

**Report on Nine Industry Stakeholder Meetings  
30 September 2004 through 27 October 2004  
in support of  
Advanced Notice of Proposed Rulemaking (ANPR)  
on NOAA Fisheries' Strategy to  
"Reduce Mortalities to North Atlantic Right Whales  
(NARW) as a Result of Vessel Collisions."**

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## **Advanced Notice of Proposed Rulemaking (ANPR) Stakeholder (Industry) Meeting Notes for National Marine Fisheries Service (NMFS)**

### **Background of meetings**

On 1 June 2004, the National Marine Fisheries Service (NOAA Fisheries) published an Advanced Notice of Proposed Rulemaking (ANPR) in the Federal Register. The ANPR solicited comments on NOAA Fisheries' strategy to "reduce mortalities to North Atlantic Right Whales (NARW) as a result of vessel collisions." The comment period ended on 15 November 2004. The ANPR provided for five public meetings and advised that NOAA Fisheries would hold separate stakeholder meetings.

These stakeholder meetings were not Public Hearings. Rather, they were an opportunity for NOAA Fisheries staff to provide rationale and justifications for their right whale ship strike reduction strategy; and for NOAA Fisheries staff and interested parties to engage in a dialogue to understand issues and concerns. There were nine meetings with industry. NOAA Fisheries staff also held two meetings with conservation groups (non-governmental organizations) and scientists.

Nine industry meetings were held to provide ample opportunity for stakeholders whose operations or members (i.e., industry associations) would be impacted regionally (i.e., port specific) or whose operations or members would be impacted along the U.S. East coast. (i.e., one or more right whale vessel management areas). Stakeholder meetings were not held in Philadelphia, PA (ports of Philadelphia), Charleston, SC, and Wilmington, NC, although these are considered key ports. Industry interests in those regions were consulted and provided notification of the other meeting locations and dates. Several representatives attended one of the other meetings.

At each meeting, NOAA Fisheries staff provided a comprehensive presentation of the strategy focussed on regionally specific areas adjacent to the port area(s) where the meetings were conducted. A broad overview of the entire strategy was also presented, with opportunity provided to expand the presentations depending on the meeting participants and their interests.

At the conclusion of the series of meetings, rough drafts of the meeting notes were circulated to meeting attendees and several industry representatives who were not able to attend the meetings but wanted to participate through correspondence. In the course of the nine meetings, similar questions or similar concerns were raised. To foster a more comprehensive exchange of information, included in the rough meeting notes were a compendium of background material and a series of commonly asked questions and answers. This material, and questions and answers are now incorporated in [Appendix A](#) to these meeting notes. Clarifying comments received and Agency and facilitator comments on the rough drafts are noted in *italics* in these meeting notes.

Several Federal and state agency representatives also attended some of these meetings and participated in the discussions. Agencies represented included: U.S. Coast Guard, U.S. Navy, U.S. Maritime Administration, Military Sealift Command, National Ocean Service, U.S. Army Corps of Engineers, Massachusetts Office of Coastal Zone Management, and the Florida Fish and Wildlife Conservation Commission. See [Appendix D](#) for the complete list of attendees.

## Organization of Meeting Notes

The notes for each of the meetings are organized as follows.

Overview of Major concerns and Questions (facilitator's qualitative comments / summary of the major issues raised);

Meeting Summary

- List of presenters
- NOAA Fisheries observers
- Presentations
- Discussions

Questions and Answers / Commonly asked questions ([Appendix A](#))

References ([Appendix B](#))

Acronyms ([Appendix C](#))

The list of meeting attendees ([Appendix D](#))

## Quick Reference to Stakeholder Meeting Summaries

<b>Location</b>	<b>Date</b>	<b>pages</b>
<a href="#">Boston, Massachusetts</a>	<a href="#">30 September 2004</a>	4-10
<a href="#">Portland, Maine</a>	1 October 2004	11-14
<a href="#">Norfolk, Virginia</a>	4 October 2004	15-18
<a href="#">Morehead City, North Carolina</a>	6 October 2004	19-22
<a href="#">Jacksonville, Florida</a>	13 October 2004	23-26
<a href="#">Savannah, Georgia</a>	<a href="#">14 October 2004</a>	27-30
<a href="#">New London, Connecticut</a>	20 October 2004	31-34
<a href="#">Newark, New Jersey</a>	25 October 2004	35-39
<a href="#">Baltimore / Washington, DC:</a>	27 October 2004	40-44

## Clarifications, Corrections and Other Notes

Over the course of the nine meetings several matters came up that are important to address to ensure that those who attended any of the meetings are properly informed. These are:

- Figure 1 in the ANPR is incorrect. The easternmost boundary of the proposed measures in the Southeast U.S. areas is incorrectly drawn to the existing MSR boundary. The text of the ANPR is correct in that the easternmost boundary extends to 81° W or about 24 nautical miles (nm) from the coast. In one or more presentations, a slide was presented that incorrectly provided this distance offshore as about 29nm. This has been replaced.
- The wording in the ANPR describing proposed measures in the Southeastern U.S. seasonal management area might be a bit confusing. To be clear, the strategy proposed the following measures:
  1. Designated routes if warranted and so indicated based, in part, on the results of the Port Access Route Study. If designated routes were established, seasonal speed restrictions would be implemented in the lanes unless no whales are present in the area (criteria for determining 'no whales present' have yet to be developed).
  2. An understanding would be developed with operators of vessels (e.g., large recreational vessels, tugs and barges, etc.) which primarily transit along the coast locally

and between ports. The understanding would be that vessels use the designated traffic lanes or avoid transiting the area to the maximum extent practicable and, for those that do not use the lanes or avoid the area, impose a uniform speed restriction throughout the seasonal management area.

