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### Potential Fire Occurrence - Alaska

**Indicator:** Potential Fire Occurrence. This map shows the relative frequency of fire in Alaska based on: (1) the annual number of fires documented within each ecoregion, (2) fuel type based on vegetation assemblage, (3) an index to fire behavior within each fuel type, and (4) the average annual summer precipitation.

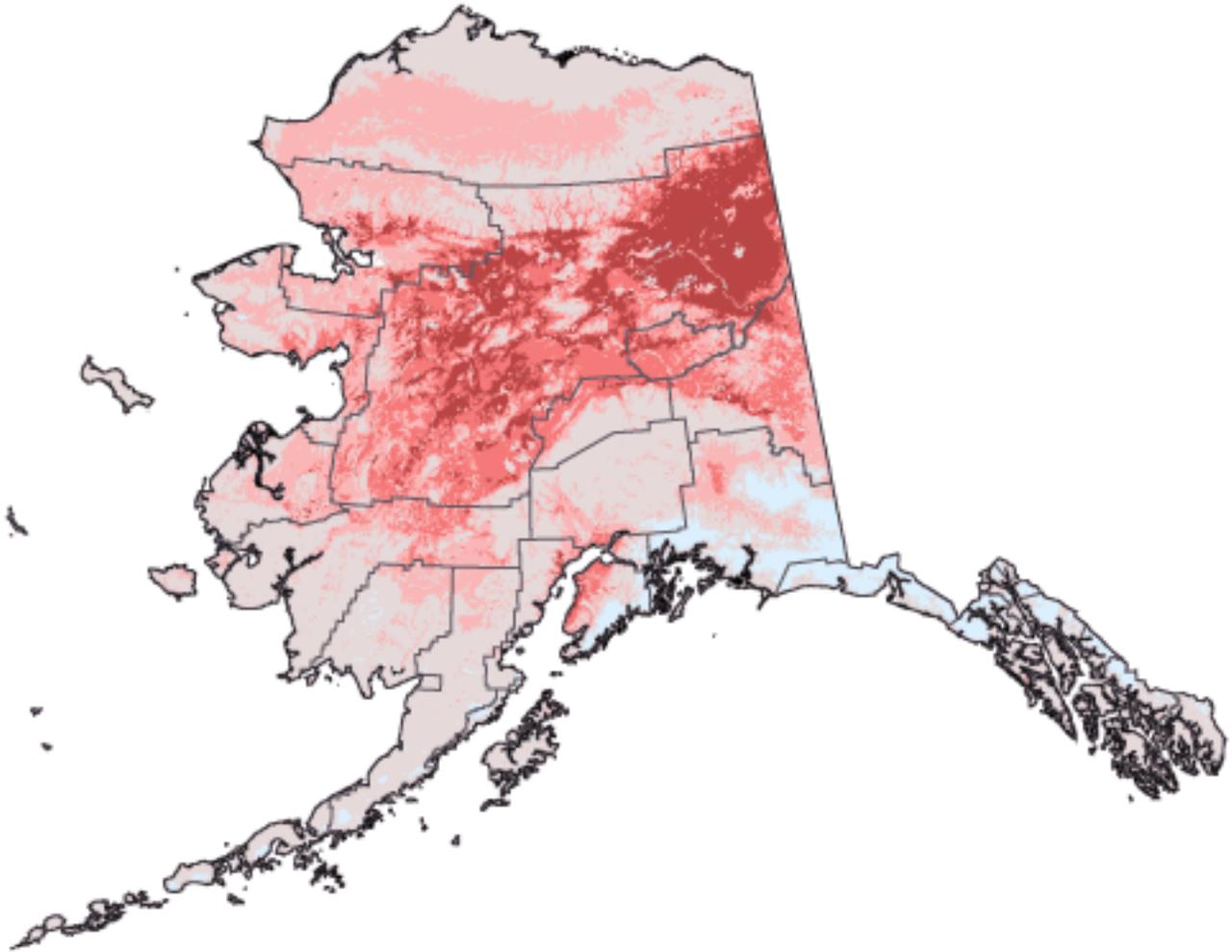
**Key Findings:** This map is a gross indicator and, as such, depicts where fire potential is highest. This map does not indicate the risk with respect to potential loss of ecosystem components due to the current condition of the land and its modified fire regime as defined by the U.S. Forest Service (Prescribed Fire and Fire Effects Research Work Unit, Rocky Mountain Research Station).

**Limitations:** This map is a combination of information from four different sources and has been smoothed to improve readability. At the scale of this map, a change in frequency would not be apparent until approximately one million acres were involved. In Alaska, the major ignition source is lightning, thus summer weather pattern dictates fire occurrence. Human caused ignitions, though increasing in frequency, are usually contained quickly and held to small areas of disturbance.

**Source:** *Ecoregion fire frequency:* Gallant, A. L., E. F. Binnian, J. M. Omernik, and M. B. Shasby, 1995. *Ecoregions of Alaska*. U.S. Geological Survey Professional Paper 1567. *Fuel type:* AVHRR/NDVI data provided by the U.S. Geological Survey, Anchorage, Alaska. *Fire behavior:* Canadian Fire Fuels Danger Rating System index to fire behavior provided by the Alaska Fire Service, Fairbanks, Alaska. *Precipitation:* May, June, July, and August average precipitation data were produced by UC Berkeley and the USGS using NCDC Global Historical Climatological Network data.

**Comments:** When this map is compared with the lower-48 (Fire Frequency and Land Condition), it is evident that Alaska systems have not been severely modified by a long history of fire suppression. In fact, Gabriel and Tande (*A Regional Approach to Fire History in Alaska*) indicated lightning caused fires have cycles ranging from 29 to 400 years.

## Potential Fire Occurrence



Potential Fire Occurrence based on  
Ecoregion, Fuel Type, Fire Behavior Index,  
and Average Summer Precipitation



Scale 1 : 15,000,000

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