



# Arctic Coastal and Freshwater Surveys 2010-2015: The Good, the Bad and the Ugly

Alaska Department of Environmental Conservation  
Division of Water  
Alaska Monitoring and Assessment Program  
Amber Bethe

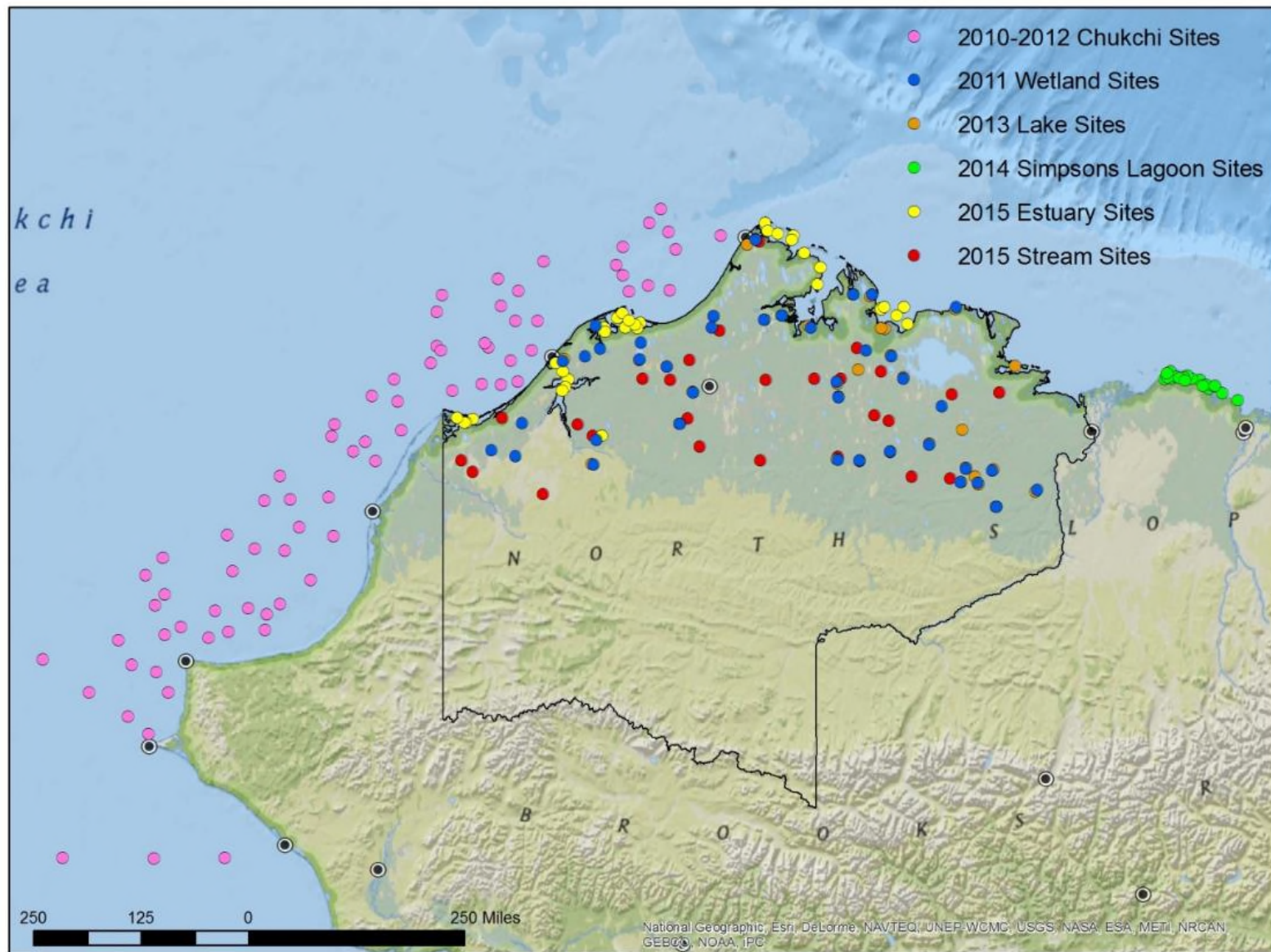






# Arctic Coastal Plain

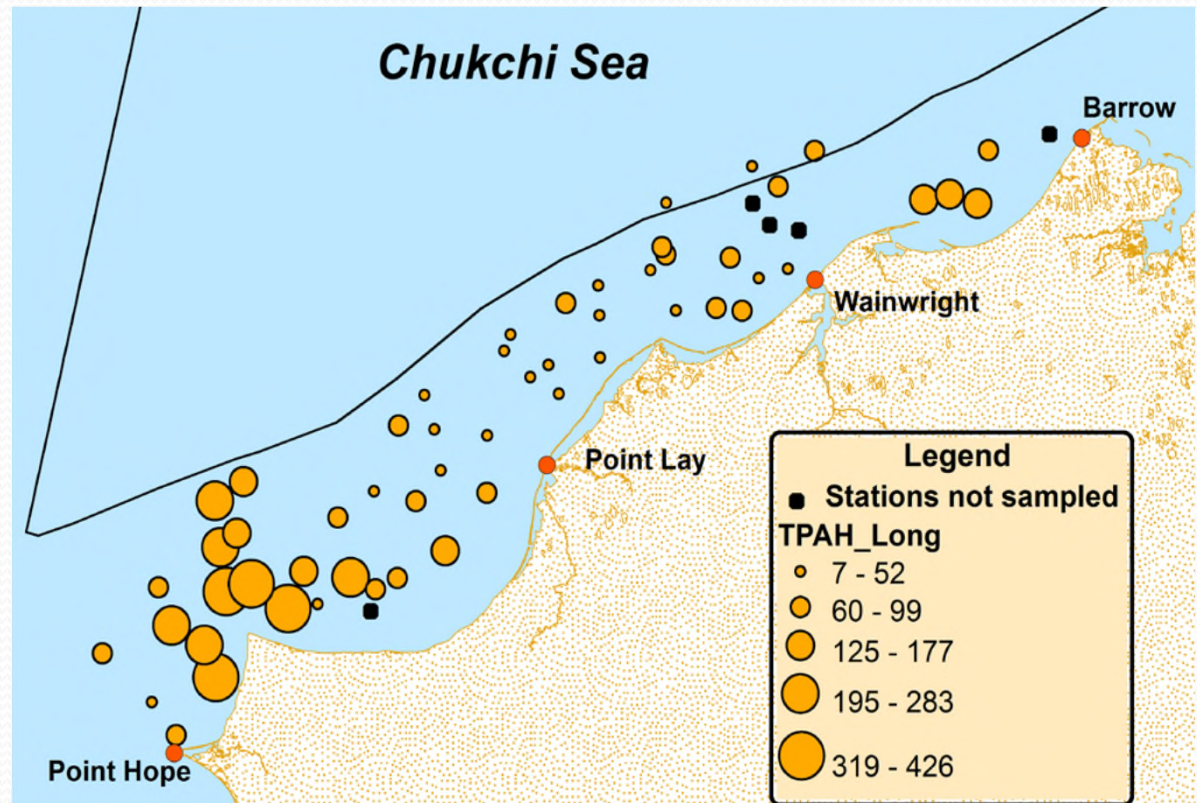
## Survey Stations 2010 - 2015





# Chukchi Sea Coastal Survey

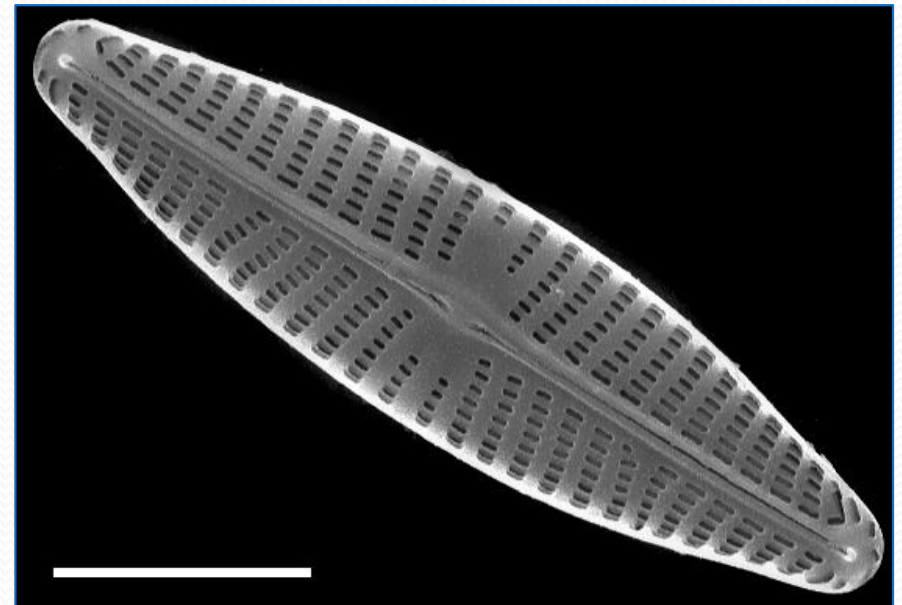
- Total polycyclic aromatic hydrocarbons levels below Effects Range Level (4,022 ng/g dry weight)
- Preliminary analysis suggests petrogenic source





# Preliminary Stream Diatoms

- 26 sites
- 65 genera, over 400 taxa
- Average 61 taxa per site (27-93)
- Average 25 taxa per site in other Alaska studies
- Most diverse genera = Navicula, Gomphonema, Nitzschia









