



Collaborative Science Supporting Collaborative Management

Two examples of how creative collaborations can work toward addressing marine spatial planning initiatives.

- Whale SENSE: An educational whale watch program
- Digital Acoustic Recording Tag Research Supporting Management

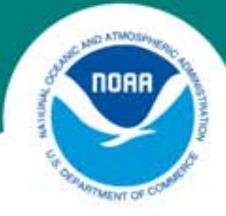
**NOAA
FISHERIES
SERVICE**



Whale SENSE

A collaborative, voluntary, educational whale watching program for commercial operators and naturalists.





Collaboration

Partner Organizations

- NOAA Fisheries Service, Northeast Regional Office
- NOAA's Stellwagen Bank National Marine Sanctuary
- Whale & Dolphin Conservation Society

Industry Involvement

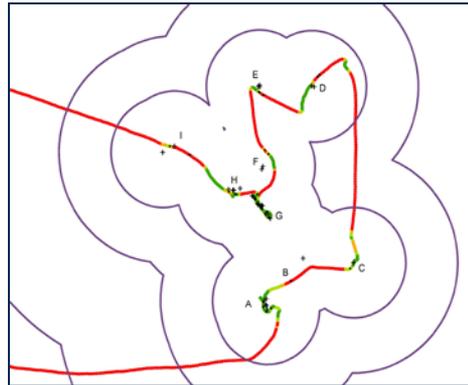
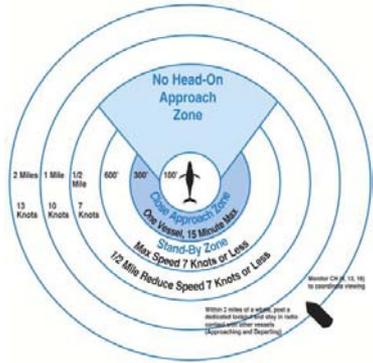
- Intro meetings held 12/15/2008 (Plymouth, MA) & 2/10/2009 (Gloucester, MA).
- 14 companies, 2 NGOs represented, 39 people in attendance.
- Created small working group to help design program specifics.
 - 2 operators (South Shore & Boston), 1 naturalist (North Shore)



What is Whale SENSE?

- Voluntary, recognition & education program.
- Provides consumers with an additional option when choosing a whale watching company.
- Goals :
 - Set a standard for educational & operational aspects of whale watching.
 - Encourage industry to be pro-active.
 - Recognize companies that go above. & beyond the status quo.



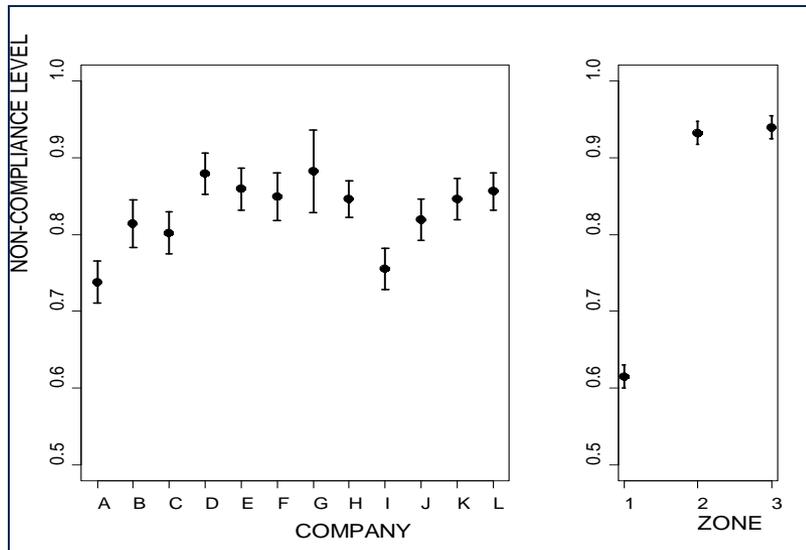


Background

Between 2003 & 2004, Wiley et al.(2008) observed 46 whale watching vessels for compliance with voluntary whale watching speed zone guidelines.

Created buffer zones around sighted whales and monitored vessel behavior.

All vessels showed noncompliance with speed recommendations.





