

Winter Marine Bird Surveys in Prince William Sound

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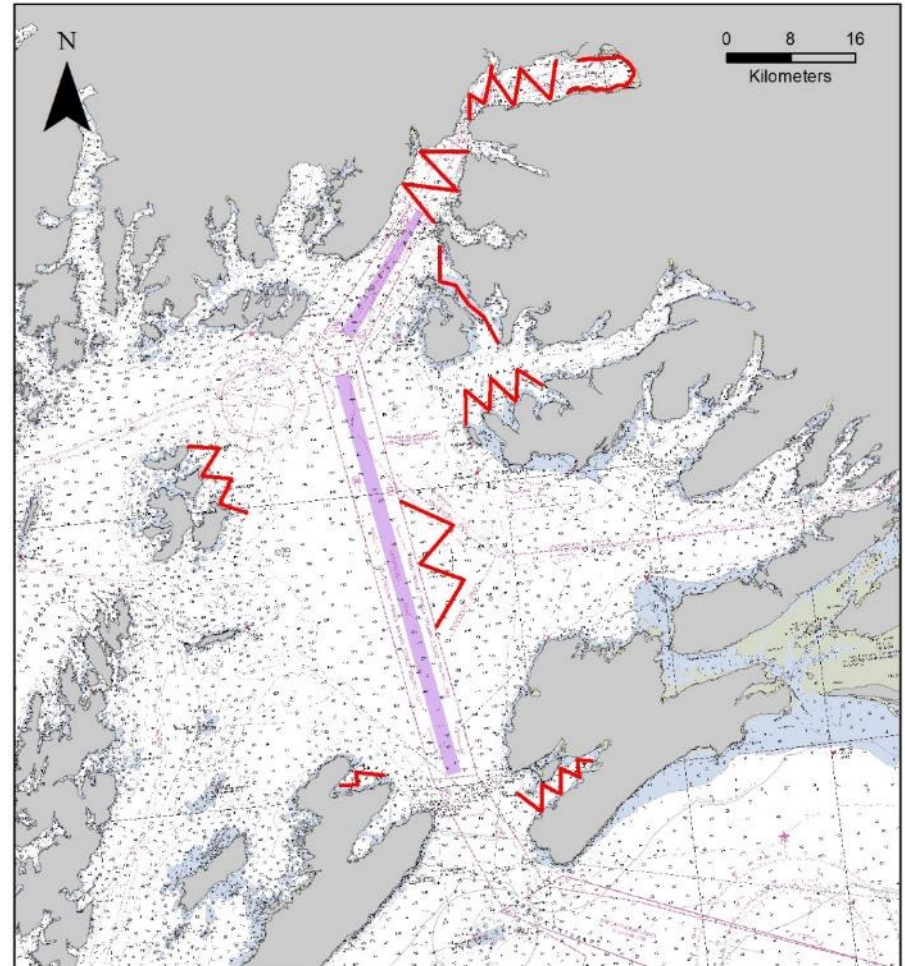
Background

- In Alaska most marine bird surveys occur in summer.
- Winter is important for avian survival at northern latitudes and Prince William Sound is a winter refuge from Gulf of Alaska.
- EVOSTC Gulf Watch Alaska fall/winter surveys in PWS since 2007 - 2021.



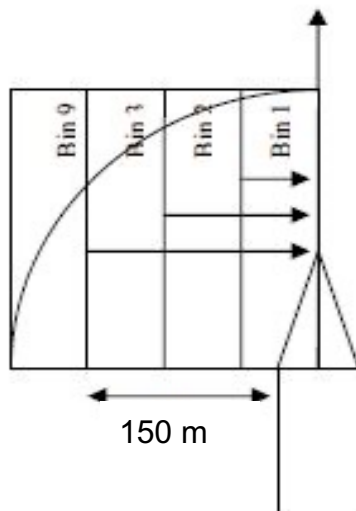
Objectives

- Conduct at-sea marine bird and marine mammal surveys in under-surveyed areas in and around tanker escort zone in PWS
- Provide recommendations for prioritizing oil spill response efforts in and around the tanker escort lane



Field Methods

- At-sea strip transect surveys along fixed transects
- Record number, species, behavior both sides of bow
- Group similar bird species and calculated relative density for each 3-km segment of transect.





Loons



Scoters



Kittiwakes



Grebes



Inshore
Ducks



Murres



Cormorants



Mergansers



Murrelets



Harlequin
Ducks



Large
Gulls



Guillemots



Long-tailed
Ducks



Small
Gulls

Photo credits: VJ
Anderson, D. Keats, A.
Riego & C. McClarren,
D. Daniels, R. Knight, A.
Schmierer, G.
Schechter, A.
Berndtsson, G. Smith

