

Alaska Coastal Mapping Gaps & Priorities

For the assessment of coastal flood & erosion hazards



State of Alaska
Department of Natural Resources
Jacquelyn Overbeck

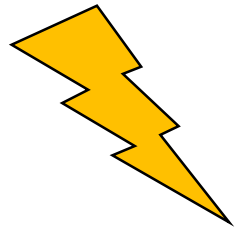


Lightning Talk

State of Alaska Coastal Hazards Program

The State of Alaska established the Division of Geological & Geophysical Surveys (DGGGS) to carry out Alaska Statute 41.08.020

“Determine the potential of Alaskan land for production of metals, minerals, fuels, and geothermal resources, the locations and supplies of groundwater and construction material, and the **potential geologic hazards to buildings, roads, bridges and other installations and structures**”



Coastal Hazards

Changing Ocean Processes

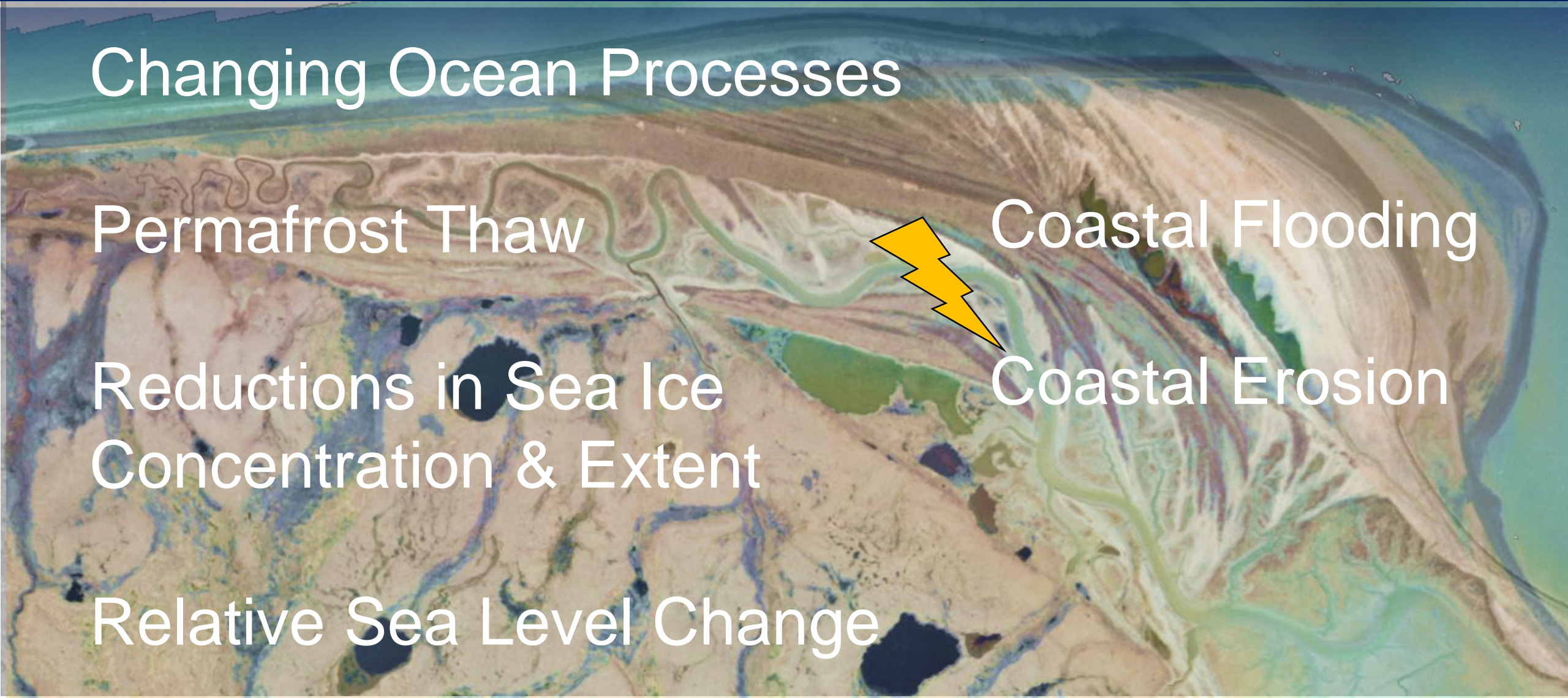
Permafrost Thaw

Reductions in Sea Ice
Concentration & Extent

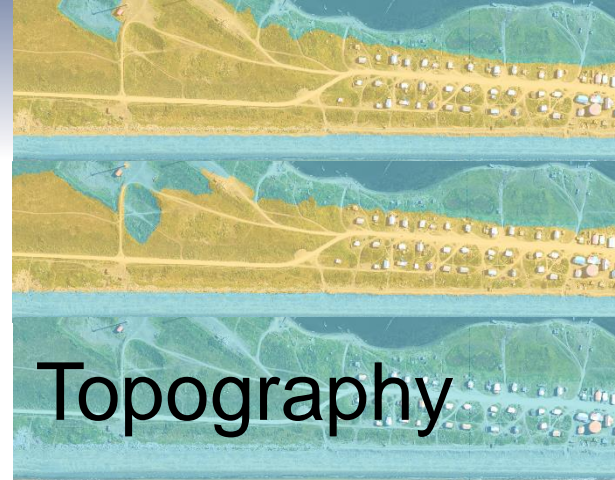
Relative Sea Level Change

Coastal Flooding

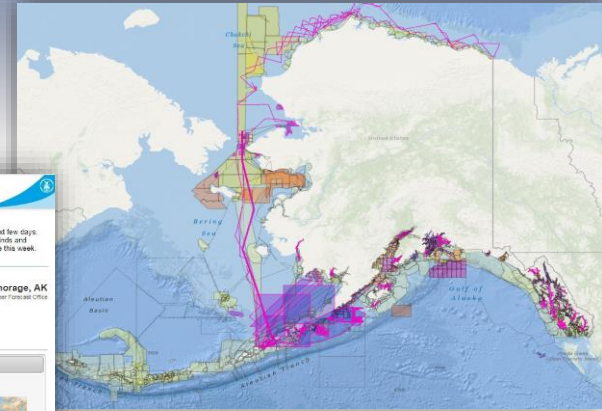
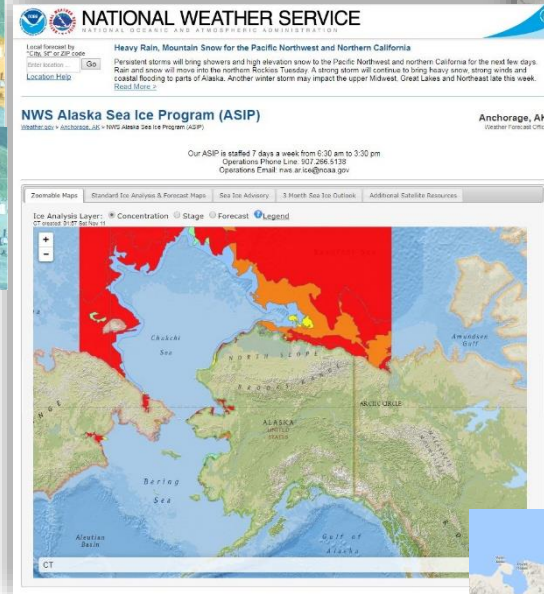
Coastal Erosion



