



REACH WW04

Crockett Lake, Coupeville Ferry, Fort Casey State Park, and Driftwood Park

SHORELINE LENGTH:

8.77 Miles

REACH AREA:

1,288 Acres

PSNERP PROCESS UNITS:

8058, 8059, 5029

REACH SUMMARY

Crockett Lake, Coupeville Ferry Facility (at Keystone), Fort Casey State Park and Driftwood Park (Reach WW04) extends south along the Ebey's Landing shoreline and east along the Crockett Bay shoreline. The reach includes Keystone Harbor and Crockett Lake, a lagoon area associated with the marine shoreline. This reach includes the Washington State Ferries Coupeville-to-Port Townsend Ferry Facility (at Keystone) (picture C), which provides ferry service to Port Townsend and the Olympic Peninsula (across Admiralty Inlet). Geomorphic shoreline processes are characterized by a convergence of two drift cells along the Admiralty Bay shoreline, supporting the accretion area (barrier beach) separating the bay from Crockett Lake lagoon immediately north. The northwest and southeast portions of the shoreline are mapped with feeder bluffs and transport zones.

Crockett Lake lagoon and adjoining associated wetlands provide significant habitat and is designated a waterfowl concentration area. The lagoon is modified by the access road to the Coupeville Ferry Facility and Keystone Harbor. Admirals Lagoon (14 acres) is also within the reach, located immediately east of the Crockett Lake. Four streams (no salmon use) drain to the shoreline. Mapped habitat within aquatic areas includes pandalid shrimp and hardshell clam areas, a seabird colony, forage fish use and continuous Kelp throughout coastal bluff areas.

Reach land use is characterized by public facilities — both within largely undeveloped park areas within Fort Casey State Park and Ebey's Landing and high intensity facilities along and adjacent to Keystone Harbor. The ferry terminal facility and a public boat launch at the southeast mouth of the harbor include overwater structures. Development within the State Park to the west of Keystone Harbor also includes significant camping and access facilities within the shoreline. Shoreline armoring is common through these areas. The shoreland area between Admiral Bay and Crockett Lake is developed with shoreline residential properties. An offshore tidal energy facility is being investigated to the SW of Admiralty Head.

GEOMORPHIC KEY INFORMATION

Geomorphic Shoretype (Map 9)

Feeder Bluff (26%), Feeder Bluff Exceptional (3%), and Transport Zones (19%) along west facing shoreline, long Accretion Shoreform (45%) fronting Crockett Lake and Coupeville Ferry Facility

Net Shore Drift (Map 8)

Southward drift at a divergence zone at Partridge Point extends around Admiralty Head and converges with northward drift inside Admiralty Bay.

Shoreform Current (Map 10)

Barrier Beach (36%); Bluff-backed Beach (58%); Artificial (6%)

Overall Rating of Degradation

Least (37%); Less (63%)

Coastal Floodplain:

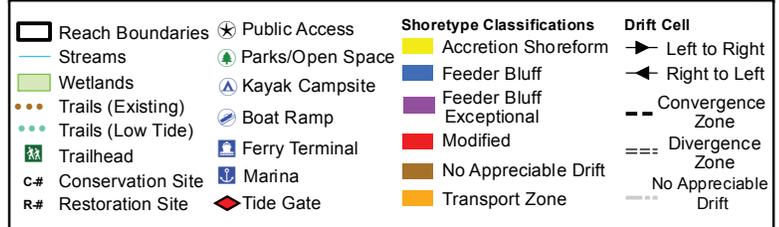
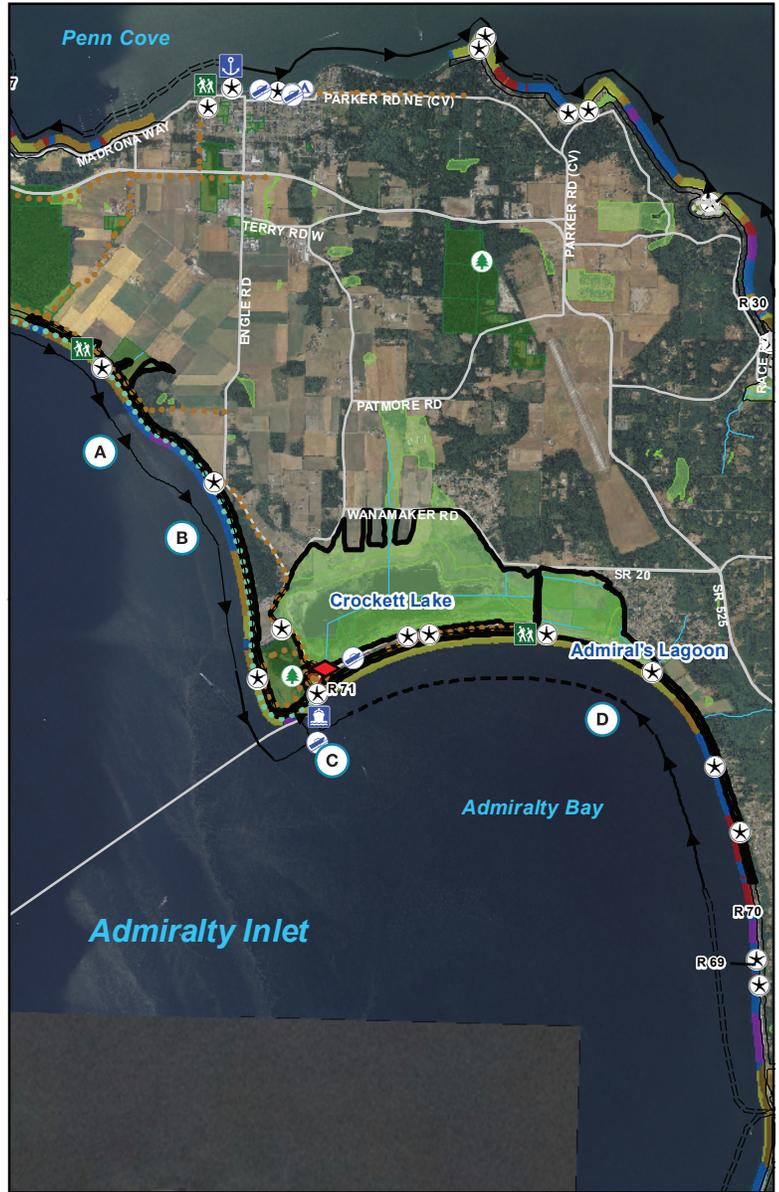
46%

