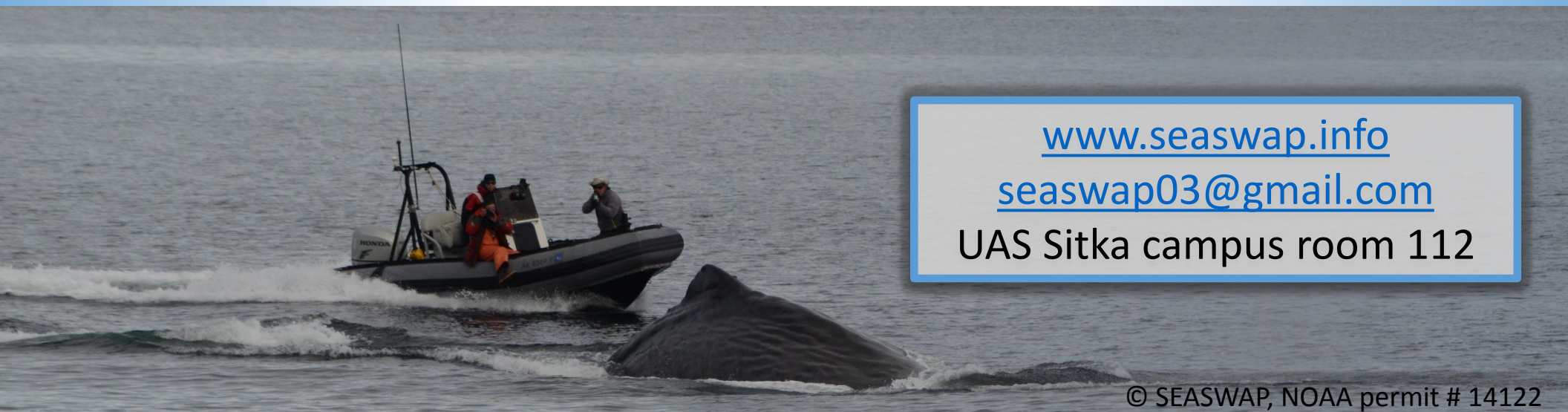


Southeast Alaska Sperm Whale Avoidance Project

NOAA Saltonstall-Kennedy Grant



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This publication is supported in part by funds from NOAA Award # NA15NMF4270271. The statements, findings, conclusions and recommendations are those of the authors and do not necessarily reflect the views of NOAA or the Dept. of Commerce.

SEASWAP Overview



- Formed in 2003 to address the issue of sperm whale depredation on commercial fishing gear in the Gulf of Alaska
- GOAL: Collaboration between scientists, fishermen, and managers to understand and reduce removal of catch from fishing gear

WWW.SEASWAP.info

Saltonstall-Kennedy project: near real-time reporting network 2015-2016

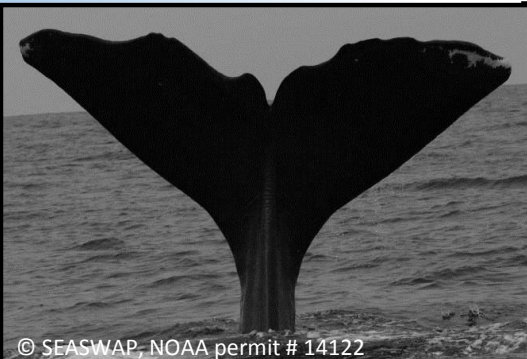
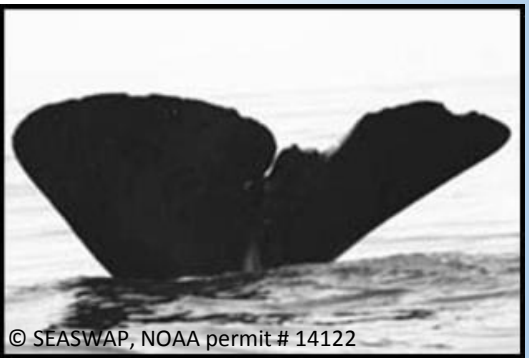
OBJECTIVES:

- Whale avoidance through near real-time communication network
- Satellite-tag sperm whales that are known depredators
- Collect whale, environmental, and fisheries data to analyze contributing factors to sperm whale depredation

