

LANDFIRE Biophysical Setting Model

Biophysical Setting 7617200

Aleutian Mixed Dwarf-Shrub-Herbaceous Shrubland

☐ This BPS is lumped with:

☐ This BPS is split into multiple models:

General Information

Contributors (also see the Comments field)

Date 11/21/2008

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Vegetation Type

Upland Shrubland

Map Zone

76

Model Zone

☒ Alaska

☐ N-Cent.Rockies

☐ California

☐ Pacific Northwest

☐ Great Basin

☐ South Central

☐ Great Lakes

☐ Southeast

☐ Northeast

☐ S. Appalachians

☐ Northern Plains

☐ Southwest

Dominant Species*

VAVIM SAAR27

EMNI CALY4

HAST3 CAMA11

PHAL4 CHANA

General Model Sources

☐ Literature

☐ Local Data

☒ Expert Estimate

Geographic Range

This system occurs throughout the Alaska Peninsula, Aleutian Islands and Kodiak Island (NatureServe 2008).

Biophysical Site Description

This is a common system throughout the Alaska Peninsula and Aleutian Islands from low to high elevations. It occurs in valleys, terraces, sideslopes and ridges. In the mountains, this system often grades upslope into the sparse heaths and fell-fields system. The continuous dwarf-shrub heaths often fragment into strips that alternate with almost bare ground, possibly due to wind erosion and frost action (NatureServe 2008).

Vegetation Description

In this system, dwarf-shrub cover is >25%, not dominated by *Empetrum nigrum*, but herbaceous cover varies from 0% to 75%. Various dwarf-shrub species dominate or codominate, including *Harrimanella stelleriana*, *Phyllodoce aleutica*, *Salix arctica*, *Salix rotundifolia*, *Cassiope lycopodioides*, *Loiseleuria procumbens*, *Vaccinium vitis-idaea*, *Vaccinium uliginosum* and *Arctostaphylos alpina*. While *Empetrum nigrum* may codominate, it is mixed with other dwarf-shrubs. Common herbaceous species include *Carex macrochaeta*, *Chamerion angustifolium*, *Deschampsia caespitosa*, *Lupinus nootkatensis*, *Leymus mollis*, *Geum calthifolium*, *Carex circinata*, *Polygonum viviparum* and *Festuca rubra*. Bryophyte cover is often high (NatureServe 2008).

Disturbance Description

Modelers had no information on the successional dynamics of this system.

*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

Adjacency or Identification Concerns

Native Uncharacteristic Conditions

This type is not departed from its "Reference Condition."

Scale Description

Large patch

Issues/Problems

Comments

This model was created by Randy Swaty and Keith Boggs based on the draft Aleutians Ecological Systems description (NatureServe 2008).

Vegetation Classes

Class A 100 %

Mid Development 1 All Structures

Upper Layer Lifeform

- ☐ Herbaceous
☒ Shrub
☐ Tree

Indicator Species* and Canopy Position

VAVIM Upper
EMNI Upper
HAST3 Upper
PHAL4 Upper

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)	Dwarf Shrub (< 20 cm)
Tree Size Class	None	

☒ Upper layer lifeform differs from dominant lifeform.

Herbs can also be dominant.

Description

Zero plus years

This class represents the Aleutian Mixed Dwarf-Shrub-Herbaceous Shrubland. Dwarf shrubs will have at least 25% cover. Herbaceous cover can be 25-75% of the total overstory cover. See Vegetation Description for more information on species composition.

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.

Description

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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

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

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