Coastal Landslides & Toe Erosion:

Landslide areas mapped at north and south ends of reach.

Steep Slopes

5%



Shoreline Oblique Photos (2006)

HABITATS & SPECIES

Significant & Unique Features (Maps 5-7)

Mapped Seabird Colony (Alcids); Admiral's Lagoon (14 acres); Crockett Lake is a brackish coastal lagoon with salt-marshes and associated freshwater wetlands; designated as Audubon Important Bird Area. Crockett Lake is also designated as a County Habitat of Local Importance and is the site of an annual international shorebird survey. Three documented Pigeon Guillemot nesting colonies located at Fort Casey, Keystone, and Ledgewood.

Coastal Lagoons 18 acres (1%)	Coastal Stream Mouths 4	Wetlands (Map 4) 82%
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Forage Fish

Sandlance None mapped **Smelt** 2%
Herring None mapped

LAND & SHORELINE USE

Shoreline Modifications (Map 13)

Areas of significant modification; significant modification associated with Coupeville Ferry Facility (modification of connection between marine shoreline and Crockett Lake; riprap armoring fronting terminal facility); major boat launch facility immediately east of the ferry terminal; groins/breakwaters at entrance to Keystone Harbor; riparian areas impacted by historic clearing within Fort Casey State Park; area of armoring along Ebey's Landing Rd (and trail head facility) to the southeast of Perego's Lagoon; bulkheads and armoring fronting residential development along Admiralty Bay; tide gate located at southwest corner of Crockett Lake.

Armoring (% of shoreline) (Map 13) 7%

Zoning (Map 11)

Rural (73%); Rural Agriculture (12%); Rural Residential (7%); Commercial Agriculture (5%); Parks (3%)

Current Land Use (Map 12)

Number of Parcels 345 **Average Parcel Size** 6.54 Acres
 Primarily public park lands; significant open space associated with uses throughout reach; major public shoreline facilities at Keystone Harbor; shoreline residential development to the east of harbor.

Shoreland Priority Habitats & Species (Map 5)

Bald Eagle buffer; Cliffs; Wetlands; 3 acres of mapped Native Oaks and Grassland

Marine Priority Habitats & Species (Map 5)

Waterfowl Concentration through Crockett Lake lagoon

Salmonid Fish Use (Map 5)

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

Public Access (Map 16)

Public lands and tidelands (some accessible only via watercraft) throughout majority of reach; Washington State Parks owned open space throughout a portion of Crockett Lake (limited small craft accessibility); public facilities and access associated with Coupeville Ferry Facility; significant access provided by Fort Casey Historical State Park and adjoining Ebey's Landing National Historical Reserve; public beach access from County property at Driftwood Park, at end of Keystone Spit.

Overwater Structures (Map 14)

Coupeville Ferry Facility located in Keystone Harbor (130 ft. long, 30 ft. wide pier; dolphin structures associated with pier); 2 piers at public boat launch; remnant pier immediately east of boat launch facility (piles and overwater structures remain). An offshore tidal energy facility is being considered to the southwest of Admiralty Head. The facility would primarily be underwater; however, it may have overwater structures along the shoreline.

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).
- Drinking water supply (aquifer) issues associated with additional development (subdivision / intensified use) — saltwater intrusion and potential exacerbation from sea level rise (SLR); limited areas of 'High Risk' for saltwater intrusion in Keystone vicinity (Island County Risk Rating Map).
- Redevelopment and / or intensified use of Coupeville-to-Port Townsend Ferry Facility and adjacent intensive active use areas.
- Restoration of connection between Lake Crockett and the marine shoreline.
- Implications of additional private shoreline access points on high bank shorelines (accessory to residential development).
- Potential implications of SLR on coastal lagoons and barrier beaches (loss of habitat).
- Potential increases in coastal flooding and rates of bluff erosion due to SLR or other factors.
- Potential use conflicts associated with public access to beaches and private residential property rights.
- 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.

RESTORATION OPPORTUNITIES

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

R71: Remove 115 creosote piles and old structures in subtidal area.

Comprehensive restoration of Crockett Lake is identified in the Island County Estuarine Restoration Program plan (2001); restoration goals include establishing open exchange of saltwater, restoration of salmon access and enhanced wildlife habitat.