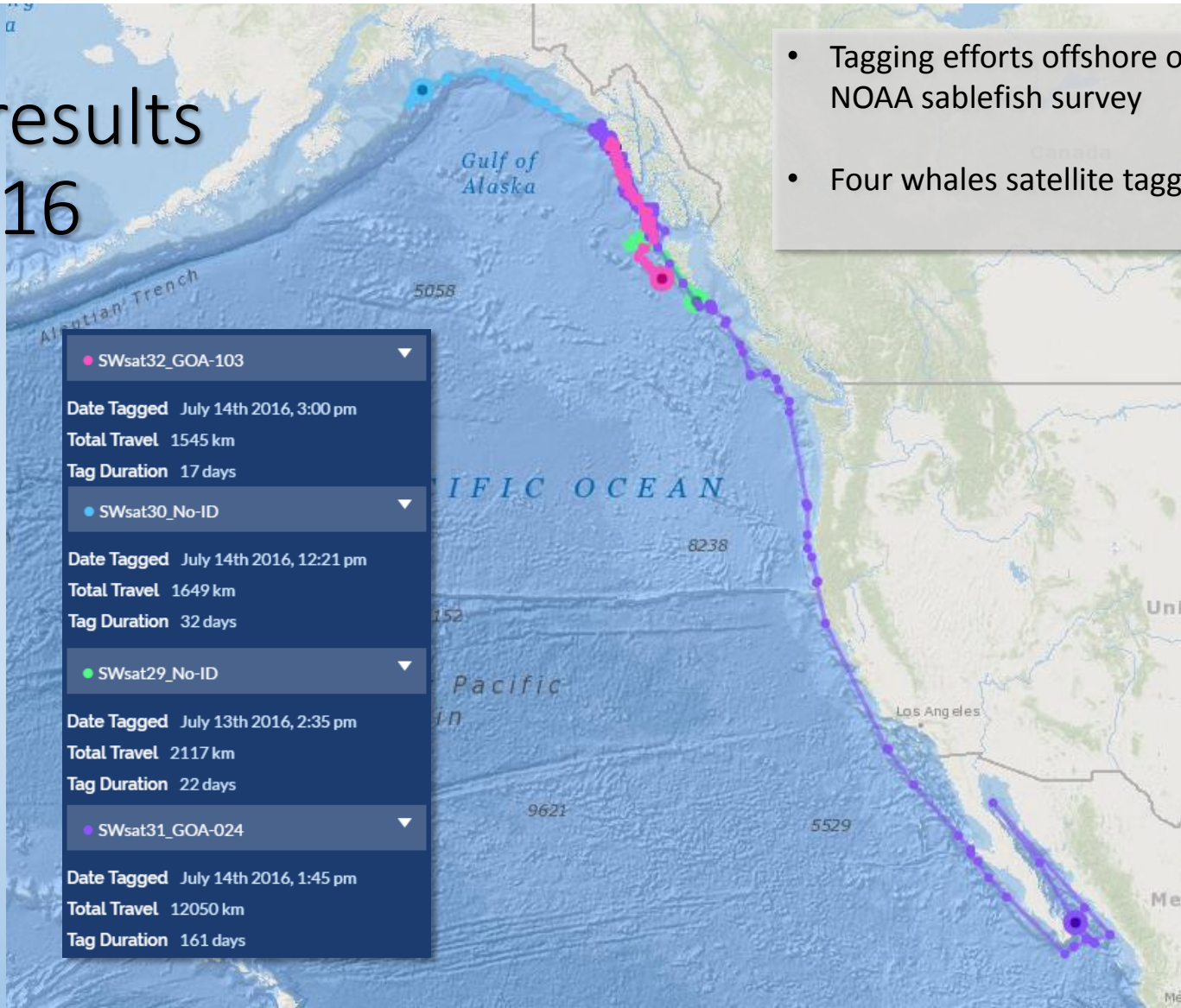
Chatham Strait as a study area: geographically and temporally confined, fewer permit holders, fewer whales

Repeat Depredators

- Individual whales are identifiable by cuts and nicks on flukes and dorsal fins
- 120 individual sperm whales in our photo ID catalog (GOA), but 11-12 individuals account for most sightings due to prevalence near vessels and depredation
- Sperm whales detectable by echolocation clicks (sonar)