All formal meeting presentations, as well as reports / studies, white papers, and other papers referenced are or will soon be available at the following web sites:

<http://www.nero.noaa.gov/shipstrike>

[http://www.nmfs.noaa.gov/pr/PR2/Conservation and Recovery Program/msr/ship strike.htm](http://www.nmfs.noaa.gov/pr/PR2/Conservation_and_Recovery_Program/msr/ship_strike.htm)

**Advanced Notice of Proposed Rulemaking Stakeholder Meeting  
Notes for National Marine Fisheries Service (NMFS)  
Boston, MA, 30 September 2004  
at Diversified Automotive Conference Room,  
Massachusetts Port Authority**

**Overview of Major Concerns and Questions**

There were three general themes to the meeting: right whale biology, economic impacts, and the technical aspects of the measures / potential solutions. The first theme of the meeting was devoted to a discussion of the size of the current right whale population, demographics, birth rates, juvenile and adult natural and human-caused mortality on the population, zooplankton availability, and the whether the carrying capacity for right whales is stuck at ~ 300 whales. These subjects were of concern to several participants and occupied a significant part of the meeting. NOAA Fisheries staff discussed the scientific literature on this assessments made through photo-identification studies and referred participants to various papers including the latest marine mammal stock assessment reports. Participants questioned the rigor and completeness of these and other right whale population assessment studies and the urgency of the need for protective measures. Questions by the industry on the current population size estimates, population growth rates, and recovery were frankly relentless. A representative of the Massachusetts Port Authority and Northeast Implementation Team member raised this concern in comments on the rough draft of the meeting notes and implied that the message NMFS is sending is at best confused and does not engender much confidence in the resource managers. [For a comprehensive discussion on right whale biology, natality, mortality and demographics please refer to the attached Question 1, Appendix A.]

The second theme of the meeting focussed on the potential economic impacts of operational measures on the port of Boston; in particular on the competitive container ship trade and the growing cruise industry. The port community in Boston repeatedly presented wide ranging arguments that the proposed operational measures will impact the port community because of the tight schedules many operators must maintain. That is, container ship operators (Mediterranean Shipping Company and COSCO a Chinese firm) will over time skip the port of Boston (dropping off cargo in Halifax, NS or New York / New Jersey); and cruise ship operators will seek out another Northeast port. Note that no representatives of cruise ship companies or COSCO attended the meeting.

The third theme of the meeting examined the basis for speed restrictions, seasonal and dynamic management areas (length, size and trigger mechanisms), and technological solutions. The basic arguments of the industry were that the management areas are too large both in time and space, not well justified; that more work is needed to prove that speed is a factor (and that a hydrodynamic study should be conducted) and that NMFS should continue to look for technological solutions, for example audible alarms.

**Boston Meeting Summary**

The stakeholders meeting was called to order by Bruce Russell, co-chair Northeast Implementation Team (NEIT) for the Recovery of the North Atlantic Right Whale. Russell

facilitated the meeting and provided technical background information on the strategy as required. Representing the National Marine Fisheries Service were:

### **NMFS Presenters**

- Dr. Greg Silber NMFS Headquarters
- Pat Gerrior, NMFS Northeast Regional Office

### **NMFS Observers**

- Mike Payne, NMFS Headquarters
- David Gouveia, NMFS Northeast Regional Office
- Kristen Koyama, NMFS Northeast Regional Office
- Barbara Zoodsma, NMFS Southeast Regional Office

A list of all attendees is attached in [Appendix D](#).

Following introductions by all present, NOAA Fisheries staff presented detailed information on the Ship Strike Strategy components and their development.

### **Presentations**

- Greg Silber presented background information and an overview of the overall ship strike strategy.
- Pat Gerrior presented detailed information on the proposed operational measures Northeast U.S., both seasonal and dynamic management areas, including Cape Cod Bay, Great South Channel, the Boston Approaches, and the wider Gulf of Maine. Ms. Gerrior presented information on the need for a Port Access Route Study in Cape Cod Bay. Ms. Gerrior also spoke to the preliminary economic analyses including the secondary impact analysis for the port of Boston.

All presentations from the meeting can be viewed at the following web sites:

<http://www.nero.noaa.gov/shipstrike>

[http://www.nmfs.noaa.gov/pr/PR2/Conservation and Recovery Program/msr/ship\\_strike.htm](http://www.nmfs.noaa.gov/pr/PR2/Conservation%20and%20Recovery%20Program/msr/ship_strike.htm)

### **Discussions**

A representative from the Massachusetts Port Authority was concerned that her organization's ability to comment on the ANPR was limited due to the lack of specificity and available information in the ANPR, and that her organization's comments on the ANPR must assume worst case. Further that it is her expectation that the seasonal times and areas of the measures would increase over time with improved detection systems and increased aerial surveillance.

A representative from the Massachusetts Port Authority asked two series of questions about right whale biology, mortality, etc. See question 1, Appendix A, for a discussion of right whale biology.

- Is the number of right whales 300 or is it 350? NOAA Fisheries staff replied that based on the latest stock assessment the official number is 296 animals.

- Is inbreeding a problem? NOAA Fisheries staff responded that survivorship in reproducing females has declined, but that first time mothers are being added to population –there may have been 6 new mothers last year. There are no data to clearly delineate that inbreeding is a limiting factor; and that there are no data or studies to indicate a "massive reproductive failure."

A representative from the Boston Shipping Association asked whether there are records of right whales that have died as the result of natural causes? NOAA Fisheries staff responded that natural causes are hard to diagnose because right whale decompose rapidly once dead and tissues are often not in good enough condition for histopathology. Apparently, some calves have died as the result of natural causes.