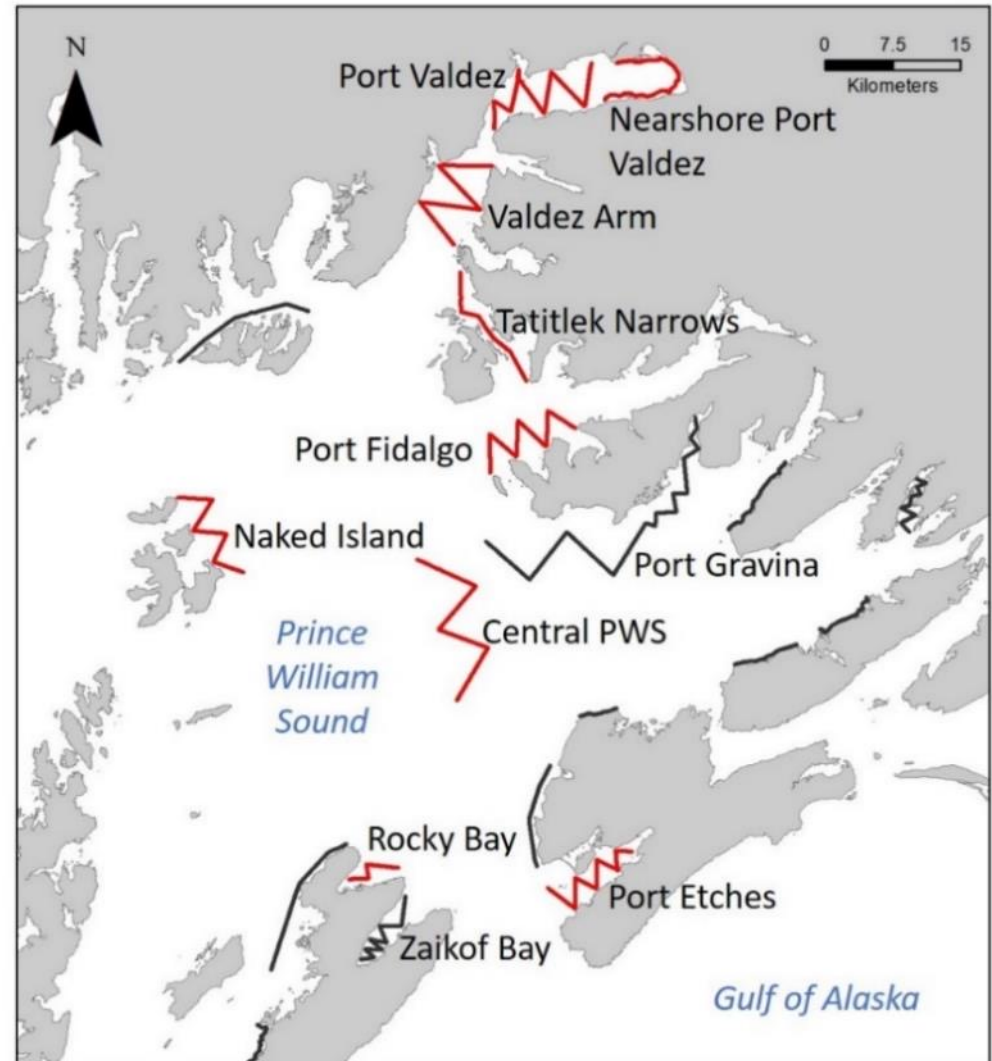
Results

2022 Survey Dates:
March 6-11

Surveyed 185.5 km

Red: 9 RCAC-funded transects

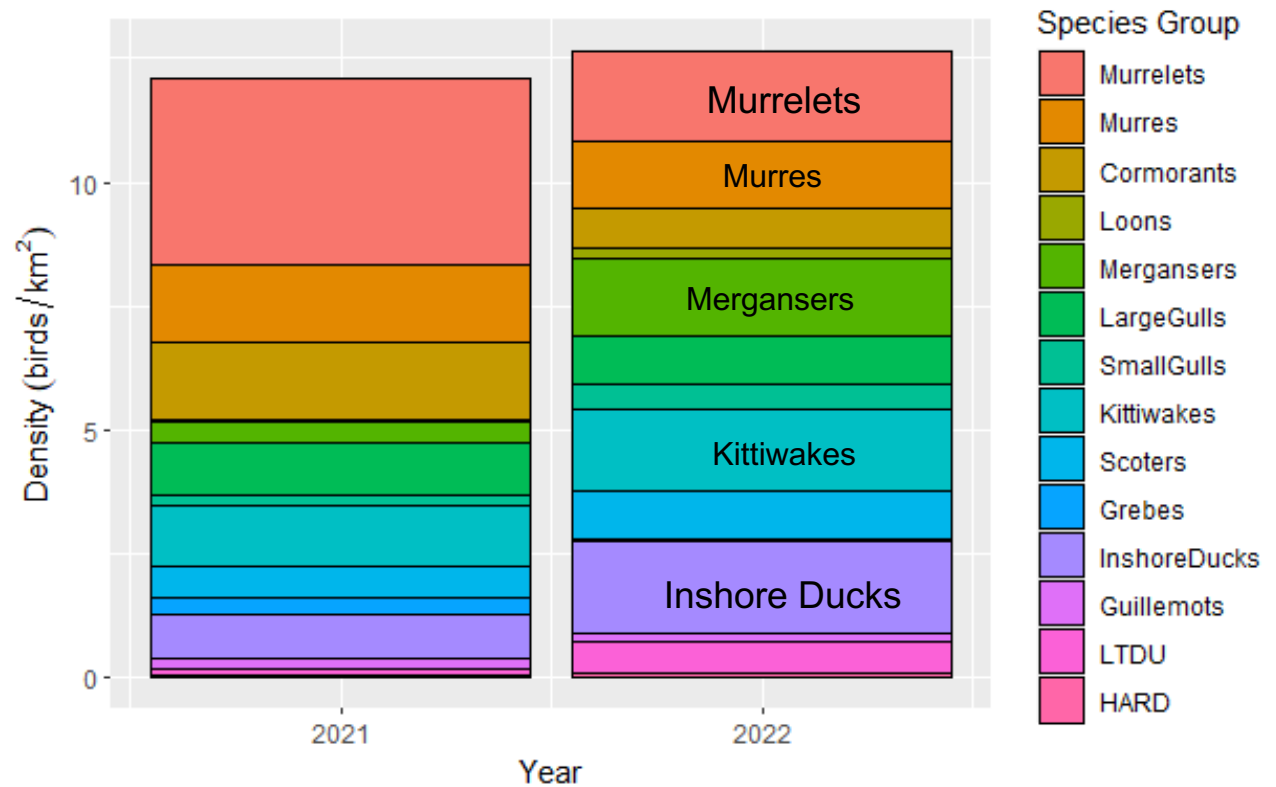
Black: historical EVOSTC Gulf
Watch-funded transects in this
area



