



# NWS Alaska Region Observation Program Priorities and Expansion

Carven Scott, Chief  
Environmental Science and Services Division





# Who we are: NOAA NWS Alaska Region



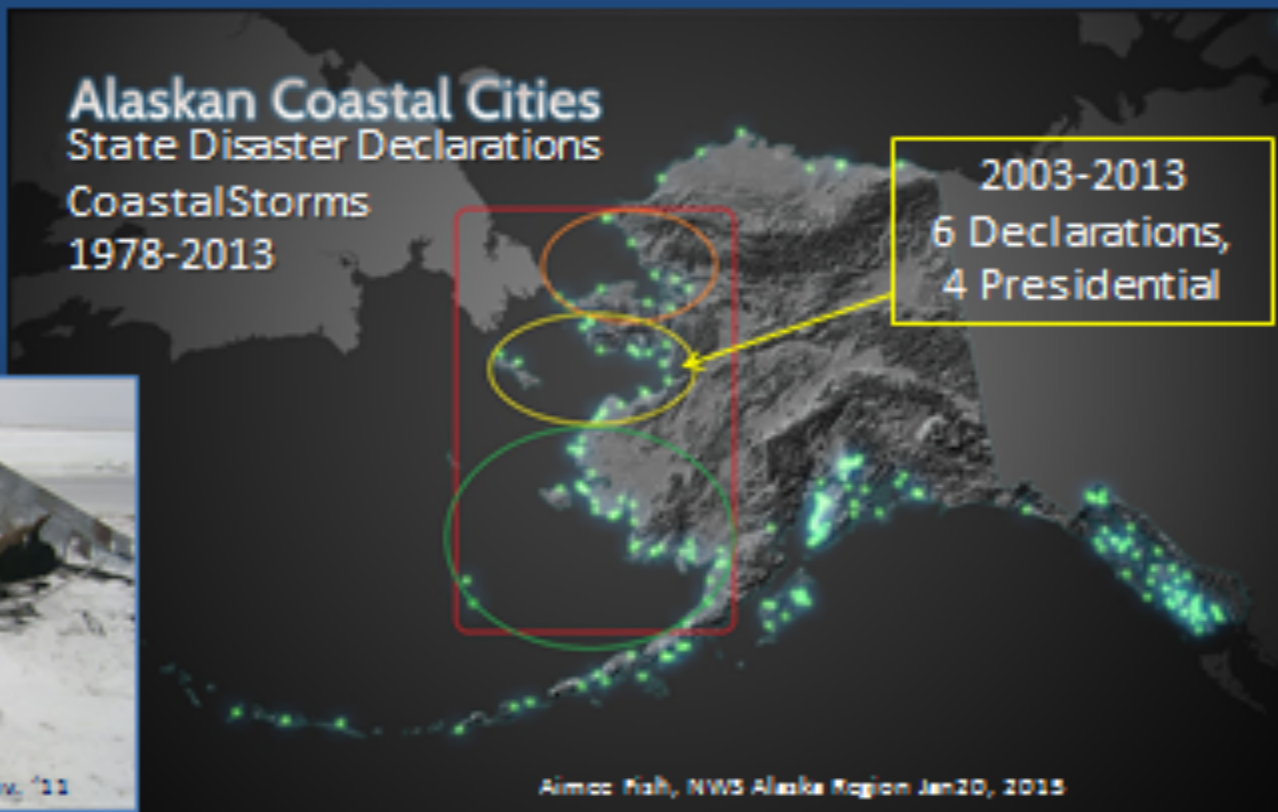


# What we do

Focus Areas	Observation Platforms
Coastal Storm Surge	Water level gauges, river gauges, wave buoys
Aviation	Surface observations (ceiling and visibility), radar, upper air, lightning data
Marine Forecasts	Wave buoys, HF radar
Hydrology	River gauges, precipitation, snow depth, radar
Fire Weather	Lightning data, precipitation, radar
Climate	Surface observations of T, P
Sea Ice Forecast and Analysis	HF radar, wave buoys, water level, satellite data
Public Forecasts & Warnings	All surface observations, lightning data, snow depth, radar