SENSE Program Principles

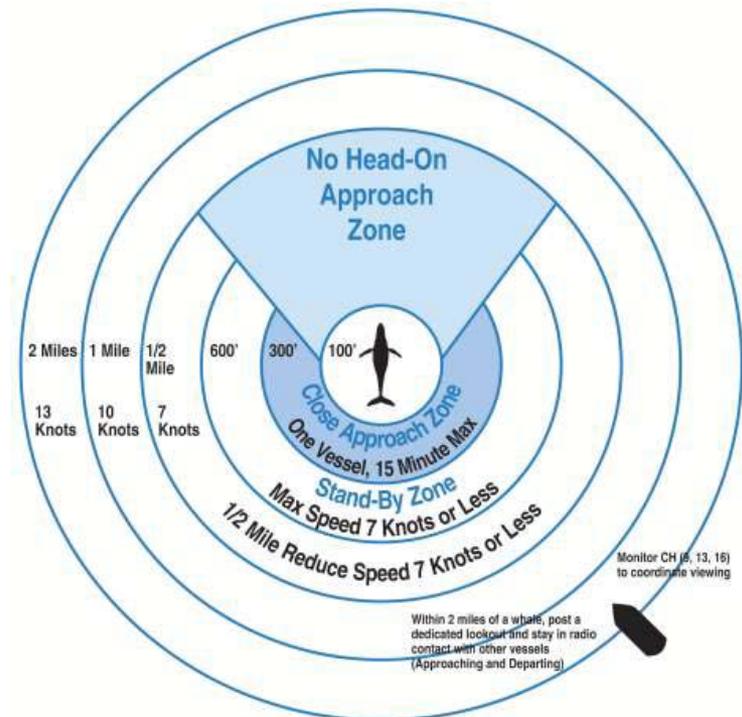
Stick to whale watching guidelines.

Educate naturalists, operators & guests to have SENSE when whale watching.

Notify appropriate agencies/networks of right whale sighting, entangled or injured whales.

Set an example for others on the water.

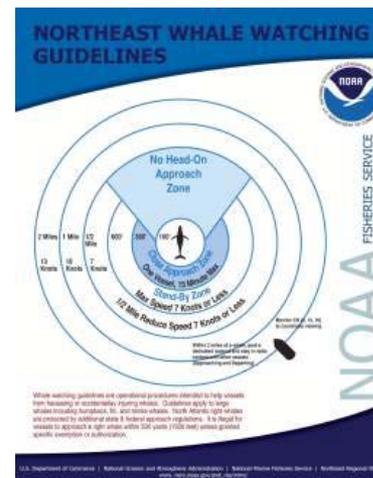
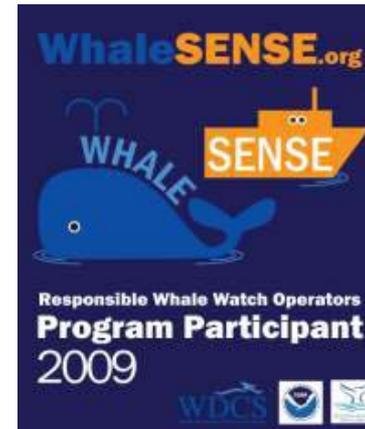
Encourage ocean stewardship.





Additional Program Requirements

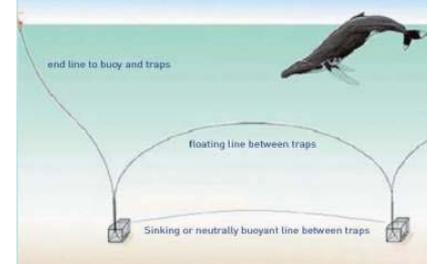
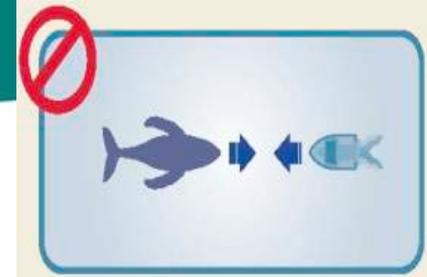
- Training.
- Advertisement Criteria.
- Public awareness.
- On Board Evaluation.
 - Specific to Naturalists & Operators.





Training

- **Participatory.**
- **Sets a baseline for operator and naturalist knowledge.**
- **Training Includes:**
 - Marine mammal protection laws, guidelines & governance.
 - Practical application of guidelines & best practices.
 - Overview of species populations, status and differences in behavior which may impact operational procedures.
 - Gulf of Maine & Stellwagen Bank significance.
 - Tips for being a successful naturalist.





