

EXPLANATION

of Artificial fill      afm Modified land

Qa Alluvium      Qm Deposits of mass-wasting processes
Chiefly silt and very fine sand; some sand and gravel in tributary valleys. Thickness highly variable
Heterogeneous deposits of landslide debris; includes both slump and earthflow material

Qlpm Qlc Lacustrine deposits

Organic and mineral sediments deposited chiefly in closed depressions: Qlpm, peat and muck; Qlc, chiefly silt and clay. Thickness ranges from 3 to at least 25 feet

Qils Qilc Glaciolacustrine deposits

Sand, silt, and clay deposited in lakes formed in ice-walled depressions or in lakes temporarily dammed by ice; Qils, chiefly sand, but includes some pebbly sand and lenses of gravel; Qilc, chiefly silt and clay, but includes some lenses of sand, sand and gravel, and in some places, till. Thickness ranges from 20 to more than 60 feet

Qit Kame-terrace deposits

Glaciofluvial sand and gravel deposited against or close to ice; commonly poorly sorted and bedded. Locally includes some till and silt lenses

Qik Kame deposits

Hummocks and mounds of glaciofluvial sand and gravel deposited in ice-walled depressions or as fans or deltas on surface of stagnant ice

Qie Esker deposits

Sinuuous ridges of glaciofluvial sand and gravel deposited in ice-walled caverns or channels. Lenses and pods of till and silt and clay occur in places

Qgt Ground moraine deposits

Chiefly compact unoxidized till, but includes some sand and gravel both within and on the till. Thickness generally less than 20 feet, but may be as much as 50 feet or more. Stipple pattern indicates discontinuous mantle of sand and gravel over till

Qg Vashon drift, undifferentiated

Vashon drift, undifferentiated

Qsr Qsa Proglacial stratified drift

Chiefly sand and pebble to cobble gravel deposited beyond ice front: Qsa, advance melt-water deposits; Qsr, undifferentiated recessional outwash of glaciofluvial and glaciolacustrine origin; locally includes some ablation moraine

Erosional unconformity

Qss Salmon Springs drift

Salmon Springs drift

Chiefly oxidized sand and pebble to cobble gravel; locally includes beds of very fine sand, silt and clay, till, and some nonglacial sediments

Erosional unconformity

Qpy Puyallup formation

Puyallup formation

Chiefly fine to medium light-gray sand, but includes mudflows, silt, clay, peat, gravel, and ash deposited during nonglacial climatic conditions. Thickness variable; maximum about 100 feet; absent in many places

Qst Stuck drift

Stuck drift

Very compact oxidized till and sand and gravel; minor amounts of silt. Maximum observed thickness about 80 feet

Contact

Dashed where approximately located

Contact

Indefinite or inferred

Landslide scarp

Dashed where approximately located

⊗

Sand or gravel pit

⊗

Sand or gravel pit, abandoned

⊙

s-tg/Δ

Material classification

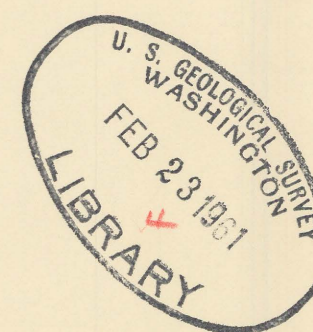
Letter symbols indicate approximate size distribution in decreasing order of relative abundance: g, gravel; s, sand; t, silt; a, clay; Δ, till; c, coarse or cobbly; p, pebbly; m, medium; f, fine; v, very. Read hyphen as "and," slant line as "overlies"

U. S. Geological Survey OPEN FILE MAP

This map is preliminary and has not been edited or reviewed for conformity with Geological Survey standards or nomenclature.

Washington State (Poverty Bay quad.) 1:20,000 1961

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Recent

Upper Pleistocene Vashon drift

Middle (?) Pleistocene

QUATERNARY