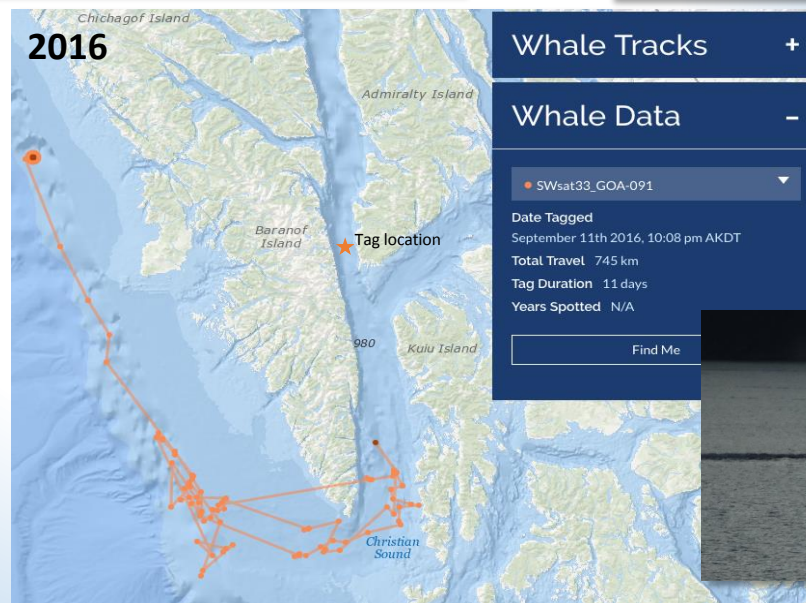
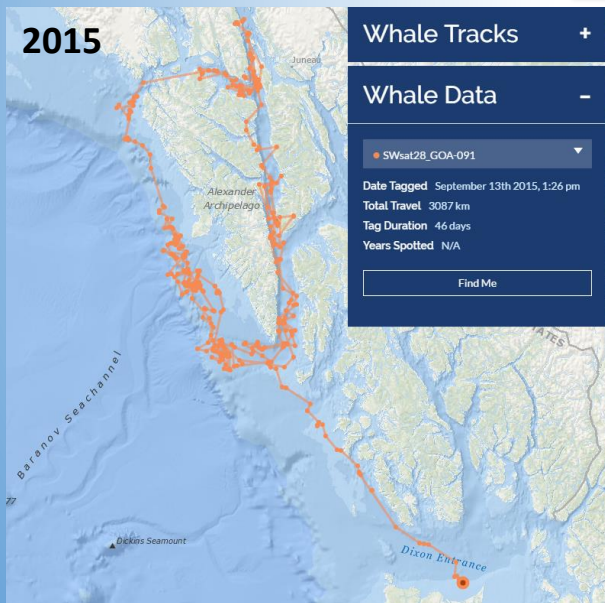
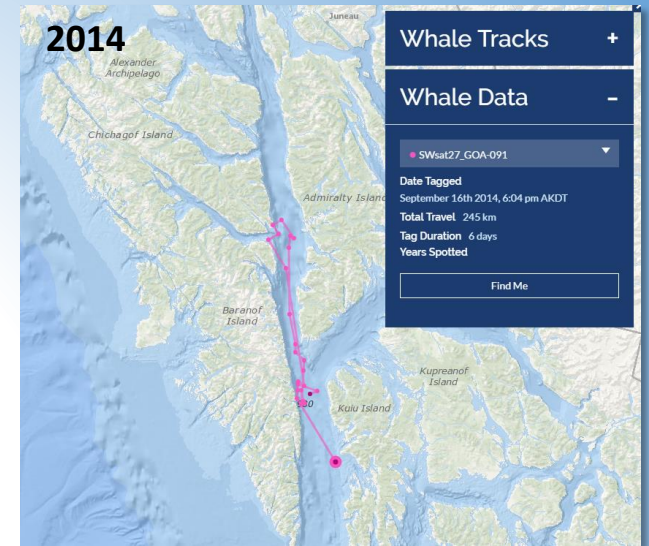
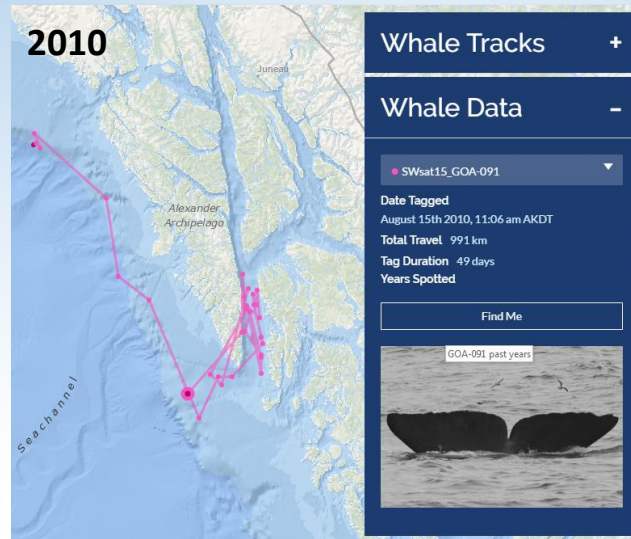


Tagging results – July 2016



- Tagging efforts offshore of Sitka during NOAA sablefish survey
- Four whales satellite tagged

