LANDFIRE Biophysical Setting Model

Biophysical Setting 7716600 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 **Date** 8/18/2008

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Vegetation Type
Wetlands/Riparian

Map Zone
77

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 (8 cm to 1 m 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 seve

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 AK.

Adjacency or Identification Concerns

Native Uncharacteristic Conditions

Scale Description

Small patch

Issues/Problems

Comments

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 plus years

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.

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.

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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

Fire Regime Group:** **NA**

Historical Fire Size (acres)

Avg 0
Min 0
Max 0

Sources of Fire Regime Data

- ☐ Literature
- ☐ Local Data
- ☑ Expert Estimate

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 fir combined (All Fires). Average FI is central tendency modeled. Minimum and maximum show the relative range of fire intervals, if known. Probability is the inver 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.

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Additional Disturbances Modeled

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

References

Boggs, K. 2000. Classification of community types, success ional sequences and landscapes of the Copper River Delta. Gen. Tech. Rep. PNW-GTR-469. Portland, OR. U.S. Dept. of Agriculture, Forest Service, Pacific Northwest Research Station. 244 p.

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 p.

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