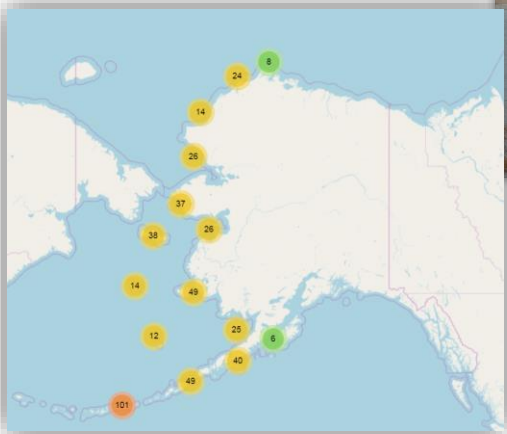
Coastal Mapping Baseline Datasets



Sea Ice



Waves

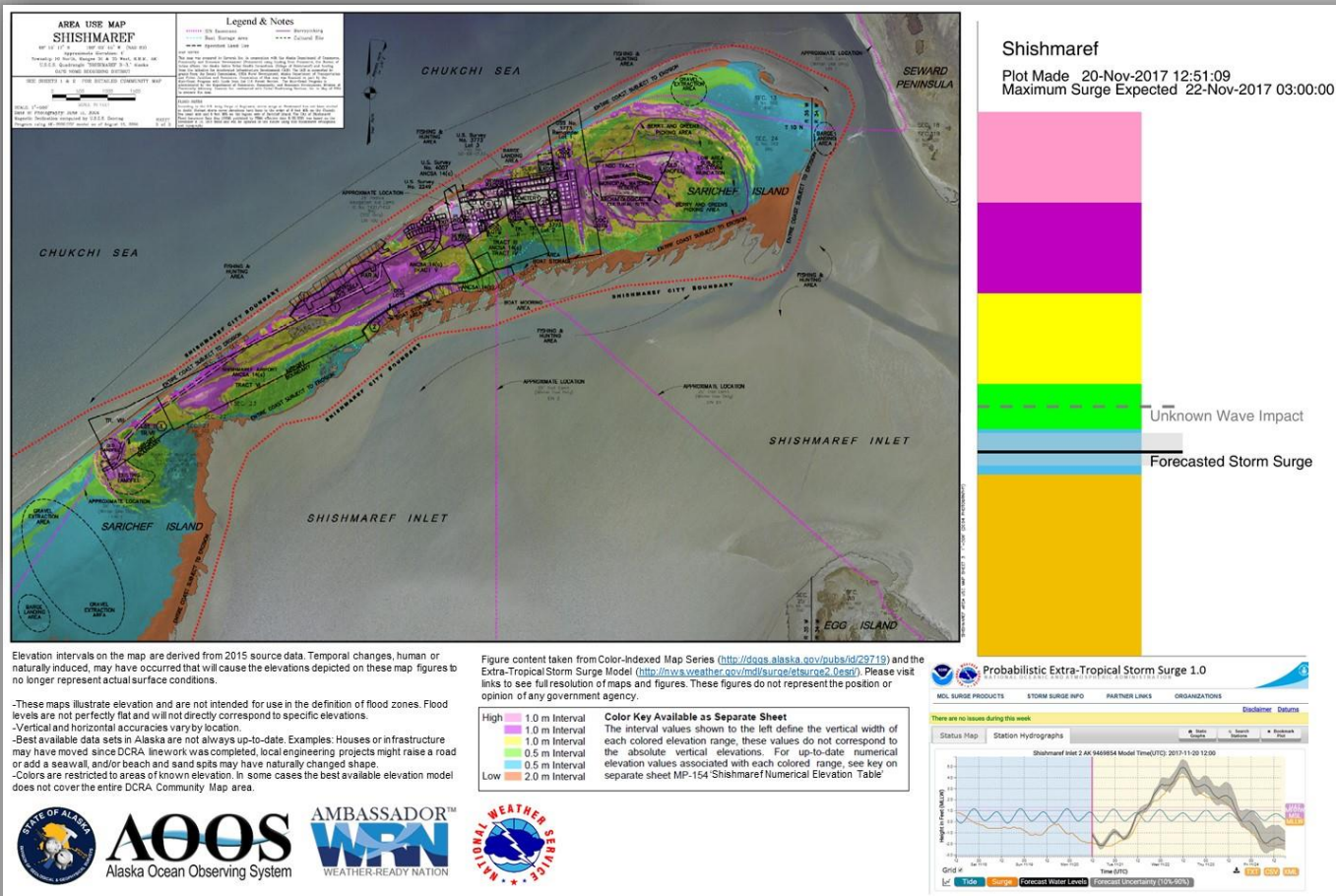


Continually Operating Reference Systems (CORS)