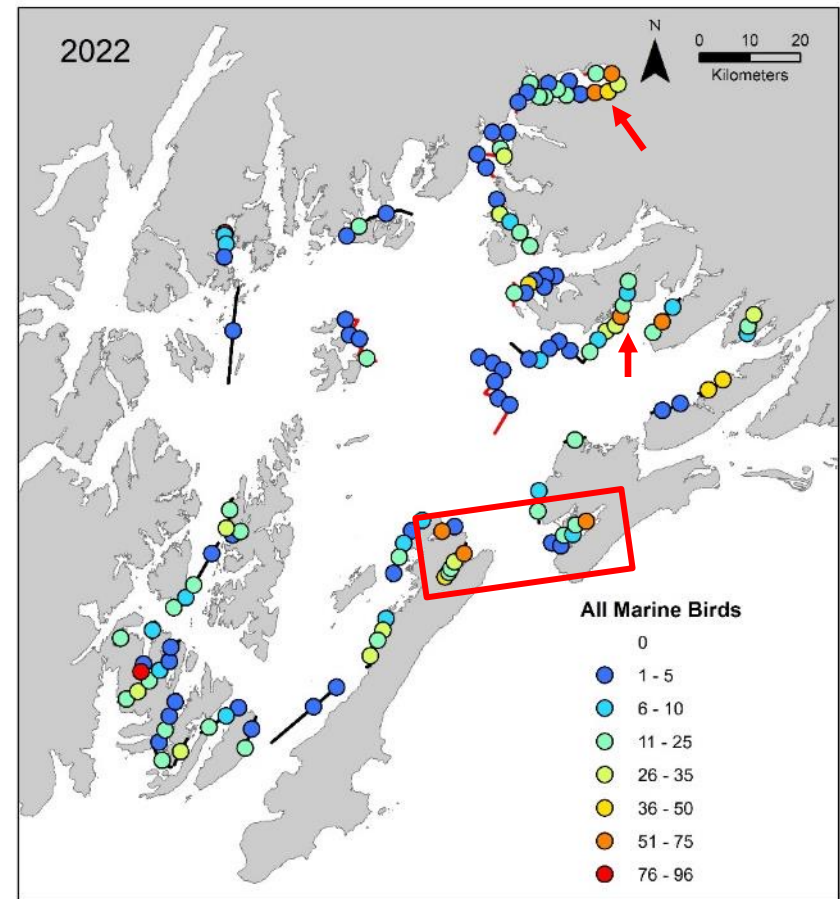
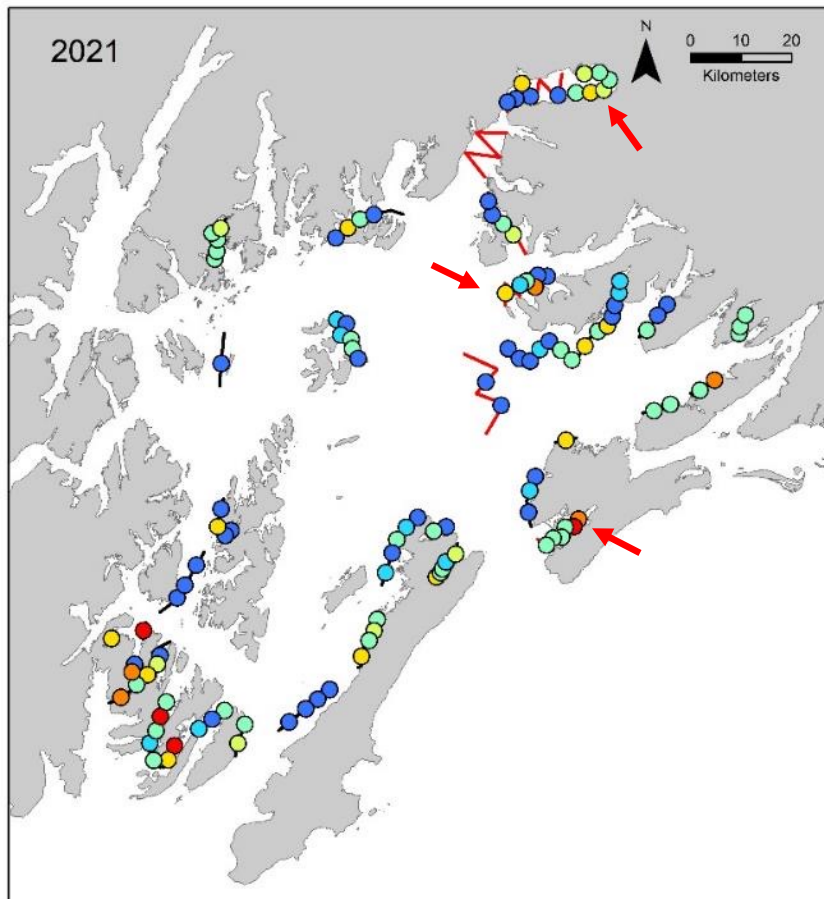
Transect Name	Mean bird density (birds/km ²)	# Mammals (within 1 km)
Central PWS	2.0	0
Port Etches	17.7	96
Port Fidalgo	9.1	14
Naked Island	2.7	4
Nearshore Port Valdez	45.0	70
Port Valdez	12.9	13
Rocky Bay	28	4
Tatitlek Narrows	13.6	28
Valdez Arm	6.9	4

Results: Marine Birds

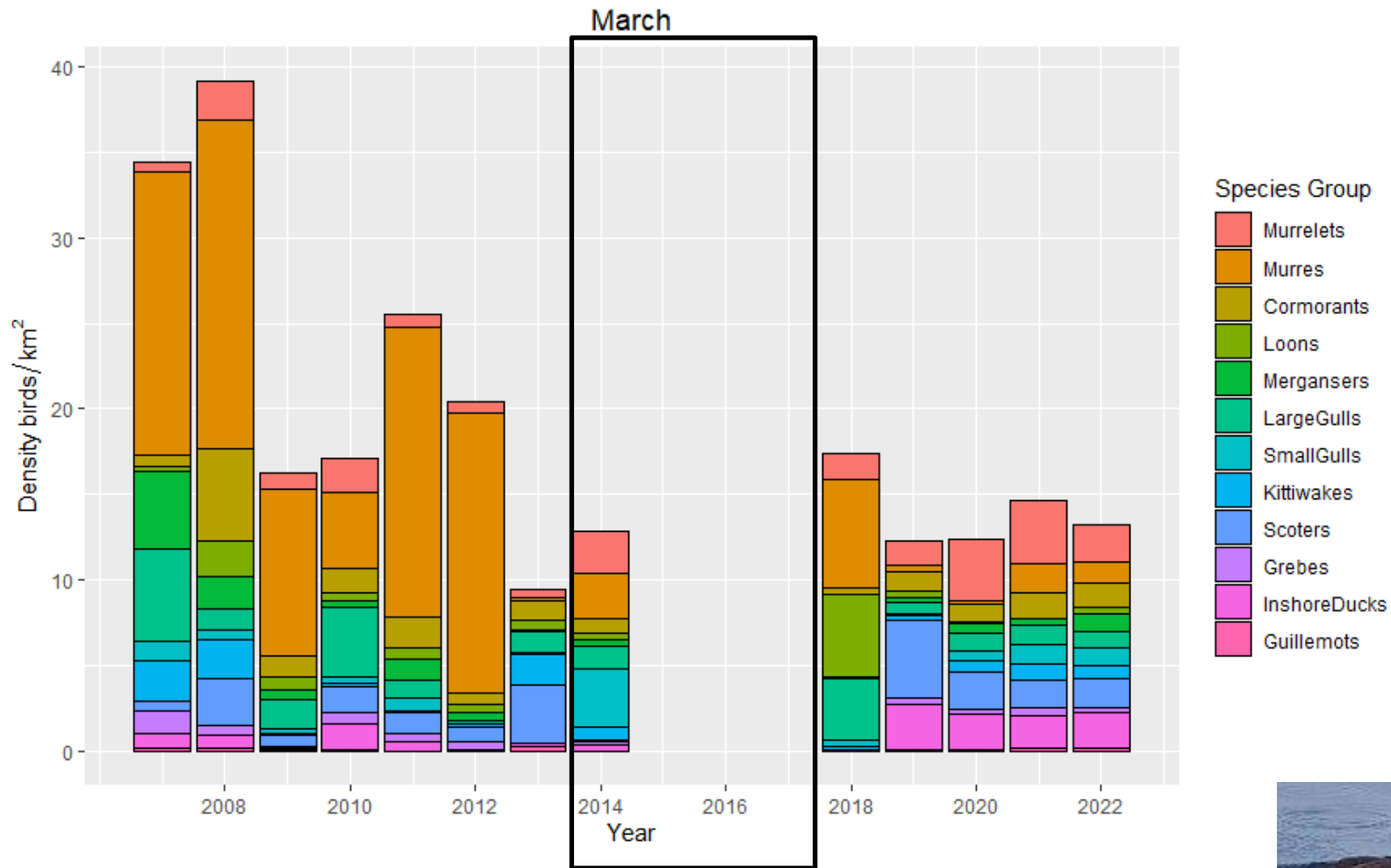
- 2022:
 - 767 birds
 - 23 species
- 2021:
 - 707 birds
 - 21 species