A representative from the Mediterranean Shipping Company and Boston Shipping Association stated that the word ship and reference to the shipping community are inaccurate. The ship strike problem is from all vessels, commercial ships, fishing vessels, recreational vessels, and U.S. Naval vessels.

A comment from a representative from the Massachusetts Port Authority was made that parity of regulatory requirements does not equate to parity in economic impacts among ports, and that the port of Boston would be hit particularly hard by the proposed operating measures. Comments from other shipping interests underscored the problems with trying to achieve "port parity." Several company representatives that service the cruise ships, and labor union representatives, further commented that there is presently lots of competition for cruise traffic among ports, for example Portland, ME, as the Northeast is a growth area for the cruise industry.

Following a series of questions by a wide spectrum of shipping interests operating in the port of Boston, related to the economic impacts to the port of Boston, NOAA Fisheries staff expanded on the study currently being conducted by Dr. Hauke Kite-Powell using the MARAD port kit economic model. This model analyzes the impact on a shipping community (looking at the trickle down impacts) from a port dislocation or a carrier skipping a port. Staff emphasized that the problem the economists are facing is the linkage between measurable direct impacts on shipping (additional transit time equates to money) and the potential for port dislocations / diversions. Industry representatives (servicing the both cruise and container ship industry) and labor union representatives underscored their earlier statements that several unpredictable delays can (and has in the past) precipitated changes in port call planning by vessel operators. Labor officials and representatives of the Boston Shipping Association and the Massachusetts Port Authority underscored the importance of the cruise ship industry to the port of Boston and the Boston tourism industry.

A Boston Pilot questioned what reduction in mortality could be expected from the proposed speed reduction measures. NOAA Fisheries staff indicated that the goal was to reduce mortalities by 1-2 females per year. Staff advised that they will eventually develop performance measures, but it is not possible to quantify reduction at this time. It is difficult to do this with the relatively large number of ship transits vs. the relatively low number of right whales and the relatively rare number of fatal ship strikes.

The Massachusetts Port Authority raised multiple concerns in particular and the Boston Shipping Association representatives, that economic impacts will be experienced long before the effectiveness of the rules will be determined. They indicated the need to conduct a real economic analysis, similar to Army Corps of Engineers port development economic analyses, that costs a couple hundred thousands of dollars. NOAA Fisheries staff indicated that an economic-impact analyses, as required by the National Environmental Policy Act (NEPA) and the Regulatory Flexibility Act (RFA) are underway.

A concern was raised that because operational measures in the Northeast would rely on both seasonal and dynamic management areas that vessels would face both predictable and unpredictable scenarios, thus potentially fostering port dislocations. Several shipping agencies (servicing the cruise and container ship operators) and labor echoed this concern, in particular with relation to the cruise industry. The industry pointed out that port dislocation might result in traffic skipping Boston and instead calling Canada or New York. NOAA Fisheries staff concurred that both (seasonal and dynamic) approaches were included in the Northeast U.S. operational measures. NOAA Fisheries staff also pointed out that the use of seasonal management areas (SMAs) would provided a great deal of predictability (thus, longshoremen, cruise line ground transportation could be scheduled in advance). Whereas Dynamically Managed Areas (DMA) added an element of unpredictability. Therefore, the Strategy preparers opted for this approach over more extensive, sweeping seasonal areas to minimize impacts to the industry. Later in the meeting, NOAA Fisheries staff went over a draft report by Russell, et al., that provided a retrospective analysis of DMAs being triggered had the regulations been in place in 2000-2004 and pointed out that relatively few DMA would have been enacted in the Boston approaches.

There were several statements as part of the extended discussion on the potential economic impacts to Boston:

- The Boston Longshoreman (Labor union) raised concerns that any real or perceived delays on shipping could effect the livelihoods (earnings and benefits (i.e., casual laborers such as longshoremen must work 1300 hours per year to receive fringe benefits)) of workers.
- A Boston Shipping Association representative stated that if a vessel on a regular schedule is delayed three or four times over a season, the port is likely to loose that carrier as a customer. Carriers operate on tight windows and have been known to skip a port if delays are anticipated. Delays can have cascading impacts. "Boston is a small port with many small operators. The impacts on small businesses may be large."
- Paraphrasing a Massachusetts Port Authority representative...if a containership gets diverted, for example it drops cargo in Halifax rather than Boston, then the containers get put on trucks via long haul driving. U.S. Department of Transportation is working to get trucks off the road. The Port Authority just successfully marketed to COSCO, a second container line calling Boston, winning business from the West Coast. Much of the imports from Asia were previously coming cross-country via rail. The ANPR strategy puts this business in jeopardy.
- 80% of the fuel for New England transits Chelsea Creek, Boston, which is "daylight only" restricted.
- MASSPORT also reported that 80,000 containers/year are now handled in Boston.

- A representative from a company that services the cruise ships calling the port of Boston explained that two types of cruise ships call on Boston. The first comes to Boston for an 8-hour visit...passengers go to see fall leaves, the USS Constitution, etc. If the ship is delayed two hours the port of call will be cancelled. The second type of cruise ship homeports here and embarks/debarks within the city at the Black Falcon terminal. These ships operate on a very tight schedule, because some destination ports such as Bermuda can only be entered during daylight hours. On the Boston to St. George, Bermuda run, the vessel operates on a tight 6-hour window to be able to transit the narrows in daylight in St George harbor. He expressed a concern that even a 3 hour net delay could lead to a cruise line dropping Boston as a regular port of call or skipping Boston in one or more itineraries, i.e., the trickle down impacts are large. Cruise ship port calls are labor intensive. One line makes 26 port calls per year and all lines run on a tight schedule. Two or three delays per season can result in a loss in that cruise business.

