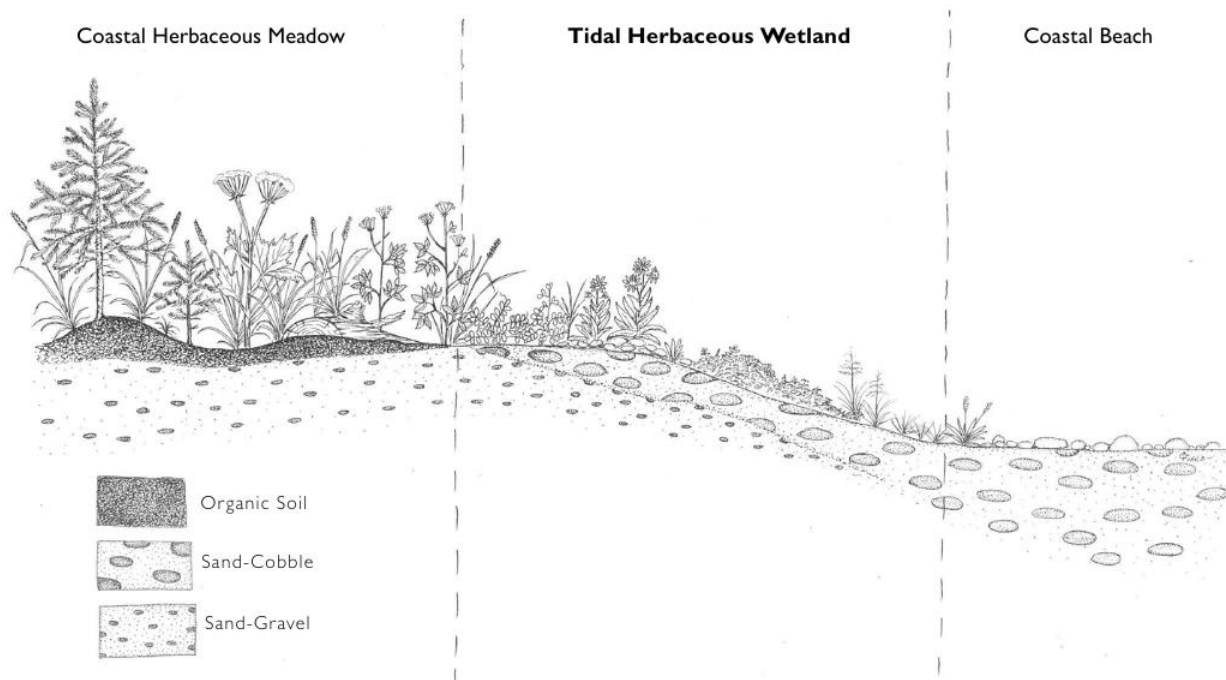


Tidal Herbaceous Wetland



Tidal herbaceous wetlands develop along protected coastlines, within topographic pockets, or as larger complexes along the margins of river deltas. Vegetation ranges from a sparse cover of salt-tolerant forbs and graminoids on mud flats, to lush stands of emergent graminoids in estuaries, to well-vegetated and more structurally-complex communities at the upper reach of tidal influence. Plants establish according to their tolerance to salinity and inundation. At the seaward margin, the halophyte, creeping alkaligrass (*Puccinellia phryganodes*) colonizes bare mud. Moving inland, dominance transitions to Nootka alkaligrass (*Puccinellia nutkaensis*) and succulent, annual forbs such as slender grasswort (*Salicornia maritima*), Canadian sandspurry (*Spergularia canadensis*), Danish scurvygrass (*Cochlearia groenlandica*), and Pursh seepweed (*Suaeda calceoliformis*). The mid marsh support mats of saltmarsh starwort (*Stellaria humifusa*), Pacific silverweed (*Potentilla anserina* ssp. *groenlandica*), sea milkwort (*Lysimachia maritima*), seaside arrowgrass (*Triglochin maritima*) and goose tongue (*Plantago maritima*). Farther inland, dense swards of Lyngbye's (*Carex lyngbyei*) or Ramensk's (*Carex ramenskii*) sedge with largeflower speargrass (*Arctopoa eminens*) establish. The high marsh ranges from the level of seasonal high tides to the maximum reach of storm surges and salt spray. This zone supports a diversity of graminoid, forb, and shrubs with minimal tolerance to saline conditions and inundation. Common grasses include: dunegrass (*Leymus mollis*), Bering's tufted hairgrass (*Deschampsia beringensis*), red fescue (*Festuca rubra*), Pacific reedgrass (*Calamagrostis nutkaensis*), mountain hairgrass (*Vahlodea latifolia*), and bluejoint (*Calamagrostis canadensis*).

The low shrubs sweetgale (*Myrica gale*) and dune willow (*Salix hookeriana*) may be locally abundant.