2009 SENSE Status

- **Implemented program late in the season but provided training to several companies in September-October.**
 - Hyannis Whale Watch, Barnstable, MA
 - Dolphin Fleet, Provincetown, MA
 - Massachusetts Bay Lines, Boston, MA
 - Virginia Aquarium, Virginia Beach, VA
 - Whale & Dolphin Conservation Society, Plymouth, MA
- **NOAA issued press release (9/10/09).**





2009 SENSE Status

- Printed Whale SENSE brochure & additional educational materials.
- Launched Whale SENSE website.



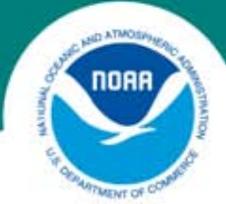
www.whalesense.org





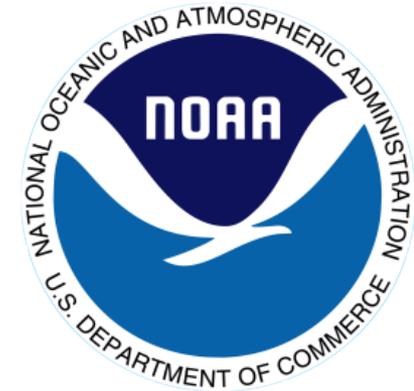
SENSE Next Steps

- Complete company evaluations for next season.
- Expand offering of program to additional companies & states.
- Create additional educational products for use by whale watching naturalists.
- Increase public awareness of program.
 - SBNMS will utilize Cape Cod Chamber of Commerce & Cape Cod Canal Chamber of Commerce sources.
 - WDCS will explore use of social networking sites.
 - Additional press release at beginning of 2010 whale watch season.
- Research additional funding.
- Investigate additional partners.



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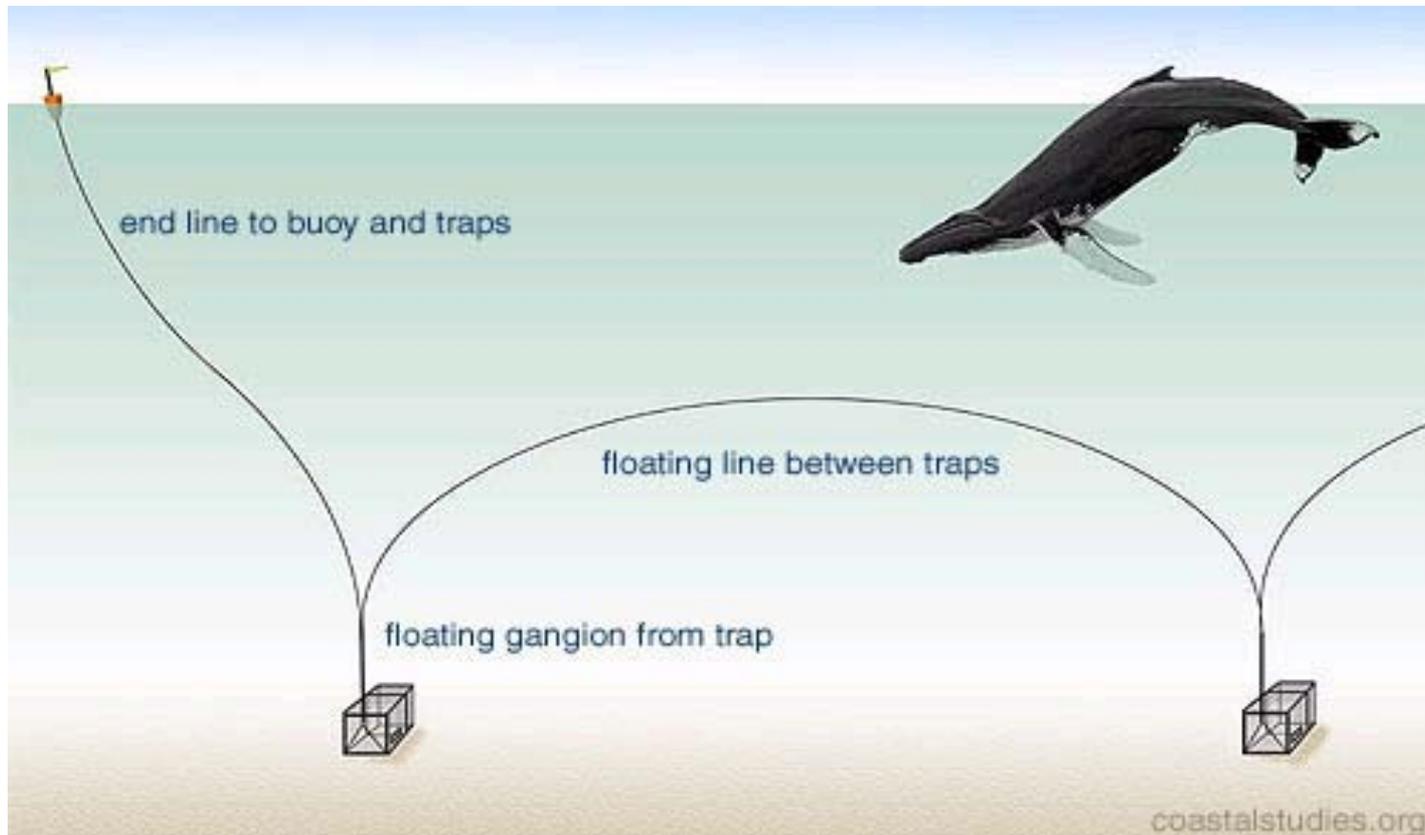