NOAA Fisheries staff requested specific contacts to work with to ensure the economic impacts assessments were as rigorous as possible. There was some agreement among MASSPORT and the Boston Shipping Association to provide data for the economic analyses.

The representative of the Mediterranean Shipping Company pointed out that there are no data to indicate that a right whale has been struck and killed in the Boston approaches off Race Point to Boston. He asked that NOAA Fisheries look more closely at the specific dimensions of the proposed seasonal management area off Race Point, in particular the westernmost section of the area. He also indicated that the area, as drawn, is too large and too far north. He asked, 'are historical sightings in this area regular or were they only for one or two years? Could this area be managed dynamically or via an additional route?' His comment was not in opposition to the measure, only that the dimensions be supported by a significant number of sightings to warrant the boundaries.

A discussion ensued about the ANPR's use of USCG-conducted Port Access Route Studies (PARS) to assess proposed routes through two federally designated right whale critical habitats. NOAA Fisheries staff presented a draft of potential (mandatory vs. recommended) routes in Cape Cod Bay under consideration. John Mauro, Coast Guard, District 1 (Boston), Aids to Navigation office, provided a description of how a PARS works. (See question 4, Appendix A, for a discussion of PARS.)

There was a suggestion by a ferry service operator to increase real-time surveillance and to provide real-time information to vessels operating in the Cape Cod Bay and Stellwagen Bank areas using Automated Information System (AIS) and a program of voluntary measures. He also suggested using the Automated Information System to distribute sighting information to mariners so they can avoid whales. Mariners could then decide what to do. These suggestions followed the short presentation by NOAA Fisheries staff on the PARS in Cape Cod Bay. A USCG representative also spoke to the USCG intending to conduct PARS.

Representatives from the Massachusetts Port Authority, the Boston Shipping Association and P&O Ports (a cruise ship service company) called for more research into both alarms and active acoustics. One questioned the validity of an experiment conducted in the Bay of Fundy

(Nowacek, et al, 2004) using an alarm and the equipment used to conduct the test. Specifically, some participants indicated that the playback transducer was not appropriate for the study and the study's sample size was too small for the conclusions made.

Some sectors of the shipping industry calling at the port of Boston expressed serious concern with the DMA trigger mechanism and imposition criteria (i.e. duration and area). NOAA Fisheries staff indicated that the "trigger" criteria and dimensions were proposed and would be finalized with further analysis after the ANPR comment period had ended.

Several operators (Tractebel (Liquefied Natural Gas (LNG) ships), Mediterranean Shipping Company) are taking a closer look at the impact of Dynamic Management Areas (DMAs) and the seasonal measures taking into account using draft / initial Vessel Traffic Management Scenarios paper (Russell, et al, 2003) to better gauge the impact of the measures on their operations. Russell noted that this paper is being updated and revised and will be made available on the NMFS website.

There were multiple comments from shipping industry representatives that more study was needed on hydrodynamics and more science was needed to back up the speed reductions proposed in the ANPR. A representative from the Massachusetts Port Authority commented that the Massachusetts Institute of Technology hydrodynamics studies (Knowlton, et al, 1995 & 1998) used a vessel that does not come in these waters. And, he added that no appropriate science suggests that speed restrictions will work. A representative of the Boston Shipping Association stated that the hydrodynamic studies were incomplete and should look at appropriate vessel classes, not VLCCs (very large crude carriers).

There was a lengthy discussion on relying on technological solutions, challenging that NMFS had not fully considered or pursued this option as a remedy to the ship strike situation. NOAA Fisheries staff referenced its Technological Solutions white paper (posted on the web sites) and discussed limitations (logistical, economic, and technical) to this approach. However, NOAA Fisheries staff also mentioned that passive acoustics and pop-up buoys offer promise of providing real-time data on whale locations in the very near future. A participant suggested that additional work be done on a technological solution to replace the proposed routing and speed measures. (See questions 7-9, [Appendix A](#) for a discussion on technological solutions.)

A participant asked about the possibility of doing away with Dynamic Management Areas (DMAs) and going with Seasonal Management Areas (SMAs) only. The Port Authority added that they would prefer DMAs, but another industry representative remarked that his organization would prefer SMAs as opposed to DMAs and that ship captains would prefer predictability to minimize unexpected delays and economic costs.

A representative of the Boston Shipping Association raised questions regarding NMFS legal obligations to conduct thorough analyses. Staff responded that:

- Economic impact analysis is required under the National Environmental Policy Act (NEPA) and the Regulatory Flexibility Act (RFA).
- The Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA) do not require economic impact analysis, except when establishing critical habitat, but NEPA and RFA do.

**Advanced Notice of Proposed Rulemaking Stakeholder Meeting  
Notes for National Marine Fisheries Service (NMFS)  
Portland, ME, 1 October 2004  
at City of Portland, Waterfront Division Conference Room**

**Overview of Major Concerns and Questions**

There were three major themes raised by the industry: the trigger mechanism for Dynamic Management Areas must consider regional differences in right whale behavior; vessel operating restrictions such as speed could be devastating to ferry operations; and that NOAA Fisheries should examine other factors in evaluation of operating measures, (e.g., vessel draft, configuration, personnel training, and existing voluntary programs). Generally, the shipping industry in Portland is OK with speed restrictions and would prefer speed restrictions to large areas to be avoided (in particular the Great South Channel). There may be some impact on vessels calling the port of Portland that may transit through the Great South Channel.