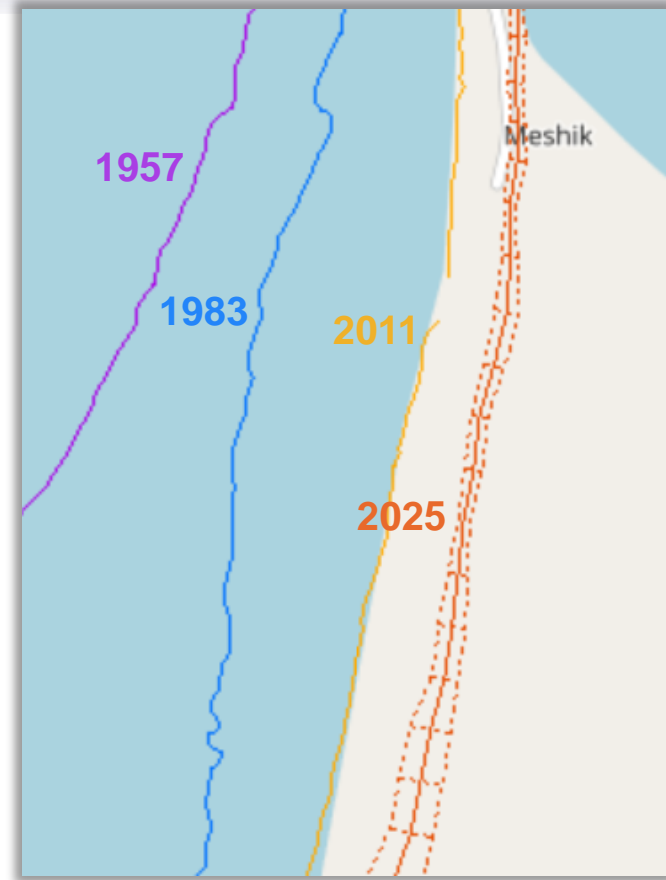


Coastal Hazards Mapping & Forecasting

Coastal Flooding



Coastal Erosion

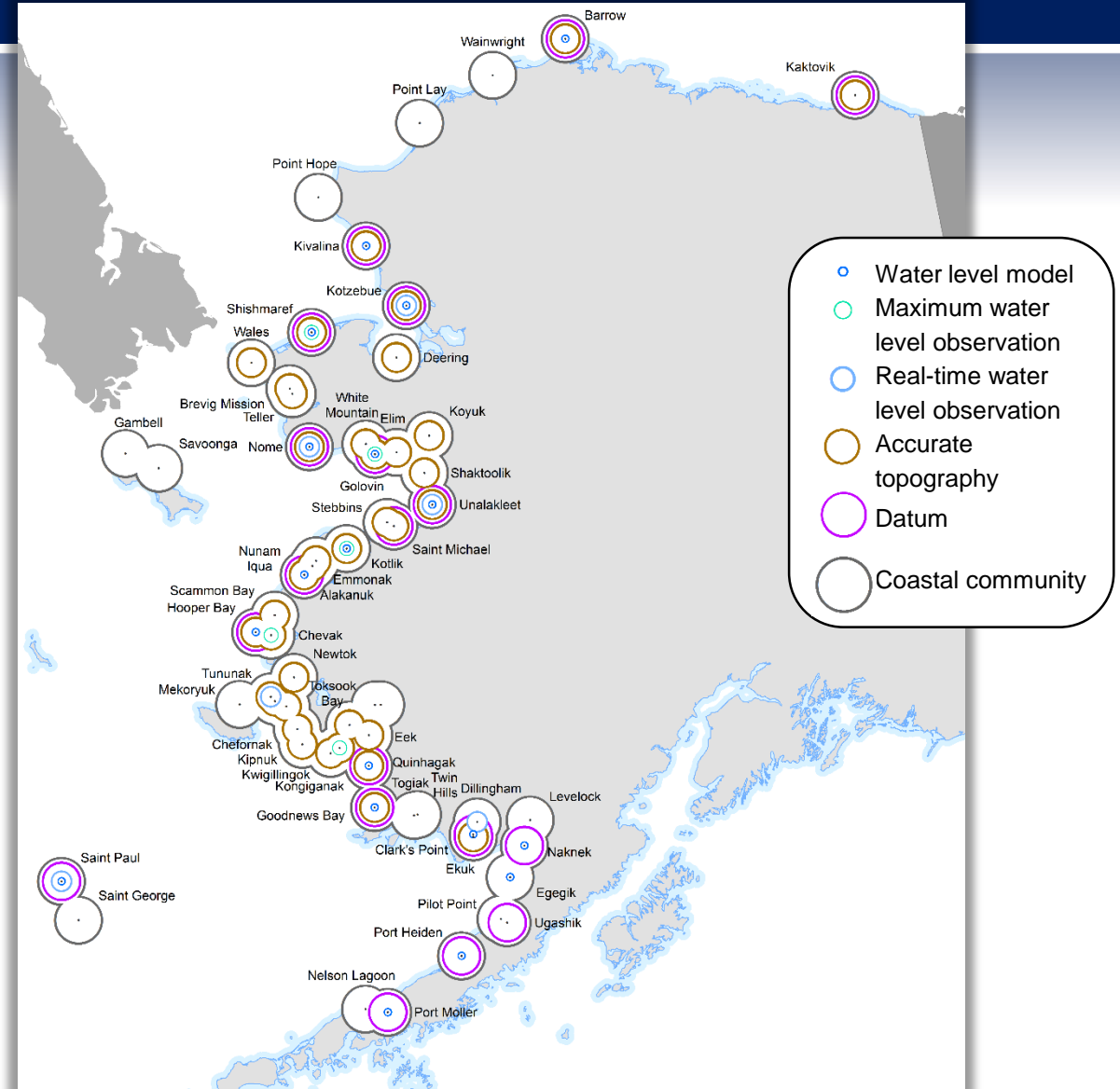
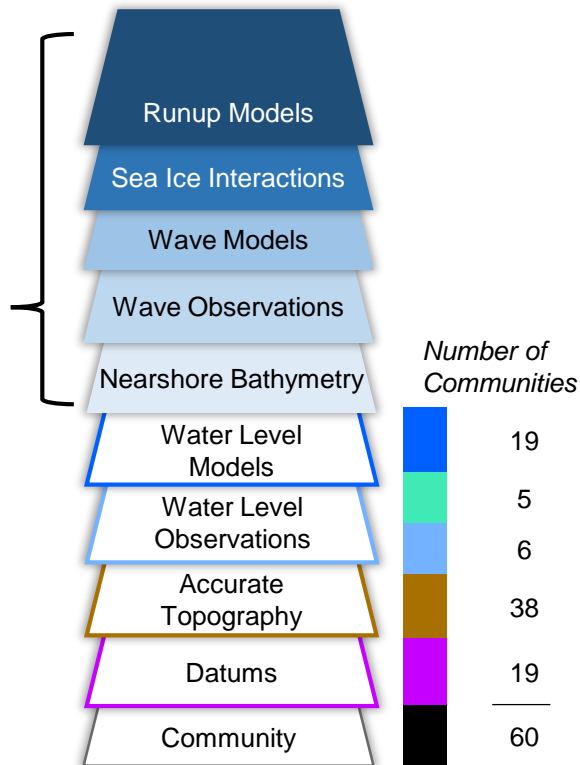


