Open Space Taxation Act

JULY 2021

The information and instructions in this publication are to be used when applying for assessment on the basis of current use under the "open space laws," chapter 84.34 RCW and chapter 458-30 WAC.

What is the Open Space Taxation Act?

The Open Space Taxation Act, enacted in 1970, allows property owners to have their open space, farm and agricultural, and timber lands valued at their current use rather than at their highest and best use. The Act states that it is in the best interest of the state to maintain, preserve, conserve, and otherwise continue in existence adequate open space lands for the production of food, fiber, and forest crops and to assure the use and enjoyment of natural resources and scenic beauty for the economic and social well-being of the state and its citizens.

Lands qualifying for current use classification

The law provides three classifications:

Open space land

Farm and agricultural land

Timber land

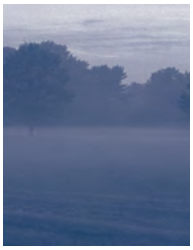
Open space land is defined as any of the following:

1. Any land area zoned for open space by a comprehensive official land use plan adopted by any city or county.

2. Any land area in which the preservation in its present use would:
   - **a.** Conserve and enhance natural or scenic resources.
   - **b.** Protect streams or water supply.
   - **c.** Promote conservation of soils, wetlands, beaches or tidal marshes. (As a condition of granting open space classification, the legislative body may not require public access on land classified for the purpose of promoting conservation of wetlands.)
   - **d.** Enhance the value to the public of neighbouring parks, forests, wildlife preserves, nature reservations or sanctuaries or other open space.
   - **e.** Enhance recreation opportunities.
   - **f.** Preserve historic sites.
   - **g.** Preserve visual quality along highway, road, and street corridors or scenic vistas.
   - **h.** Retain in its natural state tracts of land not less than one acre situated in an urban area and open to public use on such conditions as may be reasonably required by the legislative authority granting the open space classification.

3. Any land meeting the definition of "farm and agricultural conservation land," which means either:
   - **a.** Land previously classified under the farm and agricultural classification that no longer meets the criteria and is reclassified under open space land; or
   - **b.** "Traditional farmland," not classified, that has not been irrevocably devoted to a use inconsistent with agricultural uses, and that has a high potential for returning to commercial agriculture.

This fact sheet provides general information regarding the Open Space Taxation Act. The information is current at the date of publication. Please note subsequent law changes may supersede or invalidate some of this information.




Farm and agricultural land is defined as any of the following:

1. Any parcel of land that is 20 or more acres, or multiple parcels of land that are contiguous and total 20 or more acres, and are:
   - **a.** Devoted primarily to the production of livestock or agricultural commodities for commercial purposes.
   - **b.** Enrolled in the federal conservation reserve program (CRP) or its successor administered by the United States Department of Agriculture.
   - **c.** Other commercial agricultural activities established under chapter 458-30 WAC.

2. Any parcel of land that is five acres or more but less than 20 acres, is devoted primarily to agricultural uses, and has produced a gross income equivalent to:
   - **a.** Prior to January 1, 1993, $100 or more per acre per year for three of the five calendar years preceding the date of application for classification.
   - **b.** On or after January 1, 1993, $200 or more per acre per year for three of the five calendar years preceding the date of application for classification.

3. Any parcel of land that is five acres or more but less than 20 acres, is devoted primarily to agricultural uses, and has standing crops with an expectation of harvest within:
   - **a.** Seven years and a demonstrable investment in the production of those crops equivalent to $100 or more per acre in the current or previous calendar year.
   - **b.** Fifteen years for short rotation hardwoods and a demonstrable investment in the production of those crops equivalent to $100 or more per acre in the current or previous calendar year.

4. For parcels of land five acres or more but less than 20 acres, "gross income from agricultural uses" includes, but is not limited to, the wholesale value of agricultural products donated to nonprofit food banks or feeding programs.

5. Any parcel of land less than five acres devoted primarily to agricultural uses and has produced a gross income of:
   - **a.** Prior to January 1, 1993, $1,000 or more per year for three of the five calendar years preceding the date of application for classification.
   - **b.** On or after January 1, 1993, $1,500 or more per year for three of the five calendar years preceding the date of application for classification.

6. "Farm and agricultural land" also includes any of the following:
   - **a.** Incidental uses compatible with agricultural purposes, including wetland preservation, provided such use does not exceed 20 of the classified land.
   - **b.** Land on which appurtenances necessary for production, preparation, or sale of agricultural products exist in conjunction with the lands producing such products.
   - **c.** Any non-contiguous parcel one to five acres, that is an integral part of the farming operations.
   - **d.** Land on which housing for employees or the principal place of residence of the farm operator or owner is sited provided the use of the housing or residence is integral to the use of the classified land for agricultural purposes, the housing or residence is on or contiguous to the classified land, and the classified land is 20 or more acres.
   - **e.** Land that is used primarily for equestrian-related activities for which a charge is made, including, but not limited to, stabling, training, riding, clinics, schooling, shows, or grazing for feed. Depending on the number of classified acres, the land may be subject to minimum gross income requirements.
   - **f.** Land that is primarily used for commercial horticultural purposes, including growing seedlings, trees, shrubs, vines, fruits, vegetables, flowers, herbs, and other plants in containers, whether under a structure or not. For additional criteria regarding this use, please refer to RCW 84.34.020(2)(h).

Timber land is defined as the following:

Any parcel of land five or more acresor multiple parcels of land that are contiguous and total five or more acres which is or are devoted primarily to the growth and harvest of timber for commercial purposes. Timber land means the land only and does not include a residential homesite. The term includes land used for incidental uses that are compatible with the growing and harvesting of timber but no more than 10% of the land may be used for such incidental uses.

It also includes the land which appurtenances necessary for the production, preparation, or sale of the timber products exist in conjunction with land producing these products.

The timber land classification may be unavailable in some counties. As a result of the passage of Senate Bill 6180 in 2014, counties have the option to merge their timber land classification into their designated forest land program under chapter 84.33 RCW. To determine whether your county offers the timber land classification, you may contact the county assessor or visit the Department of Revenue's website at: www.dor.wa.gov.

Who may apply?

An owner or contract vendee may apply for current use assessment. However, all owners or contract vendees must sign the application for classification, and any resulting agreement.

When may I apply?

Applications may be made for classification at any time during the year from January 1 through December 31. If approved, current use assessment will begin on January 1 following the year the application was submitted.

Where do I get the application?

Application forms for the farm and agricultural land classification are available from the county assessor's office. Application forms for the open space and timber land classifications are available from either the county assessor's office or by contacting the county legislative authority.

Where do I file the application?

An application for open space classification is filed with the county legislative authority.

An application for farm and agricultural land classification is filed with the county assessor.

An application for timber land classification is filed with the county legislative authority. Timber land applications require that a timber management plan also be filed.

Is there an application fee?

The city or county legislative authority may, at their discretion, establish a processing fee to accompany each application. This fee must be in an amount that reasonably covers the processing costs of the application.

What happens after I file my application for open space classification?

Applications for classification or reclassification as "open space land" are made to the appropriate agency or official called the "granting authority." If the land is located in the county's unincorporated area, the county legislative authority is the granting authority on the application. If the land is located within an incorporated area of the county, the application is acted upon by both the county and city legislative authorities.

If the application is subject to a comprehensive plan that has been adopted by any city or county it will be processed in the same manner in which an amendment to the comprehensive plan is processed. If the application is not subject to a comprehensive land use plan, a public hearing on the application will be conducted, but a notice announcing the hearing must be published at least 10 days prior to the hearing.

The granting authority must approve or reject the application within six months of receiving the application. In determining whether an application made for classification or reclassification should be approved or denied, the granting authority may consider the benefits to the general welfare of preserving the current use of the property.

They may require that certain conditions be met including but not limited to the granting of easements.

If the application is approved, the granting authority will, within five calendar days of the approval date, send an agreement to the applicant for signature showing the land classification and conditions imposed. The applicant may accept or reject the agreement. If the applicant accepts, he or she must sign and return the agreement to the granting authority within 30 days after receipt.

The approval or denial of the application for classification or reclassification is a legislative determination and is reviewable only for arbitrary and capricious actions. Appeal can be made only to the superior court of the county where the application was filed.

Within 10 days of receiving notice of classification of the land from the granting authority, the assessor submits the notice to the county auditor for recording in the place and manner provided for the public recording of state tax liens on real property.

If approved, current use assessment will begin on January 1 following the year the application was submitted. The criteria for classification continue to apply after classification has been granted.

How does a public benefit rating system work?

If the county legislative authority has established a public benefit rating system (PBRS) for the open space classification, the criteria contained within the rating system governs the eligibility and valuation of the land subject to the application.

When a county creates or amends a PBRS, all classified open space land will be rated under the new PBRS. Land that no longer qualifies for classification will not be removed from classification, but will be rated according to the PBRS. Within 30 days of receiving notification of the new assessed value established by the PBRS, the owner may request removal of classification of the land without imposition of additional tax, interest, and penalty.

What happens after I file my application for farm and agricultural land classification?

Upon application for classification or reclassification, the assessor may require applicants to provide data regarding the use of the land, including, but not limited to, the productivity of typical crops, sales receipts, federal income tax returns, other related income and expense data, and any other information relevant to the application.

The application will be considered approved unless the assessor notifies the applicant in writing prior to May 1 of the year after the application was submitted. The criteria for classification continue to apply after classification has been granted.

What is an "advisory committee"?

The county legislative authority must appoint a five member committee representing the active farming community within the county. This committee will serve in an advisory capacity to the assessor in implementing assessment guidelines as established by the Department of Revenue for the assessment of open space lands, farm and agricultural lands, and timber lands.

How do I appeal a denial of my farm and agricultural land application?

The owner may appeal the assessor's denial to the board of equalization in the county where the land is located. The appeal must be filed with the board on or before July 1 of the year of the determination or within 30 days after the mailing of the notice of denial, or within a time limit of up to 60 days adopted by the county legislative authority, whichever is later.

What happens after I file my application for timber land classification?

Applications for timber land classification or reclassification are made to the county legislative authority. A timber management plan is required at the time of application or when a sale or transfer of timber land occurs and a notice of continuance is signed.

The application form requests information about forest management, restocking, fire protection, insect and disease control, weed control, and any other summary of experience and activity that supports the growth and harvest of timber for commercial purposes.

The application is acted upon in a manner similar to open space land applications and within six months of receiving the application.

Approval or denial of a timber land application is a legislative determination and is reviewable only for arbitrary and capricious action. Appeal can be made only to the superior court of the county where the application was filed.