**Portland Meeting Summary**

The stakeholders meeting was called to order by Bruce Russell, co-chair Northeast Implementation Team (NEIT) for the Recovery of the North Atlantic Right Whale. Russell facilitated the meeting and provided technical background information on the strategy as required. Representing the National Marine Fisheries Service were:

**NMFS Presenters**

- Dr. Greg Silber NMFS Headquarters
- Pat Gerrior, NMFS Northeast Regional Office

**NMFS Observers**

- Kristen Koyama, NMFS Northeast Regional Office
- Barbara Zoodsma, NMFS Southeast Regional Office

A list of all attendees is attached in [Appendix D](#).

Following introductions by all present, NOAA Fisheries staff presented detailed information on the Ship Strike Strategy components and their development.

**Presentations**

- Greg Silber presented background information and an overview of the overall ship strike strategy.
- Pat Gerrior presented detailed information on the proposed operational measures in the Northeast U.S., both seasonal and dynamic management areas, including the wider Gulf of Maine (and Portland approaches) Cape Cod Bay, Great South Channel, and the Boston

Approaches. Ms. Gerrior presented information on the need for a Port Access Route Study in the Cape Cod Bay. Ms. Gerrior also spoke to the preliminary economic analyses.

All presentations from the meeting can be viewed at the following web sites:

<http://www.nero.noaa.gov/shipstrike>

[http://www.nmfs.noaa.gov/pr/PR2/Conservation\\_and\\_Recovery\\_Program/msr/ship\\_strike.htm](http://www.nmfs.noaa.gov/pr/PR2/Conservation_and_Recovery_Program/msr/ship_strike.htm)

## Discussions

John Bass, President of the local Propeller Club, asked to speak on behalf of the Propeller Club and Captain Earl Walker, Portland Pilots. Captain Walker sent his regrets that he was unable to attend the meeting. *(Captain Walker has worked with the Northeast Regional Office and the NEIT for several years and has been instrumental in education and outreach in the Gulf of Maine. As the master for the Bath Iron Works (shipyard), Captain Walker has been instrumental in imposing voluntary speed restrictions (of 10 Knots) on his transits through the Gulf of Maine and Great South Channel (GSC)).* Key points:

- The local shipping industry is OK with speed restrictions as long as there are not large blocks or areas of speed restrictions.
- Speed restrictions are preferable to the proposed ATBA in the Great South Channel. Captain Walker voluntarily transits GSC at 10 Knots and monitors whale sightings before and during transits.
- Captain Walker has several questions and concerns that require clarification. NOAA Fisheries staff will follow up with Captain Walker.

NOAA Fisheries staff and the facilitator noted that Captain Walker has worked with the Northeast Regional Office and the Northeast Implementation Team (NEIT) for several years and has been instrumental in education and outreach in the Gulf of Maine. As the master for the Bath Iron Works (shipyard), Captain Walker has been instrumental in imposing voluntary speed restrictions (of 10 Knots) on his transits through the Gulf of Maine and Great South Channel (GSC).

During NOAA Fisheries staff discussion about the Port Access Route Study (PARS) for Cape Cod Bay, John Mauro the USCG representative from the Coast Guard navigation office, Boston, MA, asked if data are available on an annual basis showing the occurrence of right whales (i.e., sightings data) in Cape Cod Bay. NOAA Fisheries staff agreed to share with him the available data in this format. (See question 4, [Appendix A](#) for a discussion on PARS.)

The port director, City of Portland, advised that proposed routes in Cape Cod Bay should consider the strong easterly winds that mariners often must crab against (ENE to N) to ensure that tugs and tows in particular do not ground to the west. He recommended that any designated route provide for easterly diversions to ensure navigation safety.

A ferry operator asked for more sightings and mortality data and analysis conducted to define the seasonal management area of the Boston approaches from Boston to Race Point. NOAA Fisheries staff agreed to make this data available and provide him that data and analyses.

A City of Portland representative, raised questions on: the legal authorities and the unilateral nature of the proposed strategy, (i.e., that most of the strategy would be imposed without IMO approval); the issue of port liability for implementation of the Strategy; and her understanding on the limitations on the use of MSR data for imposing restrictions. This individual also did not want enforcement and implementation to fall on local jurisdictions; NOAA Fisheries staff advised that NMFS is in discussions with the Coast Guard on enforcement. (See question Appendix A for a discussion on enforcement). NOAA Fisheries staff agreed to provide MSR-related background information that could be used in crafting comments on the ANPR. *[This information was provided to the individual subsequent to the meeting.]*

A City of Portland representative recommended that the environmental assessment consider cumulative impacts on fisherman who are also subject to take reduction fishing gear regulations and area closures such as Marine Protected Areas, and National Marine Sanctuaries, etc. She agreed to provide further details on the potential for these cumulative impacts. NOAA Fisheries staff will follow up.

A ferry operator raised concerns and provided recent evidence that the proposed Dynamic Management Area (DMA) trigger and measures in the proposed strategy would not work in the northern Gulf of Maine. Over the last few years, some operators voluntarily imposed their own triggers and measures. For example, Bay Ferries (the Bar Harbor to Yarmouth, Canada ferry) self-imposed restrictions for 10 days this year due to sightings of right whales along their route. The company cannot afford to sustain both physical damage or public relations damage from a whale strike. He recommended that recognition and continuation of voluntary programs should be part of the NMFS strategy. In particular consideration should be given to a vessel's profile in the water, propulsion, training and extra training, ability to maneuver and experience in whale avoidance gained in self-regulation. Further, the potential of 13 days of a large area DMA trigger in August (20% of annual business is in August) could be devastating to ferry operators. The facilitator commented that he would consider recommending in his report to NMFS whether there is room in the rulemaking process for equivalent levels of risk/safety.