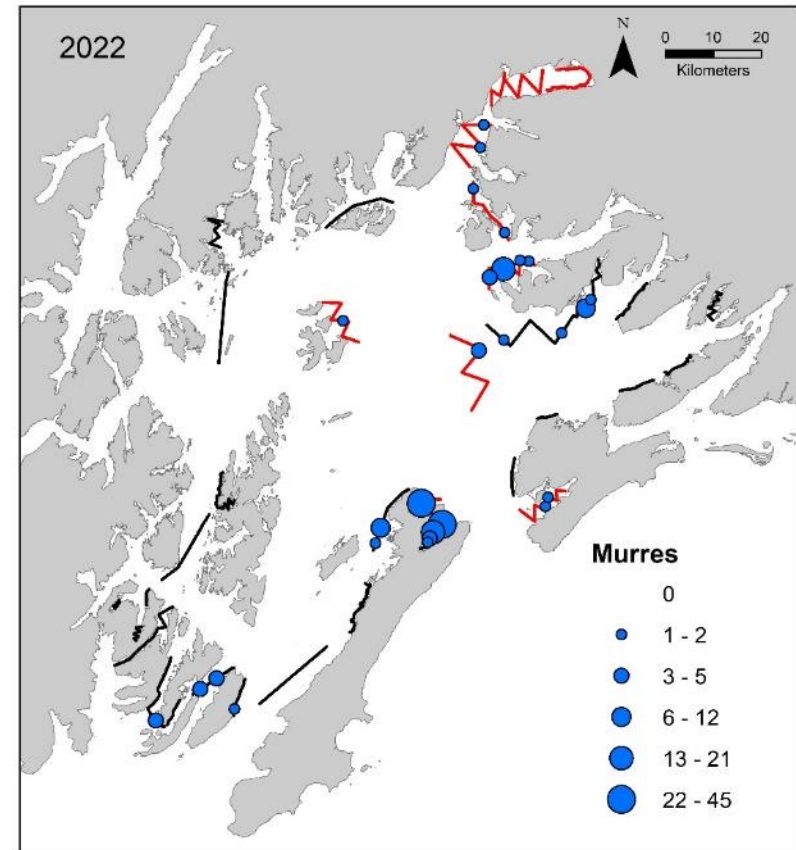
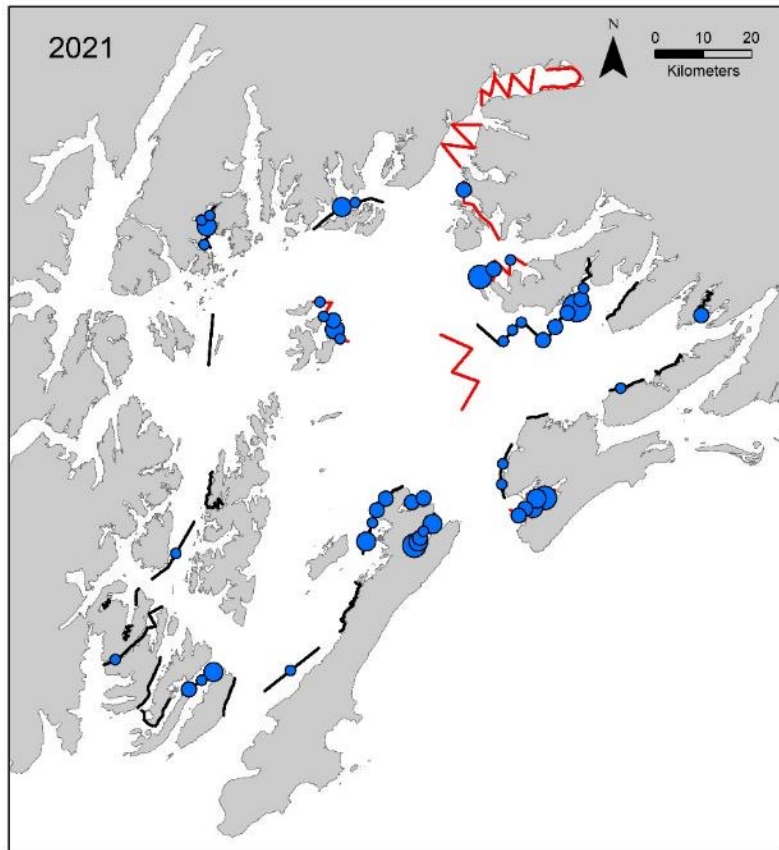
Results: Marine Birds