Humpback Digital Acoustic Recording Tag (DTAG) Research

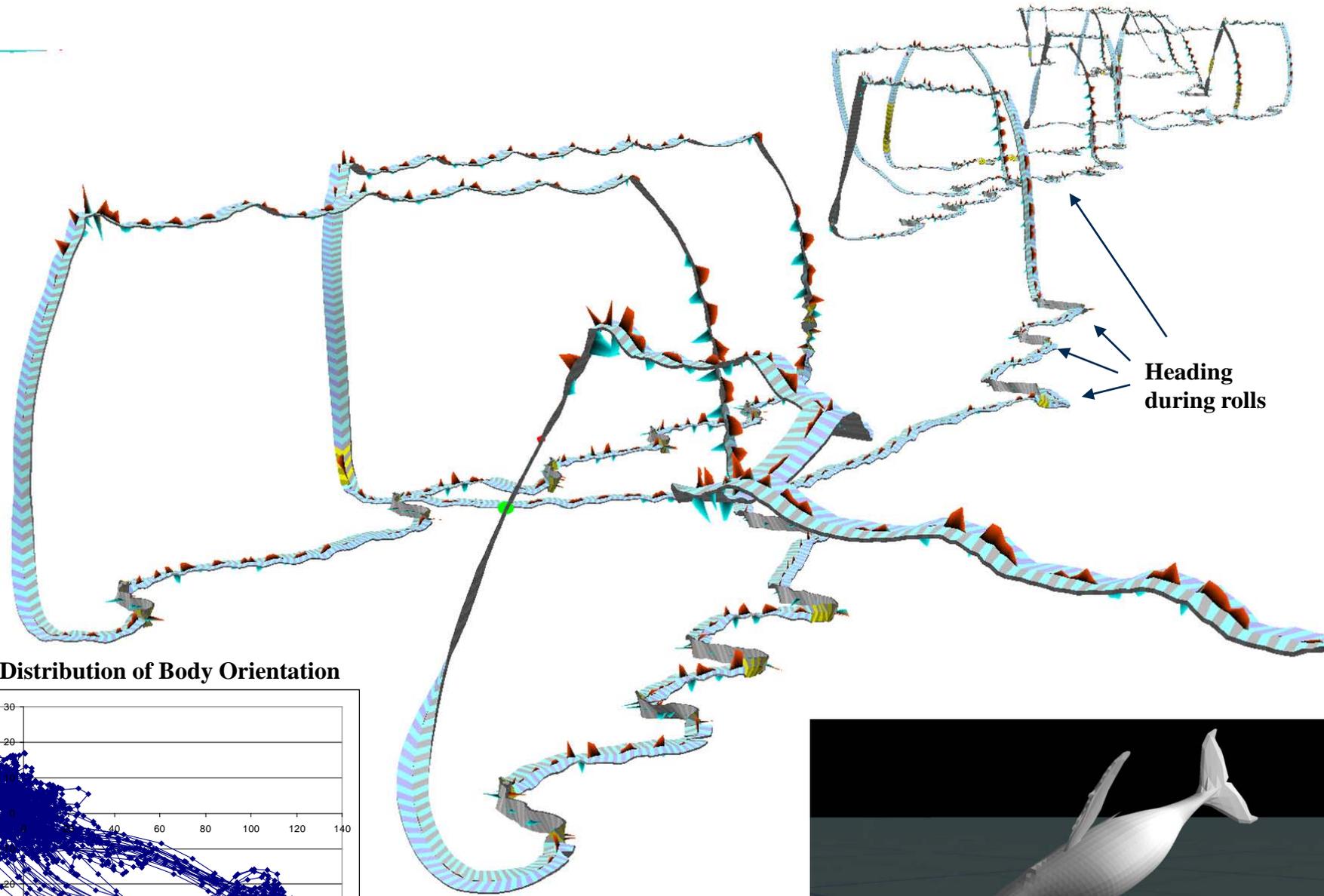
- Entanglement risk associated with floating groundlines utilized in trap/pot gear.
- Research efforts conducted by the NOAA Stellwagen Bank National Marine Sanctuary staff and its partners.
- Management efforts by NOAA Fisheries Service, Northeast Regional Office to development and implementation a sinking groundline requirement for all trap/pot fisheries along the Atlantic Coast.