GOA-091 – a repeat Chatham Strait depredator



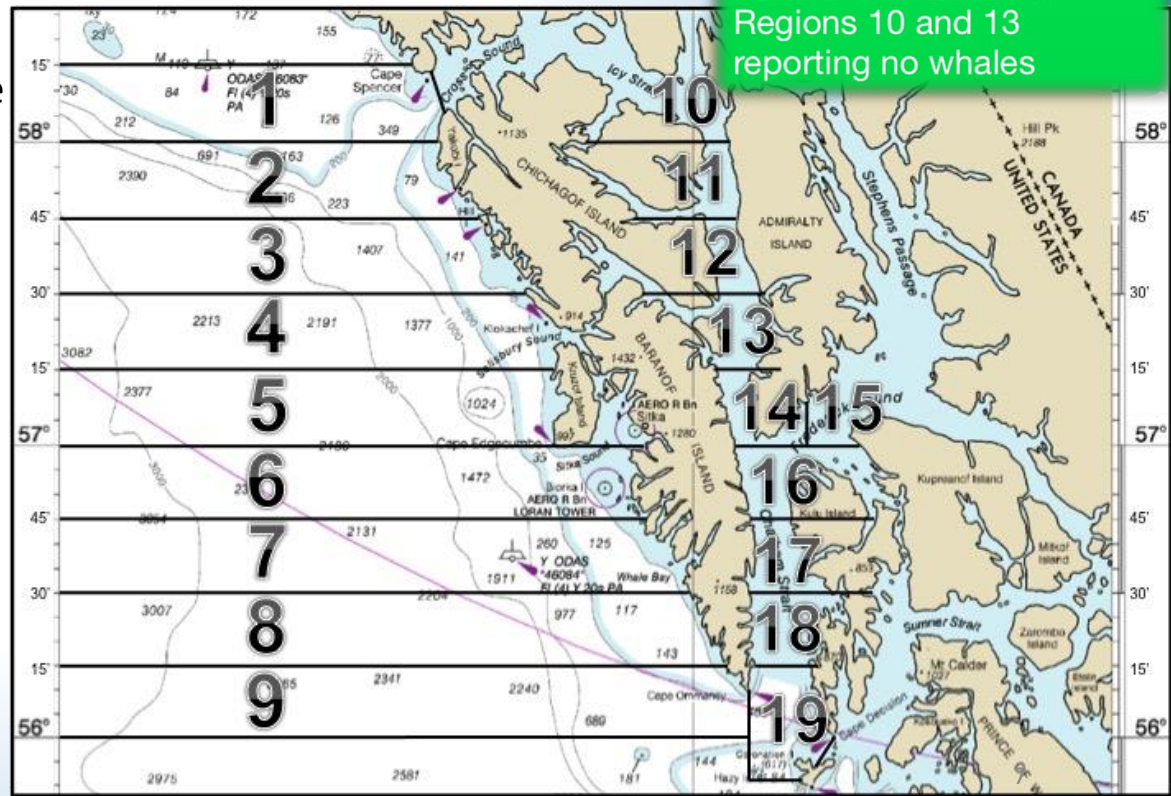
September 11, 2016



Sperm Whale Avoidance Network (SWAN) – year two

- Inreach devices, cell phones, and satellite phones
 - ALFA provided 10 Inreaches to check out
- Participants reported their location and presence or absence of whales twice daily to the shore-based coordinator
 - Fishermen also reported all whale sightings as soon as they occurred
- Participants then received twice daily reports of whale activity
 - Tagged whale locations were given as exact locations, participant reports were anonymous and generalized by region to protect confidentiality
- Participants sign release forms to allow ADFG to share logbook data with SEASWAP

Tagged whale is in southern Lynn Canal about 2mi SW of Funter Bay. Last location was 58.2182, 134.9544 at 8.15am. Regions 10 and 13 reporting no whales



