

LANDFIRE Biophysical Setting Model

Biophysical Setting 7716530

Alaskan Pacific Maritime Mesic Herbaceous Meadow

☐ This BPS is lumped with:

☐ This BPS is split into multiple models:

General Information

Contributors (also see the Comments field)

Date 9/15/2008

Modeler 1 Rick Turner rltturner@fs.fed.us

Reviewer Tom DeMeo tdemeo@fs.fed.us

Modeler 2

Reviewer Tina Boucher antvb@uaa.alaska.edu

Modeler 3

Reviewer

Vegetation Type

Upland Grassland/Herbaceous

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*

ANGE2 VEGI
CHANA LUNO
HEMA80 ACDE2
ATFI SACA14

General Model Sources

- ☒ Literature
☐ Local Data
☒ Expert Estimate

Geographic Range

This system is found from Prince William Sound through southeast AK.

Biophysical Site Description

Mesic herbaceous meadows are a widely distributed type found on a variety of landforms and at varying elevations. Some occur on subalpine sideslopes with colluvial accumulations of well-drained soils. It can also occur at lower elevations on stream levees or higher elevation sites that tend to hold snow and have a relatively short growing season. The main factor is deep, nutrient-rich, well-drained soils.

Vegetation Description

This herbaceous system includes a wide variety of vegetation types dominated by forbs, graminoids or ferns (NatureServe 2008). Vegetation may be dominated by forbs, grasses, or ferns. In the northern portion of the range (Yakutat to Kodiak) meadows dominated by *Calamagrostis canadensis* and *Chamerion angustifolium* are common, but occur less frequently in the southern portion of the range. Forb (particularly large umbel) and fern meadows occur throughout the range. The most common diagnostic assemblages include *Angelica genuflexa*, *Calamagrostis canadensis* and *Chamerion angustifolium*. One or more of the following species can also be present: *Veratrum viride*, *Athyrium filix-femina*, or *Heracleum maximum*. Other common species may include *Lupinus nootkatensis*, *Aconitum delphiniifolium*, *Sanguisorba canadensis*, *Senecio triangularis* *Nephrophyllidium crista-galli* and *Angelica genuflexa* (Shephard 1995, DeVelice et al. 1999).

Disturbance Description

Successional relationships for this type are largely unknown (Viereck et al. 1992; III.B.2.). Some mesic herbaceous types may persist for quite a while. Shrubs and tree seedlings are inhibited due to very dense vegetation cover and lack of substrate for tree seedling germination.

*Dominant Species are from the NRCS PLANTS database. To check a species code, please visit <http://plants.usda.gov>.

**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

It is unclear what disturbances affect this system in the Maritime region of AK. A reviewer noted that many, if not all of the non-forest communities on level or gentle terrain accumulate incompletely decayed vegetation (peat) over centuries, and for all practical purposes have no disturbance.

Adjacency or Identification Concerns

This system can be found adjacent to Alaskan Pacific Maritime Subalpine Alder-Salmonberry Shrubland, Alaskan Pacific Maritime Avalanche Slope Shrubland, Alaskan Pacific Maritime Shrub and Herbaceous Floodplain Wetland (near stream levees) and most forest types.

Native Uncharacteristic Conditions

Scale Description

Small patch

Issues/Problems

There is little information about disturbances affecting this community or its successional status.

Comments

This model was based on input from experts who attended the LANDFIRE Juneau Modeling Meeting (Feb. 08) and refined by Rick Turner. Review resulted in minor descriptive changes.

Vegetation Classes

Class A 100 %

Mid Development 1 All Structures

Upper Layer Lifeform

- ☒ Herbaceous
☐ Shrub
☐ Tree

Indicator Species* and

Canopy Position

ANGE2 Upper
 CHANA2 Upper
 HEMA80 Upper
 ATFI 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 Mesic Herbaceous Meadow BpS. Forbs, grasses and/or ferns dominate the site.

No disturbances were 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

DeVelle, R.L., Hubbard, C.J., Boggs, K. et al. 1999. Plant community types of the Chugach National Forest. Tech. Publ. R10-TP-76. Juneau, AK: U.S. Forest Service, Alaska Region. 375p.

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.

Viereck et al. 1992. The Alaska vegetation classification. Pacific Northwest Research Station, USDA Forest Service, Portland, OR. Gen. Tech. Rep. PNW-GTR286. 278 p.

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