

Acoustic monitoring of beluga whales (*Delphinapterus leucas*) in Cook Inlet, Alaska

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Objectives

Initial project (CIBA): 2008 – 2013

Funding: NMFS, DoD

- Is passive acoustic monitoring feasible in Cook Inlet?
 - 33 feet tidal exchange
 - 11 knots
 - Bottom substrate transport
 - Glacial silt (>3 feet/month)
 - Vegetative debris
 - Winter ice coverage

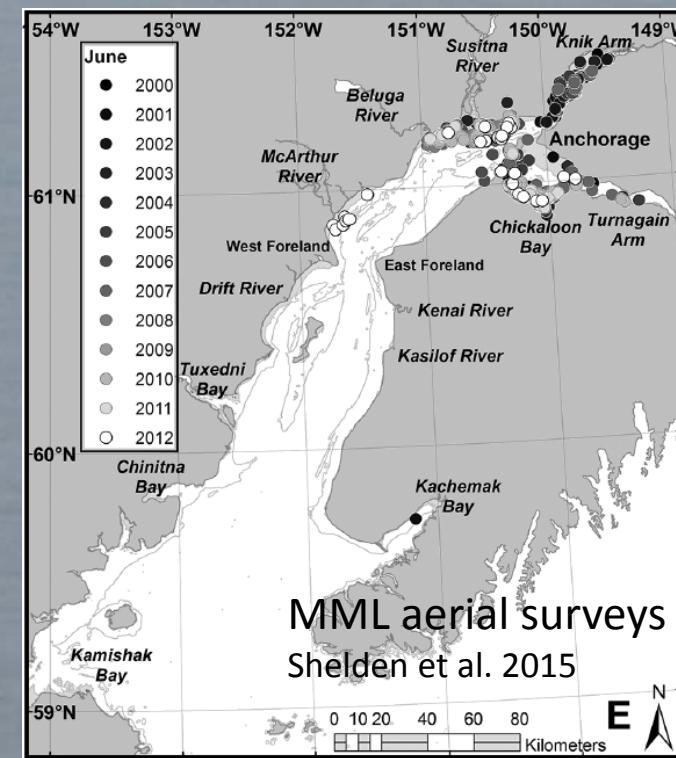


Objectives

Initial project (CIBA): 2008 – 2013

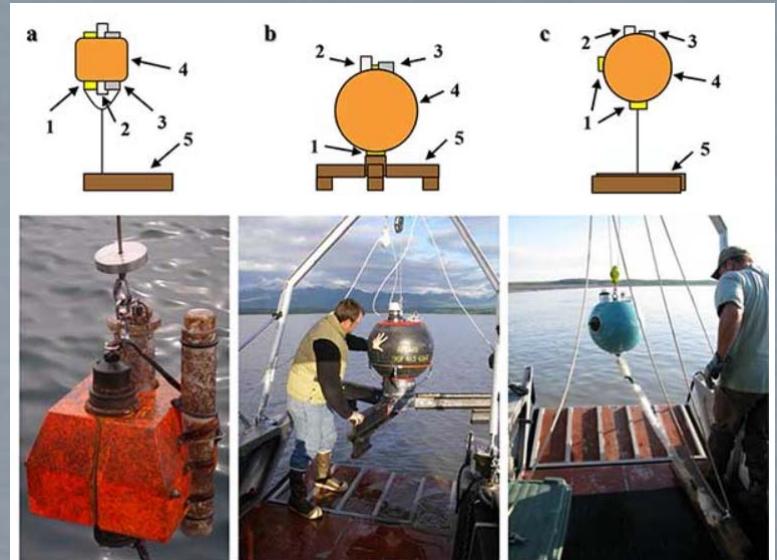
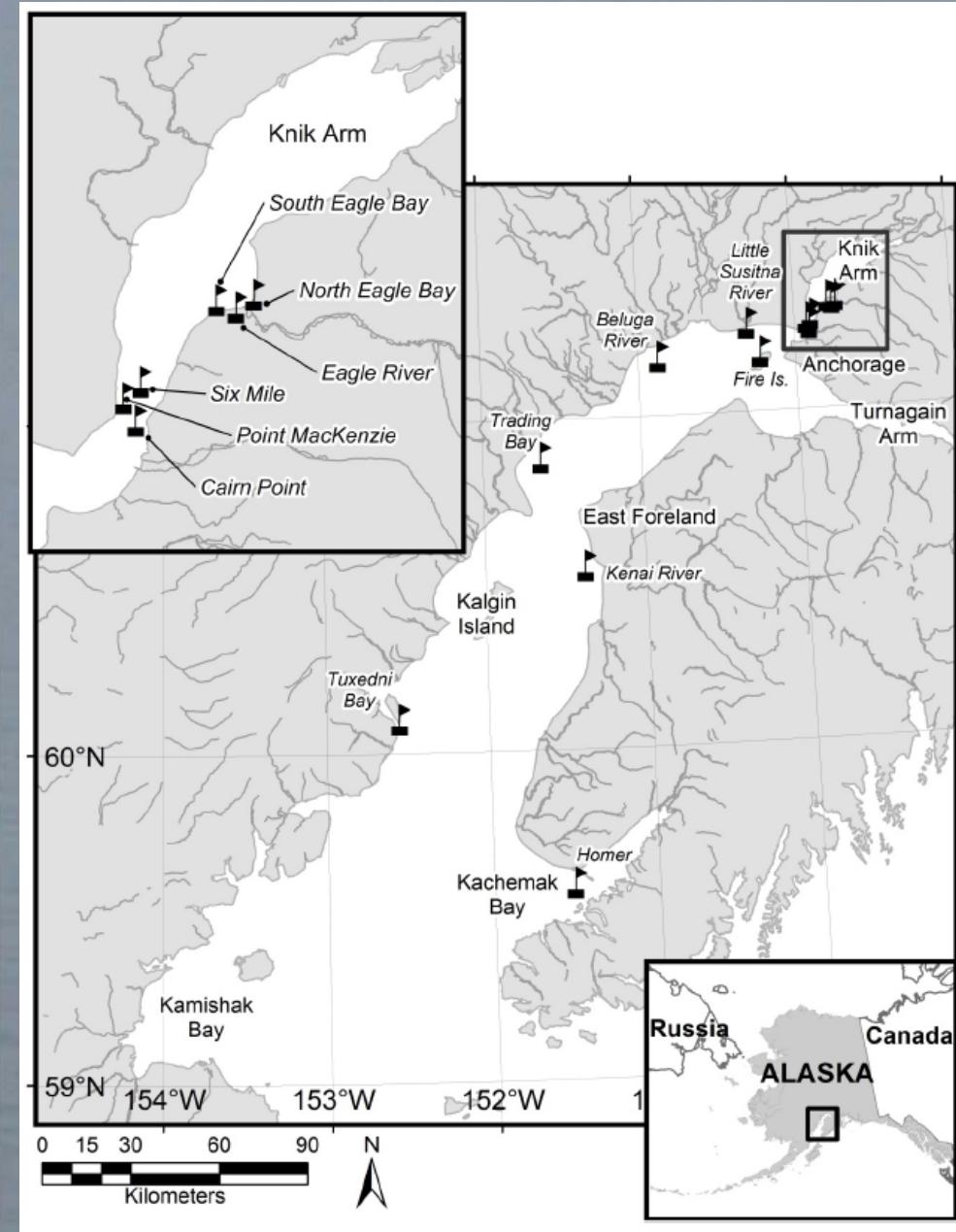
Funding: NMFS, DoD

- Is passive acoustic monitoring feasible in Cook Inlet?
- Year-round seasonal presence
- Killer whale, porpoise, anthropogenic noise