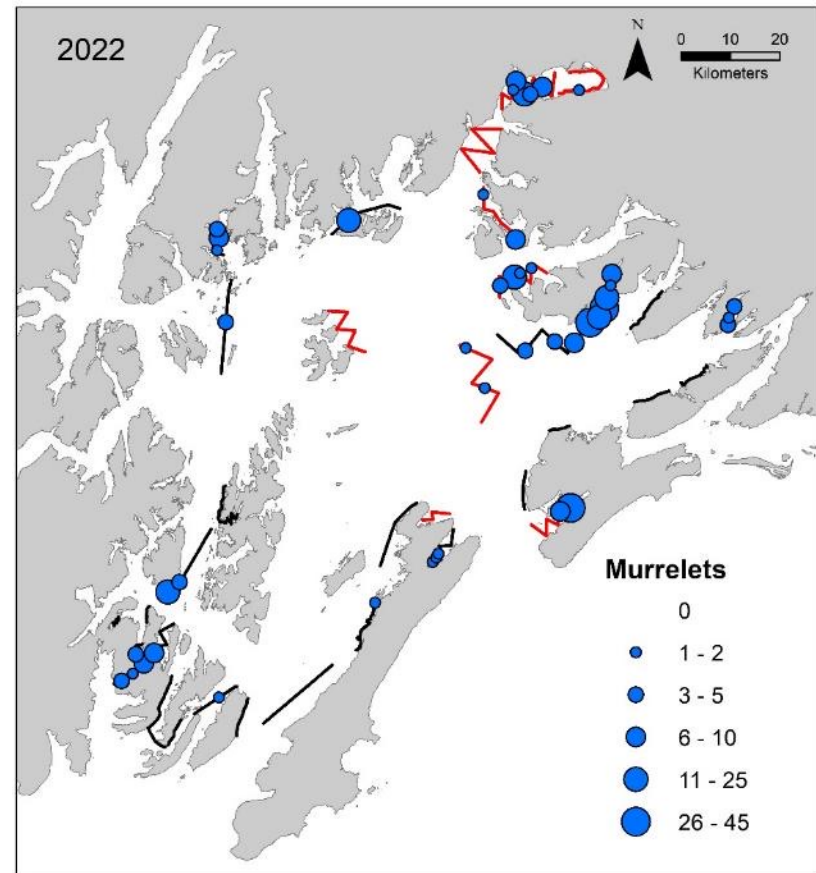
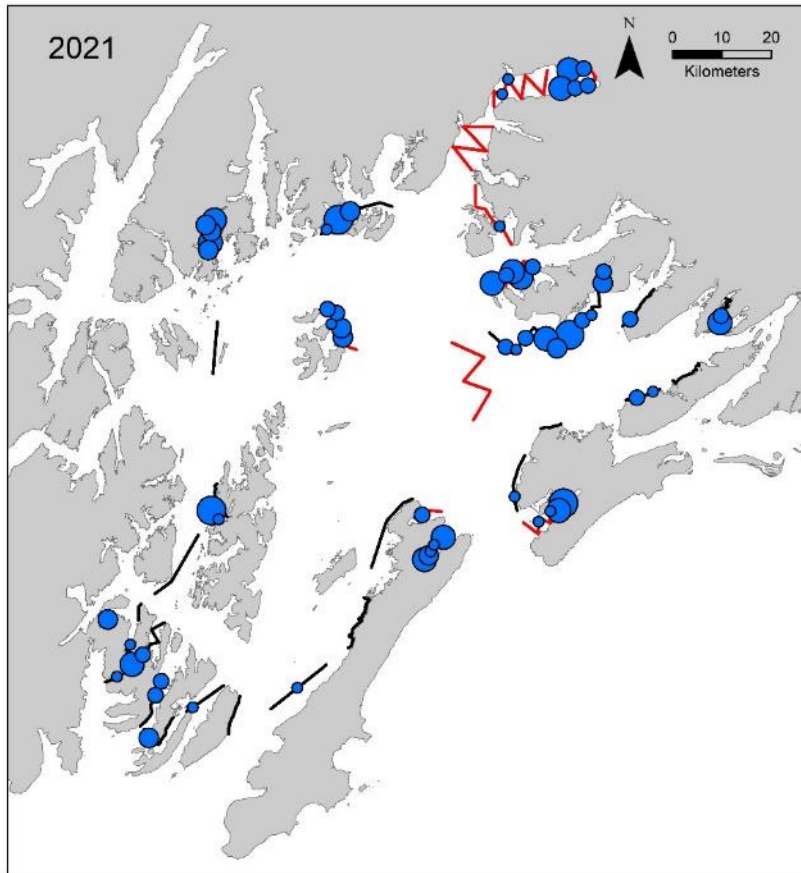
Murres



Murres



Murrelets

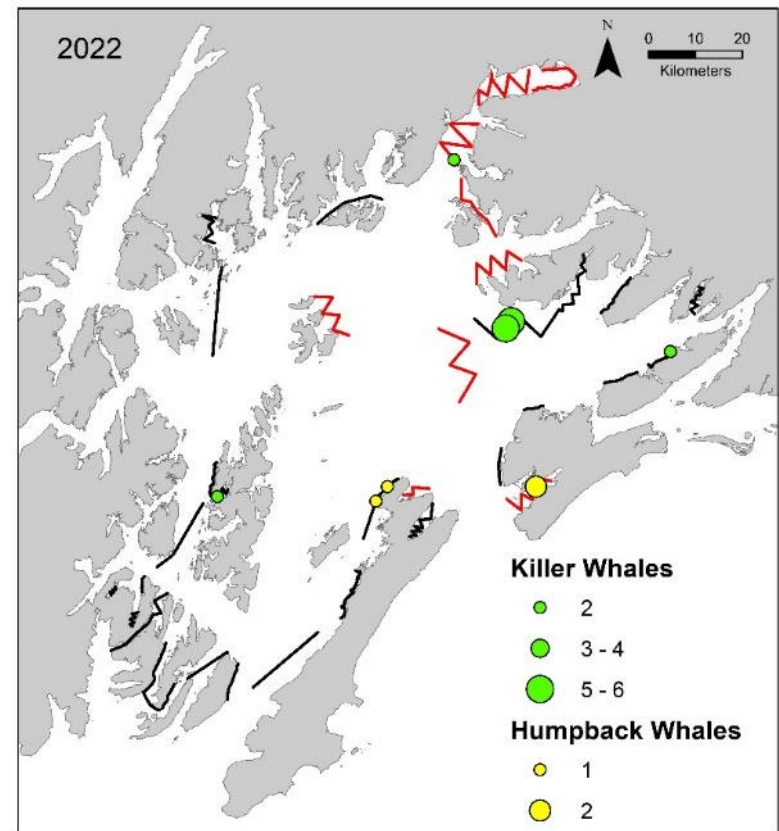
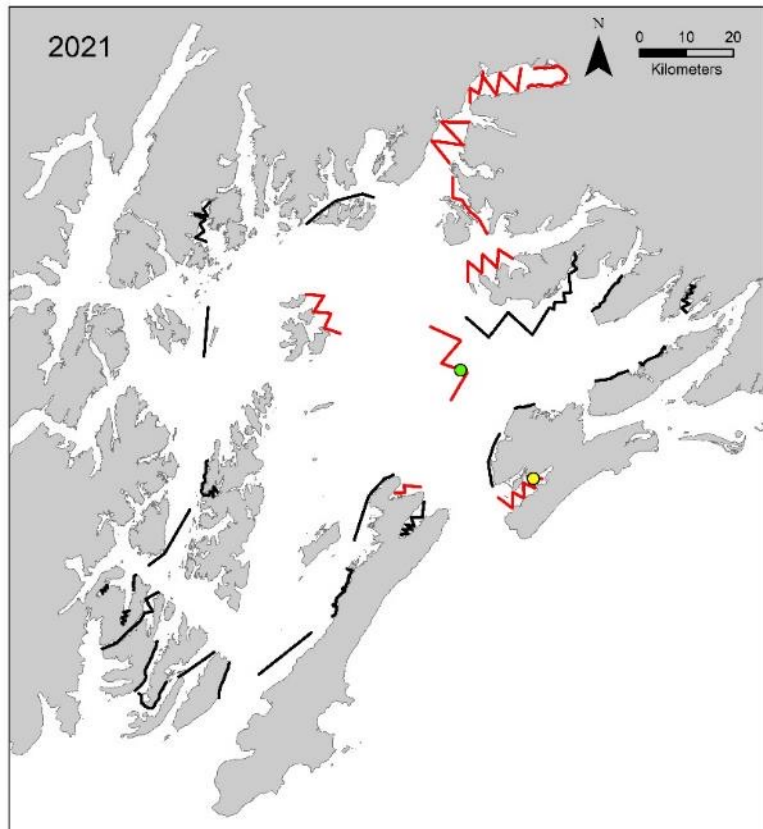