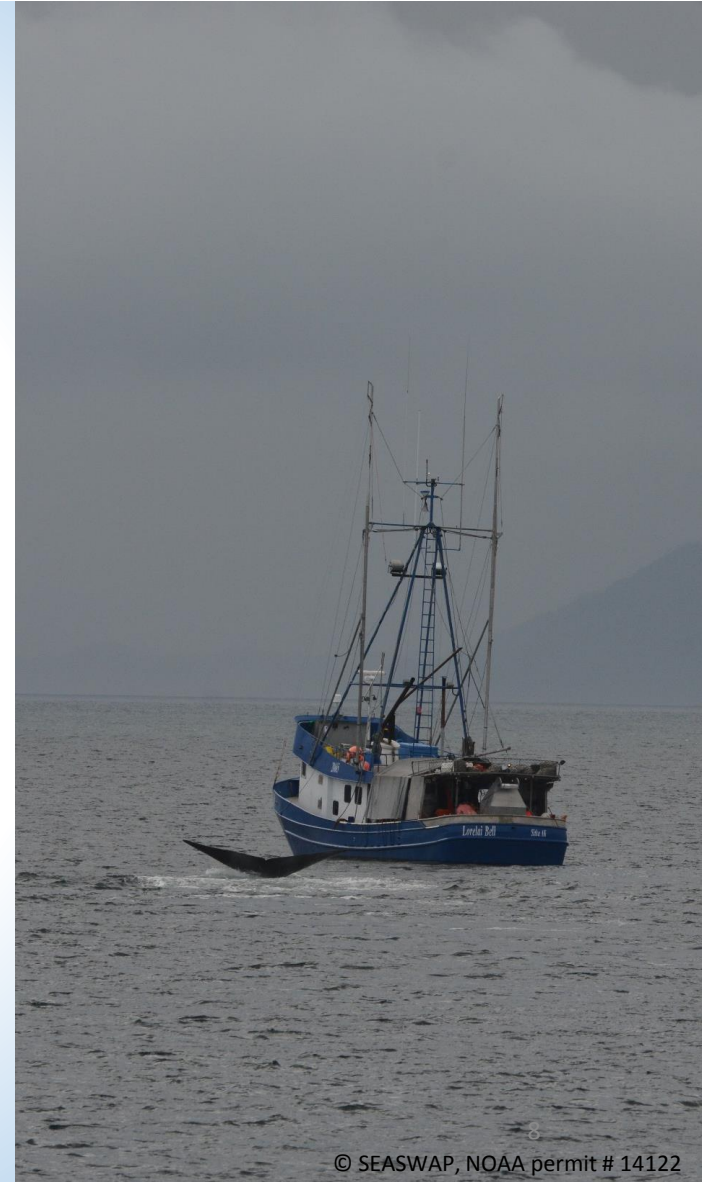
Communication network results

2015

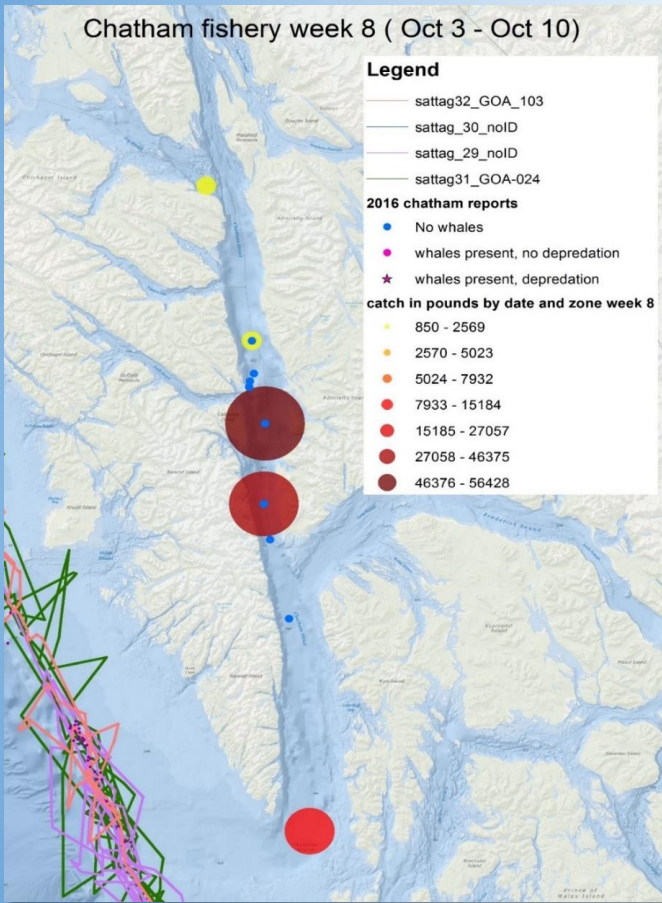
- 48 permit holders (61%)
- 34 vessels (58%)
- 10 reports of depredation
- 3 reports of whales with no depredation
- Whale activity in 8 of 11 weeks of fishing
- 89 negative reports
- 3 days fishing on average

2016

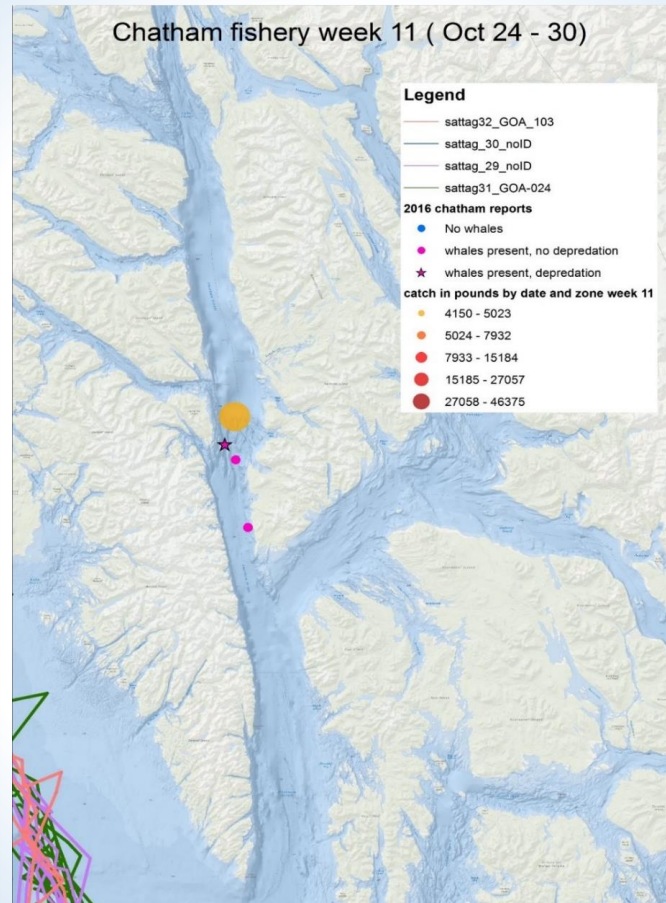
- 37 permit holders (47%)
- 29 vessels (58%)
- 3 reports of depredation
- 2 reports of whales with no depredation
- Whale activity in 3 out of 11 weeks of fishing
- 51 negative reports
- 2.2 days fishing on average