“Since 2000, Alaska has had **15** federally declared [flooding] disaster declarations... collectively impacting **over 58%** of Alaska’s organized communities...” - DGGS

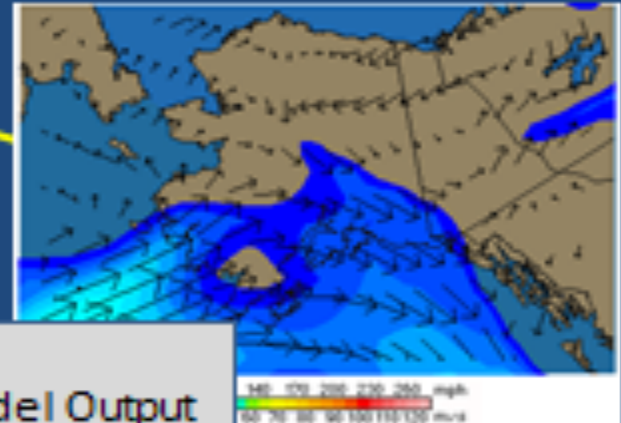




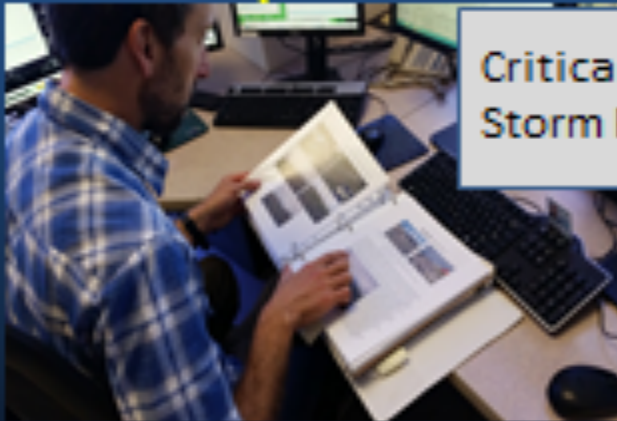
# THE FORECASTING GAP



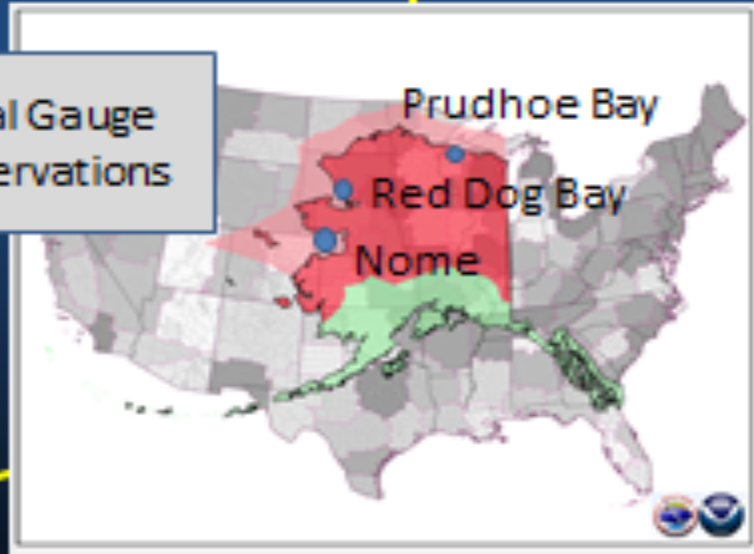