Results: Marine Mammals

Species	2021 Count (including observations beyond 300 m)	2022 Count (including observations beyond 300 m)
Dall's Porpoise	15	2
Harbor Porpoise		2
Unidentified Porpoise	2	3
Harbor Seal	56	31
Steller Sea Lion	20	75
Sea Otter	72	116
Humpback Whale	1	2
Killer Whale	2	2



Results: Whales

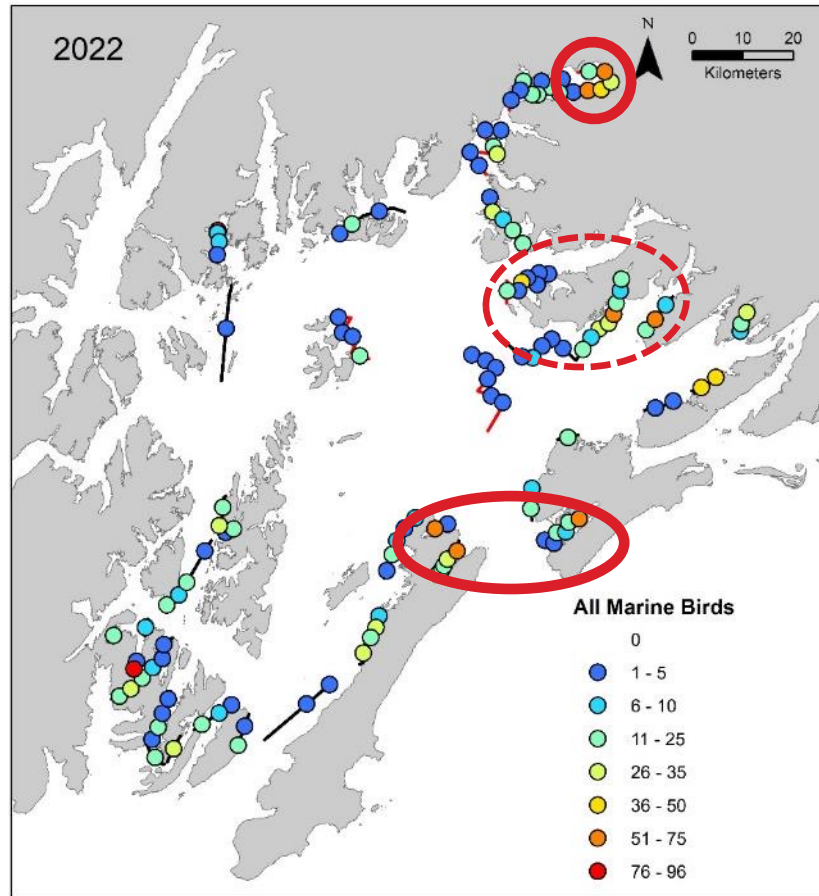


Conclusions

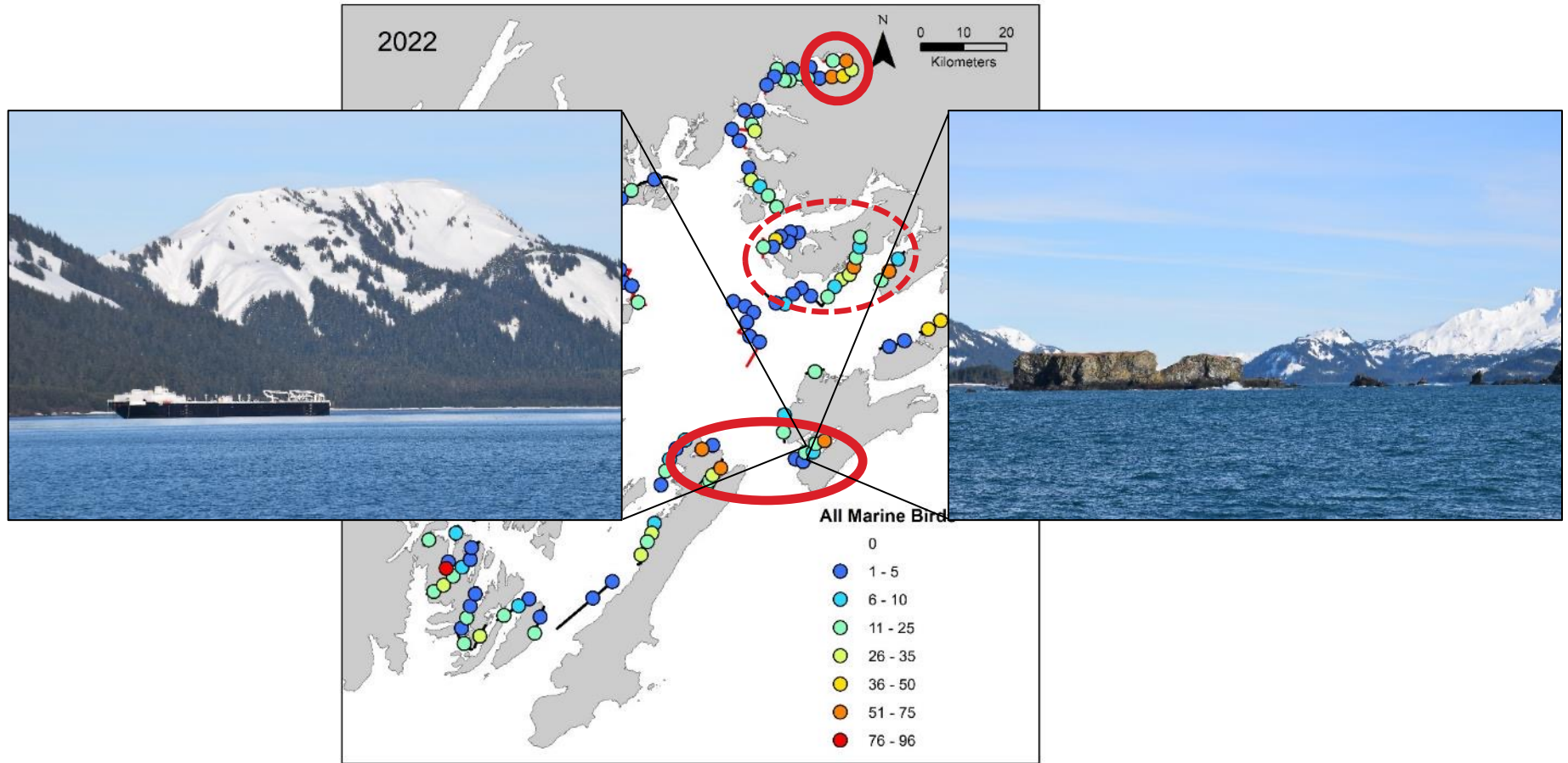
- PWS is a winter refuge from the Gulf of Alaska for seabirds
- Preference for nearshore areas consistent with patterns reported previously for PWS in non-breeding season.