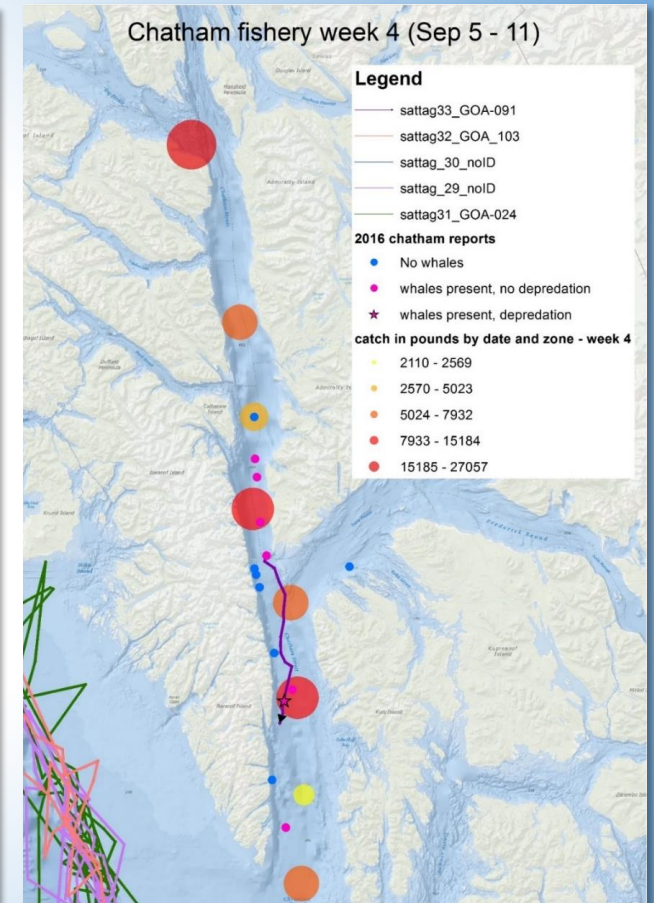
Fishing and whale activity over 2016 Chatham opening – low correlation



High fishing activity, no whales



Low fishing activity, depredation



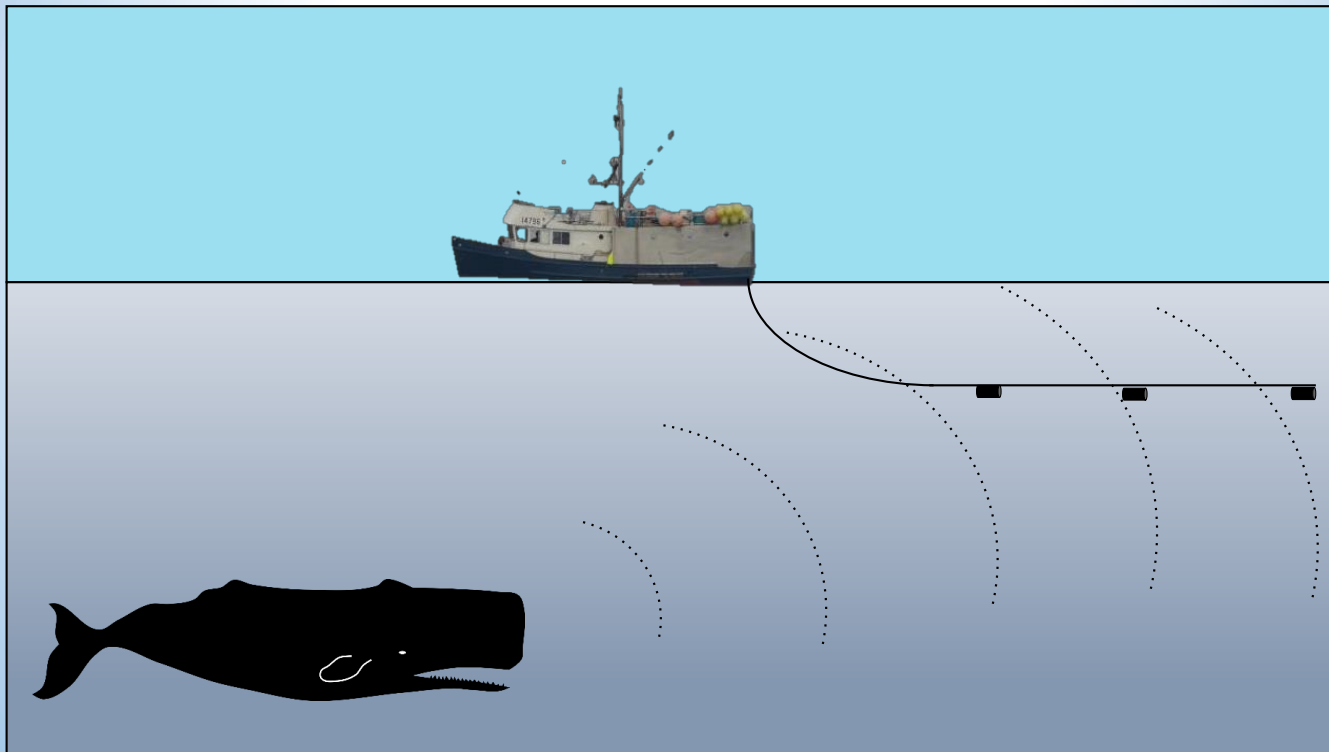
High fishing activity, whale activity, low depredation

