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# Bycatch of Harbor Porpoise in the Southeast Alaska Gillnet Fishery: Bycatch Estimates and Implications for Management

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# Outline

- Overview of AK Marine Mammal Observer Program (AMMOP)
- Recent observer coverage
- Resulting bycatch estimates
- Context for SEAK harbor porpoise
- Next steps

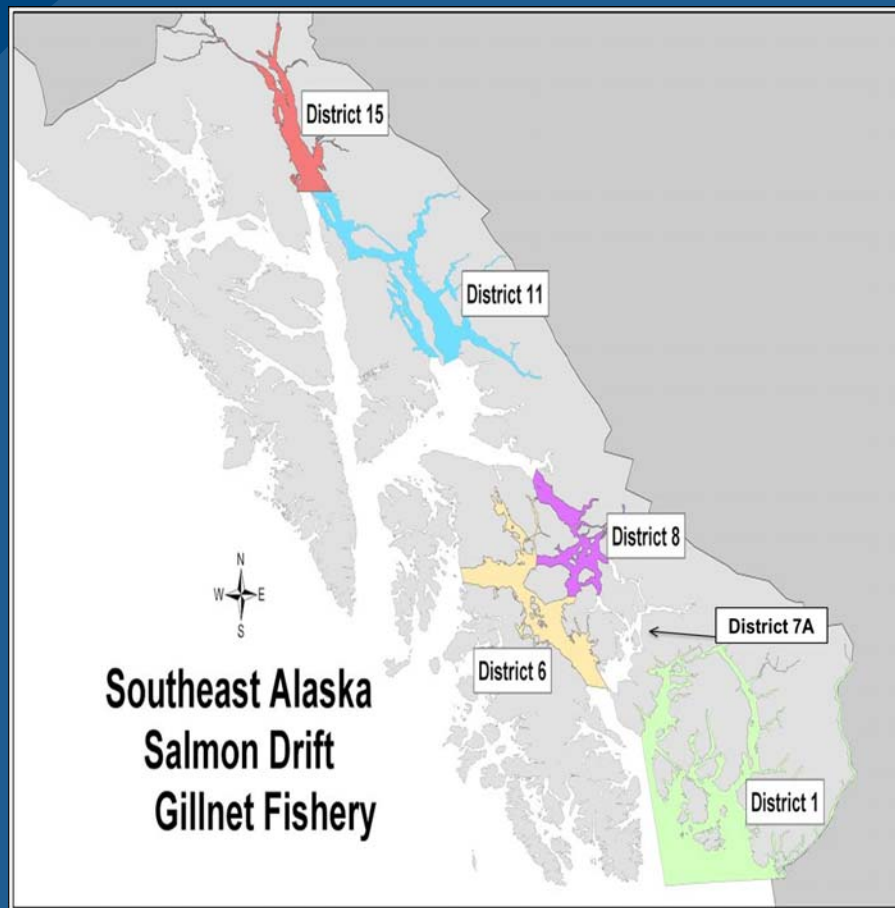


# Overview of AMMOP

Began in 1990 to observe commercial fisheries managed by the State of Alaska

| State of AK Fisheries Observed by AMMOP               | Years Observed |
|---|----------------|
| Prince William Sound salmon drift gillnet             | 1990-1991      |
| Prince William Sound salmon set gillnet               |                |
| AK Peninsula/Aleutian Islands salmon drift gillnet    |                |
| Cook Inlet salmon drift gillnet                       | 1999-2000      |
| Cook Inlet salmon set gillnet                         |                |
| Kodiak salmon set gillnet                             | 2002 & 2005    |
| Yakutat salmon set gillnet                            | 2007-2008      |
| Southeast Alaska drift gillnet (2 of 5 mgt districts) | 2012-2013      |
| AK Peninsula/Aleutian Islands salmon set gillnet      | None           |
| Bristol Bay salmon drift gillnet                      | None           |
| Bristol Bay salmon set gillnet                        | None           |

