LANDFIRE Biophysical Setting Model

Biophysical Setting 7617300 Aleutian Sparse Heath and Fell-field

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

General Information

Contributors (also see the Comments field **Date** 10/23/2008

Modeler 1	Kori Blankenship	kblankenship@tnc.org	**Reviewer**	Jeff Williams	Jeff_Williams@fws.gov
Modeler 2	Keith Boggs	ankwb@uaa.alaska.edu	**Reviewer**		
Modeler 3			**Reviewer**		

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*

HAST3	EMNI
PHAL4	CALY4
SAAR27	ARAL2
SARO2	CAREX

General Model Sources
☐ Literature
☐ Local Data
☑ Expert Estimate

Geographic Range
This system occurs on the Alaska Peninsula, Aleutian Islands and Kodiak Island.

Biophysical Site Description
This system typically occurs at higher elevations on exposed summits, windswept ridges, cliffs, rocky outcrops and fellfields characterized by harsh environmental conditions (NatureServe 2008). Slopes vary from flat to steep (NatureServe 2008).

Vegetation Description
The following information was taken from the draft Arctic Ecological Systems description (NatureServe 2008):
Total vascular plant cover is 10-25%, and lichen cover is <25%. The higher elevation fellfields and discontinuous heath include Harrimanella stelleriana, Phyllodoce aleutica, Salix arctica, Salix rotundifolia, Empetrum nigrum, Cassiope lycopodioides and Arctostaphylos alpina. Herbaceous species include Carex macrochaeta, Carex aquatilis var. dives (= Carex sitchensis), Carex circinata, Lupinus nootkatensis, Geum calthifolium, Polygonum viviparum, Agrostis mertensii (= Agrostis borealis), Heuchera glabra, Potentilla villosa, Saxifraga bronchialis, Saxifraga oppositifolia, Veronica wormskjoldii var. stelleri (= Veronica stelleri) and Tofieldia coccinea (Shacklette et al. 1969).

Disturbance Description
Successional dynamics in this system are unclear, but it is likely a relatively unstable system given the harsh environmental conditions it is subjected to. Solifluction processes represent a dominant ground disturbance on Amchitka Island and other regions (Shacklette et al. 1969).

Adjacency or Identification Concerns

*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 seve

Native Uncharacteristic Conditions

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

Scale Description

Martix or large patch

Issues/Problems

Comments

This model was created by Kori Blankenship and Keith Boggs based on information from 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

HAST3	Upper
PHAL4	Upper
SAAR27	Upper
SARO2	Upper

Structure Data (for upper layer lifeform)

	Min	Max
Cover	Open Shrub (25-74% shrub cover)	Open Shrub (25-74% shrub cover)
Height	Dwarf Shrub (< 20 cm)	Dwarf Shrub (< 20 cm)
Tree Size Class	None	

☐ Upper layer lifeform differs from dominant lifeform.

Description

Zero plus years

This class represents the Sparse Heath and Fell-field. 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 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

Byrd, G.V. 1984. Vascular vegetation of Buldir Island, Aleutian Islands, Alaska, compared to another Aleutian island. Arctic 37(1):37-48.

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

Shacklette, H.T., L.W. Durrell, J.A. Erdman, J.R. Keith, W.M. Klein, H. Krog, H. Persson, H. Skuja, and W.A. Weber. 1969. Vegetation of Amchitka Island, Aleutian Islands, Alaska. Geological Survery Professional Paper 648. U.S. Government Printing Office, Washington, DC. 66 pp.

Talbot, S.S., S.L. Talbot and W.B. Schofield. 2006. Vascular flora of Izembek National Wildlife Refuge, westernmost Alaska Peninsula, Alaska. Rhodora 108(935):249-293.

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