Within 10 days of receiving notice of classification of the land from the granting authority, the assessor submits the notice to the county auditor for recording in the place and manner provided for the public recording of state tax liens on real property.

If approved, current use assessment will begin on January 1 following the year the application was submitted. The criteria for classification continue to apply after classification has been granted.

How is the value of classified land determined?

The assessor is required to maintain two values for each parcel that is classified. The first is the value that would be placed on the land if it was not classified. This is commonly referred to as the "fair market value." The second is the current use land value based on its current use, not highest and best use , as classified by the granting authority.

Open space land located within a county that has adopted a public benefit rating system will be valued according to the criteria of the rating system.

In the absence of a rating system, the per acre value can be no less than the lowest per acre value of classified farm and agricultural land in the county.

In determining the current use value of farm and agricultural land, the assessor considers the earning or productive capacity of comparable lands from crops grown most typically in the area averaged over not less than five years. This earning or productive capacity is the "net cash rental" and is capitalized by a "rate of interest" charged on long term loans secured by a mortgage on farm or agricultural land plus a component for property taxes.

Timber land is valued according to a schedule prepared by the Department of Revenue according to chapter 84.33 RCW. The Department of Revenue annually adjusts and certifies timber land values to be used by county assessors in preparing assessment rolls. The assessors assign the timber land values to the property based upon land grades and operability classes.

When are taxes due on classified lands?

Land classified as open space, farm and agricultural, or timber land is assessed at its current use value and placed on the assessment rolls the year after the application was submitted. Taxes on classified land are due and payable the year after the current use value was placed on the assessment rolls.

How long does the classification last?

The land continues in its classification until a request for removal is made by the owner, the use of land no longer complies, a sale or transfer to an owner that causes land to be exempt from property taxes, or the ownership has changed and the new owner has not signed a Notice of Continuance. The notice of removal is recorded with the county auditor in the same manner as the recording of state tax liens on real property. Additional tax, interest, and penalties will apply if the land is removed and the removal does not meet one of the exceptions listed in RCW 84.34.108(6).

How do I withdraw from classification?

If intending to withdraw all or a portion of the land from classification after 10 years of classification, the owner must complete a withdrawal form with the county assessor.

If a portion of the land is removed from classification, the remaining portion must meet the requirements of original classification unless the remaining land has different income or investment criteria.

What happens after I file a request to withdraw?

Upon receipt of a request for withdrawal, the assessor notifies the granting authority that originally approved the classification, and, the assessor withdraws the land from classification. The land withdrawn from classification is subject to seven years of additional tax and interest, but not a 20% penalty.

What happens if the classified land is sold or transferred?

When classified land is sold or transferred, the seller or transferor becomes liable at the time of sale for the additional tax, interest, and penalty unless the new owner(s) signs the Notice of Continuance which is attached to or shown on the real estate excise tax affidavit. The county auditor cannot accept an instrument of conveyance on any classified land unless the Notice of Continuance has been signed or the additional tax, interest, and penalty has been paid. The assessor determines if the land qualifies for continued classification

What if I want to change the use of my classified property?

An owner changing the use of land from a classified use must notify the county assessor within 60 days of this action. The assessor will remove the land from classified status and impose an additional tax equal to the difference between the tax paid on the current use value and the tax that would have been paid on the land had it not been classified. The additional tax is payable for the last seven tax years, plus interest at the same rate as charged on delinquent property taxes, plus a penalty of 20% of the total amount.

If the assessor removes my land from classification, may I appeal?

Yes, the owner may file an appeal of the removal from classification to the county board of equalization on or before July 1 of the year of the determination, or within 30 days of the date the notice was mailed by the assessor, or within a time limit of up to 60 days adopted by the county legislative authority, whichever is later.

Upon removal from classification, what taxes are due?

At the time the land is removed from classification, any taxes owing from January 1 of the removal year through the removal date, and any additional tax, applicable interest, and penalty owing are due and payable to the county treasurer within 30 days of the owner being notified.

What if the additional taxes are not paid?

Any additional tax, applicable interest, and penalty become a lien on the land at the time the land is removed from classification. This lien has priority over any other encumbrance on the land. Such a lien may be foreclosed upon expiration of the same period after delinquency in the same manner as delinquent real property taxes. If unpaid, interest is charged on the total amount due at the same rate that is applied by law to delinquent property taxes. Interest accrues from the date of the delinquency until the date the total amount is paid in full.

What is done with the additional tax, interest, and penalty paid when land is removed from classification?

Upon collection, the additional tax is distributed by the county treasurer in the same manner in which current taxes applicable to the subject land are distributed. The applicable interest and penalties are distributed to the county's current expense fund.



How do I change the classification of my property?

Land may be reclassified, upon request by the owner, subject toall applicable qualifications for each classification, without additional tax, interest, and penalty for the following:

1. Land classified as farm and agricultural land may be reclassified to timber land; timber land may be reclassified to farm and agricultural land.
2. Land classified as either farm and agricultural land or timber land under chapter 84.34 RCW, or forest land under chapter 84.33 RCW may be reclassified to open space land.
3. Land classified as farm and agricultural land or timber land may be reclassified to forest land under chapter 84.33 RCW.
4. Land previously classified as farm and agricultural land may be reclassified to open space land as "farm and agricultural conservation land" and subsequently be reclassified back to farm and agricultural land.

Applications for reclassification are acted upon in the same manner as approvals for initial classification. The county assessor approves all applications for farm and agricultural classifications and reclassifications. The county legislative authority (and in some cases, the city legislative authority)approves all land classifications or reclassifications for timber land and open space land, including farm and agricultural conservation land.

Is supporting information required to change classifications?

The assessor may require an owner of classified land to submit data regarding the use of the land, productivity of typical crops, income and expense data, and similar information regarding continued eligibility.

Laws and Rules

It is helpful to read the complete laws, Revised Code of Washington, chapters 84.33 and 84.34 (RCW) and rules, Washington Administrative Code, chapter 458-30 (WAC) to understand requirements of the classifications and the tax liabilities incurred.

Need More Information?

Requirements for making application for current use classification are available at the county assessor's office or by contacting the county legislative authority.

For general information contact:

- **Department of Revenue, Property Tax Division**
  P. O. Box 47471
  Olympia, Washington 98504-7471
  360-534-1400
- **Website: dor.wa.gov**
- **Telephone Information Center**
  360-705-6705
- For tax assistance or to request this document in an alternate format, visit dor.wa.gov or call 360-705-6705. Teletype (TTY) users may use the Washington Relay Service by calling 711.

Department of Revenue
Washington State

dor.wa.gov

PTFS0046 06/21

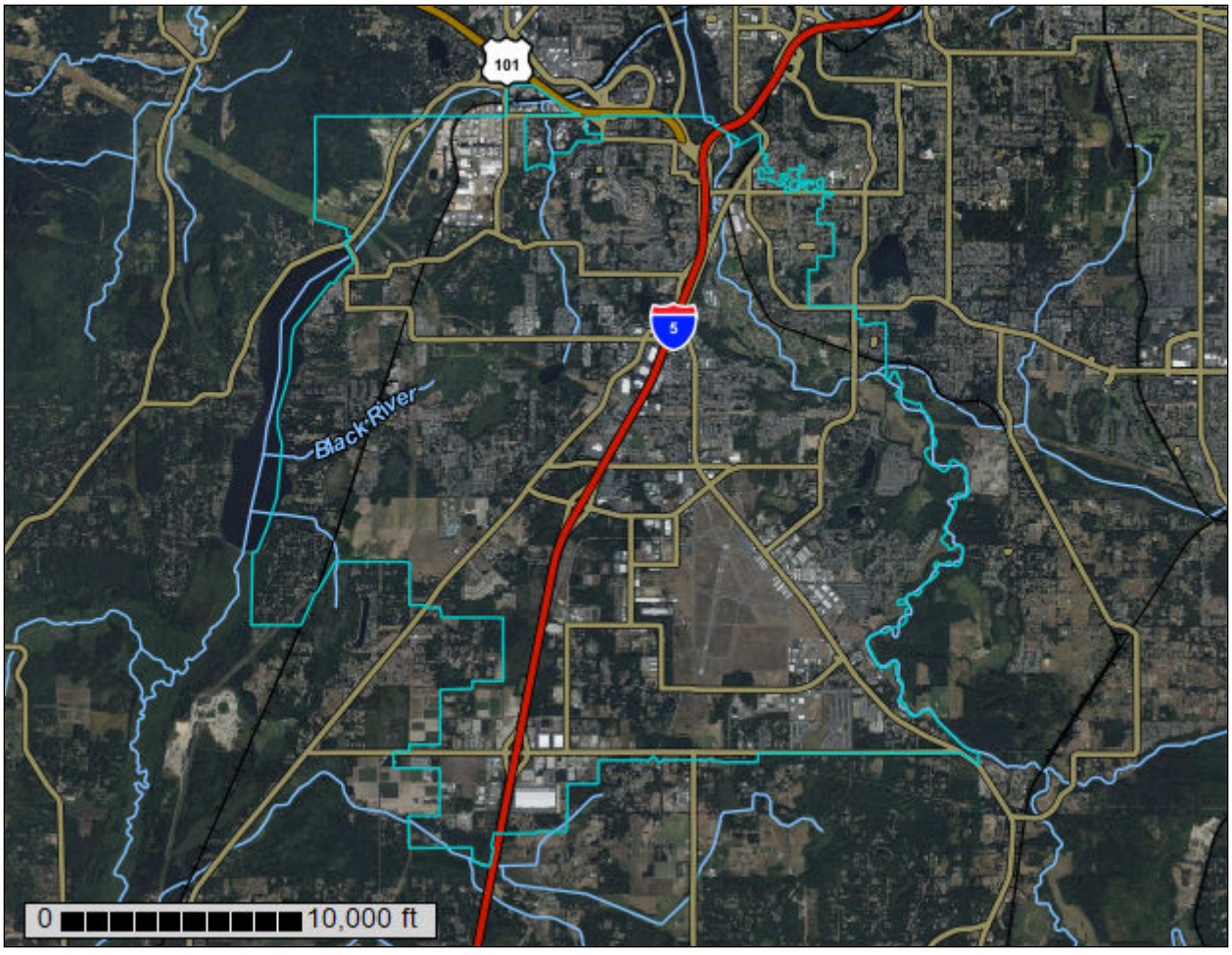
United States Department of Agriculture

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 Thurston County Area, Washington



April 2, 2025

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.

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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.