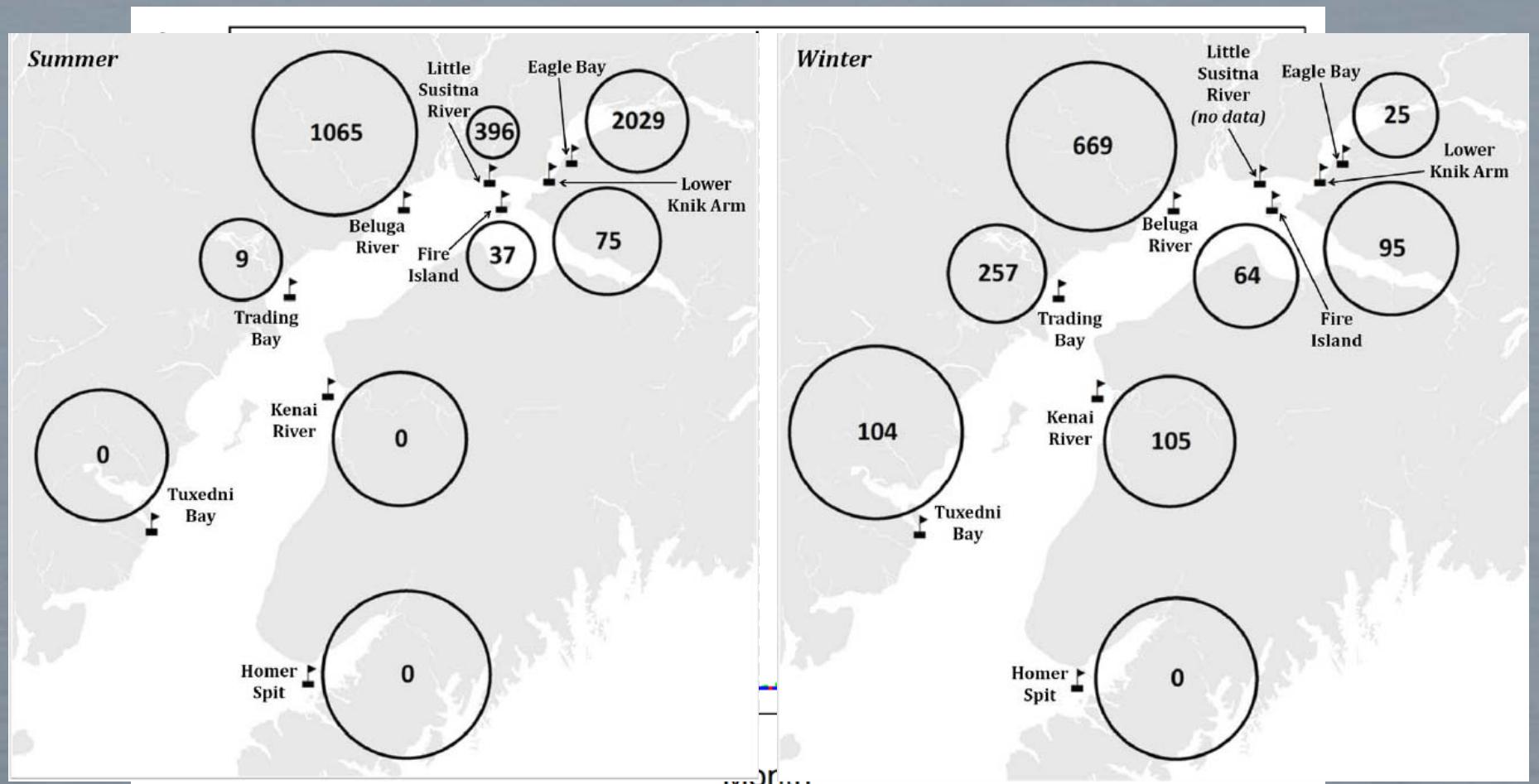


Methods

Lammers *et al.* 2013, Castellote *et al.* 2016



Results

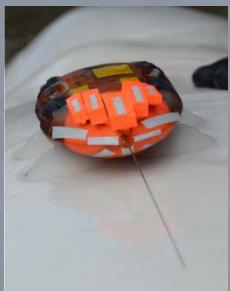


Results

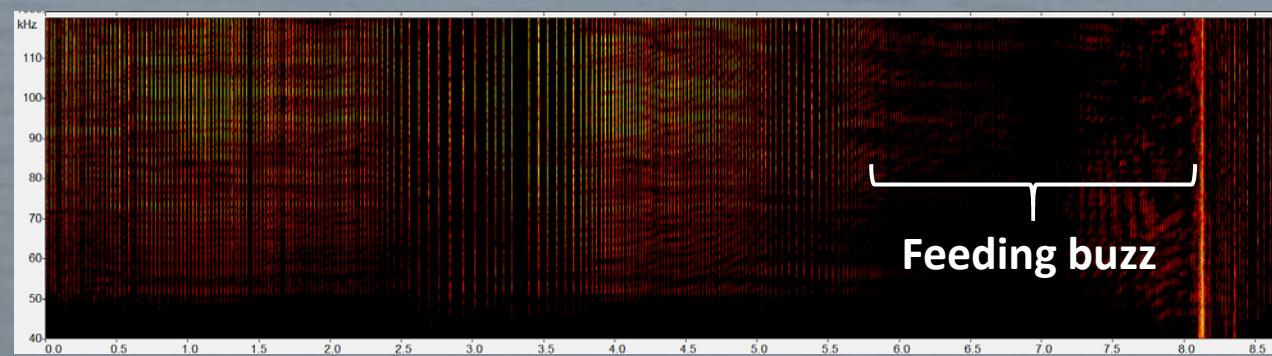
Feeding occurrence through echolocation

Bristol Bay beluga population health assessment program (2014-2016)