Pot/Trap Groundline Entanglement Risk

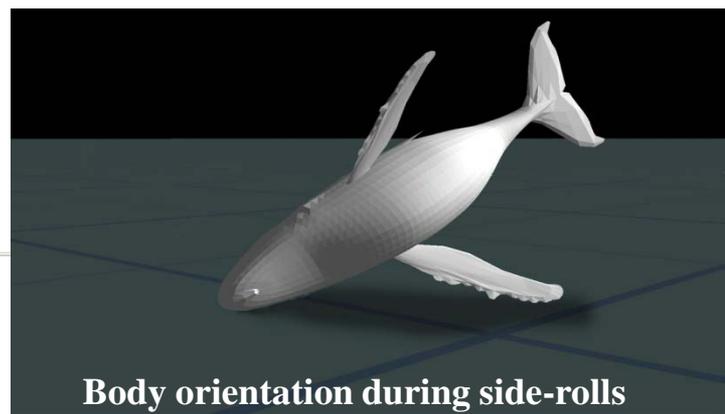
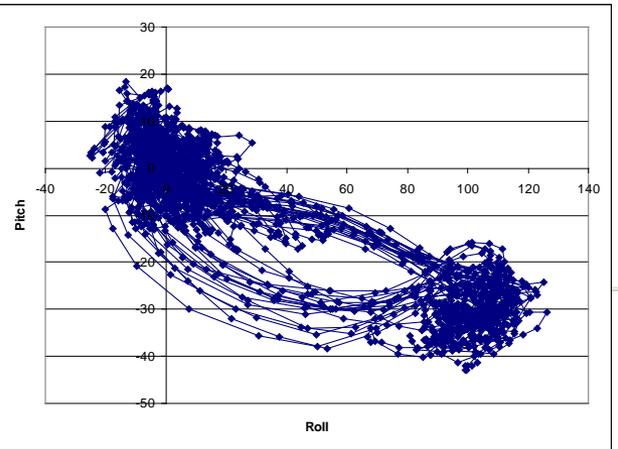