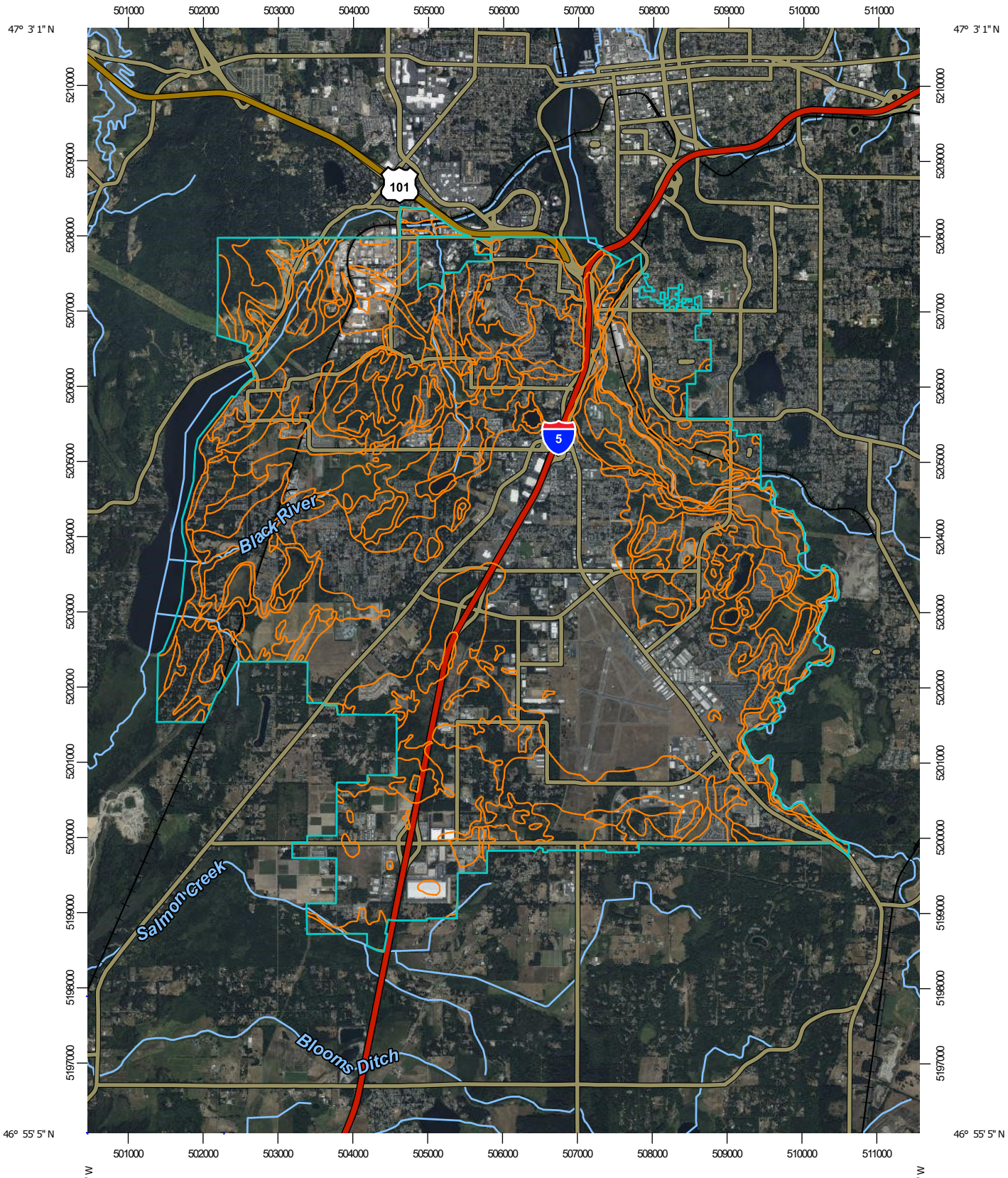
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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 Scale: 1:71,500 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 1000 2000 4000 6000

Feet: 0 3000 6000 12000 18000

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 1:24,000.

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: Thurston County Area, Washington
Survey Area Data: Version 18, Aug 27, 2024

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

Date(s) aerial images were photographed: Jul 18, 2020—Aug 14, 2023

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
1	Alderwood gravelly sandy loam, 0 to 8 percent slopes	173.8	1.2%
2	Alderwood gravelly sandy loam, 8 to 15 percent slopes	321.7	2.2%
3	Alderwood gravelly sandy loam, 15 to 30 percent slopes	36.9	0.3%
20	Cagey loamy sand	2,116.9	14.8%
27	Delphi very gravelly loam, 3 to 15 percent slopes	116.2	0.8%
30	Dystric Xerochrepts, 60 to 90 percent slopes	20.7	0.1%
32	Everett very gravelly sandy loam, 0 to 8 percent slopes	862.6	6.0%
33	Everett very gravelly sandy loam, 8 to 15 percent slopes	169.6	1.2%
34	Everett very gravelly sandy loam, 15 to 30 percent slopes	29.4	0.2%
35	Everett very gravelly sandy loam, 30 to 50 percent slopes	111.8	0.8%
38	Giles silt loam, 0 to 3 percent slopes	16.9	0.1%
39	Giles silt loam, 3 to 15 percent slopes	107.4	0.8%
40	Giles silt loam, 15 to 30 percent slopes	8.9	0.1%
41	Godfrey silty clay loam	47.4	0.3%
45	Hydraquents, tidal	1.5	0.0%
46	Indianola loamy sand, 0 to 5 percent slopes	1,432.1	10.0%
47	Indianola loamy sand, 5 to 15 percent slopes	378.0	2.6%
48	Indianola loamy sand, 15 to 30 percent slopes	471.5	3.3%
51	Kapowsin silt loam, 3 to 15 percent slopes	127.7	0.9%
52	Kapowsin silt loam, 15 to 30 percent slopes	267.5	1.9%
53	Kapowsin silt loam, 30 to 50 percent slopes	23.0	0.2%
65	McKenna gravelly silt loam, 0 to 5 percent slopes	159.7	1.1%
69	Mukilteo muck	212.3	1.5%
70	Mukilteo muck, drained	227.8	1.6%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
73	Nisqually loamy fine sand, 0 to 3 percent slopes	3,613.9	25.2%
74	Nisqually loamy fine sand, 3 to 15 percent slopes	14.2	0.1%
75	Norma fine sandy loam	40.5	0.3%
76	Norma silt loam	707.2	4.9%
84	Pilchuck loamy sand	36.3	0.3%
85	Pits, gravel	69.4	0.5%
88	Puget silt loam	69.2	0.5%
89	Puyallup silt loam	293.6	2.1%
98	Salkum silty clay loam, 8 to 15 percent slopes	3.6	0.0%
102	Schneider very gravelly loam, 20 to 40 percent slopes	271.5	1.9%
103	Schneider very gravelly loam, 40 to 65 percent slopes	386.2	2.7%
104	Semiahmoo muck	232.2	1.6%
106	Shalcar variant muck	11.4	0.1%
108	Skipopa silt loam, 3 to 15 percent slopes	12.7	0.1%
109	Spana gravelly loam	10.1	0.1%
110	Spanaway gravelly sandy loam, 0 to 3 percent slopes	21.3	0.1%
115	Sultan silt loam	213.4	1.5%
120	Tisch silt loam	25.9	0.2%
125	Xerorthents, 0 to 5 percent slopes	43.8	0.3%
126	Yelm fine sandy loam, 0 to 3 percent slopes	423.9	3.0%
127	Yelm fine sandy loam, 3 to 15 percent slopes	36.4	0.3%
128	Yelm fine sandy loam, 15 to 30 percent slopes	33.6	0.2%
129	Water	308.0	2.2%
Totals for Area of Interest		**14,319.9**	**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.

Thurston County Area, Washington

1—Alderwood gravelly sandy loam, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2t625
Elevation: 50 to 800 feet
Mean annual precipitation: 25 to 60 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 160 to 240 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

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

Description of Alderwood

Setting

Landform: Hills, ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest, talf
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Glacial drift and/or glacial outwash over dense glaciomarine deposits

Typical profile

A - 0 to 7 inches: gravelly sandy loam
Bw1 - 7 to 21 inches: very gravelly sandy loam
Bw2 - 21 to 30 inches: very gravelly sandy loam
Bg - 30 to 35 inches: very gravelly sandy loam
2Cd1 - 35 to 43 inches: very gravelly sandy loam
2Cd2 - 43 to 59 inches: very gravelly sandy loam

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Moderately well drained
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: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
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): 4s
Hydrologic Soil Group: B
Ecological site: F002XA004WA - Puget Lowlands Forest
Forage suitability group: Limited Depth Soils (G002XS301WA), Limited Depth Soils (G002XF303WA), Limited Depth Soils (G002XN302WA)

Other vegetative classification: Limited Depth Soils (G002XS301WA), Limited Depth Soils (G002XF303WA), Limited Depth Soils (G002XN302WA)
Hydric soil rating: No

Minor Components

Everett
Percent of map unit: 5 percent
Landform: Moraines, eskers, kames
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Crest, interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Mckenna
Percent of map unit: 5 percent
Landform: Drainageways, depressions
Landform position (three-dimensional): Dip
Down-slope shape: Linear, concave
Across-slope shape: Concave
Hydric soil rating: Yes

Shalcar
Percent of map unit: 3 percent
Landform: Depressions
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Norma
Percent of map unit: 2 percent
Landform: Drainageways, depressions
Landform position (three-dimensional): Dip
Down-slope shape: Linear, concave
Across-slope shape: Concave
Hydric soil rating: Yes

2—Alderwood gravelly sandy loam, 8 to 15 percent slopes

Map Unit Setting
National map unit symbol: 2t626
Elevation: 50 to 800 feet
Mean annual precipitation: 20 to 60 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 160 to 240 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition
Alderwood and similar soils: 85 percent

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

Description of Alderwood

Setting

Landform: Hills, ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Nose slope, talf
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Glacial drift and/or glacial outwash over dense glaciomarine deposits

Typical profile

A - 0 to 7 inches: gravelly sandy loam
Bw1 - 7 to 21 inches: very gravelly sandy loam
Bw2 - 21 to 30 inches: very gravelly sandy loam
Bg - 30 to 35 inches: very gravelly sandy loam
2Cd1 - 35 to 43 inches: very gravelly sandy loam
2Cd2 - 43 to 59 inches: very gravelly sandy loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Moderately well drained
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: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
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): 4s
Hydrologic Soil Group: B
Ecological site: F002XA004WA - Puget Lowlands Forest
Forage suitability group: Limited Depth Soils (G002XS301WA), Limited Depth Soils (G002XF303WA), Limited Depth Soils (G002XN302WA)
Other vegetative classification: Limited Depth Soils (G002XS301WA), Limited Depth Soils (G002XF303WA), Limited Depth Soils (G002XN302WA)
Hydric soil rating: No