Dtag v3 and SPLASH 10 Argos/fastloc GPS

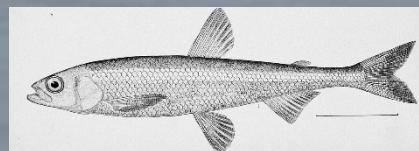
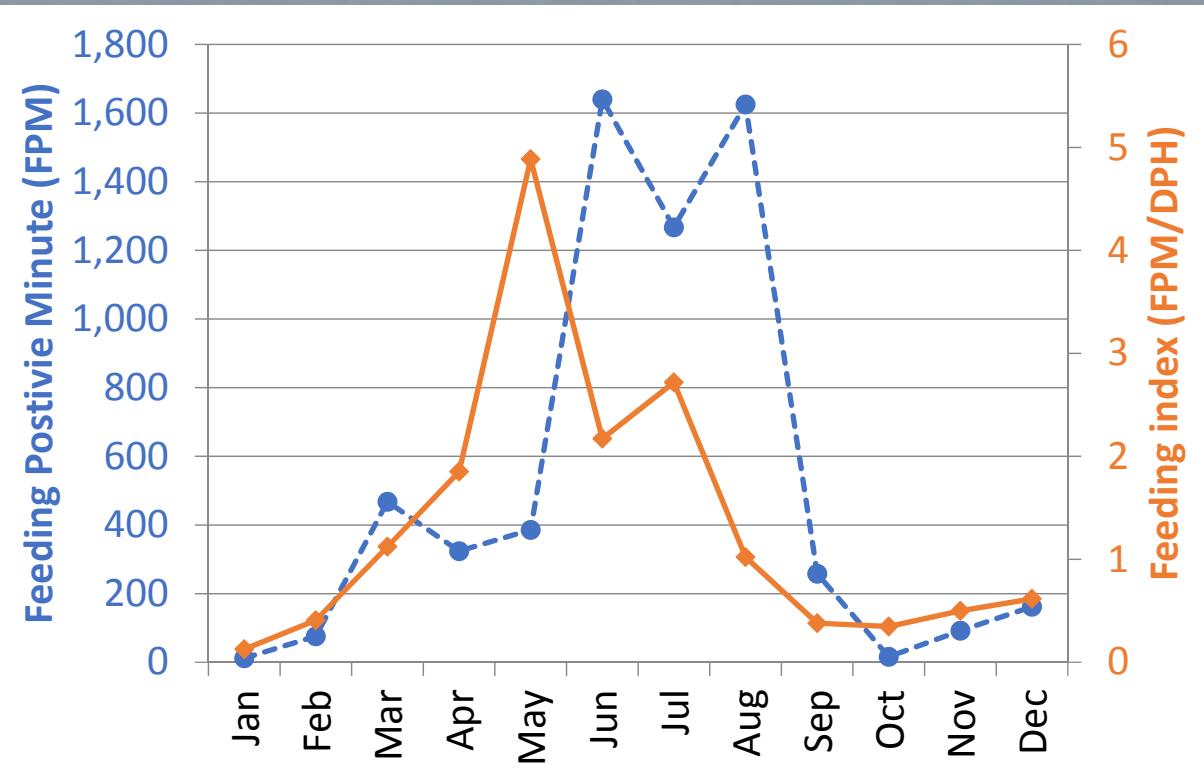


Stomach temperature pill



Results

May becomes the most important foraging month



Smelt, Osmeridae



Smolt, *Oncorhynchus*



Eulachon, *Thaleichthys*

Thank you MMC for funding this re-analysis!