# Access





# Helicopter Access



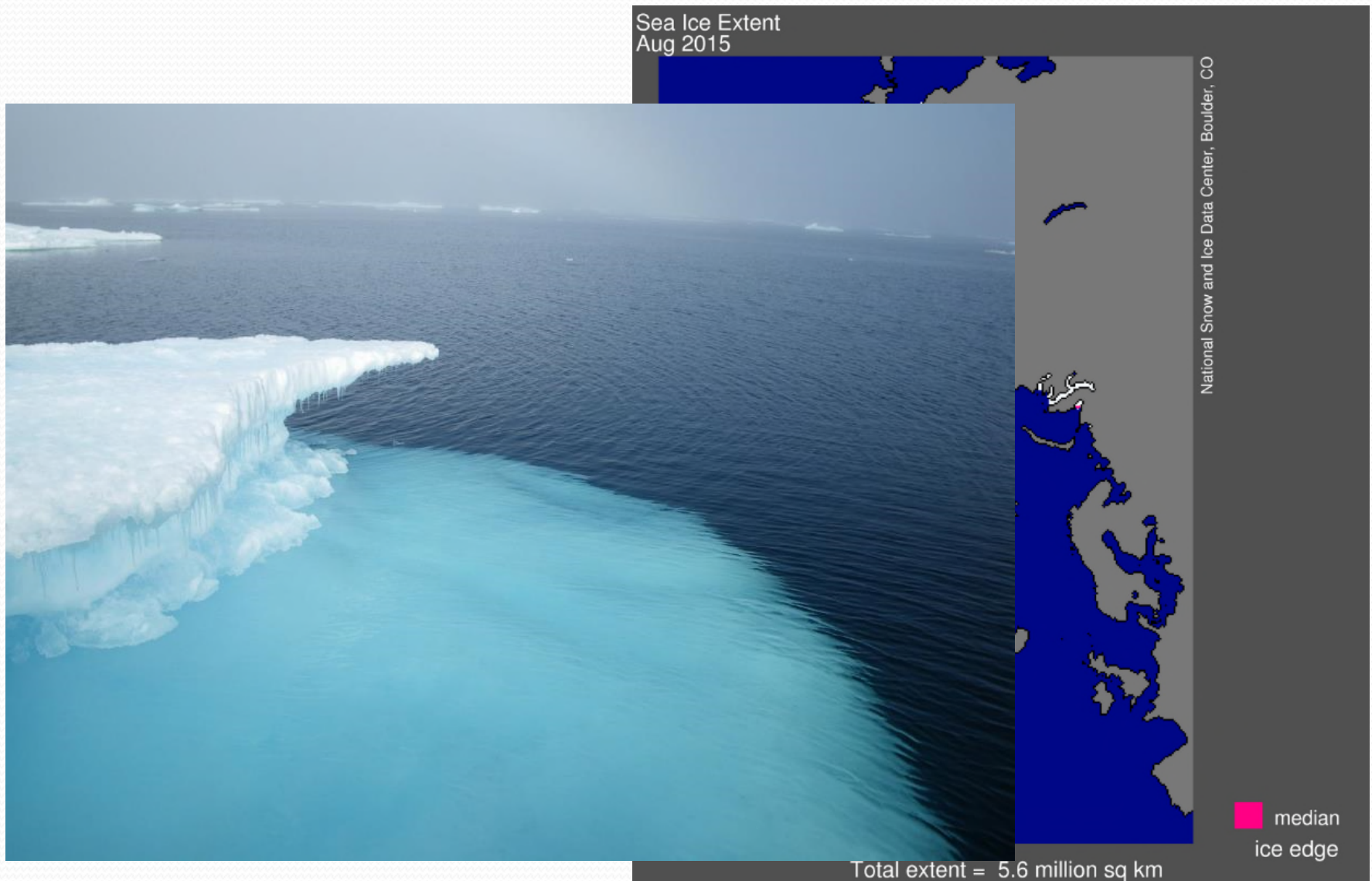


# Weather





# Sea Ice





# Field Camp





# Permafrost





# Mosquitoes





# Mosquitoes





# Other Challenges

- Cost effective and useful indicators
  - PCBs in Chukchi, costly and all non-detects
  - Microcystins in Arctic wetlands, costly and all non-detects
  - Physical habitat in Alaska vs. continental U.S.
- Difficult to meet holding times
- Lack of refrigeration



# Partners

Environmental Protection Agency  
UAA Alaska Natural Heritage Program  
UAF Institute of Ocean and Marine Sciences  
Natural Resource Conservation Service  
Bureau of Land Management  
National Oceanic & Atmospheric Administration  
Barrow Arctic Science Consortium  
Olgoonik Fairweather Corporation  
North Slope Borough  
The Wilderness Society







Questions?  
Thank you for your time!

Alaska Monitoring and Assessment Program  
(907) 269-7955

[amber.bethe@alaska.gov](mailto:amber.bethe@alaska.gov)

<http://dec.alaska.gov/water/wqsar/monitoring/AKMAP.htm>