USDA Natural Resources
Conservation Service

Ecological site F220XY325AK
Maritime Forest Gravelly Floodplains, High Gradient Occasionally Flooded

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General information

Provisional. A provisional ecological site description has undergone quality control and quality assurance review. It contains a working state and transition model and enough information to identify the ecological site.

MLRA notes

Major Land Resource Area (MLRA): 220X–Alexander Archipelago-Gulf of Alaska Coast

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Ecological site concept

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Table 1. Dominant plant species

Tree	(1) *Picea sitchensis* (2) *Tsuga heterophylla*
Shrub	(1) *Menziesia ferruginea* (2) *Oplopanax horridus*
Herbaceous	(1) *Gymnocarpium dryopteris* (2) *Athyrium filix-femina*

Physiographic features

Climatic features

Influencing water features

Soil features

Ecological dynamics

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State and transition model

Ecosystem states

1. Refernce

State 1 submodel, plant communities

1.1. Western Hemlock-Sitka Spruce Forest Community

1.2. Sitka Spruce-Poplar Community

1.3. Sitka Spruce-Paper Birch- Western Hemlock - Alder Community

1.4. test

State 1
Refernce

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Community 1.1
Western Hemlock-Sitka Spruce Forest Community

The reference community phase for a Maritime Forest Gravelly Floodplain is characterized by a closed canopy *Picea sitchensis*, *Betula papyrifera* var. papyrifera (paper birch), and *Tsuga heterophylla* forest. *Abies lasiocarpa* may occasionally occur at higher elevation sites. The sub canopy layer is variable. Some sites have minimal shrub and forb cover with 40% moss cover. Other sites have a mixed shrub-forb-moss understory with high species diversity. Common shrub species on these sites include *Oplopanax horridus* (devilsclub), *Alnus viridis* ssp. Sinuata, *Viburnum edule* (squashberry), *Menziesia ferruginea* (rusty menziesia), and *Vaccinium ovalifolium* (oval-leaf blueberry). Forb species include *Gymnocarpium dryopteris* (western oakfern), *Athyrium filix-femina* (common ladyfern), *Dryopteris expansa* (spreading woodfern), *Streptopus amplexifolius* (claspleaf twistedstalk), *Boschniakia rossica* (northern groundcone), *Trientalis europaea* (arctic starflower), *Orthilia secunda* (sidebells wintergreen), and *Moneses uniflora* (single delight).

Community 1.2
Sitka Spruce- Poplar Community

Following a brief duration flood, lichen establishes on bare rock produce an early successional lichen community. The ground cover is approximately 15% bare rock, 75% lichen, and 10% moss. Common lichen species include Stereocaulon (snow lichen) and *Cladina rangiferina* (greygreen reindeer lichen). Overstory vegetation includes near 35% of regenerating to medium sized *Picea sitchensis*, *Tsuga heterophylla* and *Populus balsamifera* (balsam poplar). Shrub cover may be up to 80% of Menziesia (Menziesia) and *Alnus viridis* ssp. Sinuata.

Community 1.3
Sitka Spruce- Paper Birch- Western Hemlock - Alder Community

This is the mid to late sere community phase following flood. As the plant community progresses from an early sere community into a mid sere, shrub cover declines and tree cover and size increases. This shrub community is

dominated by *Alnus viridis* ssp. Sinuata and Menziesia with smaller proportions of *Salix sitchensis* (sitka willow). Shrub cover is up to 80%. Tree canopy cover is near 25% and is comprised of mostly medium sized trees (15- 40 ft tall) and some tall (greater than 40 ft) including *Populus balsamifera*, *Tsuga heterophylla* and *Picea sitchensis*.

Community 1.4
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Additional community tables

Other references

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Contributors

Elizabeth Powers

Rangeland health reference sheet

Interpreting Indicators of Rangeland Health is a qualitative assessment protocol used to determine ecosystem condition based on benchmark characteristics described in the Reference Sheet. A suite of 17 (or more) indicators are typically considered in an assessment. The ecological site(s) representative of an assessment location must be known prior to applying the protocol and must be verified based on soils and climate. Current plant community cannot be used to identify the ecological site.

Author(s)/participant(s)	
Contact for lead author	
Date	
Approved by	
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

1. **Number and extent of rills:**

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2. **Presence of water flow patterns:**

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3. **Number and height of erosional pedestals or terracettes:**

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4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):**

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5. **Number of gullies and erosion associated with gullies:**

6. **Extent of wind scoured, blowouts and/or depositional areas:**

7. **Amount of litter movement (describe size and distance expected to travel):**

8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):**

9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):**

10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:**

11. **Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):**

12. **Functional/Structural Groups (list in order of descending dominance by above-ground annual-production or live foliar cover using symbols: >>, >, = to indicate much greater than, greater than, and equal to):**

    Dominant:

    Sub-dominant:

    Other:

    Additional:

13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):**

14. **Average percent litter cover (%) and depth (in):**

15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):**

16. **Potential invasive (including noxious) species (native and non-native). List species which BOTH characterize degraded states and have the potential to become a dominant or co-dominant species on the ecological site if their future establishment and growth is not actively controlled by management interventions. Species that become dominant for only one to several years (e.g., short-term response to drought or wildfire) are not**

invasive plants. Note that unlike other indicators, we are describing what is NOT expected in the reference state for the ecological site:

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17. **Perennial plant reproductive capability:**