The ferry operator stated that speed should not be the only consideration in whale strikes- vessel displacement and maneuverability should also be considered. Speed may be an asset to collision avoidance depending on hull type and draft. Triggers for Dynamic Management Areas should be based on sound science and focus on differentiating non-migrating whales. He and the City of Portland representatives questioned the applicability of existing Dynamic Area Management (DAM) triggers to Gulf of Maine/ Bay of Fundy right whale behavior. This trigger was developed for fisheries take reduction, and is based solely on the analysis of Stellwagen Bank/MA Bay data and distribution. They asserted that the trigger of the sighting of three whales in close proximity of each other might not be relevant, as many whales are transiting and not resident in other Northeast areas.

NOAA Fisheries staff noted reports of ship strikes and high-speed vessels and provided Don Cormier, Bay Ferries LTD, a paper on increased whale strikes due to the relatively recent introduction of high-speed ferries in the Canary Islands.

The port director, City of Portland, advised that the proposed strategy would have limited impacts for vessels operating in the Gulf of Maine. However, proposed measures in the Great South Channel would impact some vessels calling Portland (in particular tankers laden with oil from NY and Philadelphia, that is oil that is not moved by tug and barge through the Cape Cod Canal). He offered to help provide information on affected ships (see Judy Harris) to the economists. NOAA Fisheries staff will follow up. He also advised that in the past many super tankers used the GSC to move Venezuelan crude oil to Canada and northern Maine. The vessels cannot use the GSC traffic separation scheme (TSS) for navigation safety reasons (+40' drafts); there is little or no tanker traffic of this size presently operating.

Participants indicated that more comprehensive economic analyses are needed and, in particular, with regard to ferries that operate in this region, including Bay Ferries LTD and the Scotia Princess.

**Advanced Notice of Proposed Rulemaking Stakeholder Meeting  
Notes for National Marine Fisheries Service (NMFS)  
Norfolk, VA, 4 October 2004  
at Hampton Roads Maritime Association Conference Room**

**Overview of Major Concerns and Questions**

There were three general themes to the meeting: the relative economic impacts on vessels operating in the ports of Hampton Roads area will erode the current and growing competitive advantage that these ports have over other east coast ports; that the industry is concerned that U.S. Naval vessel operations (over 3500 vessel transits year) pose similar risks and would not be regulated; and that speed restrictions would potentially pose a navigation safety problem in the already congested port approaches.

**Norfolk Meeting Summary**

The stakeholders meeting was called to order by Bruce Russell, co-chair Northeast Implementation Team (NEIT) for the Recovery of the North Atlantic Right Whale. Russell facilitated the meeting and provided technical background information on the strategy as required. Representing the National Marine Fisheries Service were:

**NMFS Presenters**

- Dr. Greg Silber NMFS Headquarters
- Pat Gerrior, NMFS Northeast Regional Office

**NMFS Observers**

- Kristen Koyama, NMFS Northeast Regional Office
- Barbara Zoodsma, NMFS Southeast Regional Office

A list of all attendees is attached in [Appendix D](#).

Following introductions by all present, NOAA Fisheries staff presented detailed information on the Ship Strike Strategy components and their development.

**Presentations**

- Greg Silber presented background information and an overview of the overall ship strike strategy.
- Pat Gerrior presented background information and details of the proposed seasonal operating measures and dynamic management areas in the mid Atlantic region, the approaches to Chesapeake Bay in particular. Gerrior also spoke to the preliminary economic analyses for the ports of Hampton Roads, as well as the Ports of Philadelphia (Delaware Bay).

All presentations from the meeting can be viewed at the following web sites:

<http://www.nero.noaa.gov/shipstrike>

[http://www.nmfs.noaa.gov/pr/PR2/Conservation and Recovery Program/msr/ship\\_strike.htm](http://www.nmfs.noaa.gov/pr/PR2/Conservation%20and%20Recovery%20Program/msr/ship_strike.htm)

## **Discussions**

The Port Director, Port of Richmond, VA advised that the primary operator at the Port of Richmond operates a service between Chester, PA and Richmond, VA (and thus would also have to slow when entering the seasonal management area off the Delaware Bay). This operation may not be able to maintain this service (the operator echoed this concern): there are tide and daylight restrictions for the port of Richmond, and the round trip run includes four transits through two port area entrances with speed restrictions on an already tight schedule. The port director and the operator both submitted background information documenting these concerns as part of their comments on the ANPR. The operator '...would there be a provision for exemptions, for example if a ship is running late and no whales are sighted?' NOAA Fisheries staff indicated that no exemptions are anticipated if a ship is running late. Staff also advised that in the mid Atlantic, NMFS does not anticipate knowing where a specific right whale is. These whales are migrating and are difficult to detect either visually and [currently] acoustically.

A representative from the Virginia Pilots advised that the approaches to Chesapeake Bay are already congested due to: a high volume of U.S. Naval traffic, port of Baltimore bound-traffic, slow moving bulk carriers and growing volume of faster container vessels. Also, the lanes include a dogleg (Captain Cofer will provide information on vessel routes to Russell). A speed restriction may pose problems in safe vessel traffic management. Pilots board ship up to speeds of 12 knots but 8 knots is an appropriate number to use in modeling vessel traffic management scenarios.

There was a brief discussion about the large whale ship strike database and report (Jensen et al, 2003). NOAA Fisheries staff indicated that the database is skewed toward those vessels that are expected to report a strike (U.S. Naval, Coast Guard, and whale watching vessels) –these entities have been good at doing so. This is particularly true with regard to more recent records. Little is known about the type of vessel involved in a ship strike, where the actual strike occurred and the vessel's speed. In addition, although this is the best available information, the record is probably incomplete as many ship strikes either go undetected or unreported.

