NOAA Initiatives Addressing Large Whale Entanglements

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NMFS Mandates

Marine Mammal Protection Act – reduce marine mammal serious injuries/mortalities in commercial fisheries to insignificant levels

Endangered Species Act – recover endangered and threatened species

All large whales are protected under the MMPA and most are listed under the ESA
Reported Whale Entanglement Locations 2000 to 2012

Entangled whales (n=143)

- FIN (n=4)
- GRAY (n=56)
- HUMPBACK (n=55)
- MINKE (n=1)
- SPERM (n=2)
- UNIDENTIFIED (n=25)
Challenges

Reports are minimum estimates

- Estimates that 3.9-13% of gray whales that die (natural/human-caused) in a given year end up stranding and being reported (Punt and Wade 2012)

- Low to no observer coverage in pot/trap

- Reports of entangled whales never sighted again
  - Conditions, rugged coastline, low human population in areas, etc.

- Gear is often not identified ("crab pot gear")

- Reports may not reflect area of interaction
West Coast Priorities for Addressing Large Whale Entanglements

- Characterize fixed gear fisheries (“Gear Guide”)
  - Description
  - Configuration
  - Geographic range of effort
  - Season/management structure
- Assess risk of fixed gear fisheries and large whales (humpback, fin, blue, sperm and gray whales) individually and at the stock-level
- Improve reporting, response, outreach and education
Implement priority activities of large whale Recovery Plans

Priority 2 - An action that must be taken to prevent a significant decline in population numbers or habitat quality, or to prevent other significant negative trends short of extinction. Reducing fishery interactions – all Priority 2 in RPs
“Understanding the co-occurrence of large whales and commercial fixed gear fisheries off the west coast of the United States” NOAA-TM-NMFS-SWR-044; Saez et al. 2013

**Outreach/Education**

**Entangled Whale?**
1-877-SOS-WHALe

**Timely Reporting Can Help**
Prompt reporting is the best way to help entangled whales. Reports will be relayed to regional responders. Authorized personnel will advise you on what to do next. The following information will aid responders in assessing the case and planning an appropriate response.

1. **Date:** __________________________________________
2. **Time of sighting:** ____________________________
3. **Name:** ____________________________
4. **Vehicle:** ____________________________
5. **Phone number:** ____________________________
6. **General location:** ____________________________
7. **Species:** ____________________________
8. **Stake (spermaceti, etc.):** ____________________________
9. **Apparent size and class:** ____________________________
10. **Note:** ____________________________

**Report All Entangled Whales in Washington and Oregon to the Entanglement Reporting Hotline:**
1-877-SOS-WHALe (1-877-767-9425)

**Do not approach or attempt disentanglement.**

To report injured or stranded whales, dolphins, porpoises, seals, and sea lions, or to report incidents of marine mammal harassment, please call NOAA's 24/7 hotline at 1-800-853-1964.
Whale Entanglement Fact Sheet

The concern
Entanglement of marine mammals, particularly large whales, in fishing gear and marine debris is a concern because of the potential impacts to marine mammals (individuals and at a stock-population level), the fishing industry, and the environment.

Commercial fishery estimated average catch rate from 1990-1999:
- Worldwide: 34,716 captures/year
- United States: 2,429 captures/year (1% of global estimate)

Reported large whale entanglements
- U.S. report (California/Oregon/Washington): an average of 8 large whales reported as entangled per year from 2000-2012
- Actual number of entangled whales in sucker whales: reports are based on opportunistic sightings reported to the National Marine Fisheries Service (NMFS) and the entanglement response network, also from NMFS commercial fishery observers.
- Commercial fisherman have been actively engaged in using LORAS (Long Range Acoustic Ranging System) and humpback (Megaptera novaeangliae) were the most frequently reported entangled whale species
- California: an average of 8 large whale entanglement reports per year from 2000 to 2012

Conservation case study: Gillnet modifications to reduce entanglements
- A Pacific Salmon Trawl Reduction Team was formed in 1995 and led to requirements for the placement of acoustic pingers and deployment depths in the chief large-mesh drift gillnet fisheries targeting swordfish/thresher sharks
- Acoustic pingers produce sounds to warn whales of the presence of the net (regardless at large-scale entanglement)

Gear types
For many confirmed entanglement reports, an on-water response is not possible and a photograph or description of the entanglement is all that can be obtained. The origin of the entangling gear (active fishing gear or marine debris) is difficult to identify.
- From 2000-2010, the majority of large whale entanglements reported in California (87%) were identified as trap gear, 50% of reports indicated netting, and the source of the entangling gear was unidentified in 20% of reports.
- A Field Gear Guide characterizing commercial fishing gears off California, Oregon, and Washington is available to assist responders and managers with identification of the entangling gear.

Reporting sources
NMFS uses reports to track entanglements and provide the foundation for entanglement response. If possible, reporting of entangled whale observations from a variety of sources, including: on-water observations (figures below). There are greater number of entanglements reported over larger cities such as San Francisco, Los Angeles and San Diego where boating activity is higher.
- It is important to note that where the entangled whale is initially sighted may not necessarily reflect where the entanglement occurred.

