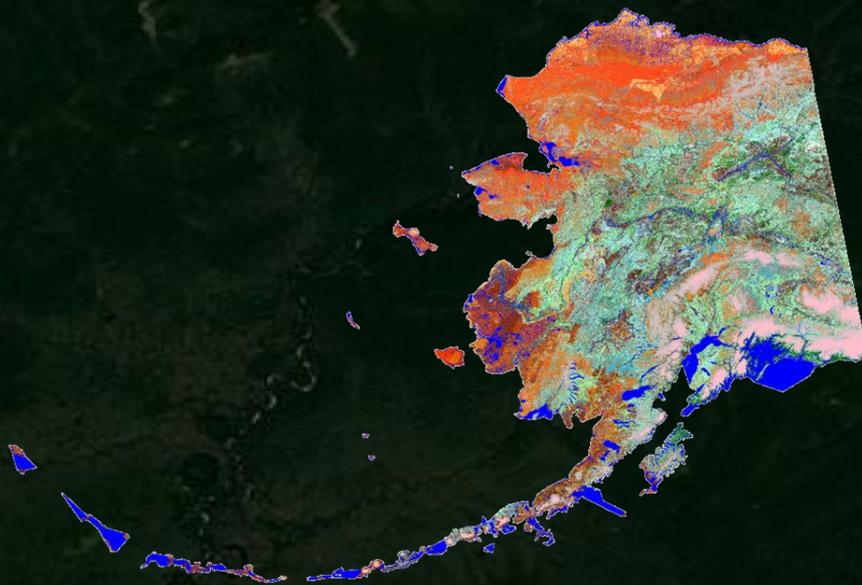


LANDFIRE Alaska Existing Vegetation Mapping



Existing Vegetation Type Legend

- Ecological Systems
 - Developed by NatureServe and Alaska National Heritage Program
 - “Mid-scale ecological units encompassing complexes of plant communities influenced by similar physical environments and dynamic ecological processes”
 - 138 distinct classes in Alaska
 - System descriptions available at www.natureserve.org

Field Data Availability and Use

- Data collected from various parties
- Point data used to extract pixel values from input layers
- Polygon data rasterized to 30m pixels and each pixel used as 1 point
- Aerial sketch map data collected in 2006 and 2007 to augment LFRDB
- Spatial distribution of data very “clumped”
- Some parts of state had very sparse field data available

Image Strip Processing

- Individual scenes mosaiced into strips and masked between dates
- Unsupervised classification performed to cluster multi-date imagery
- Spectral groups formed from clusters to separate clouds, bad data
- Re-clustering of “good date” image to remove bad data
- Spectral groups formed from re-clustered imagery
- Decision tree models used to classify vegetation types in each group
- Individual strips mosaiced into mapping zone products

Existing Vegetation Structure

- Sparse field data available describing canopy cover and height
- Used image mosaics to map full zone at once
- Decision tree models used to map individual lifeform structure
- 3-lifeform mask derived from final EVT map
- Composite structure maps built from the 3-lifeform mask
- Used modified Viereck legend for canopy cover and height

Mapping Challenges

- Field data availability and distribution
- Detail in the EVT legend
- Image availability, clouds, sun angles, etc.
- Lack of statewide ancillary layers
- Complexity of mapping methodology

Data Usage

- Habitat modeling
- Ecological assessments
- Setting conservation priorities
- Biodiversity and species richness studies
- Species range modeling

Data Feedback

- Comments, feedback, questions, suggestions welcomed
- helpdesk@landfire.gov
- www.landfire.gov