Minor Components

Indianola

Percent of map unit: 5 percent
Landform: Terraces, kames, eskers
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Everett

Percent of map unit: 5 percent
Landform: Moraines, eskers, kames

Landform position (two-dimensional): Shoulder, footslope
Landform position (three-dimensional): Crest, base slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Shalcar

Percent of map unit: 3 percent
Landform: Depressions
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Norma

Percent of map unit: 2 percent
Landform: Drainageways, depressions
Landform position (three-dimensional): Dip
Down-slope shape: Linear, concave
Across-slope shape: Concave
Hydric soil rating: Yes

3—Alderwood gravelly sandy loam, 15 to 30 percent slopes

Map Unit Setting

National map unit symbol: 2t627
Elevation: 0 to 1,000 feet
Mean annual precipitation: 25 to 60 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 160 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

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

Description of Alderwood

Setting

Landform: Hills, ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Nose slope, side slope, talf
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Glacial drift and/or glacial outwash over dense glaciomarine deposits

Typical profile

A - 0 to 7 inches: gravelly sandy loam
Bw1 - 7 to 21 inches: very gravelly sandy loam

Bw2 - 21 to 30 inches: very gravelly sandy loam
Bg - 30 to 35 inches: very gravelly sandy loam
2Cd1 - 35 to 43 inches: very gravelly sandy loam
2Cd2 - 43 to 59 inches: very gravelly sandy loam

Properties and qualities

Slope: 15 to 30 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Moderately well drained
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: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
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): 4e
Hydrologic Soil Group: B
Ecological site: F002XA004WA - Puget Lowlands Forest
Forage suitability group: Limited Depth Soils (G002XS301WA), Limited Depth Soils (G002XF303WA), Limited Depth Soils (G002XN302WA)
Other vegetative classification: Limited Depth Soils (G002XS301WA), Limited Depth Soils (G002XF303WA), Limited Depth Soils (G002XN302WA)
Hydric soil rating: No

Minor Components

Everett

Percent of map unit: 5 percent
Landform: Moraines, eskers, kames
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Indianola

Percent of map unit: 5 percent
Landform: Terraces, kames, eskers
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Shalcar

Percent of map unit: 3 percent
Landform: Depressions
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Norma

Percent of map unit: 2 percent
Landform: Drainageways, depressions

Landform position (three-dimensional): Dip
Down-slope shape: Linear, concave
Across-slope shape: Concave
Hydric soil rating: Yes

20—Cagey loamy sand

Map Unit Setting

National map unit symbol: 2nd8d
Elevation: 330 to 980 feet
Mean annual precipitation: 40 to 60 inches
Mean annual air temperature: 50 degrees F
Frost-free period: 165 to 195 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Cagey and similar soils: 85 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cagey

Setting

Landform: Terraces
Parent material: Sandy glacial drift

Typical profile

H1 - 0 to 6 inches: loamy sand
H2 - 6 to 28 inches: loamy sand
H3 - 28 to 60 inches: fine sand

Properties and qualities

Slope: 0 to 4 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: A
Ecological site: F002XA005WA - Puget Lowlands Moist Forest
Forage suitability group: Seasonally Wet Soils (G002XS201WA)
Other vegetative classification: Seasonally Wet Soils (G002XS201WA)
Hydric soil rating: No

Minor Components

Mckenna

Percent of map unit: 5 percent
Landform: Depressions
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

27—Delphi very gravelly loam, 3 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2nd8m
Elevation: 330 to 3,280 feet
Mean annual precipitation: 50 to 75 inches
Mean annual air temperature: 50 degrees F
Frost-free period: 165 to 195 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

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

Description of Delphi

Setting

Landform: Till plains
Parent material: Continental basal till

Typical profile

H1 - 0 to 8 inches: very gravelly loam
H2 - 8 to 13 inches: very gravelly loam
H3 - 13 to 48 inches: very gravelly silt loam
H4 - 48 to 52 inches: extremely gravelly clay loam

Properties and qualities

Slope: 3 to 15 percent
Depth to restrictive feature: 40 to 55 inches to densic material
Drainage class: Well drained
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: About 39 to 54 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: B
Ecological site: F002XA007WA - Puget Lowlands Wet Forest

Forage suitability group: Droughty Soils (G001XY402WA)
Other vegetative classification: Droughty Soils (G001XY402WA)
Hydric soil rating: No

30—Dystric Xerochrepts, 60 to 90 percent slopes

Map Unit Setting

National map unit symbol: 2nd8r
Elevation: 0 to 3,280 feet
Mean annual precipitation: 50 inches
Mean annual air temperature: 50 degrees F
Frost-free period: 180 days
Farmland classification: Not prime farmland

Map Unit Composition

Dystric xerochrepts and similar soils: 85 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dystric Xerochrepts

Setting

Landform: Escarpments
Parent material: Colluvium and glacial till

Typical profile

H1 - 0 to 4 inches: very gravelly sandy loam
H2 - 4 to 30 inches: very gravelly sandy loam
H3 - 30 to 34 inches: very gravelly sandy loam

Properties and qualities

Slope: 60 to 90 percent
Depth to restrictive feature: 20 to 72 inches to densic material
Drainage class: Well drained
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
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): 7e
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Skipopa

Percent of map unit: 5 percent
Hydric soil rating: No

32—Everett very gravelly sandy loam, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2t629
Elevation: 30 to 900 feet
Mean annual precipitation: 35 to 91 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 180 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Everett and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Everett

Setting

Landform: Kames, moraines, eskers
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Crest, interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy and gravelly glacial outwash

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
A - 1 to 3 inches: very gravelly sandy loam
Bw - 3 to 24 inches: very gravelly sandy loam
C1 - 24 to 35 inches: very gravelly loamy sand
C2 - 35 to 60 inches: extremely cobbly coarse sand

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A
Ecological site: F002XA004WA - Puget Lowlands Forest
Forage suitability group: Droughty Soils (G002XS401WA), Droughty Soils (G002XF403WA), Droughty Soils (G002XN402WA)

Other vegetative classification: Droughty Soils (G002XS401WA), Droughty Soils (G002XF403WA), Droughty Soils (G002XN402WA)
Hydric soil rating: No

Minor Components

Indianola
Percent of map unit: 10 percent
Landform: Terraces, kames, eskers
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Alderwood
Percent of map unit: 10 percent
Landform: Hills, ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest, talf
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

33—Everett very gravelly sandy loam, 8 to 15 percent slopes

Map Unit Setting
National map unit symbol: 2t62b
Elevation: 30 to 900 feet
Mean annual precipitation: 35 to 91 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 180 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition
Everett and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Everett

Setting
Landform: Moraines, eskers, kames
Landform position (two-dimensional): Shoulder, footslope
Landform position (three-dimensional): Crest, base slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy and gravelly glacial outwash

Typical profile
Oi - 0 to 1 inches: slightly decomposed plant material
A - 1 to 3 inches: very gravelly sandy loam

Bw - 3 to 24 inches: very gravelly sandy loam
C1 - 24 to 35 inches: very gravelly loamy sand
C2 - 35 to 60 inches: extremely cobbly coarse sand

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A
Ecological site: F002XA004WA - Puget Lowlands Forest
Forage suitability group: Droughty Soils (G002XS401WA), Droughty Soils (G002XF403WA), Droughty Soils (G002XN402WA)
Other vegetative classification: Droughty Soils (G002XS401WA), Droughty Soils (G002XF403WA), Droughty Soils (G002XN402WA)
Hydric soil rating: No

Minor Components

Alderwood

Percent of map unit: 10 percent
Landform: Hills, ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Nose slope, talf
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Indianola

Percent of map unit: 10 percent
Landform: Terraces, kames, eskers
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

34—Everett very gravelly sandy loam, 15 to 30 percent slopes

Map Unit Setting

National map unit symbol: 2t62c
Elevation: 30 to 900 feet
Mean annual precipitation: 35 to 91 inches

Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 180 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Everett and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Everett

Setting

Landform: Moraines, eskers, kames
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy and gravelly glacial outwash

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
A - 1 to 3 inches: very gravelly sandy loam
Bw - 3 to 24 inches: very gravelly sandy loam
C1 - 24 to 35 inches: very gravelly loamy sand
C2 - 35 to 60 inches: extremely cobbly coarse sand

Properties and qualities

Slope: 15 to 30 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: A
Ecological site: F002XA004WA - Puget Lowlands Forest
Forage suitability group: Droughty Soils (G002XS401WA), Droughty Soils (G002XN402WA)
Other vegetative classification: Droughty Soils (G002XS401WA), Droughty Soils (G002XN402WA)
Hydric soil rating: No

Minor Components

Alderwood

Percent of map unit: 10 percent
Landform: Hills, ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Nose slope, side slope, talf
Down-slope shape: Convex, linear
Across-slope shape: Convex

Hydric soil rating: No

Indianola

Percent of map unit: 10 percent
Landform: Terraces, kames, eskers
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

35—Everett very gravelly sandy loam, 30 to 50 percent slopes

Map Unit Setting

National map unit symbol: 2t62d
Elevation: 30 to 900 feet
Mean annual precipitation: 35 to 91 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 180 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Everett and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Everett

Setting

Landform: Moraines, eskers, kames
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy and gravelly glacial outwash

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
A - 1 to 3 inches: very gravelly sandy loam
Bw - 3 to 24 inches: very gravelly sandy loam
C1 - 24 to 35 inches: very gravelly loamy sand
C2 - 35 to 60 inches: extremely cobbly coarse sand

Properties and qualities

Slope: 30 to 50 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None

Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: F002XA004WA - Puget Lowlands Forest
Hydric soil rating: No

Minor Components

Indianola

Percent of map unit: 10 percent
Landform: Terraces, kames, eskers
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Alderwood

Percent of map unit: 10 percent
Landform: Hills, ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Nose slope, side slope, talf
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

38—Giles silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2ndbv
Elevation: 160 to 1,640 feet
Mean annual precipitation: 35 to 60 inches
Mean annual air temperature: 50 degrees F
Frost-free period: 170 to 200 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Giles and similar soils: 85 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Giles

Setting

Landform: Terraces
Parent material: Volcanic ash and glacial outwash

Typical profile

H1 - 0 to 10 inches: silt loam
H2 - 10 to 48 inches: silt loam
H3 - 48 to 60 inches: silt loam