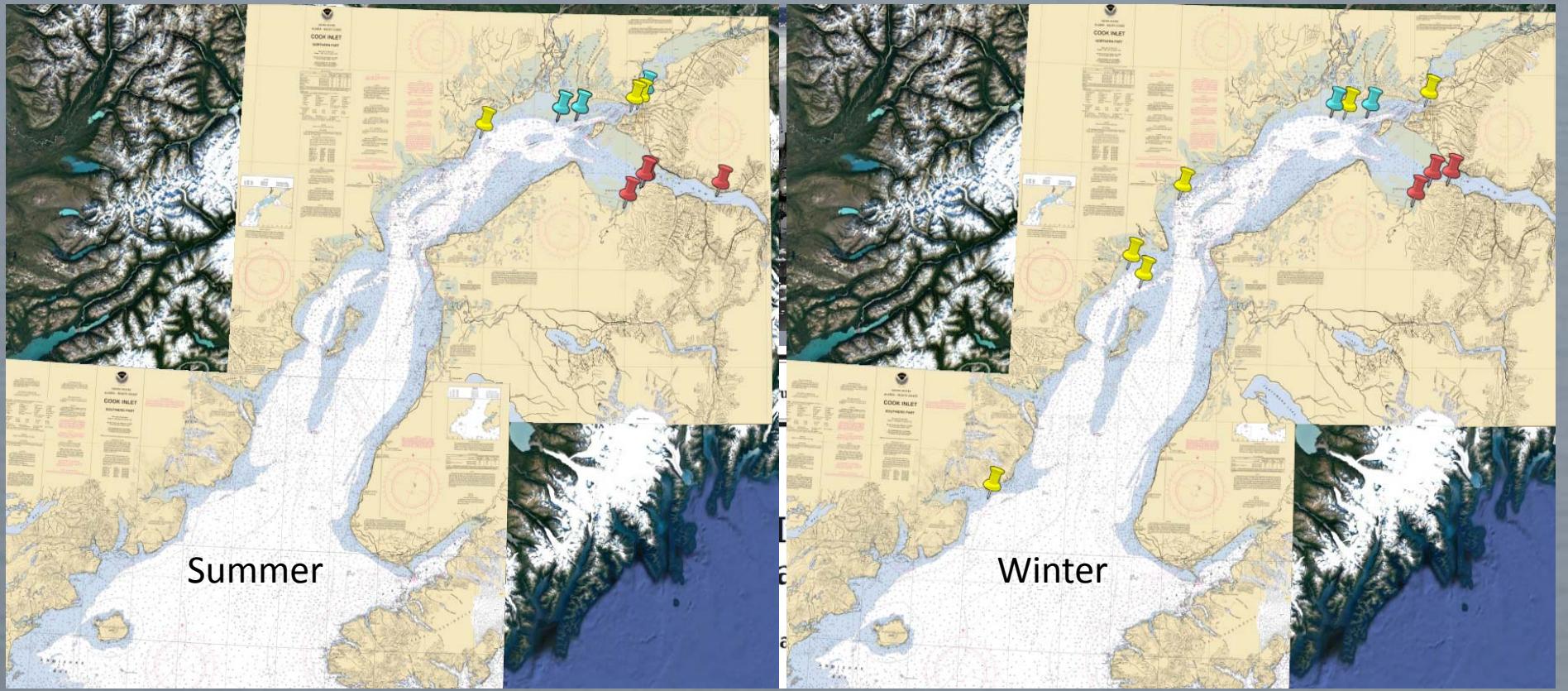
Objectives

Continuation project (DOS CIBAS): 2017 – 2020

Funding: NMFS S6 Species Recovery Grants to States (ADF&G)



- Is foraging behavior disturbed by noise?



Acknowledgements

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