



LEGEND

SURFICIAL DEPOSITS

PLEISTOCENE AND HOLOCENE POSTGLACIAL NONGLACIAL ENVIRONMENT

- H** Antropogenic materials. Culturally made or modified geological materials, landfill including sand, gravel, fill, crushed stone, and rubble. > 2 to 50 m thick.
- O** Organic deposits. Accumulations of plant material in various stages of decomposition, bog or swamp deposits. Organic deposits within the forested zone.
- COLLUVIUM** Mass wasting debris, detritus deposited directly by gravity at the base of steep slopes.
- Cs** Cultural spurs. Mass wasting debris forming aprons along the base of steep slopes.
- Ct** Cultural veneer. Thin and discontinuous cover of slung sand or silt with material < 1 m thick.
- C** Un differentiated colluvium.

LAKE SEDIMENTS (deposits related to modern rivers, creeks and lake processes)

FLUVIAL SEDIMENTS alluvium, sorted sand, silt, and clay deposited by streams, currently active, may contain some organic detritus, some alluvial sediments are reworked glacial till and siltstone.

- Aa** Alluvial floodplain. Gravel, sand and silt with minor organic detritus. > 2 m thick, channel fill and channel bank deposits forming narrow floodplains, meander scars and small meanders are common.
- Ai** Alluvial terrace alluvium. > 2 m thick, above the level of modern flooding.
- Aj** Alluvial fan. Poorly sorted sand, silt and gravel. < 2 m thick, formed by steep gradient alluvium and debris flows extending onto valley floors. Alluvial terrace fan deposits.
- Am** Alluvial delta. Medium and fine sand and gravel, silt and clay, generally 1 to 10 m thick, deposited where streams enter Strait of Georgia. Alluvial deposits forming terraces.
- As** Alluvial veneer. Fine and discontinuous cover of alluvium, < 1 m thick.
- A** Un differentiated alluvium.

LACUSTRINE SEDIMENTS Fine sand, silt and clay deposited in lakes, exposed by a recent lake level lowering. > 2 m thick, may contain organic deposits.

MARINE SEDIMENTS Loam and siltstone sediments deposited by waves and currents along the present shoreline, forming ridges and banks.

- Mb** Beach sediments. Sand and silt, up to 2 m thick, deposited by waves and currents at the present shoreline, forming ridges and banks.
- Mt** Tidal sediments. Medium to coarse sand, silt and clay deposited in tidal flats, exposed between mean low water and high water lines.
- Mw** Marine blanket. Marine sediments marking areas above the present littoral zone. May form a veneer.

EARLY HOLOCENE AND WISCONSINAN POSTGLACIAL AND GLACIAL ENVIRONMENTS

CAPLANSO SEDIMENTS Deposits related to former marine, river, and lake levels, mainly the result of proglacial, glaciolacustrine, and glaciomarine drift.

VAHON DRIFT (local deposits include specific glaciomarine deposits)

- GLACIOFLUVIAL SEDIMENTS** Sorted sand and gravel, well to poorly sorted silt and minor detritus deposited in channels, etc. at the foot of the ice margin.
- Gp** Proglacial outwash. 2 to 10 m thick, graded outwash (silt) deposited on valley floors in front of retreating ice margin; grade into raised delta deposits where valleys meet the coastline.
- Gt** Proglacial terrace. 1 to 10 m thick, former terrace deposits along valley sides in places, proglacial alluvium, flood deposits. Gt forming the upper terrace.
- Gd** Glaciolacustrine delta terrace. Gravel, sand and silt, minor silt > 10 m thick, deposited by meltwater streams entering high proglacial seas. Gd, some delta deposits form the ice margin.
- Gc** Glaciolacustrine veneer. < 2 m thick, thin and discontinuous.
- Gs** Unsorted detritus. Poorly sorted sand and gravel with minor detritus. 1 to 10 m thick, deposited in contact with the retreating glacier. Gs, however, topography related to differential melting of retreating ice. Gs, low terrace. Gs, low terrace. Gs, low terrace.
- G** Un differentiated glaciolacustrine deposit. Gs forming a terrace surface. Gs forming ridges.
- Gd** GLACIOFLUVIAL SEDIMENTS: sorted sand and gravel deposited into the Strait of Georgia by meltwater streams, commonly unsorted locally, may contain minor debris and/or detritus of low relief debris.

GLACIOMARINE SEDIMENTS sand and silt, minor gravel. 1 to 10 m thick, deposited into the sea by floating glaciers and meltwater, commonly unsorted locally, may contain minor debris and/or detritus of low relief debris.

- GMb** Coarse glaciomarine blanket. sand and silt, minor gravel, generally underlain by clay. 2 to 10 m thick.
- GMt** Fine glaciomarine blanket. silt, clay and silt, clay. 2 to 10 m thick.
- GM** Un differentiated glaciomarine deposit.
- Mw** Marine veneer. Unsorted, fine-grained sand, silt and clay, usually derived from underlying Vahon Drift, generally less than 1 m thick and discontinuous.

TILL Unsorted detritus deposited in subglacial and/or marginal environments, sandy in upper reaches with clasts of various lithologies.

- Tb** Till blanket. < 2 m thick, continuous detritus cover, locally shows underlying bedrock relief. Tc, however, locally exposed. Tc, blanket by retreating glacier on alluvium.
- Tv** Till veneer. < 1 m thick, discontinuous detritus cover, underlying bedrock surface is discontinuous patches of till on cover in depressions.

PRE-VAHON DEPOSITS (local, gravel, silt, clay, and silt underlying Vahon Drift)

- Qd** Quaternary. glaciolacustrine channel fill and floodplain deposits, unsorted sand, silt, minor gravel, silt, may include unsorted debris deposits. 2 to 10 m thick, deposited in flood channels and/or terraces.
- Q** Pre-Vahon unsorted, glacial and glaciolacustrine sediments. Unsorted detritus of unsorted detritus. Unsorted detritus of unsorted detritus. Unsorted detritus of unsorted detritus.

PRE-QUATERNARY BEDROCK

- R** Exposed bedrock. Rv, subvolcanic rocks of the Upper Cretaceous Nanaimo Group and Upper Paleocene. Rv, Lower Cretaceous. Rv, Middle Cretaceous rocks of the Fraser Formation, and Rv, Cretaceous massive rocks of the Jurassic Island Plinianic Suite.

NOTE: In areas where the surficial cover forms a complex pattern, the area is colored according to the dominant unit and labeled in descending order of cover (e.g., T, G, C). Where different surficial deposits are found in a single area, the area is colored according to the underlying unit and labeled in the following manner: G/G.

Geological boundary (dashed, solid, dashed-dotted):

- Subsided outcrop in one of outcrops
- Multicolumn (direction of flow inferred, flow direction not inferred)
- Equipement
- Kettle
- Esker (flow direction inferred)
- Flow moraine
- Miscellaneous moraine fill
- Fluting (for flow direction known, leftward)
- Striation (for flow direction known, leftward)
- Moraine line (approximate)
- Shoalwater
- Moraine scarp
- Clay (some downward)
- Excavation
- Ground pit (shaded or white)
- Quarry (shaded or white)
- Radiocarbon date (uncorrected)

Geology by J. Bednarski, 2013

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Figure 10. Surficial geology of the study area from Deep Bay to Nanoose Harbour.

SURFICIAL GEOLOGY
HORNE LAKE - PARKSVILLE
BRITISH COLUMBIA

Scale 1:50 000 Echelle

1 2 3 Kilometers

Unpublished Topographic Map Information
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