Societal Impacts



Model Output



Critical Values,  
Storm Records



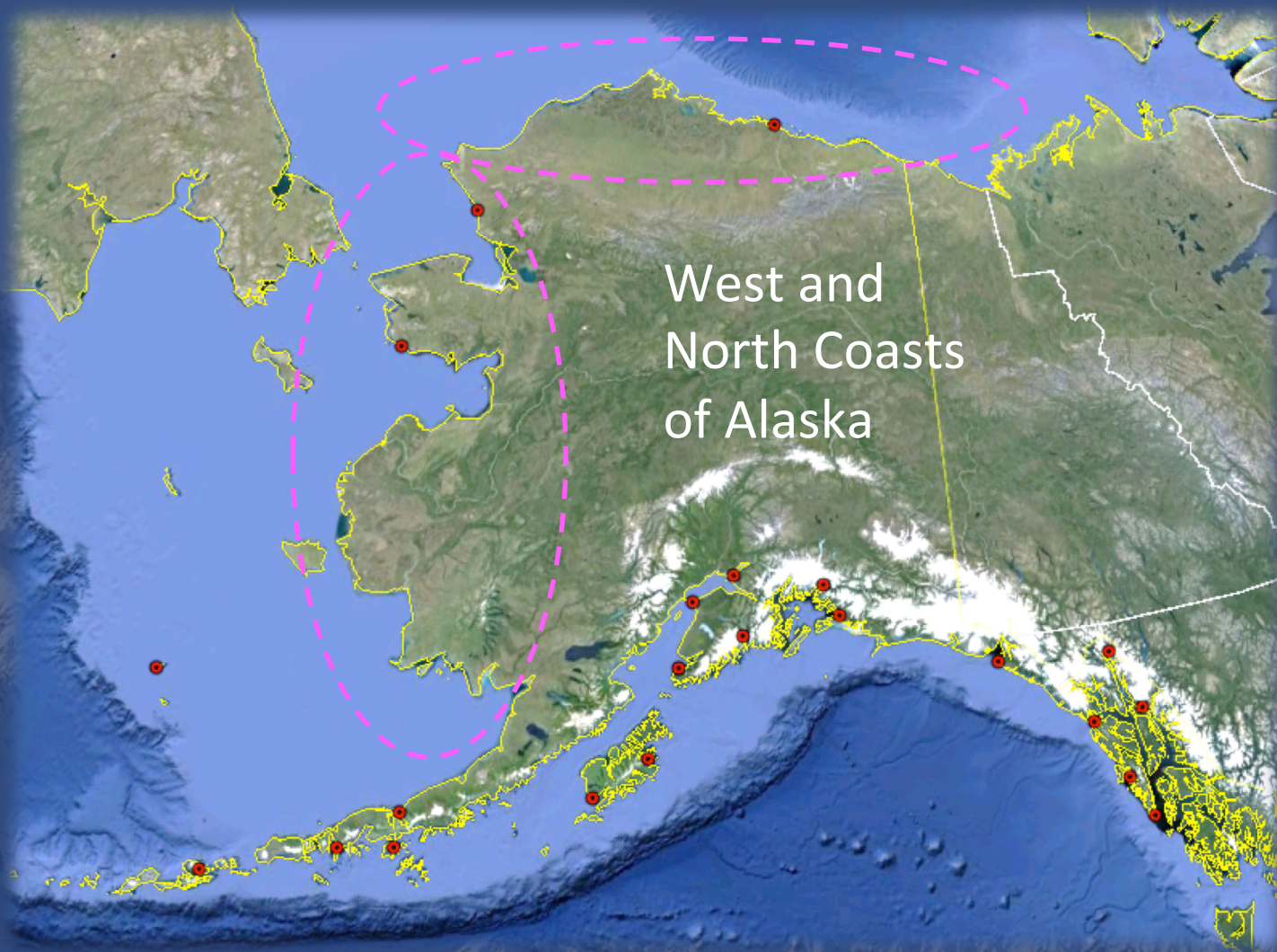
Tidal Gauge  
Observations



# WATER LEVEL OBSERVATIONS

## Major Gaps

- Over 30 at-risk communities
- Developing industry
- Increased traffic due to reduction in sea ice
- Major disaster-level fall storm impacts increasing