Properties and qualities

Slope: 0 to 3 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 (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very high (about 14.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: B
Ecological site: F002XA004WA - Puget Lowlands Forest
Forage suitability group: Soils with Few Limitations (G002XS501WA)
Other vegetative classification: Soils with Few Limitations (G002XS501WA)
Hydric soil rating: No

Minor Components

Yelm

Percent of map unit: 3 percent
Landform: Terraces
Hydric soil rating: No

Norma

Percent of map unit: 2 percent
Landform: Depressions
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

39—Giles silt loam, 3 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2ndbw
Elevation: 160 to 1,640 feet
Mean annual precipitation: 35 to 60 inches
Mean annual air temperature: 50 degrees F
Frost-free period: 170 to 200 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Giles and similar soils: 85 percent

Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Giles

Setting
Landform: Terraces
Parent material: Volcanic ash and glacial outwash

Typical profile
H1 - 0 to 10 inches: silt loam
H2 - 10 to 48 inches: silt loam
H3 - 48 to 60 inches: silt loam

Properties and qualities
Slope: 3 to 15 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 (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very high (about 14.6 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: F002XA004WA - Puget Lowlands Forest
Forage suitability group: Soils with Moderate Limitations (G002XN602WA)
Other vegetative classification: Soils with Moderate Limitations (G002XN602WA)
Hydric soil rating: No

Minor Components

Yelm
Percent of map unit: 5 percent
Hydric soil rating: No

40—Giles silt loam, 15 to 30 percent slopes

Map Unit Setting
National map unit symbol: 2nd8v
Elevation: 160 to 1,640 feet
Mean annual precipitation: 35 to 60 inches
Mean annual air temperature: 50 degrees F
Frost-free period: 170 to 200 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Giles and similar soils: 85 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Giles

Setting

Landform: Escarpments
Parent material: Volcanic ash and glacial outwash

Typical profile

H1 - 0 to 10 inches: silt loam
H2 - 10 to 48 inches: silt loam
H3 - 48 to 60 inches: silt loam

Properties and qualities

Slope: 15 to 30 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 (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very high (about 14.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: F002XA004WA - Puget Lowlands Forest
Forage suitability group: Sloping to Steep Soils (G002XN702WA)
Other vegetative classification: Sloping to Steep Soils (G002XN702WA)
Hydric soil rating: No

Minor Components

Yelm

Percent of map unit: 5 percent
Landform: Terraces
Hydric soil rating: No

41—Godfrey silty clay loam

Map Unit Setting

National map unit symbol: 2nd8w
Elevation: 20 to 300 feet
Mean annual precipitation: 40 to 65 inches
Mean annual air temperature: 50 to 54 degrees F

Frost-free period: 150 to 200 days
Farmland classification: Prime farmland if drained

Map Unit Composition

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

Description of Godfrey, Drained

Setting

Landform: Flood plains
Parent material: Alluvium

Typical profile

H1 - 0 to 8 inches: silty clay loam
H2 - 8 to 52 inches: silty clay
H3 - 52 to 60 inches: silty clay

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 9.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C/D
Ecological site: F002XA008WA - Puget Lowlands Riparian Forest
Forage suitability group: Seasonally Wet Soils (G002XS201WA)
Other vegetative classification: Seasonally Wet Soils (G002XS201WA)
Hydric soil rating: Yes

Minor Components

Sultan

Percent of map unit: 5 percent
Hydric soil rating: No

Godfrey, undrained

Percent of map unit: 5 percent
Landform: Depressions
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

Newberg

Percent of map unit: 3 percent
Hydric soil rating: No

Puget, undrained

Percent of map unit: 2 percent
Landform: Depressions
Other vegetative classification: Wet Soils (G002XS101WA)

Hydric soil rating: Yes

45—Hydraquents, tidal

Map Unit Setting

National map unit symbol: 2nd90
Elevation: 0 to 100 feet
Mean annual precipitation: 20 to 30 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 170 to 210 days
Farmland classification: Not prime farmland

Map Unit Composition

Hydraquents, tidal, and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hydraquents, Tidal

Setting

Landform: Tidal flats
Parent material: Alluvium

Typical profile

H1 - 0 to 6 inches: fine sandy loam
H2 - 6 to 60 inches: stratified fine sandy loam to silty clay loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly 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: About 0 inches
Frequency of flooding: Very frequent
Frequency of ponding: None
Maximum salinity: Moderately saline to strongly saline (8.0 to 16.0 mmhos/cm)
Sodium adsorption ratio, maximum: 10.0
Available water supply, 0 to 60 inches: High (about 10.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

46—Indianola loamy sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2t62k
Elevation: 0 to 980 feet
Mean annual precipitation: 30 to 81 inches
Mean annual air temperature: 48 to 50 degrees F
Frost-free period: 170 to 210 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

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

Description of Indianola

Setting

Landform: Terraces, eskers, kames
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy glacial outwash

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
A - 1 to 6 inches: loamy sand
Bw1 - 6 to 17 inches: loamy sand
Bw2 - 17 to 27 inches: sand
BC - 27 to 37 inches: sand
C - 37 to 60 inches: sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): 4s
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A
Ecological site: F002XA004WA - Puget Lowlands Forest
Forage suitability group: Droughty Soils (G002XS401WA), Droughty Soils (G002XF403WA), Droughty Soils (G002XN402WA), Droughty Soils (G002XV402WA)

Other vegetative classification: Droughty Soils (G002XS401WA), Droughty Soils (G002XF403WA), Droughty Soils (G002XN402WA), Droughty Soils (G002XV402WA)
Hydric soil rating: No

Minor Components

Alderwood
Percent of map unit: 5 percent
Landform: Ridges, hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest, talf
Down-slope shape: Linear, convex
Across-slope shape: Convex
Hydric soil rating: No

Everett
Percent of map unit: 5 percent
Landform: Eskers, moraines, kames
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve, crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Norma
Percent of map unit: 5 percent
Landform: Depressions, drainageways
Landform position (three-dimensional): Dip
Down-slope shape: Concave, linear
Across-slope shape: Concave
Hydric soil rating: Yes

47—Indianola loamy sand, 5 to 15 percent slopes

Map Unit Setting
National map unit symbol: 2t635
Elevation: 0 to 980 feet
Mean annual precipitation: 30 to 81 inches
Mean annual air temperature: 48 to 50 degrees F
Frost-free period: 170 to 210 days
Farmland classification: Prime farmland if irrigated

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

Description of Indianola

Setting

Landform: Terraces, kames, eskers
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy glacial outwash

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
A - 1 to 6 inches: loamy sand
Bw1 - 6 to 17 inches: loamy sand
Bw2 - 17 to 27 inches: sand
BC - 27 to 37 inches: sand
C - 37 to 60 inches: sand

Properties and qualities

Slope: 5 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A
Ecological site: F002XA004WA - Puget Lowlands Forest
Forage suitability group: Droughty Soils (G002XS401WA), Droughty Soils (G002XN402WA)
Other vegetative classification: Droughty Soils (G002XS401WA), Droughty Soils (G002XN402WA)
Hydric soil rating: No

Minor Components

Alderwood

Percent of map unit: 8 percent
Landform: Hills, ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Nose slope, talf
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Everett

Percent of map unit: 5 percent
Landform: Moraines, eskers, kames
Landform position (two-dimensional): Shoulder, footslope
Landform position (three-dimensional): Crest, base slope
Down-slope shape: Convex

Across-slope shape: Convex
Hydric soil rating: No

Norma

Percent of map unit: 2 percent
Landform: Drainageways, depressions
Landform position (three-dimensional): Dip
Down-slope shape: Linear, concave
Across-slope shape: Concave
Hydric soil rating: Yes

48—Indianola loamy sand, 15 to 30 percent slopes

Map Unit Setting

National map unit symbol: 2t639
Elevation: 0 to 980 feet
Mean annual precipitation: 30 to 81 inches
Mean annual air temperature: 48 to 50 degrees F
Frost-free period: 170 to 210 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

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

Description of Indianola

Setting

Landform: Terraces, kames, eskers
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy glacial outwash

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
A - 1 to 6 inches: loamy sand
Bw1 - 6 to 17 inches: loamy sand
Bw2 - 17 to 27 inches: sand
BC - 27 to 37 inches: sand
C - 37 to 60 inches: sand

Properties and qualities

Slope: 15 to 30 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 99.90 in/hr)
Depth to water table: More than 80 inches

Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): 6e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: A
Ecological site: F002XA004WA - Puget Lowlands Forest
Forage suitability group: Droughty Soils (G002XS401WA), Droughty Soils (G002XN402WA)
Other vegetative classification: Droughty Soils (G002XS401WA), Droughty Soils (G002XN402WA)
Hydric soil rating: No

Minor Components

Alderwood

Percent of map unit: 8 percent
Landform: Hills, ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Nose slope, side slope, talf
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Everett

Percent of map unit: 5 percent
Landform: Moraines, eskers, kames
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Norma

Percent of map unit: 2 percent
Landform: Drainageways, depressions
Landform position (three-dimensional): Dip
Down-slope shape: Linear, concave
Across-slope shape: Concave
Hydric soil rating: Yes

51—Kapowsin silt loam, 3 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2ndbx
Elevation: 50 to 900 feet
Mean annual precipitation: 30 to 50 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 150 to 220 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Kapowsin and similar soils: 85 percent
Minor components: 8 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kapowsin

Setting

Landform: Till plains
Parent material: Compact basal till

Typical profile

H1 - 0 to 4 inches: silt loam
H2 - 4 to 22 inches: silt loam
H3 - 22 to 30 inches: gravelly loam
H4 - 30 to 34 inches: gravelly loam

Properties and qualities

Slope: 3 to 15 percent
Depth to restrictive feature: 20 to 40 inches to densic material
Drainage class: Moderately well drained
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: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C/D
Ecological site: F002XA004WA - Puget Lowlands Forest
Forage suitability group: Limited Depth Soils (G002XN302WA)
Other vegetative classification: Limited Depth Soils (G002XN302WA)
Hydric soil rating: No

Minor Components

Norma

Percent of map unit: 5 percent
Landform: Depressions
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

Skipopa

Percent of map unit: 3 percent
Other vegetative classification: Seasonally Wet Soils (G002XN202WA)
Hydric soil rating: No

52—Kapowsin silt loam, 15 to 30 percent slopes

Map Unit Setting

National map unit symbol: 2ndby
Elevation: 50 to 900 feet
Mean annual precipitation: 30 to 50 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 150 to 220 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Kapowsin and similar soils: 85 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kapowsin