<http://maps.dggg.alaska.gov/shoreline/>

Flood Mapping & Forecasting

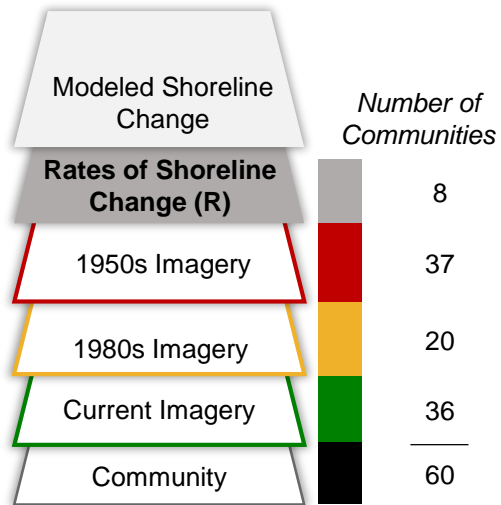
Baseline data layers used for coastal flood modeling and forecasting in northern and western Alaska communities.

Requiring research or needed at all locations.




Erosion Mapping & Forecasting


Baseline data layers used for coastal erosion modeling and forecasting in northern and western Alaska communities.

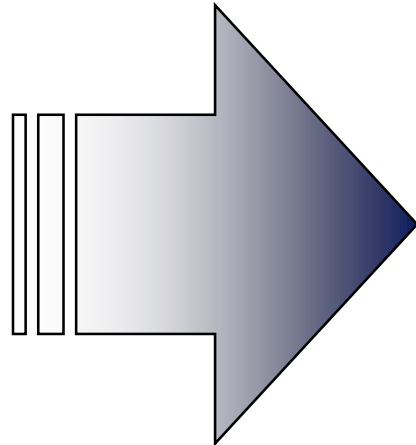


Impacts on Alaskans

➤ Effective flood and erosion **mapping** 

➤ Continuous and consistent flood and erosion **forecasting** 

➤ Accurate flood and erosion **long-term modeling** and prediction 



➤ Informed state, regional, and local community and climate adaptation planning

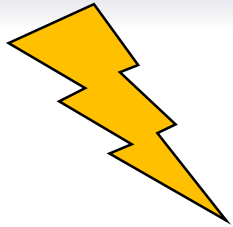
➤ Effective engineering in the coastal zone

➤ Disaster preparation and mitigation

For More Information

This has been a lightning version of:

Overbeck, J.R. [ed], 2018, **Alaska Coastal Mapping Gaps and Priorities for the assessment of coastal flood and erosion hazards** [in prep]: Alaska Division of Geological & Geophysical Surveys.



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