Conclusions - SK

- Less whale activity in 2016 – potentially due to lower quotas, fewer boats, shorter fishing trips?
- Whale activity in Chatham Strait is highly variable – does not appear to be strongly correlated to fishing activity
- Whales in Chatham are not always depredating vessels, may be natural foraging
- Whales travel freely in and out of Chatham Strait
- Certain whales (GOA-091!) have a degree of site fidelity to Chatham Strait

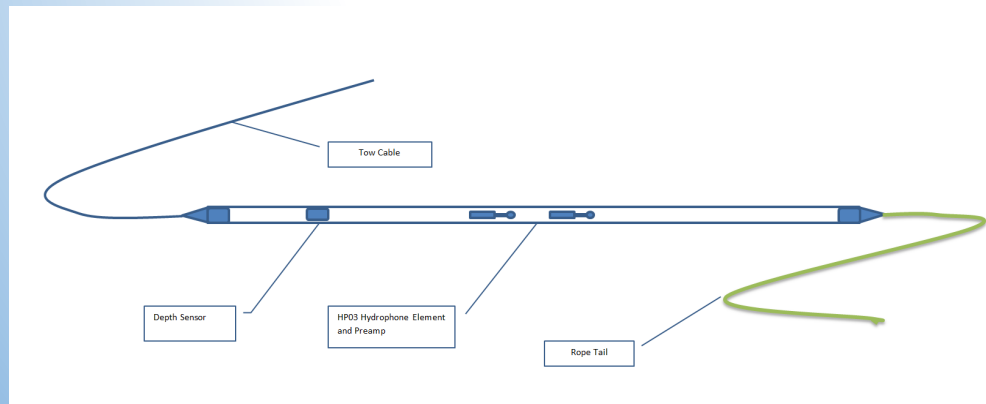
Towed Hydrophone Array

- Detect animals in real time