# AK Marine Mammal Observer Program (AMMOP): 2012-2013 Coverage



Management Districts  
observed: 6 and 8 (and 7A)

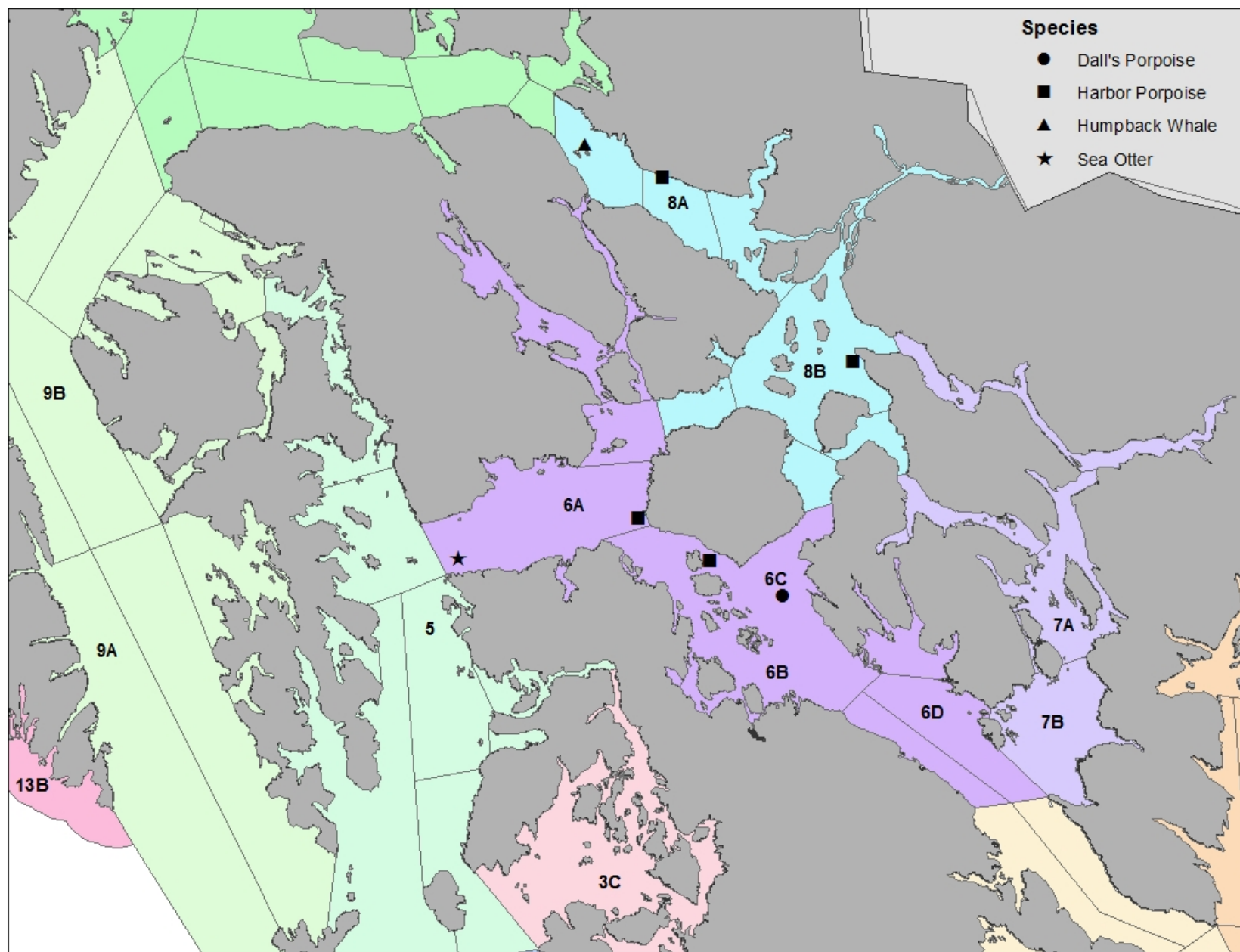


## SEAK DGN Fishery Observer Coverage

| Year | # of Unique Permit Holders Observed | # of Active Permits in all Districts | # of Trips Observed | Observer Coverage |
|------|-------------------------------------|--------------------------------------|---------------------|-------------------|
| 2012 | 160                                 | 445                                  | 379                 | 6.4%              |
| 2013 | 165                                 | 451                                  | 449                 | 6.6%              |