How you can help
- Raise awareness of marine mammal entanglements by sharing this document, the Field Gear Guide, brochures, videos, and on the web
- Take photos of the marine mammal (dorsal fin, blood, body, and head), and the entanglement (fishing gear, line, and hosting)
- Assess the situation by documenting: marine species, nature of distress, general condition of the whale, location, time of last sighting, appearance size, weather, animal speed and heading, and any identifying markings on gear
- Report entangled whale to the NOAA-NMFS Alaska Office (877-NMFS-942), and report entangled or stranded dolphins, seals, sea lions, or sea turtles to your local stranding network member. Information can be found at: http://www.marin.marin.gov/health/hotlines.htm
- Stay with the animal at a safe distance of 100 yards minimum until trained help arrives and be prepared to share information with responders.
Training/Supplies

Whale disentanglement training/supplies
- annual, west-coast wide
- Level I-IV disentanglement specialists
- telemetry buoys/tags, etc

Whale entanglement reporting DVD (national)
2013 Large Whale Entanglement Workshop Goals (Portland, OR)

Bring together experts in the fields of marine mammals, fisheries, modeling, bycatch, lost gear/marine debris, and management, to share information relevant to this issue;

Continue to identify data gaps, data needs, and next steps; and

If possible, begin to develop research and outreach priorities.
Priorities Identified

Improve outreach and education, particularly to the fishing industry

Continue gear research to understand mechanisms of large whale entanglements, and investigate the creation of a gear density-based fishery model.

Further investigate elevated risk areas and associated time periods identified by models
Questions for the DCTF EC

Would the fleet be receptive to small outreach meetings to share information on:

- Whale entanglement issue and importance
- Reporting marine mammal serious injuries/mortalities
- Outreach materials
- Disentanglement training/supplies

If so, can you suggest venues, timing, any other topics they may be interested in? If not, what are your concerns?

Would the fleet be receptive to considering research to reduce entanglements?
BACKGROUND SLIDES
Marine Mammal Protection Act

Amended in 1994 to include new program for managing marine mammal bycatch:

1. Stock Assessment Reports
2. Categorization of Fisheries
3. Registration/Monitoring Program
4. Reporting (Observer) Program
5. Take Reduction Plans
Stock Assessment Reports

Developed for all U.S. marine mammal stocks

Provide estimates of stock abundance and human caused mortalities and serious injuries (including fishery takes)

Provides estimates of the “potential biological level” or “PBR” (i.e. how many animals per year is it safe to “take”?)
Status of large whales off U.S. West Coast (2013 draft Stock Assessment Report) – *minimum population estimate*

- **Non-listed***
  - ENP Gray whales: 18,017

- **Endangered**
  - Blue whales: 1,551
  - Fin whales: 2,598
  - Humpback whales: 1,876
  - Sperm whales: 751
Marine Mammal Protection Act
List of Fisheries

- Annual list of ALL U.S. commercial fisheries
  - Each fishery placed into 1 of 3 categories based on level of marine mammal take (SI/M)
  - Categorization determines requirements
  - Category I – “frequent” takes
  - Category II – “occasional” takes
  - Category III – “rare or no known takes”
Category I Fisheries (# participants/vessels)
CA thresher shark/swordfish drift gillnet fishery (25)
Covered under Take Reduction Plan
  *sperm whales

Category II Fisheries
CA yellowtail/barracuda and white sea bass drift gillnet (50)
  *by analogy
CA halibut/white sea bass set gillnet (30)
  *humpback whales
Category II Fisheries
CA spot prawn pot (27)
  *humpback whales
  Eastern North Pacific gray whales
CA, OR, WA Dungeness coastal crab pot (534, 433, 228)
  *humpback whales
  Eastern North Pacific gray whales
CA/OR/WA sablefish pot (309)
  *humpback whales
Category III
CA coonstripe shrimp, rock crab, tanner crab pot/trap (305)
  EN Pacific gray whale
CA spiny lobster (225)
  EN Pacific gray whale
OR/CA hagfish pot/trap (54)
WA/OR shrimp pot/trap (254)
WA Puget Sound Dungeness crab pot/trap (249)
Marine Mammal Authorization Program

Allows commercial fishers to lawfully "incidentally take" a marine mammal in a commercial fishery.

Any owner of a commercial vessel or non-vessel gear engaging in a Category I or II fishery must obtain a marine mammal authorization from NMFS in order to lawfully incidentally take a marine mammal in a commercial fishery.

Report (form) sent to NMFS within 48 hours following return to port – only serious injuries/mortalities of MM

http://www.nmfs.noaa.gov/pr/interactions/mmap/
Take Reduction Plan Process

- Assess Marine Mammal Abundance Data
- Analyze Fisheries Research & Observer Data
- Analyze Data
- Convene Take Reduction Team
- Develop Consensus Recommendations and Submit to NMFS
- Publish Regulations with Opportunity for Public Comment
- Implement, Monitor, and Evaluate the Plan Measures
- Achieve MMPA Goals?
  - Yes
  - No