

LANDFIRE Biophysical Setting Model

Biophysical Setting 7716610

Alaskan Pacific Maritime Fen and Wet Meadow

- ☐ 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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Modeler 2 **Reviewer**
Modeler 3 **Reviewer**

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*

CAAQD METR3
DOPU COPA28
PAFI3 CASA10
ERRU2 CALY3

General Model Sources

- ☒ Literature
☐ Local Data
☒ Expert Estimate

Geographic Range

This type occurs from Kodiak Island through southeast AK.

Biophysical Site Description

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

This system includes a variety of herbaceous wetlands. Common themes include sedges with diverse forbs and an organic layer that ranges from thick to relatively thin. The organic layer may be composed of sphagnum, sedge, or other organic material and can occur over mineral soil, or may be floating or submerged.

Vegetation Description

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

This BpS consistently features *Carex aquatilis* var. *diversa* (formerly *Carex sitchensis*) (McClellan et al. 2003), though a variety of other sedges and forbs may be present including *Dodecatheon pulchellum*, *Parnassia fimbriata*, *Eriophorum russeolum*, *Menyanthes trifoliata*, *Comarum palustre*. Ericaceous shrubs are absent. Bryophytes (when present) include *Calligeron giganteum*, *Sphagnum squarrosum*, and *S. riparium*. (Shephard 1995, Boggs 2000). Wet herbaceous meadows are often dominated by sedges and forbs such as *Carex saxatilis*, *Carex lyngbyei*, *Sanguisorba canadensis*, *Swertia perrenis*, *Platanthera dilatata*, *Equisetum variegatum*, and *Equisetum fulvatile*.

Disturbance Description

The dominant factor governing the dynamics of this system is hydrology. Under appropriate hydrologic conditions this system will remain stable for long periods but changes in water level or frequency and

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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

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. Under drying conditions, a Wet Low Shrub community may develop.

This system likely does not burn in southeast AK.

Adjacency or Identification Concerns

This type does not include poor fens—these are included with the bog types.

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

CAAQD Upper
DOPU Upper
PAFI3 Upper
CASA10 Upper

Structure Data (for upper layer lifeform)

	Min	Max
Cover	Herbaceous	Herbaceous
Height	Herbaceous	Herbaceous
Tree Size Class	None	

☐ Upper layer lifeform differs from dominant lifeform.

Description

Zero plus years

This class represents the stable Fen and Wet Meadow 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 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.

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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, successional 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.

McClellan, M.H., Brock, T., Baichtal, J.F. 2003. Calcareous Fens in Southeast Alaska. PNW-RN-536. USDA Forest Service, Pacific Northwest Research Station, Portland, OR. 10 p.

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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