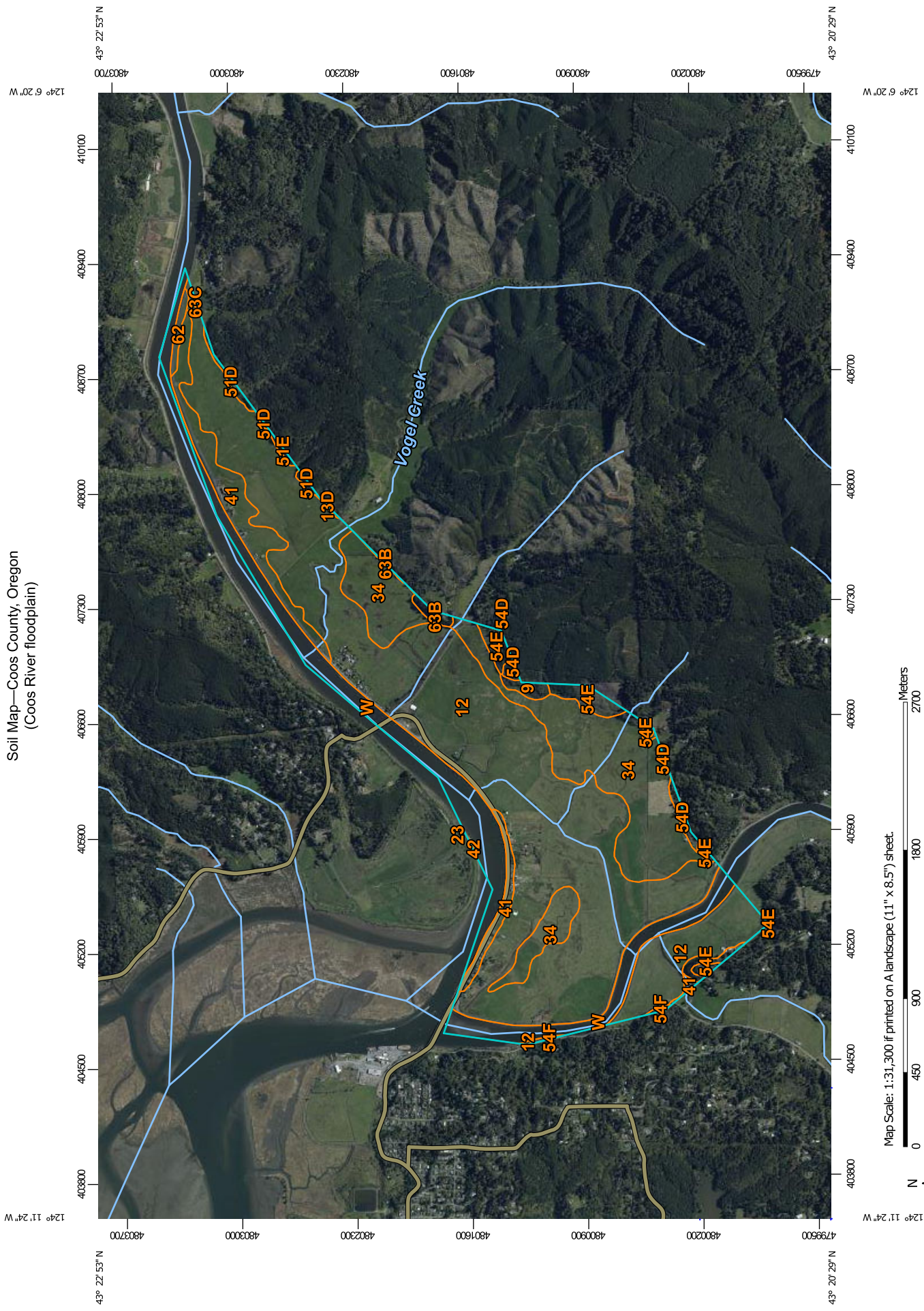


Soil Map—Coos County, Oregon (Coos River floodplain)



Map Scale: 1:31,300 if printed on A landscape (11" x 8.5") 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

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL: <https://websoilsurvey.sc.egov.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: Coos County, Oregon