In response to a question about why right whales get hit by ships, NOAA Fisheries staff answered that little is known. There is no data that suggests right whales are attracted to ships, and it is not known how and whether right whales respond or do not respond to an approaching ship. A MARAD representative posed that faster ships make more noise and that this might act as an alarm. NOAA Fisheries staff indicated that the Jensen and Silber database suggests that that slower speeds result in fewer deaths. A port representative examined the database (Jensen et al, 2003) and concluded that very high speeds resulted in fewer deaths; that she has a concern for the quality of the data and any conclusions that could be drawn from that database.

There was a question from a shipping industry association representative with regard to performance measures. NOAA Fisheries staff advised that the Service's goal is to eliminate one

or two mortalities, particularly female mortalities, per year. NOAA Fisheries staff indicated that further performance measures were discussed in developing the strategy, but at present were not part of the strategy. NMFS expects to develop performance measures.

A representative of the National Oceans Service asked if NMFS is considering using Automated Identification System (AIS) to post sightings. NOAA Fisheries staff advised that they will pursue this question, though again they emphasized that sight-ability and detect-ability of right whales in the mid Atlantic is low. Traveling right whales are difficult to detect. That is, even if sighting information could be relayed, the detection of right whales is problematic.

Several questions were raised about active sonar and audible alarms. NOAA Fisheries staff advised that active sonar was the subject of a prior workshop. Great energy would be needed to send a signal with sufficient capability to detect a submerged right whale at distance, equipment would be expensive (~\$10K /vessel), and discriminating the return signal is difficult. Passive acoustics show promise. A real-time passive detection system is near development, but one possible difficulty in the mid Atlantic is low vocalization rate of migrating right whales. NOAA Fisheries staff indicated that even if all whale locations are known through advanced technologies, the onus would still fall upon the mariner to avoid the area or undertake evasive action. NOAA Fisheries staff also indicated that a white paper assessing state-of-the-art technologies, including a discussion on sonar detection is posted on the ship strike website. (For a discussion on technology and acoustic alarms, see question 9 in [Appendix A](#).)

An association representative reported that the Oceans Commission called for integrated observation systems that could be useful in tagging and tracking. NOAA Fisheries staff reported that the problem is with the tagging (i.e., attachment success) not the tracking. Tags can be considered analogous to a splinter; some whales show signs of infection, while to other whales the tag seems to be an irritant and they rub the tag off. Tagging and tracking research continues. (See question 8, [Appendix A](#) for a discussion of tagging.)

In response to questions about what NMFS is doing to expand and revise the economic analyses, NOAA Fisheries staff asked for points of contact for shipping data and decision parameters. NOAA Fisheries acknowledged that they are actively seeking the best possible information for economic analysis and encouraged participation in this process by industry representatives. David White (HMRA), Heather Wood (VA Ports Authority), Melvyn Hernandez (ICL) and Captain Marty Moynihan indicated they would be able to provide data and information on port and vessel operations.

In response to questions about what NMFS is doing to refine the time (duration) and area for the mid Atlantic ports, NOAA Fisheries staff advised that existing data were being further analyzed, more aerial surveys are planned, passive acoustic detectors will be deployed, and a predictive model holds some promise.

The National Oceans Service (NOS) representative asked what would happen if the North Atlantic right whale went extinct. NOAA Fisheries staff advised that the Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA) require that NMFS work to recover a species at risk of extinction.

A discussion of “short-sea shipping” ensued. MARAD reported that their time horizon for short sea service is 2-5 years. Short-sea shipping is a U.S. Department of Transportation initiative to move cargo off highways and onto vessels on short sea routes among ports.

MARAD reported that their job is to minimize disruption to commerce. MARAD ships comply with commercial regulations. MARAD representatives offered to help in reducing the threat of ship strikes and offered to assist in securing information to enhance the economic impact analyses.

A concern was raised by a number of industry representatives about the high volume of U.S. Naval traffic in and around the approaches (and circling 30-50nm offshore). Industry representatives suggested that these activities were likely a greater threat to right whales than is commercial shipping activities. NOAA Fisheries staff indicated that the operations of vessels by Federal agencies was being addressed through consultations under Section 7 of the Endangered Species Act.

The Hampton Roads Maritime Association (HMRA) may be interested in pursuing a grant to conduct an independent economic impact analysis.

NOAA Fisheries staff asked why mariners consider the predictable seasonal management measures "delays" and why mariners wouldn't factor this into their voyage planning. The response was that they would factor the increased time in during some seasons. The term delay, as used, is a relative term. For example, currently during the winter many ships drop off cargo at Norfolk rather than the port of NY/NJ because of heavy weather to the north and weather related delays effecting northern ports; thus SMAs in the winter are delays akin to weather delays to the north and will work against the ports of Hampton Roads seasonal competitive advantage.

At the close of the meeting, a question by an industry association representative was raised: What is the threshold at which economic costs to the industry outweigh the benefits to the right whale and measures will not be implemented? This was part of the larger discussion of the economics, but did not require a response.

**Advanced Notice of Proposed Rulemaking Stakeholder Meeting  
Notes for National Marine Fisheries Service (NMFS)  
Morehead City, NC 6 October 2004  
at Morehead City Maritime Building Conference Room**

**Overview of Major Concerns and Questions**

The major issue at this meeting was the impact of the strategy on large commercial recreational fishing vessels, "head boats." Four head-boat owners / Captains attended the meeting and expressed their concerns that the proposed seasonal management area would make it impossible to operate in one of their prime seasons, March and April. Local tourism depends on fishing. They argued that they run competent and alert operations. Their boats are planing hulls and show a low profile in the water. One media representative and two state congressional representatives attended this meeting. A recommendation in the facilitator's report suggests that NOAA Fisheries consider special operating conditions for all head, party, and charter boat operators. Such special measures would not be an exemption, rather could for example be similar to those the Coast Guard employs for its small vessel operations. A second recommendation in the facilitator's report suggests that if NOAA Fisheries conducts a hydrodynamics study, the study should look at head-boat hull types (planing versus displacement hulls) and propulsion systems.