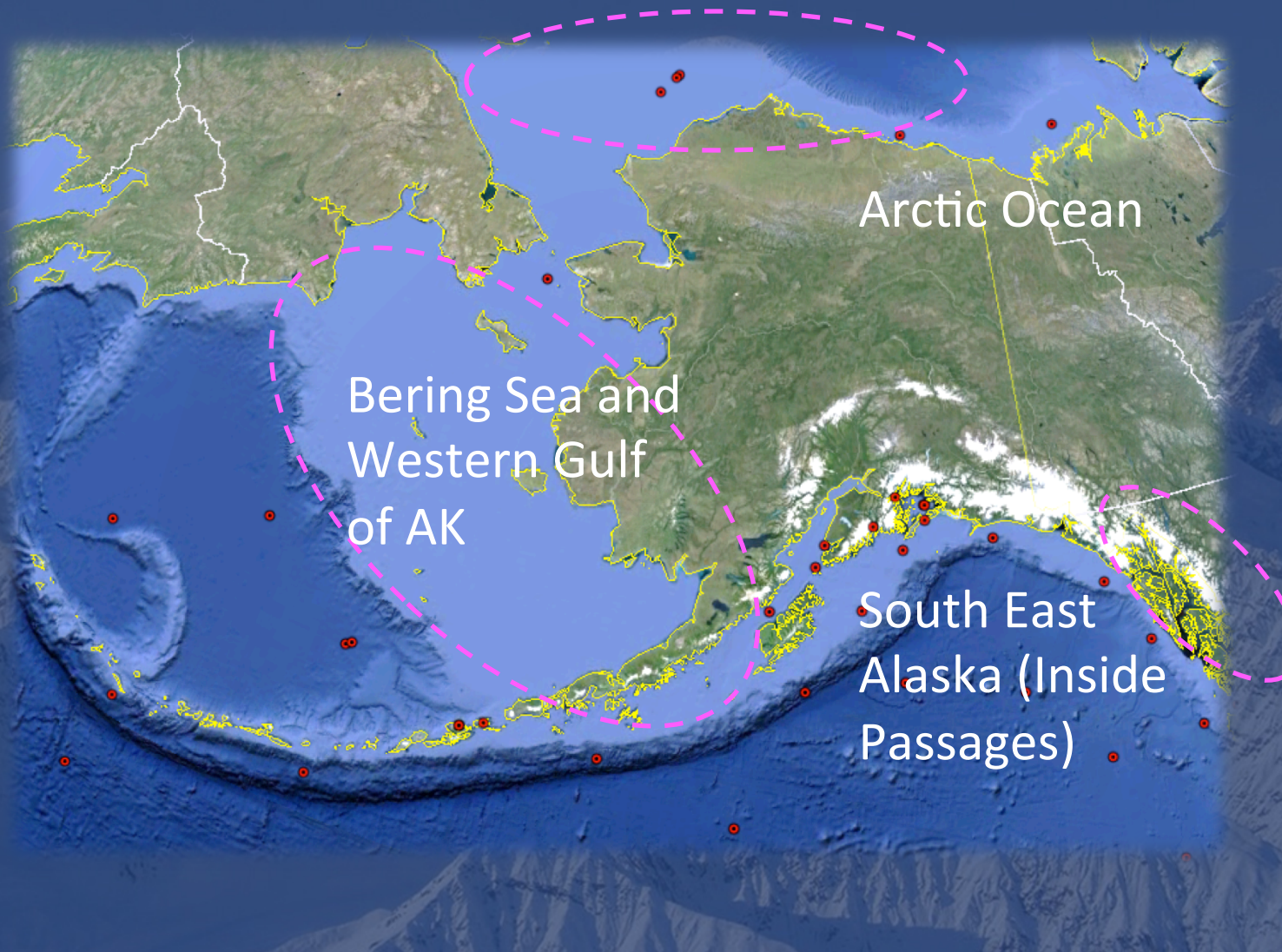




# WAVE BUOY OBSERVATIONS

## Major Gaps

- Extremely large and active marine community
- Largest fishery in the nation
- High risk for oil/HAZMAT spills
- Major transportation routes
- Developing industry