# Observed Bycatch

| Year  | Observed Marine Mammal Takes               | Observed Seabird Takes                |
|-------|--|---------------------------------------|
| 2012  | 1 Dall's porpoise<br>(1 Seriously injured) | 13 common murres<br>(12 dead, 1 live) |
| 2013  | 4 Harbor porpoise<br>(2 Seriously injured) | 76 common murres<br>(74 dead, 2 live) |
|       | 1 sea otter<br>(Released alive)            | 6 marbled murrelets<br>(6 dead)       |
|       | 1 humpback whale<br>(1 Seriously injured)  | 8 Rhinoceros auklets<br>(8 dead)      |
|       |  | 1 Cassin's auklet<br>(1 dead)         |
|       |  | 1 read throated loon<br>(1 dead)      |
| Total | 7 marine mammals                           | 105 seabirds                          |



# Estimated Mortality/Serious Injury

| Marine Mammal Stock                   | 2012       |             | 2013       |             | Mean Estimated Annual Mortality (CV) |
|---------------------------------------|------------|-------------|------------|-------------|--------------------------------------|
|                                       | # Observed | # Estimated | # Observed | # Estimated |                                      |
| Dall's Porpoise, Alaska               | 1          | 18          | 0          | 0           | 9 (1.0)                              |
| Harbor Porpoise, Southeast Alaska     | 0          | 0           | 2          | 23          | 12 (1.0)                             |
| Humpback Whale, Central North Pacific | 0          | 0           | 1          | 11          | 5.5 (1.0)                            |
| Sea Otter, Southeast Alaska*          | 0          | -           | 1          | -           | -                                    |

\* Only observed takes of sea otters are reported because NOAA Fisheries does not perform injury determinations or estimate mortality for sea otters as this species is managed by the U.S. Fish and Wildlife Service.

# SEAK Drift Gillnet Fishery Self-Reported Takes

1990-1993

- 13 self-reported harbor porpoise

1996-2017

- 4 self-reported harbor porpoise (1 in 2013)
- 6 self-reported unidentified small cetacean (porpoise or dolphin)



# Harbor Porpoise - Southeast AK stock

| Fishery Name  | Years        | Data Type | Percent Observer Coverage | Observed Mortality | Estimated Mortality | Mean Estimated Annual Mortality |
|---|--------------|-----------|---------------------------|--------------------|---------------------|---------------------------------|
| Yakutat salmon set gillnet                                | 2007<br>2008 | Obs data  | 5.3<br>7.6                | 1<br>3             | 16.1<br>27.5        | 22<br>(CV = 0.54)               |
| Southeast Alaska salmon drift gillnet (Districts 6, 7, 8) | 2012<br>2013 | Obs data  | 6.4<br>6.6                | 0<br>2             | 0<br>23             | 12<br>(CV = 1.0)                |
| <b>Minimum</b> total estimated annual mortality           |              |           |                           |                    |                     | 34<br>(CV = 0.77)               |

# Harbor Porpoise - Southeast AK stock

SEAK DGN Fishery-related M/SI = 12

PBR for inland waters = 8.9

Because  $M/SI > PBR$ , the  
stock/fishery meets the MMPA  
criteria for convening a TRT

# Next Steps

- Focus on data collection to inform:
  - Abundance estimates
  - Bycatch estimates for 3 other management districts
  - Fishery characterization
- Continue evaluating stock structure
- Consider research on mitigation measures (e.g., pingers)
- Update NMFS' Priorities for Convening TRTs per MMPA sec 118(f)(3)