Survey Area Data: Version 18, Sep 8, 2022

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

Date(s) aerial images were photographed: Oct 5, 2019—Oct 10, 2019

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

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
9	Chetco silty clay loam	5.7	0.5%
12	Coquille silt loam	704.5	58.9%
13D	Dement silt loam, 12 to 30 percent slopes	0.5	0.0%
23	Fluvaquents-Histosols complex	0.0	0.0%
26C	Geisel silt loam, 2 to 12 percent slopes	2.2	0.2%
26D	Geisel silt loam, 12 to 30 percent slopes	2.0	0.2%
34	Langlois silty clay loam	213.2	17.8%
41	Nestucca silt loam	71.9	6.0%
42	Nestucca-Willanch complex	0.2	0.0%
51D	Rinearson silt loam, 0 to 30 percent slopes	5.4	0.5%
51E	Rinearson silt loam, 30 to 50 percent slopes	1.6	0.1%
54D	Templeton silt loam, 7 to 30 percent slopes	5.9	0.5%
54E	Templeton silt loam, 30 to 50 percent slopes	26.7	2.2%
54F	Templeton silt loam, 50 to 70 percent slopes	1.7	0.1%
62	Willanch fine sandy loam	5.2	0.4%
63B	Wintley silt loam, 0 to 8 percent slopes	4.7	0.4%
63C	Wintley silt loam, 8 to 15 percent slopes	0.3	0.0%
W	Water	143.5	12.0%
Totals for Area of Interest		1,195.2	100.0%

Chemical Soil Properties

This table shows estimates of some chemical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Cation-exchange capacity is the total amount of extractable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. Soils having a low cation-exchange capacity hold fewer cations and may require more frequent applications of fertilizer than soils having a high cation-exchange capacity. The ability to retain cations reduces the hazard of ground-water pollution.

Effective cation-exchange capacity refers to the sum of extractable cations plus aluminum expressed in terms of milliequivalents per 100 grams of soil. It is determined for soils that have pH of less than 5.5.

Soil reaction is a measure of acidity or alkalinity. It is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

Calcium carbonate equivalent is the percent of carbonates, by weight, in the fraction of the soil less than 2 millimeters in size. The availability of plant nutrients is influenced by the amount of carbonates in the soil.

Gypsum is expressed as a percent, by weight, of hydrated calcium sulfates in the fraction of the soil less than 20 millimeters in size. Gypsum is partially soluble in water. Soils that have a high content of gypsum may collapse if the gypsum is removed by percolating water.

Salinity is a measure of soluble salts in the soil at saturation. It is expressed as the electrical conductivity of the saturation extract, in millimhos per centimeter at 25 degrees C. Estimates are based on field and laboratory measurements at representative sites of nonirrigated soils. The salinity of irrigated soils is affected by the quality of the irrigation water and by the frequency of water application. Hence, the salinity of soils in individual fields can differ greatly from the value given in the table. Salinity affects the suitability of a soil for crop production, the stability of soil if used as construction material, and the potential of the soil to corrode metal and concrete.

Sodium adsorption ratio (SAR) is a measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration. Soils that have SAR values of 13 or more may be characterized by an increased dispersion of organic matter and clay particles, reduced saturated hydraulic conductivity and aeration, and a general degradation of soil structure.

Report—Chemical Soil Properties

Chemical Soil Properties—Coos County, Oregon								
Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	<i>In</i>	<i>meq/100g</i>	<i>meq/100g</i>	<i>pH</i>	<i>Pct</i>	<i>Pct</i>	<i>mmhos/cm</i>	
9—Chetco silty clay loam								
Chetco	0-10	20-35	—	5.1-6.5	0	0	0	0
	10-24	15-35	—	5.6-6.5	0	0	0	0
	24-60	20-25	—	5.6-6.5	0	0	2.0-4.0	0
12—Coquille silt loam								
Coquille	0-14	15-35	—	3.5-5.0	0	0	0	0
	14-36	10-25	—	3.5-5.0	0	0	0	0
	36-60	15-30	—	3.5-5.0	0	0	2.0-4.0	0
13D—Dement silt loam, 12 to 30 percent slopes								
Dement	0-7	15-30	—	4.5-6.5	0	0	0	0
	7-45	10-30	—	4.5-5.5	0	0	0	0
	45-55	—	—	—	—	—	—	—

Chemical Soil Properties--Coos County, Oregon								
Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	<i>In</i>	<i>meq/100g</i>	<i>meq/100g</i>	<i>pH</i>	<i>Pct</i>	<i>Pct</i>	<i>mmhos/cm</i>	
23—Fluvaquents-Histosols complex								
Fluvaquents	0-3	10-30	—	5.6-6.5	0	0	5.0-25.0	0-5
	3-6	15-30	—	6.1-6.5	0	0	5.0-25.0	0-5
	6-9	15-30	—	6.6-7.3	0	0	5.0-25.0	0-5
	9-59	15-30	—	6.6-7.3	0	0	5.0-25.0	0-5
Histosols	0-7	120-165	—	5.6-7.3	0	0	—	0
	7-13	120-165	—	5.6-7.3	0	0	—	0
	13-20	120-165	—	5.6-7.3	0	0	—	0
	20-32	25-45	—	5.6-7.3	0	0	—	0
	32-60	25-45	—	5.6-7.3	0	0	—	0
26C—Geisel silt loam, 2 to 12 percent slopes								
Geisel	0-10	20-30	—	5.6-6.5	0	0	0	0
	10-54	15-35	—	4.5-6.0	0	0	0	0
	54-64	—	—	—	—	—	—	—
26D—Geisel silt loam, 12 to 30 percent slopes								
Geisel	0-10	20-30	—	5.6-6.5	0	0	0	0
	10-54	15-35	—	4.5-6.0	0	0	0	0
	54-64	—	—	—	—	—	—	—
34—Langlois silty clay loam								
Langlois	0-10	20-35	—	5.1-6.0	0	0	0	0
	10-28	20-35	—	5.1-6.0	0	0	0	0
	28-60	20-40	—	5.6-6.0	0	0	0.0-4.0	0