Environment:

Salt marshes develop where relatively flat land receives periodic input of tidal waters. As an interface between the ocean and land, marshes combine aquatic and terrestrial habitats as well as saline and fresh waters. This dynamic environment supports life adapted to both saturation and brackish conditions. Substrate ranges from cobble and gravel to fine-grained silts.

Disturbance:

Due to their landscape position, salt marshes are highly susceptible to damage from development, oil spills, sea level rise, and earthquake-induced slides and tsunamis. The 9.2-magnitude 1964 Good Friday Earthquake raised the Chenega region between 1.3 and 3.5 m, which elevated former salt marshes above the range of tidal influence. As a result, these habitats have transitioned to vegetation characteristic of the surrounding nontidal habitats while low marsh plants have invaded newly exposed mudflats. Frequent strong winds cause erosive waves, which retard seaward marsh development. Consequently, salt marshes are more infrequent than expected based on topography.

Animal Species Supported:

Mammals:

Sitka black-tailed deer (*Odocoileus hemionus ssp. sitkensis*) – **Tuntuq, Puhgutaq** [Chenega]

Black bear (*Ursus americanus*) – **Tan'erliq**

Fox (*Vulpes vulpes*) – **Kaugya'aq; Kangilngaq, Uuquciik** [NW, PG]

Birds:

Northern pintail duck (*Anas acuta*) – **Pamyurtuliq** [Kodiak], **Eteqsurtuliq** [NW, PG],

Amutaarualek

Mallard duck (*Anas platyrhynchos*) – **Nillqitaq** [NW, PG, Kodiak], **Seqtaq** [PWS]

Black brant (*Branta bernicla nigricans*) – **Kamouk** [PWS]

Cackling goose (*Branta hutchinsii*) – **Lagiq** [Kodiak], **Neqlleq** [NW, PG]

Long-tailed duck (*Clangula hyemalis*) – **Aarrangiiq** [NW, PG, Kodiak], **Arrangkiluk**

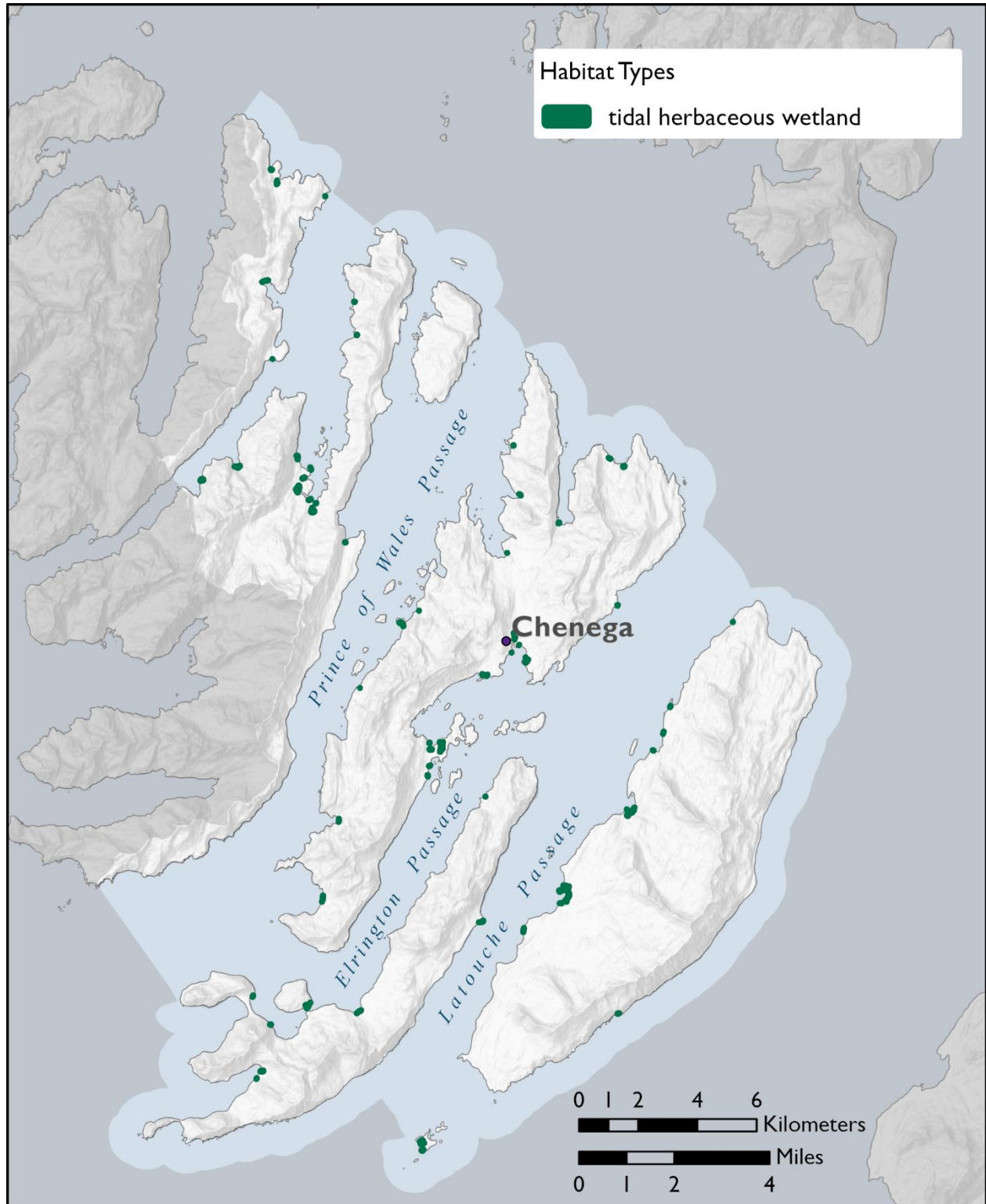
Tundra swan (*Cygnus columbianus*) – **Qugyuk** [Kodiak], **Uquirpak** [PWS], **Saqulegpak** [NW, PG]