Setting

Landform: Till plains
Parent material: Compact basal till

Typical profile

H1 - 0 to 4 inches: silt loam
H2 - 4 to 22 inches: silt loam
H3 - 22 to 30 inches: gravelly loam
H4 - 30 to 34 inches: gravelly loam

Properties and qualities

Slope: 15 to 30 percent
Depth to restrictive feature: 20 to 40 inches to densic material
Drainage class: Moderately well drained
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: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C/D
Ecological site: F002XA004WA - Puget Lowlands Forest
Forage suitability group: Limited Depth Soils (G002XN302WA)
Other vegetative classification: Limited Depth Soils (G002XN302WA)
Hydric soil rating: No

Minor Components

Hoogdal
Percent of map unit: 5 percent
Hydric soil rating: No

Indianola
Percent of map unit: 5 percent
Hydric soil rating: No

53—Kapowsin silt loam, 30 to 50 percent slopes

Map Unit Setting
National map unit symbol: 2ndbz
Elevation: 50 to 900 feet
Mean annual precipitation: 30 to 50 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 150 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition
Kapowsin and similar soils: 85 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kapowsin

Setting
Landform: Till plains
Parent material: Compact basal till

Typical profile
H1 - 0 to 4 inches: silt loam
H2 - 4 to 22 inches: silt loam
H3 - 22 to 30 inches: gravelly loam
H4 - 30 to 34 inches: gravelly loam

Properties and qualities
Slope: 30 to 50 percent
Depth to restrictive feature: 20 to 40 inches to densic material
Drainage class: Moderately well drained
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: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.1 inches)

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

Hydrologic Soil Group: C/D
Ecological site: F002XA004WA - Puget Lowlands Forest
Hydric soil rating: No

Minor Components

Hoogdal
Percent of map unit: 5 percent
Hydric soil rating: No

65—McKenna gravelly silt loam, 0 to 5 percent slopes

Map Unit Setting
National map unit symbol: 2nd9g
Elevation: 50 to 500 feet
Mean annual precipitation: 30 to 60 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 150 to 180 days
Farmland classification: Prime farmland if drained

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

Description of Mckenna

Setting
Landform: Depressions, drainageways
Parent material: Glacial drift

Typical profile
H1 - 0 to 9 inches: gravelly silt loam
H2 - 9 to 13 inches: gravelly silt loam
H3 - 13 to 36 inches: very gravelly loam
H4 - 36 to 40 inches: very gravelly loam

Properties and qualities
Slope: 0 to 5 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Poorly drained
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: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Available water supply, 0 to 60 inches: Low (about 5.4 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6w

Hydrologic Soil Group: D
Ecological site: F002XA007WA - Puget Lowlands Wet Forest
Forage suitability group: Wet Soils (G002XS101WA)
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

Minor Components

Bellingham, undrained
Percent of map unit: 5 percent
Landform: Depressions
Other vegetative classification: Wet Soils (G002XN102WA)
Hydric soil rating: Yes

Norma
Percent of map unit: 5 percent
Landform: Depressions
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

Skipopa
Percent of map unit: 5 percent
Other vegetative classification: Seasonally Wet Soils (G002XN202WA)
Hydric soil rating: No

69—Mukilteo muck

Map Unit Setting
National map unit symbol: 2nd9l
Elevation: 0 to 1,000 feet
Mean annual precipitation: 40 to 70 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 150 to 250 days
Farmland classification: Prime farmland if drained

Map Unit Composition
Mukilteo, undrained, and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Mukilteo, Undrained

Setting
Landform: Depressions
Parent material: Herbaceous organic material

Typical profile
Oa - 0 to 6 inches: muck
Oe - 6 to 60 inches: mucky peat

Properties and qualities
Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly 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: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Available water supply, 0 to 60 inches: Very high (about 26.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Ecological site: R002XA003WA - Puget Lowlands Bogs and Fens
Forage suitability group: Wet Soils (G002XS101WA)
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

Minor Components

Shalcar

Percent of map unit: 10 percent
Landform: Depressions
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

70—Mukilteo muck, drained

Map Unit Setting

National map unit symbol: 2ndc5
Elevation: 0 to 1,000 feet
Mean annual precipitation: 40 to 70 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 150 to 250 days
Farmland classification: Prime farmland if drained

Map Unit Composition

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

Description of Mukilteo, Drained

Setting

Landform: Depressions
Parent material: Herbaceous organic material

Typical profile

Oa - 0 to 6 inches: muck
Oe2 - 6 to 60 inches: mucky peat

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly 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: About 0 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very high (about 26.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Ecological site: R002XA003WA - Puget Lowlands Bogs and Fens
Forage suitability group: Seasonally Wet Soils (G002XS201WA)
Other vegetative classification: Seasonally Wet Soils (G002XS201WA)
Hydric soil rating: Yes

Minor Components

Shalcar

Percent of map unit: 5 percent
Landform: Depressions
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

Mukilteo, undrained

Percent of map unit: 5 percent
Landform: Depressions
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

73—Nisqually loamy fine sand, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2ndc8
Elevation: 160 to 1,310 feet
Mean annual precipitation: 40 to 60 inches
Mean annual air temperature: 50 degrees F
Frost-free period: 150 to 200 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Nisqually and similar soils: 85 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nisqually

Setting

Landform: Terraces
Parent material: Sandy glacial outwash

Typical profile

H1 - 0 to 5 inches: loamy fine sand
H2 - 5 to 31 inches: loamy fine sand
H3 - 31 to 60 inches: loamy sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Ecological site: R002XA006WA - Puget Lowlands Prairie
Forage suitability group: Droughty Soils (G002XS401WA)
Other vegetative classification: Droughty Soils (G002XS401WA)
Hydric soil rating: No

Minor Components

Yelm

Percent of map unit: 3 percent
Hydric soil rating: No

Norma

Percent of map unit: 2 percent
Landform: Depressions
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

74—Nisqually loamy fine sand, 3 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2ndc9
Elevation: 160 to 1,310 feet
Mean annual precipitation: 40 to 60 inches
Mean annual air temperature: 50 degrees F
Frost-free period: 150 to 200 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Nisqually and similar soils: 85 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nisqually

Setting

Landform: Terraces
Parent material: Sandy glacial outwash

Typical profile

H1 - 0 to 5 inches: loamy fine sand
H2 - 5 to 31 inches: loamy fine sand
H3 - 31 to 60 inches: loamy sand

Properties and qualities

Slope: 3 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: A
Ecological site: R002XA006WA - Puget Lowlands Prairie
Forage suitability group: Droughty Soils (G002XS401WA)
Other vegetative classification: Droughty Soils (G002XS401WA)
Hydric soil rating: No

Minor Components

Yelm

Percent of map unit: 3 percent
Hydric soil rating: No

Norma

Percent of map unit: 2 percent
Landform: Depressions
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

75—Norma fine sandy loam

Map Unit Setting

National map unit symbol: 2ndcb
Elevation: 0 to 1,000 feet
Mean annual precipitation: 35 to 60 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 150 to 200 days
Farmland classification: Prime farmland if drained

Map Unit Composition

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

Description of Norma, Fine Sandy Loam

Setting

Landform: Depressions, drainageways
Parent material: Alluvium

Typical profile

H1 - 0 to 7 inches: fine sandy loam
H2 - 7 to 25 inches: fine sandy loam
H3 - 25 to 60 inches: sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Available water supply, 0 to 60 inches: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: A/D
Ecological site: F002XA007WA - Puget Lowlands Wet Forest
Forage suitability group: Wet Soils (G002XS101WA)
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

Minor Components

Norma, silt loam

Percent of map unit: 5 percent

Landform: Depressions
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

Alderwood
Percent of map unit: 5 percent
Hydric soil rating: No

76—Norma silt loam

Map Unit Setting
National map unit symbol: 2ndcc
Elevation: 0 to 1,000 feet
Mean annual precipitation: 35 to 60 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 150 to 200 days
Farmland classification: Prime farmland if drained

Map Unit Composition
Norma, silt loam, and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Norma, Silt Loam

Setting
Landform: Depressions, drainageways
Parent material: Alluvium

Typical profile
H1 - 0 to 8 inches: silt loam
H2 - 8 to 30 inches: sandy loam
H3 - 30 to 60 inches: sandy loam

Properties and qualities
Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly 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: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Available water supply, 0 to 60 inches: Moderate (about 8.9 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Ecological site: F002XA007WA - Puget Lowlands Wet Forest
Forage suitability group: Wet Soils (G002XS101WA)

Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

Minor Components

Norma, fine sandy loam
Percent of map unit: 5 percent
Landform: Depressions
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

Alderwood
Percent of map unit: 5 percent
Hydric soil rating: No

84—Pilchuck loamy sand

Map Unit Setting
National map unit symbol: 2nd9t
Elevation: 70 to 1,970 feet
Mean annual precipitation: 35 to 60 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 160 to 210 days
Farmland classification: Prime farmland if irrigated

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

Description of Pilchuck

Setting
Landform: Flood plains
Parent material: Alluvium

Typical profile
H1 - 0 to 6 inches: loamy sand
H2 - 6 to 60 inches: fine sand

Properties and qualities
Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 24 to 48 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: A
Ecological site: F002XA008WA - Puget Lowlands Riparian Forest
Forage suitability group: Droughty Soils (G002XS401WA)
Other vegetative classification: Droughty Soils (G002XS401WA)
Hydric soil rating: No

Minor Components

Puget, undrained

Percent of map unit: 5 percent
Landform: Depressions
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

Sultan

Percent of map unit: 5 percent
Hydric soil rating: No

Newberg

Percent of map unit: 5 percent
Hydric soil rating: No

85—Pits, gravel

Map Unit Composition

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

Description of Pits

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

88—Puget silt loam

Map Unit Setting

National map unit symbol: 2nd9y
Elevation: 10 to 650 feet
Mean annual precipitation: 35 to 55 inches
Mean annual air temperature: 48 to 50 degrees F
Frost-free period: 160 to 180 days
Farmland classification: Prime farmland if drained

Map Unit Composition

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

Description of Puget, Drained

Setting

Landform: Flood plains
Parent material: Alluvium

Typical profile

H1 - 0 to 9 inches: silt loam
H2 - 9 to 60 inches: silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 12 to 35 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 12.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C
Ecological site: F002XA008WA - Puget Lowlands Riparian Forest
Forage suitability group: Soils with Few Limitations (G002XS501WA)
Other vegetative classification: Soils with Few Limitations (G002XS501WA)
Hydric soil rating: Yes

Minor Components

Puget, undrained

Percent of map unit: 5 percent
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

