



REACH WW05

Lake Hancock

SHORELINE LENGTH:

5.31 Miles

REACH AREA:

136 Acres

PSNERP PROCESS UNITS:

5029, 5030

REACH SUMMARY

Lake Hancock (Reach WW05) extends along the Admiralty Inlet shoreline as it fronts Lake Hancock, a tidally active coastal lagoon (Oblique Photos B and C). The entire reach is mapped as a divergence zone between drift cells trending north and south. The shoreline fronting Lake Hancock is an accretion area and all other shorelines are comprised of feeder bluffs (including areas mapped as exceptional).

Lake Hancock is a large coastal lagoon comprising more than 45 percent of the reach area; the lagoon drains directly to the shoreline, providing significant habitat for numerous species (WDFW habitats include Lagoon, Slough, Wetland and Shorebird and Waterfowl Concentrations). Two streams (both without mapped salmonid use) drain to the shoreline, one within the lagoon area. Other shoreland habitats include Bald Eagle territory and coastal cliffs. Mapped aquatic habitats include geoduck habitat, hardshell clam habitat and patchy kelp and eelgrass intermittently throughout the reach.

Land use is comprised of federally owned (military) open space throughout Lake Hancock lagoon area and rural residential development behind bluffs along the Admiralty Inlet shoreline. The shoreline is modified in areas north of Lake Hancock, where shoreline residential development occurs in front of shoreline slopes and bulkheads are prevalent.

GEOMORPHIC KEY INFORMATION

Geomorphic Shoretype (Map 9)

Feeder Bluff (22%) and Feeder Bluff Exceptional (13%), Accretion Shoreform (14%) fronting Lake Hancock (lagoon area is mapped with No Appreciable Drift (46%))

Net Shore Drift (Map 8)

A broad divergence zone with northward and southward drift occurs along this reach.

Shoreform Current (Map 10)

Barrier Beach (16%); Barrier Lagoon (46%); Bluff-backed Beach (38%)



Overall Rating of Degradation

Least (50%); Less (50%)

Coastal Floodplain:

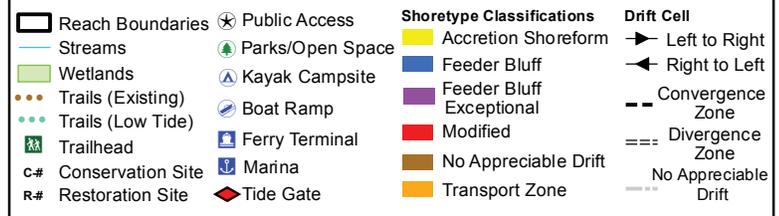
1%

Coastal Landslides & Toe Erosion:

Extensive mapping of both along feeder bluffs to north and south of Lake Hancock lagoon.

Steep Slopes

20%



Shoreline Oblique Photos (2006)

HABITATS & SPECIES

Significant & Unique Features (Maps 5-7)

Geoduck habitat along Admiralty Inlet shoreline (north and south portions of reach); limited hardshell clam habitat; continuous eelgrass extending along shoreline and into Lake Hancock lagoon; patchy kelp mapped intermittently; two documented Pigeon Guillemot nesting colonies at Lagoon North.

Coastal Lagoons	Coastal Stream Mouths	Wetlands (Map 4)
None mapped	2	9%

Forage Fish

Sandlance None mapped **Smelt** None mapped

Herring None mapped

LAND & SHORELINE USE

Shoreline Modifications (Map 13)

Limited modification at north end of reach with shoreline residential development; reach (including Lake Hancock coastal lagoon) otherwise unmodified.

Armoring (% of shoreline) (Map 13) 5%

Zoning (Map 11)

Federal (59%); Rural (21%); Rural Residential (10%); Rural Forest (10%)

Current Land Use (Map 12)

Number of Parcels 85 **Average Parcel Size** 7.63 Acres

Federally owned open space throughout Lake Hancock lagoon area, rural residential development behind bluffs along Admiralty Inlet shoreline.

Shoreland Priority Habitats & Species (Map 5)

Cliffs; Wetland

Marine Priority Habitats & Species (Map 5)

Lagoon; Slough; Waterfowl Concentration; Shorebird Concentration (all focused at Lake Hancock lagoon)

Salmonid Fish Use (Map 5)

Nearshore areas are designated ESA critical habitat for Chinook (Puget Sound ESU).

Public Access (Map 16)

The entire Lake Hancock lagoon is federally owned, with public access provided via a walkway and viewing platform; public tidelands accessible via watercraft at north end of reach.

Overwater Structures (Map 14)

No overwater structures

Shellfish & Aquaculture (Map 15)

Unclassified shellfish growing area; no mapped or classified shellfish beaches.

KEY MANAGEMENT ISSUES

- Continued degradation of shoreline processes due to armoring (bulkheads) in northern areas of reach.
- Disconnection of feeder bluff areas from shoreline due to toe armoring and / or development fronting bluff areas leading to greater down-drift erosion rates (issue is related to short portions of reach where development fronts coastal bluffs).
- Slope stability, habitat and aesthetic implications of additional private shoreline access points on high bank shorelines (accessory to residential development).
- Potential implications of sea level rise (SLR) on Lake Hancock lagoon and fronting barrier beach (loss of habitat).
- Potential use conflicts associated with public access to beaches and private residential property rights.
- Slope / bluff stability for existing and future land uses at the top or toes of slopes, (considering land uses and modifications such as clearing, creation of impervious surfaces, modified surface / ground-water dynamics).
- Subdivision and intensified use — additional modification of feeder bluff / steep slope areas and water quality implications (septic systems and road runoff) due to greater intensity of use.
- Shoreline areas of several subdivisions (i.e., LedgeWood, Bonair, Teronda West) are subject to deep-seated landslides.

RESTORATION OPPORTUNITIES

Restoration sites were identified in 2004 by Coastal Geologic Services (Appendix H).

R69: Remove 35 creosote piles from failing wall.

R70: Remove 4 creosote piles in subtidal area.

Lake Hancock restoration is identified in the Island County Restoration Program plan (2001); restoration goals include removal of creosote pilings and unexploded military ordinances. Continued protection of the valuable, intact lagoon is also highlighted.