Sandhill crane (*Grus canadensis*) – **Tatellgaq** [NW, PG]

Bald eagle (*Haliaeetus leucocephalus*) – **Kuckalag** [Chenega], **Kum'agyak** [NW, PG]

Gull (*Larus* spp.) – **Naruyag**, **Qatayag** [Kodiak], **Naahqwaq** [Chenega], **Qukiswa'ag** [NW, PG]

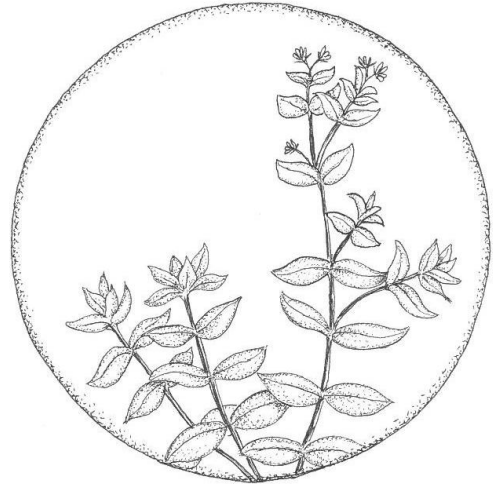
Arctic tern (*Sterna paradisaea*) – **Ayusag**



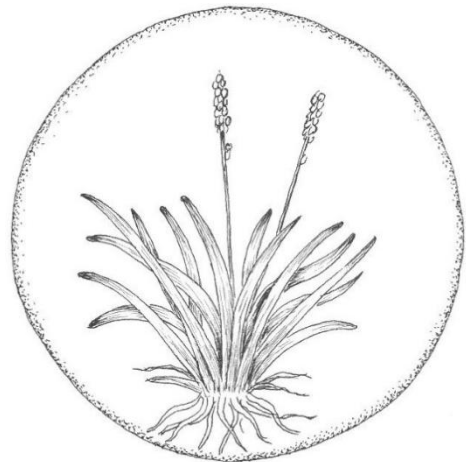
Subsistence Plants:

Species: Common name (*Scientific name*) – **Alutiiq name** [if known]
[NW = Nanwalek; PG = Port Graham; PWS = Prince William Sound]

Beach sandwort (*Honckenya peploides*): Greens are edible, high in vitamin A and C, and used to prevent scurvy. Leaves are harvested and eaten raw, cooked, or fermented. Shoots can be added raw to salads, steamed, sautéed, or added to stir fry, meats, or soups. Leaves can be used in steam bath or boiled into a tea to treat bladder infections. Fish can be cleaned on a mat of leaves to keep clean and prevent them from sliding.



Sweetgale (*Myrica gale*) – **Enem tepkegcuatii** [NW, PG]: No documented use by Alutiiq, but other regional groups boil leaves for a tea to treat tuberculosis or as a wash for boils and pimples. Branches can also be used as a steam bath switch. **CAUTION:** contains a toxic oil that must evaporate during steeping for safe consumption.



Sea plantain (*Plantago maritima*) – **Weguat, Weguaq** [NW]: Greens are edible and collected in late spring and summer. Leaves are eaten raw, added to salads, or cooked as a vegetable green. Mashed leaves can be applied as a poultice to bites or stings to relieve irritation. Leaves can also be wrapped around feet overnight to cure bunions and heal sore, cracked skin.



Beach dunegrass (*Leymus mollis*) – **Imanit, Tapernat**: This plant is used for a wide array of purposes. Leaves are harvested and used as roofing material, fire starter, insulation (clothing, home, food storage pits), mattress stuffing, floor coverings, food preparation surfaces, and steam bath switches. Leaves are also woven into baskets, mats, mittens, socks, cups, and bags. The roots and rhizomes are used as scrubbing material for steam baths.



An aerial image of tidal herbaceous wetland habitat (PC: ShoreZone – Sawmill Bay, Evans Island, Chenega region)