Chemical Soil Properties—Coos County, Oregon								
Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	<i>In</i>	<i>meq/100g</i>	<i>meq/100g</i>	<i>pH</i>	<i>Pct</i>	<i>Pct</i>	<i>mmhos/cm</i>	
41—Nestucca silt loam								
Nestucca	0-14	15-30	—	4.5-5.5	0	0	0	0
	14-40	10-20	—	4.5-5.5	0	0	0	0
	40-60	10-25	—	4.5-5.5	0	0	0	0
42—Nestucca-Willanch complex								
Nestucca	0-14	15-30	—	4.5-5.5	0	0	0	0
	14-40	10-20	—	4.5-5.5	0	0	0	0
	40-60	10-25	—	4.5-5.5	0	0	0	0
Willanch	0-13	5.0-15	—	5.6-6.5	0	0	0	0
	13-35	0.0-10	—	5.6-6.0	0	0	0	0
	35-60	0.0-5.0	—	5.6-6.0	0	0	0	0
51D—Rinearson silt loam, 0 to 30 percent slopes								
Rinearson	0-18	15-20	—	4.5-5.5	0	0	0	0
	18-33	10-20	—	3.5-5.5	0	0	0	0
	33-42	10-20	—	3.5-5.5	0	0	0	0
	42-52	—	—	—	—	—	—	—
51E—Rinearson silt loam, 30 to 50 percent slopes								
Rinearson	0-18	15-20	—	4.5-5.5	0	0	0	0
	18-33	10-20	—	3.5-5.5	0	0	0	0
	33-42	10-20	—	3.5-5.5	0	0	0	0
	42-52	—	—	—	—	—	—	—

Chemical Soil Properties--Coos County, Oregon								
Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	<i>In</i>	<i>meq/100g</i>	<i>meq/100g</i>	<i>pH</i>	<i>Pct</i>	<i>Pct</i>	<i>mmhos/cm</i>	
54D—Templeton silt loam, 7 to 30 percent slopes								
Templeton	0-16	50-70	—	3.6-5.5	0	0	0	0
	16-42	15-30	—	3.6-5.0	0	0	0	0
	42-52	—	—	—	—	—	—	—
54E—Templeton silt loam, 30 to 50 percent slopes								
Templeton	0-16	50-70	—	3.6-5.5	0	0	0	0
	16-42	15-30	—	3.6-5.0	0	0	0	0
	42-52	—	—	—	—	—	—	—
54F—Templeton silt loam, 50 to 70 percent slopes								
Templeton	0-16	50-70	—	3.6-5.5	0	0	0	0
	16-42	15-30	—	3.6-5.0	0	0	0	0
	42-52	—	—	—	—	—	—	—
62—Willanch fine sandy loam								
Willanch	0-13	5.0-15	—	5.6-6.5	0	0	0	0
	13-35	0.0-10	—	5.6-6.0	0	0	0	0
	35-60	0.0-5.0	—	5.6-6.0	0	0	0	0
63B—Wintley silt loam, 0 to 8 percent slopes								
Wintley	0-1	—	30-40	3.5-5.5	0	0	0	0
	1-5	10-20	—	4.5-5.5	0	0	0	0
	5-48	10-20	—	4.5-5.5	0	0	0	0
	48-61	0.0-5.0	—	4.5-5.5	0	0	0	0

Chemical Soil Properties--Coos County, Oregon								
Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	<i>In</i>	<i>meq/100g</i>	<i>meq/100g</i>	<i>pH</i>	<i>Pct</i>	<i>Pct</i>	<i>mmhos/cm</i>	
63C—Wintley silt loam, 8 to 15 percent slopes								
Wintley	0-1	—	30-40	3.5-5.5	0	0	0	0
	1-5	10-20	—	4.5-5.5	0	0	0	0
	5-48	10-20	—	4.5-5.5	0	0	0	0
	48-61	0.0-5.0	—	4.5-5.5	0	0	0	0
W—Water								
Water	—	—	—	—	—	—	—	—

Data Source Information

Soil Survey Area: Coos County, Oregon
 Survey Area Data: Version 18, Sep 8, 2022



Sewage Disposal

This table shows the degree and kind of soil limitations that affect septic tank absorption fields and sewage lagoons. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table 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 use (1.00) and the point at which the soil feature is not a limitation (0.00).

