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

MML aerial surveys
Shelden et al. 2015
Methods


“Death star”
Results

Castellote et al. 2016
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

Feeding buzz
Results

May becomes the most important foraging month

Feeding Postivie Minute (FPM)

Feeding index (FPM/DPH)

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?
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