Newberg

Percent of map unit: 5 percent
Hydric soil rating: No

Semiahmoo, undrained

Percent of map unit: 3 percent
Landform: Depressions
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

Sultan

Percent of map unit: 2 percent
Hydric soil rating: No

89—Puyallup silt loam

Map Unit Setting

National map unit symbol: 2nd9z
Elevation: 70 to 1,970 feet
Mean annual precipitation: 35 to 60 inches
Mean annual air temperature: 50 degrees F
Frost-free period: 170 to 200 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Puyallup and similar soils: 85 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Puyallup

Setting

Landform: Terraces, flood plains
Parent material: Alluvium

Typical profile

H1 - 0 to 10 inches: silt loam
H2 - 10 to 19 inches: fine sandy loam
H3 - 19 to 60 inches: sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 14 to 20 inches to strongly contrasting textural stratification
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: Occasional
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.2 inches)

Interpretive groups

Land capability classification (irrigated): 3w
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B
Ecological site: F002XA008WA - Puget Lowlands Riparian Forest
Forage suitability group: Droughty Soils (G002XS401WA)
Other vegetative classification: Droughty Soils (G002XS401WA)
Hydric soil rating: No

Minor Components

Newberg
Percent of map unit: 5 percent
Hydric soil rating: No

Semiahmoo, undrained
Percent of map unit: 3 percent
Landform: Depressions
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

Sultan
Percent of map unit: 2 percent
Hydric soil rating: No

98—Salkum silty clay loam, 8 to 15 percent slopes

Map Unit Setting
National map unit symbol: 2ndcq
Elevation: 200 to 1,000 feet
Mean annual precipitation: 40 to 70 inches
Mean annual air temperature: 48 to 50 degrees F
Frost-free period: 150 to 210 days
Farmland classification: Farmland of statewide importance

Map Unit Composition
Salkum and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Salkum

Setting
Landform: Terraces
Parent material: Highly weatherd glacial drift

Typical profile
H1 - 0 to 12 inches: silty clay loam
H2 - 12 to 51 inches: silty clay
H3 - 51 to 60 inches: silty clay

Properties and qualities
Slope: 8 to 15 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 (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 supply, 0 to 60 inches: High (about 9.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: F002XA005WA - Puget Lowlands Moist Forest
Forage suitability group: Soils with Moderate Limitations (G001XY602WA)
Other vegetative classification: Soils with Moderate Limitations (G001XY602WA)
Hydric soil rating: No

Minor Components

Scamman

Percent of map unit: 5 percent
Landform: Terraces
Other vegetative classification: Seasonally Wet Soils (G003XF203WA)
Hydric soil rating: No

102—Schneider very gravelly loam, 20 to 40 percent slopes

Map Unit Setting

National map unit symbol: 2nd7p
Elevation: 50 to 1,800 feet
Mean annual precipitation: 60 to 75 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 150 to 200 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Schneider

Setting

Landform: Mountains

Typical profile

H1 - 0 to 6 inches: very gravelly loam
H2 - 6 to 32 inches: very gravelly silt loam
H3 - 32 to 55 inches: extremely gravelly silt loam
H4 - 55 to 59 inches: unweathered bedrock

Properties and qualities

Slope: 20 to 40 percent
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
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 supply, 0 to 60 inches: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Ecological site: F002XA005WA - Puget Lowlands Moist Forest
Hydric soil rating: No

103—Schneider very gravelly loam, 40 to 65 percent slopes

Map Unit Setting

National map unit symbol: 2nd7q
Elevation: 50 to 1,800 feet
Mean annual precipitation: 60 to 75 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 150 to 200 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Schneider

Setting

Landform: Mountains

Typical profile

H1 - 0 to 6 inches: very gravelly loam
H2 - 6 to 32 inches: very gravelly silt loam
H3 - 32 to 55 inches: extremely gravelly silt loam
H4 - 55 to 59 inches: unweathered bedrock

Properties and qualities

Slope: 40 to 65 percent
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
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 supply, 0 to 60 inches: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: F002XA005WA - Puget Lowlands Moist Forest
Hydric soil rating: No

104—Semiahmoo muck

Map Unit Setting

National map unit symbol: 2nd7r
Elevation: 10 to 1,300 feet
Mean annual precipitation: 4 to 70 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 125 to 250 days
Farmland classification: Prime farmland if drained

Map Unit Composition

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

Description of Semiahmoo, Drained

Setting

Landform: Flood plains
Parent material: Herbaceous organic material

Typical profile

Oa1 - 0 to 6 inches: muck
Oa2 - 6 to 60 inches: muck

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly 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: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very high (about 26.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Ecological site: R002XA003WA - Puget Lowlands Bogs and Fens
Forage suitability group: Wet Soils (G002XS101WA)
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

Minor Components

Shalcar variant

Percent of map unit: 5 percent
Landform: Depressions
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

Semiahmoo, undrained
Percent of map unit: 5 percent
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

Puget, undrained
Percent of map unit: 3 percent
Landform: Depressions
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

Sultan
Percent of map unit: 2 percent
Hydric soil rating: No

106—Shalcar variant muck

Map Unit Setting
National map unit symbol: 2nd7t
Elevation: 70 to 980 feet
Mean annual precipitation: 40 to 60 inches
Mean annual air temperature: 50 degrees F
Frost-free period: 150 to 200 days
Farmland classification: Prime farmland if drained

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

Description of Shalcar Variant

Setting
Landform: Flood plains
Parent material: Organic material over alluvium

Typical profile
Oa1 - 0 to 6 inches: muck
Oa2 - 6 to 20 inches: muck
H3 - 20 to 60 inches: clay

Properties and qualities
Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly 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: About 0 inches
Frequency of flooding: Occasional
Frequency of ponding: Frequent
Available water supply, 0 to 60 inches: Very high (about 15.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: C/D
Ecological site: R002XA003WA - Puget Lowlands Bogs and Fens
Forage suitability group: Wet Soils (G002XS101WA)
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

Minor Components

Sultan

Percent of map unit: 5 percent
Hydric soil rating: No

Puget, undrained

Percent of map unit: 5 percent
Landform: Depressions
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

Semiahmoo, undrained

Percent of map unit: 5 percent
Landform: Depressions
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

108—Skipopa silt loam, 3 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2nd7w
Elevation: 490 to 980 feet
Mean annual precipitation: 30 to 50 inches
Mean annual air temperature: 48 to 50 degrees F
Frost-free period: 160 to 200 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

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

Description of Skipopa

Setting

Landform: Terraces
Parent material: Volcanic ash over glaciolacustrine deposits

Typical profile

H1 - 0 to 8 inches: silt loam
H2 - 8 to 18 inches: silt loam

H3 - 18 to 60 inches: clay

Properties and qualities

Slope: 3 to 15 percent
Depth to restrictive feature: 10 to 20 inches to abrupt textural change
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: D
Ecological site: F002XA007WA - Puget Lowlands Wet Forest
Forage suitability group: Seasonally Wet Soils (G002XN202WA)
Other vegetative classification: Seasonally Wet Soils (G002XN202WA)
Hydric soil rating: No

Minor Components

Yelm

Percent of map unit: 10 percent
Hydric soil rating: No

109—Spana gravelly loam

Map Unit Setting

National map unit symbol: 2nd7x
Elevation: 330 to 1,640 feet
Mean annual precipitation: 25 to 45 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 150 to 200 days
Farmland classification: Prime farmland if drained

Map Unit Composition

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

Description of Spana

Setting

Landform: Drainageways, outwash plains
Parent material: Glacial outwash

Typical profile

H1 - 0 to 22 inches: gravelly loam
H2 - 22 to 26 inches: gravelly loam
H3 - 26 to 38 inches: gravelly loam

H4 - 38 to 60 inches: extremely gravelly sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: About 12 to 35 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B
Ecological site: R002XA006WA - Puget Lowlands Prairie
Forage suitability group: Soils with Few Limitations (G002XS501WA)
Other vegetative classification: Soils with Few Limitations (G002XS501WA)
Hydric soil rating: No

110—Spanaway gravelly sandy loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2ndb6
Elevation: 330 to 1,310 feet
Mean annual precipitation: 35 to 65 inches
Mean annual air temperature: 50 degrees F
Frost-free period: 150 to 200 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

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

Description of Spanaway

Setting

Landform: Terraces, outwash plains
Parent material: Volcanic ash over gravelly outwash

Typical profile

H1 - 0 to 15 inches: gravelly sandy loam
H2 - 15 to 20 inches: very gravelly loam
H3 - 20 to 60 inches: extremely gravelly sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)

Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.8 inches)

Interpretive groups

Land capability classification (irrigated): 3s
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Ecological site: R002XA006WA - Puget Lowlands Prairie
Forage suitability group: Droughty Soils (G002XS401WA)
Other vegetative classification: Droughty Soils (G002XS401WA)
Hydric soil rating: No

115—Sultan silt loam

Map Unit Setting

National map unit symbol: 2ndbc
Elevation: 0 to 150 feet
Mean annual precipitation: 35 to 55 inches
Mean annual air temperature: 48 to 50 degrees F
Frost-free period: 150 to 200 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Sultan and similar soils: 85 percent
Minor components: 8 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sultan

Setting

Landform: Flood plains
Parent material: Alluvium

Typical profile

H1 - 0 to 7 inches: silt loam
H2 - 7 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
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: About 24 to 48 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 11.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: C
Ecological site: F002XA008WA - Puget Lowlands Riparian Forest
Forage suitability group: Seasonally Wet Soils (G002XS201WA)
Other vegetative classification: Seasonally Wet Soils (G002XS201WA)
Hydric soil rating: No

Minor Components

Godfrey, undrained
Percent of map unit: 5 percent
Landform: Depressions
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

Puget, undrained
Percent of map unit: 3 percent
Landform: Depressions
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

120—Tisch silt loam

Map Unit Setting
National map unit symbol: 2nd82
Elevation: 50 to 1,000 feet
Mean annual precipitation: 20 to 60 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 150 to 250 days
Farmland classification: Prime farmland if drained

Map Unit Composition
Tisch, drained, and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tisch, Drained

Setting
Landform: Depressions, drainageways
Parent material: Alluvium, volcanic ash, and diatomaceous earth

Typical profile
H1 - 0 to 11 inches: silt loam
H2 - 11 to 50 inches: silt loam
Oa - 50 to 60 inches: muck

Properties and qualities
Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very high (about 25.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: C/D
Ecological site: F002XA007WA - Puget Lowlands Wet Forest
Forage suitability group: Wet Soils (G002XS101WA)
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