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 72 inches or between a depth of 24 inches and a restrictive layer is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Saturated hydraulic conductivity (Ksat), depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the distribution lines. In these soils the absorption field may not adequately filter the effluent, particularly when the system is new. As a result, the ground water may become contaminated.

Sewage lagoons are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. Considered in the ratings are slope, saturated hydraulic conductivity (Ksat), depth to a water table, ponding, depth to bedrock or a cemented pan, flooding, large stones, and content of organic matter.

Saturated hydraulic conductivity (Ksat) is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is severe. Soils that have a Ksat rate of more than 14 micrometers per second are too porous for the proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard if fractured bedrock is within a depth of 40 inches, if the water table is high enough to raise the level of sewage in the lagoon, or if floodwater overtops the lagoon.

A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor. If the lagoon is to be uniformly deep throughout, the slope must be gentle enough and the soil material must be thick enough over bedrock or a cemented pan to make land smoothing practical.

Information in this table is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this table. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Report—Sewage Disposal

[Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. The table shows only the top five limitations for any given soil. The soil may have additional limitations]

Sewage Disposal—Coos County, Oregon					
Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
9—Chetco silty clay loam					
Chetco	75	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00		

Sewage Disposal—Coos County, Oregon					
Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
12—Coquille silt loam					
Coquille	75	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Seepage	0.50
		Flooding	0.40	Flooding	0.40
13D—Dement silt loam, 12 to 30 percent slopes					
Dement	75	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Slope	1.00	Depth to soft bedrock	0.84
		Depth to bedrock	0.94		
23—Fluvaquents-Histosols complex					
Fluvaquents	50	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
Histosols	40	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
		Subsidence	1.00	Seepage	0.50
26C—Geisel silt loam, 2 to 12 percent slopes					
Geisel	75	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Depth to bedrock	0.57	Depth to soft bedrock	0.13
26D—Geisel silt loam, 12 to 30 percent slopes					
Geisel	75	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Slope	1.00	Depth to soft bedrock	0.13
		Depth to bedrock	0.57		

Sewage Disposal—Coos County, Oregon					
Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
34—Langlois silty clay loam					
Langlois	80	Very limited		Very limited	
		Flooding	1.00	Ponding	1.00
		Ponding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00		
41—Nestucca silt loam					
Nestucca	80	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Seepage	0.50
42—Nestucca-Willanch complex					
Nestucca	45	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Seepage	0.50
Willanch	40	Very limited		Very limited	
		Flooding	1.00	Ponding	1.00
		Ponding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
51D—Rinearson silt loam, 0 to 30 percent slopes					
Rinearson	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.99	Depth to soft bedrock	0.96
		Slow water movement	0.50	Seepage	0.50
51E—Rinearson silt loam, 30 to 50 percent slopes					
Rinearson	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.99	Depth to soft bedrock	0.96
		Slow water movement	0.50	Seepage	0.50

Sewage Disposal—Coos County, Oregon					
Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
54D—Templeton silt loam, 7 to 30 percent slopes					
Templeton	75	Very limited		Very limited	
		Slope	1.00	Organic matter content	1.00
		Depth to bedrock	0.99	Slope	1.00
		Slow water movement	0.50	Depth to soft bedrock	0.96
				Seepage	0.50
54E—Templeton silt loam, 30 to 50 percent slopes					
Templeton	75	Very limited		Very limited	
		Slope	1.00	Organic matter content	1.00
		Depth to bedrock	0.99	Slope	1.00
		Slow water movement	0.50	Depth to soft bedrock	0.96
				Seepage	0.50
54F—Templeton silt loam, 50 to 70 percent slopes					
Templeton	85	Very limited		Very limited	
		Slope	1.00	Organic matter content	1.00
		Depth to bedrock	0.99	Slope	1.00
		Slow water movement	0.50	Depth to soft bedrock	0.96
				Seepage	0.50
62—Willanch fine sandy loam					
Willanch	75	Very limited		Very limited	
		Flooding	1.00	Ponding	1.00
		Ponding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
63B—Wintley silt loam, 0 to 8 percent slopes					
Wintley	85	Very limited		Somewhat limited	
		Slow water movement	1.00	Seepage	0.50
				Slope	0.32
63C—Wintley silt loam, 8 to 15 percent slopes					
Wintley	80	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Slope	0.63	Seepage	0.50

Sewage Disposal—Coos County, Oregon					
Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
W—Water					
Water	100	Not rated		Not rated	

Data Source Information

Soil Survey Area: Coos County, Oregon
 Survey Area Data: Version 18, Sep 8, 2022