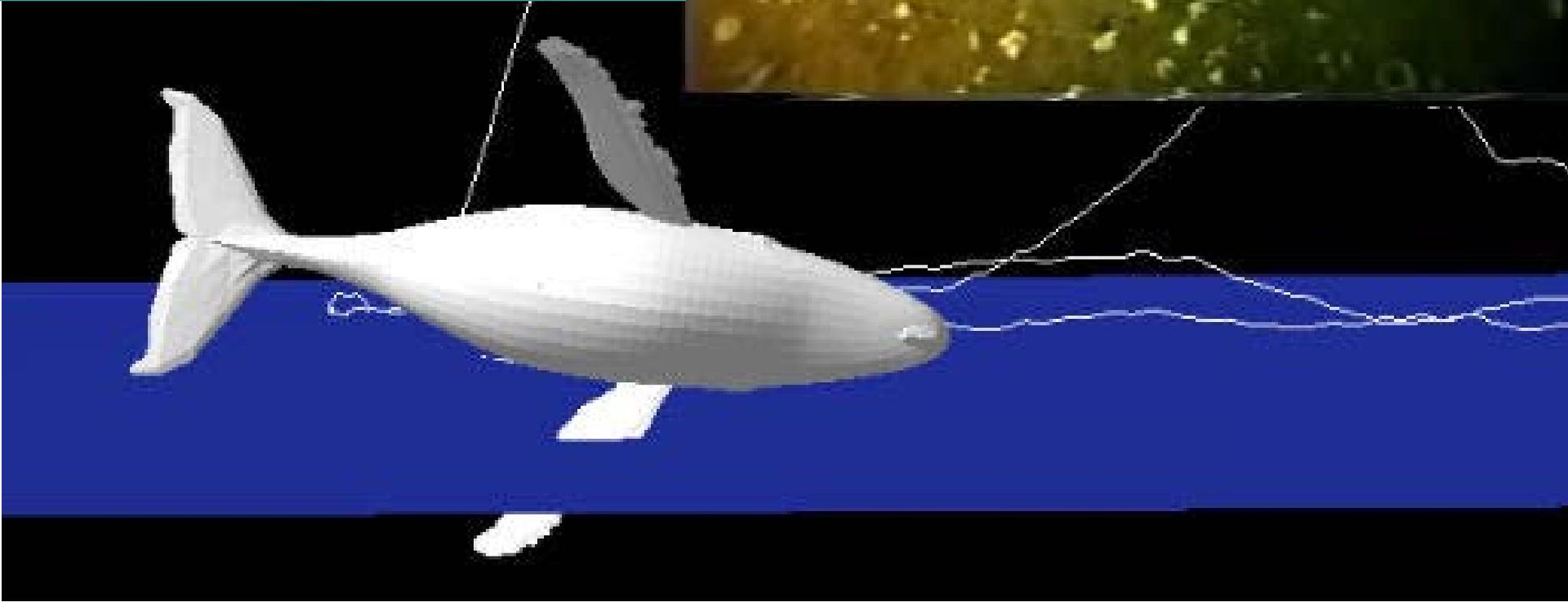
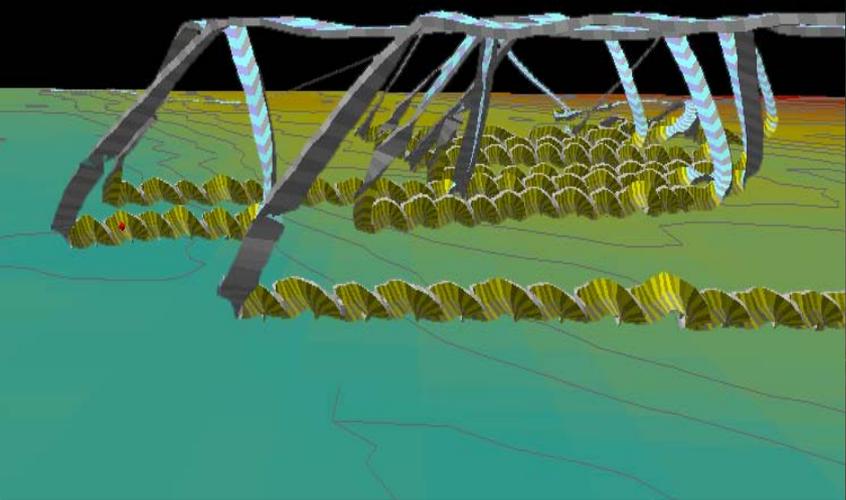
Heading
during rolls

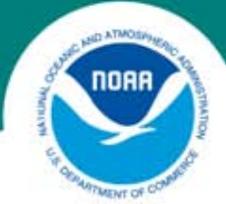
Bimodal Distribution of Body Orientation



Body orientation during side-rolls

TEMP (C) DEPTH (M) RANGE (M) TIME
06.68 034.5 01.21 15:25:19





Amendment to the Atlantic Large Whale Take Reduction Plan

1. Expansion of additional trap/pot and gillnet fisheries (Northeast anchored float gillnet, Northeast drift gillnet, Atlantic blue crab, and Atlantic mixed species trap/pot fisheries which includes but is not limited to crab [red, Jonah, and rock], hagfish, finfish [black sea bass, scup, tautog, cod, haddock, pollock, redfish (ocean perch), and white hake], conch/whelk, and shrimp) regulated under the ALWTRP;
2. Broad-based gear modifications and marking (e.g., sinking groundline, expanded weak links on buoy lines and in gillnet panels, gillnet anchoring, surface buoy and buoy line marking) in specific times and areas;
3. Elimination of the Seasonal Area Management [SAM] program;
4. Expansion of exempted waters; and
5. Regulatory changes for the purposes of clarification and consistency (e.g. where sinking line is required for groundlines, attachment of flotation devices is prohibited).



Sinking Groundline Requirement

