

LANDFIRE Biophysical Setting Model

Biophysical Setting 7516600

Alaskan Pacific Maritime Wet Low Shrub

- ☐ This BPS is lumped with:
☐ This BPS is split into multiple models:

General Information

Contributors (also see the Comments field)

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Reviewer

Vegetation Type

Wetlands/Riparian

Map Zone

75

Model Zone

- | | |
|--|--|
| ☒ Alaska | ☐ N-Cent.Rockies |
| ☐ California | ☐ Pacific Northwest |
| ☐ Great Basin | ☐ South Central |
| ☐ Great Lakes | ☐ Southeast |
| ☐ Northeast | ☐ S. Appalachians |
| ☐ Northern Plains | ☐ Southwest |

Dominant Species*

MYGA CAREX
VAUL TRCA30
ALVIS ERAN6
KAMI EQVA

General Model Sources

- ☒ Literature
☐ Local Data
☒ Expert Estimate

Geographic Range

This system occurs from the region of the eastern Alaska Peninsula, Katmai National Park and Preserve, east and south, on Kodiak Island and throughout southeastern AK. It is notably absent from the Stikine Valley and the Kenai Fjords.

Biophysical Site Description

This wetland system typically occurs as a ring on the outer edge of peatlands or on uplifted tidal marshes that are relatively wet but no longer tidally influenced (NatureServe 2008). It may also occur in upper-watershed locations as an ecotone on the edge of the forest. It is a minor yet widespread association wherever mature peatlands and uplifted tidal marshes occur, such as the Copper River Delta and Yakutat Forelands (NatureServe 2008). Soils generally have a wet organic layer (eight centimeters to one meter deep) over silt, sand or gravel (NatureServe 2008). Soils are saturated for at least a portion of the growing season, and a peat layer is usually present but variable in depth.

Vegetation Description

The following information was taken from the draft Maritime Ecological Systems description (NatureServe 2008):

The shrub layer is dominated by *Myrica gale* and/or *Vaccinium uliginosum*. Species richness is often high and composition is variable. Common associated species may include *Alnus viridis* ssp. *sinuata*, *Kalmia microphylla*, *Carex pauciflora*, *Carex livida*, *C. sitchensis*, *C. pluriflora*, *C. viridula* ssp. *viridula*, *Trichophorum caespitosum*, *Eriophorum angustifolium*, *Equisetum variegatum*, *Drosera rotundifolia*, *Sanguisorba canadensis*, *Sanguisorba officinalis*, *Calamagrostis canadensis* and *Rubus arcticus*. *Sphagnum* spp. may be abundant in the ground layer (Shephard 1995, Boggs 2000).

Disturbance Description

The dominant factor governing the dynamics of this system is hydrology. Under appropriate hydrologic

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**Fire Regime Groups are: I: 0-35 year frequency, surface severity; II: 0-35 year frequency, replacement severity; III: 35-100-year frequency, mixed severity; IV: 35-100+ year frequency, replacement severity; V: 200+ year frequency, replacement severity

conditions this system will remain stable for long periods but changes in water level or frequency and duration of flooding may cause a transition to another BpS. Substantial flooding/increase in water level may lead to the development of a Freshwater Emergent Marsh system. Minor flooding/increase in water level may lead the development of a Fen and Wet Meadow system.

This system likely does not burn in southeast Alaska.

Adjacency or Identification Concerns

Native Uncharacteristic Conditions

Scale Description

Small patch

Issues/Problems

Comments

This system was created for the maritime region and did not receive review for other regions in the state.

This model was developed based on input from experts who attend the LANDFIRE Juneau Modeling Meeting (Feb. 08) and the draft Maritime Ecological Systems description (NatureServe 2008) and refined by David D'Amore.

Vegetation Classes

Class A 100 %

Mid Development 1 All Structures

Upper Layer Lifeform

- ☐ Herbaceous
☒ Shrub
☐ Tree

Indicator Species* and Canopy Position

MYGA Upper
 VAUL Upper
 ALVIS Upper
 CAREX Lower

Structure Data (for upper layer lifeform)

	Min	Max
Cover	Open Shrub (25-74% shrub cover)	Closed Shrub (> 75% shrub cover)
Height	Dwarf Shrub (< 20 cm)	Low Shrub (20 cm to 1.5 m)
Tree Size Class	None	

☐ Upper layer lifeform differs from dominant lifeform.

Description

Zero years plus

This class represents the stable Wet Low Shrub community. See the Vegetation Description for a list of common species.

This class persists indefinitely under appropriate hydrological conditions. No disturbances modeled.

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Class B 0 %

[Not Used] [Not Used]

Upper Layer Lifeform

- ☐ Herbaceous
☐ Shrub
☐ Tree

**Indicator Species* and
Canopy Position****Structure Data (for upper layer lifeform)**

	Min	Max
Cover		
Height		
Tree Size Class		

☐ Upper layer lifeform differs from dominant lifeform.**Description****Class C 0 %**

[Not Used] [Not Used]

Upper Layer Lifeform

- ☐ Herbaceous
☐ Shrub
☐ Tree

**Indicator Species* and
Canopy Position****Structure Data (for upper layer lifeform)**

	Min	Max
Cover		
Height		
Tree Size Class		

☐ Upper layer lifeform differs from dominant lifeform.**Description****Class D 0 %**

[Not Used] [Not Used]

Upper Layer Lifeform

- ☐ Herbaceous
☐ Shrub
☐ Tree

**Indicator Species* and
Canopy Position****Structure Data (for upper layer lifeform)**

	Min	Max
Cover		
Height		
Tree Size Class		

☐ Upper layer lifeform differs from dominant lifeform.**Description****Class E 0 %**

[Not Used] [Not Used]

Upper Layer Lifeform

- ☐ Herbaceous
☐ Shrub
☐ Tree

**Indicator Species* and
Canopy Position****Structure Data (for upper layer lifeform)**

	Min	Max
Cover		
Height		
Tree Size Class		

☐ Upper layer lifeform differs from dominant lifeform.**Description****Disturbances**

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Fire Regime Group:** NA

Historical Fire Size (acres)

Avg 0

Min 0

Max 0

Sources of Fire Regime Data

- ☐ Literature
☐ Local Data
☒ Expert Estimate

Additional Disturbances Modeled

- ☐ Insects/Disease ☐ Native Grazing ☐ Other (optional 1)
☐ Wind/Weather/Stress ☐ Competition ☐ Other (optional 2)

Fire Intervals

	Avg FI	Min FI	Max FI	Probability	Percent of All Fires
Replacement					
Mixed					
Surface					
All Fires					

Fire Intervals (FI):

Fire interval is expressed in years for each fire severity class and for all types of fire combined (All Fires). Average FI is central tendency modeled. Minimum and maximum show the relative range of fire intervals, if known. Probability is the inverse of fire interval in years and is used in reference condition modeling. Percent of all fires is the percent of all fires in that severity class.

References

Boggs, K. 2000. Classification of community types, successional sequences and landscapes of the Copper River Delta. Gen. Tech. Rep. PNW-GTR-469. Portland, OR. USDA Forest, Pacific Northwest Research Station. 244 pp.

NatureServe. 2008. International Ecological Classification Standard: Terrestrial Ecological Classifications. Draft Ecological Systems Description for the Alaska Maritime Region.

Shephard, M.E. 1995. Plant community ecology and classification of the Yakutat Foreland, Alaska. Technical Report R10-TP-56. Juneau, AK: USDA Forest Service, Alaska Region. 206 pp.

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