

Ecological Site Description ID:	R236XY102AK—Western Alaska Maritime Dwarf Scrub Gravelly Slopes
Ecological Dynamics of the Site:	
<p>This western Alaska maritime ecological site consists of large (more than 1 foot tall), rolling earth hummocks on upland plains and hills. The site is typically 564 to 1,476 feet above sea level with slopes of 0 to 5 percent. Slope aspect does not appear to influence the plant community dynamics of this site because it is on all aspects.</p> <p>This ecological site is correlated to soil component D36-Western maritime low scrub gravelly glaciated slopes. Soil characteristics that are likely to influence plant community dynamics on this site include the cryic soil temperature regime, udic moisture regime with slow permeability to a depth of 40 inches, and extremely acidic to moderately acidic (pH 3.5 to 5.8) first mineral horizon. The organic material content in the surface layer is 8 to 20 percent. The soils are well drained, and the runoff potential is medium. No ponding or flooding was observed. The annual precipitation is 26 to 53 inches, and the annual frost-free period is 80 to 135 days. The parent material is herbaceous organic material over coarse-loamy cryoturbate over gravelly outwash.</p> <p>The reference community phase is typified by a dense scrubland of low and dwarf shrubs with graminoids and some dense willow interspersed throughout. The reference state supports one community phase, described by structure and dominance of the vegetation. This site is unique because of the large, rolling hummocks. Other ecological sites on upland plains and hills in the survey area are in swales and depressions, on steep slopes, and along the margins of lakes. These other sites support dissimilar reference states, community phases, and disturbance regimes; thus, this unique ecological site was necessary.</p> <p>No known major disturbance regimes are associated with this ecological site; therefore, only a reference community phase is described. Because the undulating hummocks do not create a microtopographic mosaic between high and low points, the overall vegetative assemblage is best described as a single community phase. Slight browsing on willow by an unknown species was observed, but the patchiness, low abundance, and low-lying cover of willow prevent this disturbance from resulting in a significant change in structure and function.</p> <p>No alternative states of this ecological site were observed.</p> <p>This report provides baseline vegetation inventory data for this site. Future data collection is needed to provide further information about existing plant communities and the disturbance regimes that would result in transitions from one community to another.</p>	

Community Phase Narrative:

The reference community phase for this ecological site is characterized by dense, hummocky scrubland that consists dominantly of low and dwarf shrubs. The annual production is visually estimated to occur dominantly in the shrub group with a smaller proportion in the graminoid group. A typical area consists of many shrub species, including black crowberry (*Empetrum nigrum*), dwarf birch (*Betula nana*), spirea (*Spiraea stevenii*), bog blueberry (*Vaccinium uliginosum*), and marsh Labrador tea (*Ledum palustre* spp. *decumbens*). Facultative sedges and facultative wetland sedges are in the wetter micro-lows and may include smallawned, variegated, and Bigelow's sedge (*Carex microchaeta*, *C. stylosa*, and *C. bigelowii*, respectively). Other hydrophilic plants may include arctic sweet coltsfoot (*Petasites frigidus*), Altai fescue (*Festuca altaica*), and arctic raspberry (*Rubus arcticus*). Greyleaf and tealeaf willow (*Salix glauca* and *S. pulchra*, respectively) commonly dot this plant community. Mosses (average total cover ~34 percent) and lichens (~17 percent) are typically on the surface. Ground cover may also include herbaceous litter (~45 percent) and woody litter (~11 percent). Approximately 4 percent is bare soil.

Community Phase Canopy Cover

(Vegetation data in the table are provided as constancy (percent) and average canopy cover (percent) of the most dominant and ecologically relevant species for this community phase.)

Plant group	Common name	Scientific name	USDA plant code	Constancy (percent)	Average canopy cover (percent)
S	Black crowberry	<i>Empetrum nigrum</i>	EMNI	100.0	49.3
S	Dwarf birch	<i>Betula nana</i>	BENA	100.0	29.3
S	Marsh Labrador tea	<i>Ledum palustre</i> ssp. <i>decumbens</i>	LEPAD	100.0	12.1
S	Beauverd spirea	<i>Spiraea stevenii</i>	SPST3	100.0	8.4
S	Bog blueberry	<i>Vaccinium uliginosum</i>	VAUL	100.0	15.0
S	Tealeaf willow	<i>Salix pulchra</i>	SAPU15	85.7	7.7
S	Lingonberry	<i>Vaccinium vitis-idaea</i>	VAVI	85.7	5.5
G	Bering Sea sedge	<i>Carex microchaeta</i> ssp. <i>nesophila</i>	CAMIN	85.7	11.2
G	Bluejoint grass	<i>Calamagrostis canadensis</i>	CACA4	71.4	5.6

This report is interim and subject to change.