Minor Components

Tisch, undrained

Percent of map unit: 5 percent
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

Everson, undrained

Percent of map unit: 5 percent
Landform: Depressions
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

Dupont, undrained

Percent of map unit: 5 percent
Landform: Depressions
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

Mckenna

Percent of map unit: 4 percent
Landform: Depressions
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

Giles

Percent of map unit: 1 percent
Hydric soil rating: No

125—Xerorthents, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2nd87
Elevation: 0 to 2,620 feet
Mean annual precipitation: 30 to 60 inches
Mean annual air temperature: 39 to 50 degrees F

Frost-free period: 150 to 200 days
Farmland classification: Not prime farmland

Map Unit Composition
Xerorthents and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Xerorthents

Setting
Landform: Tidal flats
Parent material: Sandy and loamy cut and fill material

Typical profile
H1 - 0 to 60 inches: variable

Properties and qualities
Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Depth to water table: About 24 inches
Frequency of flooding: None
Frequency of ponding: None

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydric soil rating: No

126—Yelm fine sandy loam, 0 to 3 percent slopes

Map Unit Setting
National map unit symbol: 2nd88
Elevation: 80 to 980 feet
Mean annual precipitation: 30 to 60 inches
Mean annual air temperature: 50 degrees F
Frost-free period: 170 to 200 days
Farmland classification: All areas are prime farmland

Map Unit Composition
Yelm and similar soils: 85 percent
Minor components: 13 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Yelm

Setting
Landform: Outwash terraces
Parent material: Glacial outwash

Typical profile
H1 - 0 to 8 inches: fine sandy loam
H2 - 8 to 46 inches: fine sandy loam

H3 - 46 to 60 inches: loamy sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 11.0 inches)

Interpretive groups

Land capability classification (irrigated): 3w
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B
Ecological site: F002XA005WA - Puget Lowlands Moist Forest
Forage suitability group: Seasonally Wet Soils (G002XS201WA)
Other vegetative classification: Seasonally Wet Soils (G002XS201WA)
Hydric soil rating: No

Minor Components

Everson, undrained

Percent of map unit: 5 percent
Landform: Depressions
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

Norma

Percent of map unit: 5 percent
Landform: Depressions
Other vegetative classification: Wet Soils (G002XS101WA)
Hydric soil rating: Yes

Skipopa

Percent of map unit: 3 percent
Other vegetative classification: Seasonally Wet Soils (G002XN202WA)
Hydric soil rating: No

127—Yelm fine sandy loam, 3 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2nd89
Elevation: 80 to 980 feet
Mean annual precipitation: 30 to 60 inches
Mean annual air temperature: 50 degrees F
Frost-free period: 170 to 200 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Yelm and similar soils: 85 percent
Minor components: 3 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Yelm

Setting

Landform: Outwash terraces
Parent material: Glacial outwash

Typical profile

H1 - 0 to 8 inches: fine sandy loam
H2 - 8 to 46 inches: fine sandy loam
H3 - 46 to 60 inches: loamy sand

Properties and qualities

Slope: 3 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 11.0 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: F002XA005WA - Puget Lowlands Moist Forest
Forage suitability group: Soils with Moderate Limitations (G002XS601WA)
Other vegetative classification: Soils with Moderate Limitations (G002XS601WA)
Hydric soil rating: No

Minor Components

Skipopa

Percent of map unit: 3 percent
Other vegetative classification: Seasonally Wet Soils (G002XN202WA)
Hydric soil rating: No

128—Yelm fine sandy loam, 15 to 30 percent slopes

Map Unit Setting

National map unit symbol: 2nd8b
Elevation: 80 to 980 feet
Mean annual precipitation: 30 to 60 inches
Mean annual air temperature: 50 degrees F

Frost-free period: 170 to 200 days
Farmland classification: Farmland of statewide importance

Map Unit Composition
Yelm and similar soils: 85 percent
Minor components: 2 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Yelm

Setting
Landform: Outwash terraces
Parent material: Glacial outwash

Typical profile
H1 - 0 to 8 inches: fine sandy loam
H2 - 8 to 46 inches: fine sandy loam
H3 - 46 to 60 inches: loamy sand

Properties and qualities
Slope: 15 to 30 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 11.0 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: F002XA005WA - Puget Lowlands Moist Forest
Forage suitability group: Sloping to Steep Soils (G002XS701WA)
Other vegetative classification: Sloping to Steep Soils (G002XS701WA)
Hydric soil rating: No

Minor Components

Hoogdal
Percent of map unit: 2 percent
Hydric soil rating: No

129—Water

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

Description of Water

Setting

Landform: Alluvial cones

Soil Information for All Uses

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.

Land Classifications

This folder contains a collection of tabular reports that present a variety of soil groupings. The reports (tables) include all selected map units and components for each map unit. 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.

Prime and other Important Farmlands

This table lists the map units in the survey area that are considered important farmlands. Important farmlands consist of prime farmland, unique farmland, and farmland of statewide or local importance. This list does not constitute a recommendation for a particular land use.

In an effort to identify the extent and location of important farmlands, the Natural Resources Conservation Service, in cooperation with other interested Federal, State, and local government organizations, has inventoried land that can be used for the production of the Nation's food supply.

Prime farmland is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil quality, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. The water supply is dependable and of adequate quality. Prime farmland is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

For some of the soils identified in the table as prime farmland, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures.

A recent trend in land use in some areas has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

Unique farmland is land other than prime farmland that is used for the production of specific high-value food and fiber crops, such as citrus, tree nuts, olives, cranberries, and other fruits and vegetables. It has the special combination of soil quality, growing season, moisture supply, temperature, humidity, air drainage, elevation, and aspect needed for the soil to economically produce sustainable high yields of these crops when properly managed. The water supply is dependable and of adequate quality. Nearness to markets is an additional consideration. Unique farmland is not based on national criteria. It commonly is in areas where there is a special microclimate, such as the wine country in California.

In some areas, land that does not meet the criteria for prime or unique farmland is considered to be *farmland of statewide importance* for the production of food, feed, fiber, forage, and oilseed crops. The criteria for defining and delineating farmland of statewide importance are determined by the appropriate State agencies. Generally, this land includes areas of soils that nearly meet the requirements for prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. Some areas may produce as high a yield as prime farmland if conditions are favorable. Farmland of statewide importance may include tracts of land that have been designated for agriculture by State law.

In some areas that are not identified as having national or statewide importance, land is considered to be *farmland of local importance* for the production of food, feed, fiber, forage, and oilseed crops. This farmland is identified by the appropriate local agencies. Farmland of local importance may include tracts of land that have been designated for agriculture by local ordinance.

Report—Prime and other Important Farmlands

Prime and other Important Farmlands–Thurston County Area, Washington		
Map Symbol	**Map Unit Name**	**Farmland Classification**
1	Alderwood gravelly sandy loam, 0 to 8 percent slopes	Prime farmland if irrigated
2	Alderwood gravelly sandy loam, 8 to 15 percent slopes	Prime farmland if irrigated
3	Alderwood gravelly sandy loam, 15 to 30 percent slopes	Farmland of statewide importance
20	Cagey loamy sand	Prime farmland if irrigated
27	Delphi very gravelly loam, 3 to 15 percent slopes	Farmland of statewide importance
30	Dystric Xerochrepts, 60 to 90 percent slopes	Not prime farmland
32	Everett very gravelly sandy loam, 0 to 8 percent slopes	Farmland of statewide importance
33	Everett very gravelly sandy loam, 8 to 15 percent slopes	Farmland of statewide importance
34	Everett very gravelly sandy loam, 15 to 30 percent slopes	Farmland of statewide importance
35	Everett very gravelly sandy loam, 30 to 50 percent slopes	Not prime farmland
38	Giles silt loam, 0 to 3 percent slopes	All areas are prime farmland
39	Giles silt loam, 3 to 15 percent slopes	Farmland of statewide importance
40	Giles silt loam, 15 to 30 percent slopes	Farmland of statewide importance
41	Godfrey silty clay loam	Prime farmland if drained
45	Hydraquents, tidal	Not prime farmland
46	Indianola loamy sand, 0 to 5 percent slopes	Prime farmland if irrigated
47	Indianola loamy sand, 5 to 15 percent slopes	Prime farmland if irrigated
48	Indianola loamy sand, 15 to 30 percent slopes	Farmland of statewide importance
51	Kapowsin silt loam, 3 to 15 percent slopes	Farmland of statewide importance
52	Kapowsin silt loam, 15 to 30 percent slopes	Farmland of statewide importance
53	Kapowsin silt loam, 30 to 50 percent slopes	Not prime farmland
65	McKenna gravelly silt loam, 0 to 5 percent slopes	Prime farmland if drained
69	Mukilteo muck	Prime farmland if drained
70	Mukilteo muck, drained	Prime farmland if drained
73	Nisqually loamy fine sand, 0 to 3 percent slopes	Prime farmland if irrigated
74	Nisqually loamy fine sand, 3 to 15 percent slopes	Farmland of statewide importance
75	Norma fine sandy loam	Prime farmland if drained
76	Norma silt loam	Prime farmland if drained
84	Pilchuck loamy sand	Prime farmland if irrigated
85	Pits, gravel	Not prime farmland
88	Puget silt loam	Prime farmland if drained
89	Puyallup silt loam	All areas are prime farmland
98	Salkum silty clay loam, 8 to 15 percent slopes	Farmland of statewide importance
102	Schneider very gravelly loam, 20 to 40 percent slopes	Not prime farmland
103	Schneider very gravelly loam, 40 to 65 percent slopes	Not prime farmland
104	Semiahmoo muck	Prime farmland if drained
106	Shalcar variant muck	Prime farmland if drained
108	Skipopa silt loam, 3 to 15 percent slopes	Farmland of statewide importance
109	Spana gravelly loam	Prime farmland if drained

Prime and other Important Farmlands–Thurston County Area, Washington		
Map Symbol	**Map Unit Name**	**Farmland Classification**
110	Spanaway gravelly sandy loam, 0 to 3 percent slopes	Prime farmland if irrigated
115	Sultan silt loam	All areas are prime farmland
120	Tisch silt loam	Prime farmland if drained
125	Xerorthents, 0 to 5 percent slopes	Not prime farmland
126	Yelm fine sandy loam, 0 to 3 percent slopes	All areas are prime farmland
127	Yelm fine sandy loam, 3 to 15 percent slopes	Farmland of statewide importance
128	Yelm fine sandy loam, 15 to 30 percent slopes	Farmland of statewide importance
129	Water	Not prime farmland

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