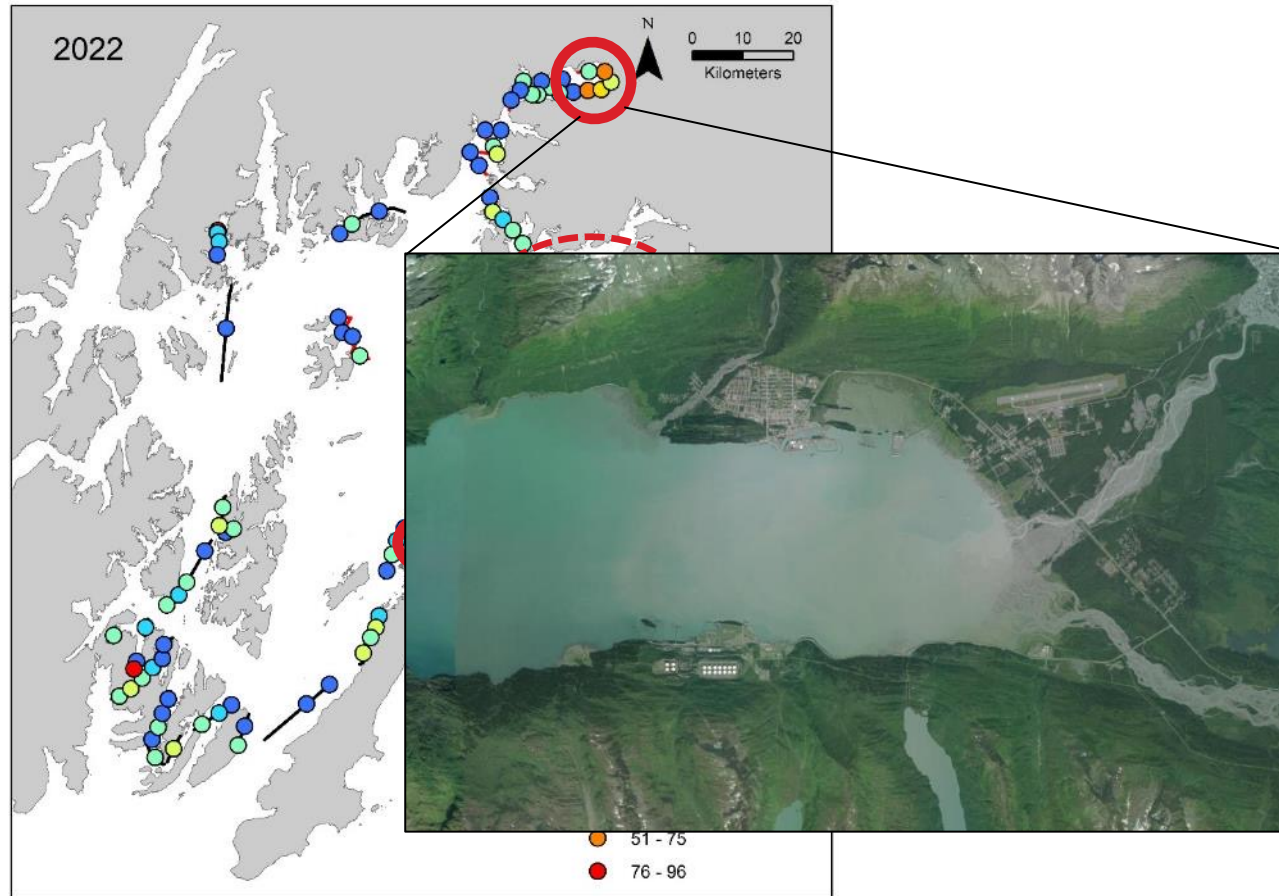
Recommendations – Priority Areas



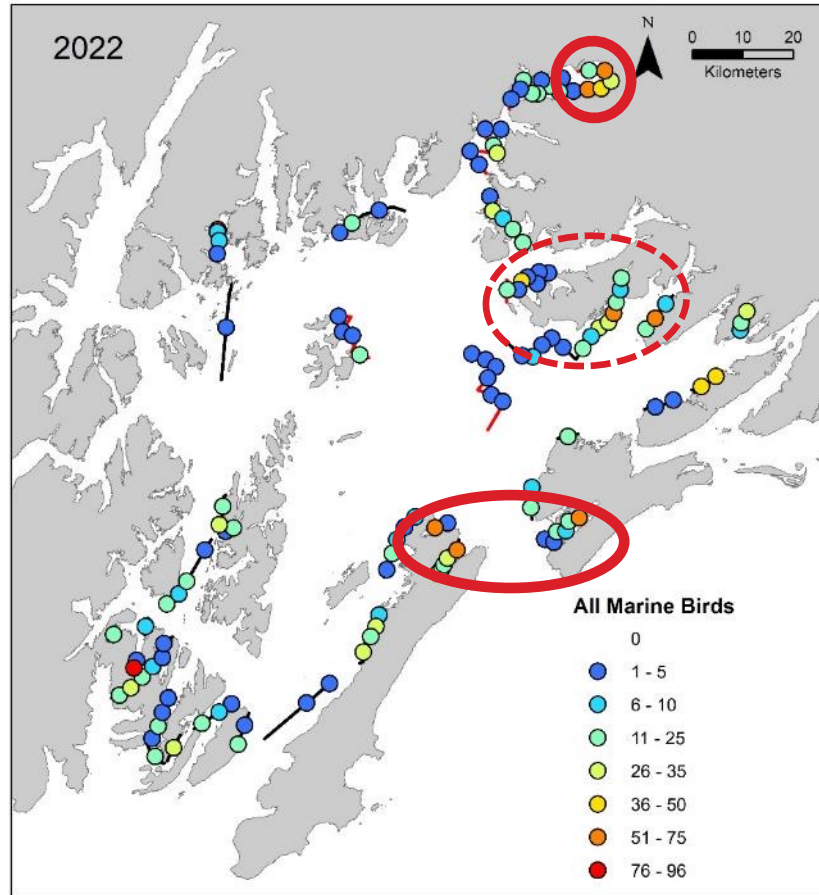
Recommendations – Priority Areas



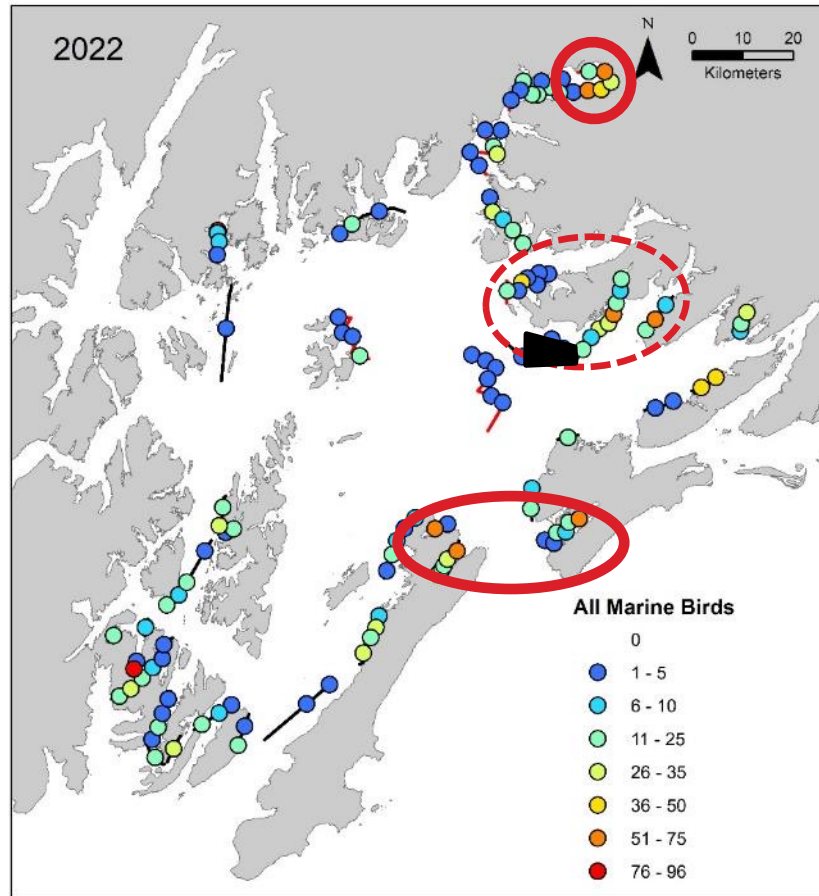
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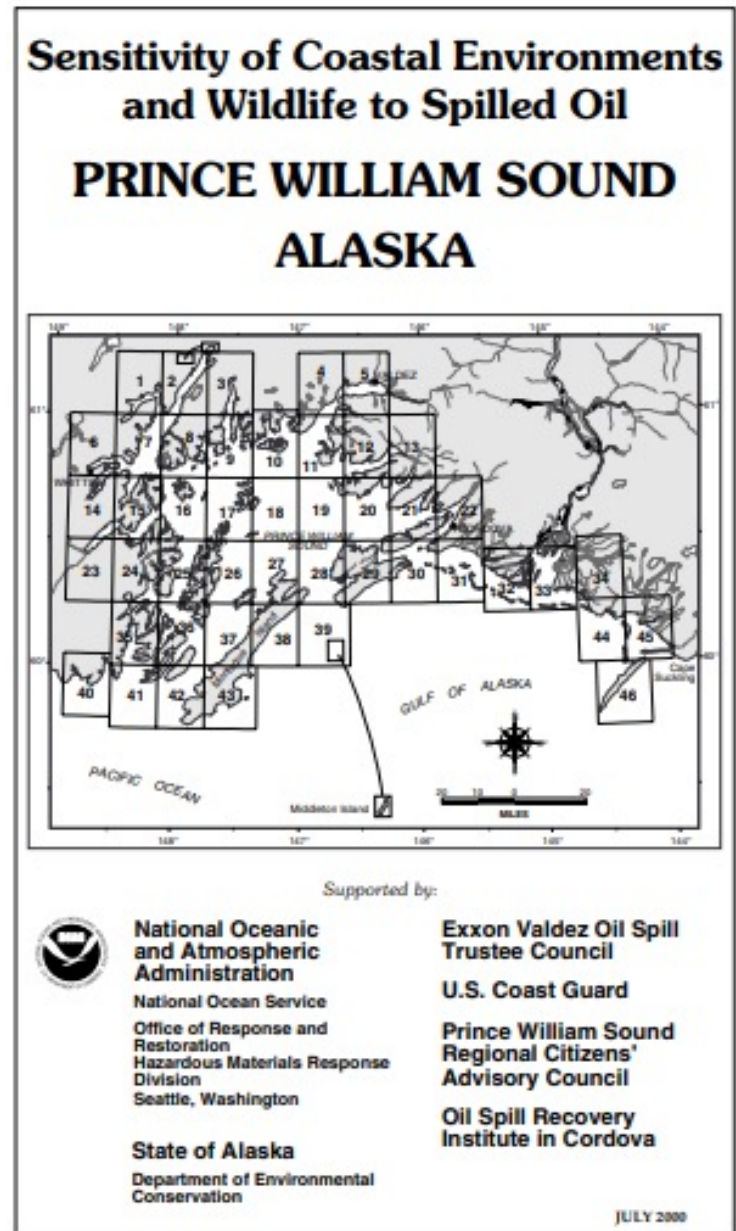


Recommendations – Priority Areas



Final thoughts

- Continued surveys in 2023 and beyond
- Important for planning and refining spill response efforts



Thank you!

- PWS Regional Citizens' Advisory Council
- Exxon Valdez Oil Spill Trustee Council Gulf Watch Alaska
- Dr. Rob Campbell, Prince William Sound Science Center