- Localize on the fishing grounds

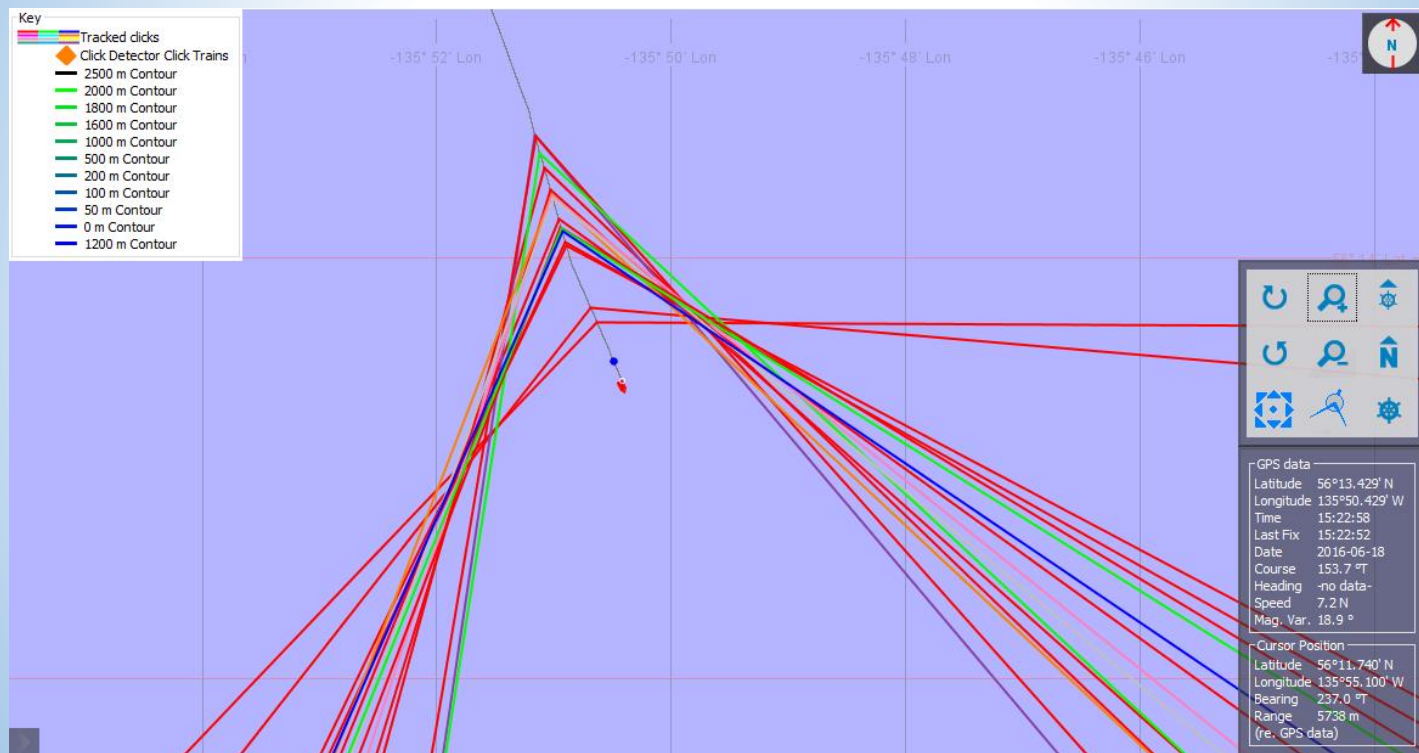


Towed Array

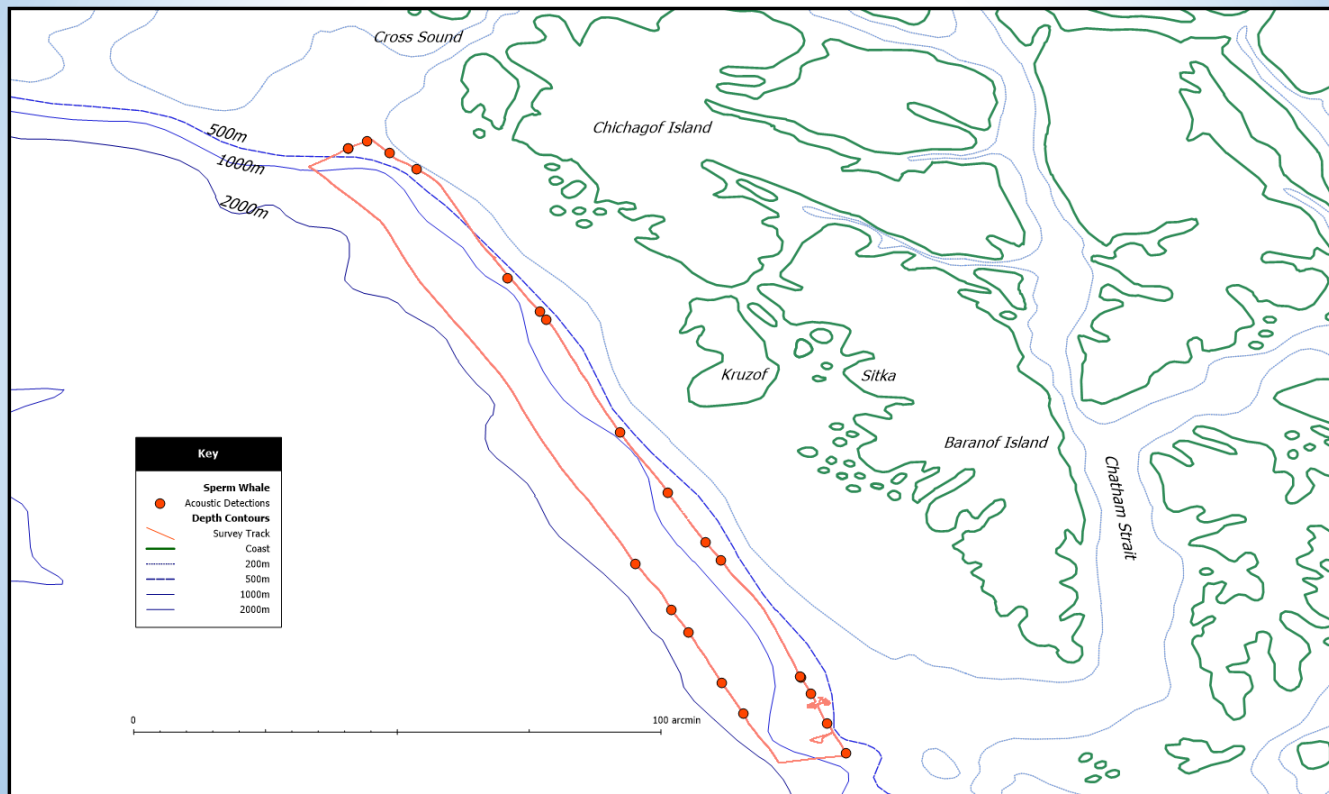
- Coils in a Longline Tub



Towed Array Display



Real Time Reporting

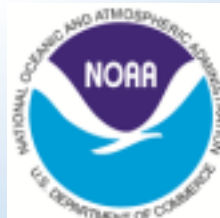


Thank You!

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This publication is supported in part by funds from NOAA Award # NA15NMF4270271. The statements, findings, conclusions and recommendations are those of the authors and do not necessarily reflect the views of NOAA or the Dept. of Commerce.