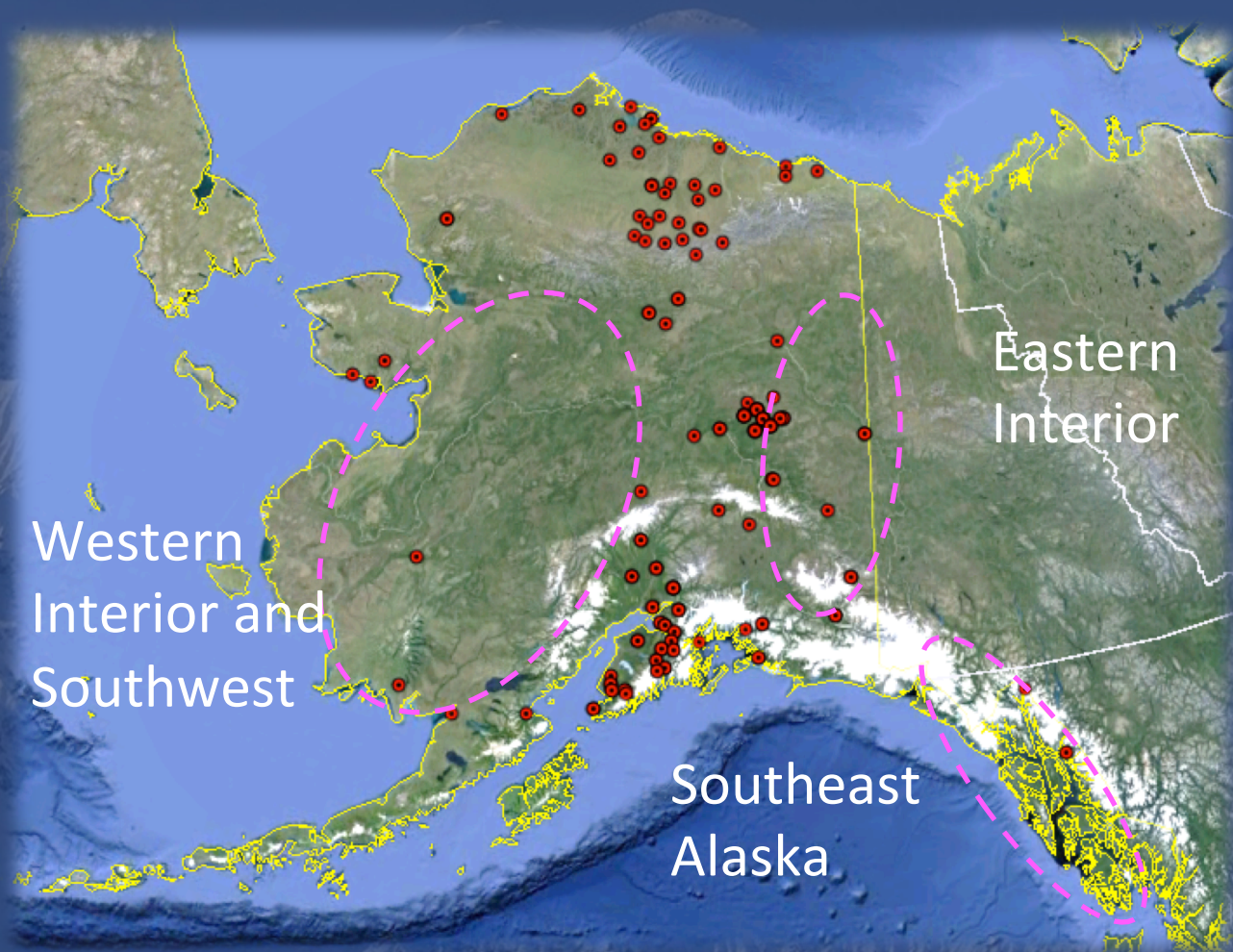




# SNOW DEPTH OBSERVATIONS

## Major Gaps


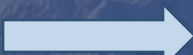


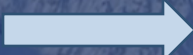
- Very few observations at elevation
- Key for avalanche safety
- Important for hydroelectric power in SE Alaska







# ADDITIONAL GAP FILLERS

- UAS  Gap: Water profile, river ice
- Drifting buoys  Gap: Water profile, ocean waves
- CASA Radars  Gap: Ceiling and precipitation
- VOS Observations  Gap: Waves, water profile, atmospheric observations
- Wind Profilers  Gap: Model data, aviation forecasts



**If you are deploying an observational platform, let's discuss!**