Large vessels currently calling the port of Morehead City travel 13.5-15 knots; these include U.S. Naval operations based out of Morehead City. Presently there are no container ships calling at Morehead City. Containerships do call at the port of Wilmington, NC.

**Morehead City Meeting Summary**

The stakeholders meeting was called to order by Bruce Russell, co-chair Northeast Implementation Team (NEIT) for the Recovery of the North Atlantic Right Whale. Russell facilitated the meeting and provided technical background information on the strategy as required. Russell noted that the official Public Hearing was held in Wilmington, NC and that on advice of the NC Ports Authority, a decision was made to hold this stakeholders meeting in Morehead City. Special thanks to Sue Markham for helping organize this meeting. Representing the National Marine Fisheries Service were:

**NMFS Presenters**

- Dr. Greg Silber NMFS Headquarters
- Barbara Zoodsma, NMFS Southeast Regional Office

**NMFS Observers**

- Kristen Koyama, NMFS Northeast Regional Office
- Pat Gerrior, NMFS Northeast Regional Office

A list of all attendees is attached in [Appendix D](#).

Following introductions by all present, NOAA Fisheries staff presented detailed information on the Ship Strike Strategy components and their development.

## **Presentations**

- Greg Silber presented background information and an overview of the overall ship strike strategy.
- Barb Zoodsma presented background information and details of the proposed seasonal operating measures, and dynamic management areas in the mid Atlantic region, the approaches to Morehead City and Wilmington, NC in particular. Zoodsma also spoke to the preliminary economic analysis for the port of Wilmington, NC and economic factors to be considered for future analyses for both North Carolina ports, the port of Morehead City, NC in particular.

All presentations from the meeting can be viewed at the following web sites:

<http://www.nero.noaa.gov/shipstrike>

[http://www.nmfs.noaa.gov/pr/PR2/Conservation and Recovery Program/msr/ship\\_strike.htm](http://www.nmfs.noaa.gov/pr/PR2/Conservation%20and%20Recovery%20Program/msr/ship_strike.htm)

## **Discussions**

A question was raised about the number of mortalities in the vicinity of the approaches to Morehead City. NOAA Fisheries staff reported that there are no confirmed mortalities off the North Carolina area during the period 1991-2002. Confirmed mortalities are those that NMFS has complete confidence to report as ship strike mortalities based on peer review of the supporting documentation from necropsy and pathology reports. These ship strike mortalities are consistent with the records in the NMFS Marine Mammal Stock Assessment Reports. Not all right whale carcasses are recovered and therefore necropsies are not always possible. The number of right whale mortalities should be viewed as a sample of what is actually occurring.

NOAA Fisheries staff emphasized that sight-ability (detect-ability) for right whales in the mid Atlantic is extremely low due to whale behavior in this region, that is, traveling whales are difficult to detect.

A Morehead City Pilot reported that large ships calling Morehead City operate at a sea speed of 13.5 -14 knots and that the pilots typically board the vessels at a speed between 5 -7 knots. It was also noted that no container traffic calls Morehead City and that U.S. Naval vessels usually come into the port at higher speeds, such as 15 knots. Proposed speed restrictions in restricted channel approaches could pose a problem in heavy weather and high winds. NOAA Fisheries staff indicated that they are aware of these and other navigation safety concerns and emphasized that proposed speed restrictions were to be implemented so as not to endanger the vessel and navigation safety. The same pilot related that he had seen right whales often in the spring and fall about 5 years ago.

A question was raised about tagging and tracking and the science to back up these operational measures. An individual with no affiliation asked about the work of Dr. Barbara Block on the West Coast (Stanford), and asked why similar tagging studies couldn't be done on right whales.

NOAA Fisheries staff indicated that the problem is with the tagging (i.e., attachment and implantation), and on right whales specifically, not the tracking. Often the tags slough off. Tags can be viewed as being analogous to a splinter. Some whales show signs of infection at the implantation site. In addition, the tag may act as an irritant and the whale seems to attempt to remove it by rubbing. In the latest experiments involving satellite tagging of right whales, one or more antennae broke off, possibly by rubbing with other whales. Nonetheless, tagging and tracking research continues. (See question 8, [Appendix A](#) for a discussion of tagging.)

Three head, party or charter boat owner/Captains conveyed their concerns about the proposed strategy and how it would negatively impact their small businesses. Their vessels are planing hulls (the Carolina Princess for example is about 80' plus at the waterline with two 3' three-blade propellers) and run at 15-17 knots from the inlet to offshore. One captain reported that his boat is highly maneuverable, and can come to a full stop in 5 seconds. There are four charter vessel operators in Carteret County, NC according to the attendees. They indicated that a speed restriction of 12-13 knots is still too low to remain in business. During the timeframe in which the SMA would be effective, they run about 50-60 miles offshore making a full day trip to catch several hours fishing. Speed restrictions will effectively "kill" their late fall / early spring fishing business. At 10 knots, it would take five hours to steam out to 50 nm. They indicated that people would not go on a boat for only an hour or two of fishing. Coast Guard manning standards allow them to run for only 12 out of 24 hours without adding additional crew; additional crewing would not economically viable. The local tourism industry depends on recreational fishing. One Captain employs 6 hands and operates everyday in March and most days in April with little activity in December and January. Their overall concern was that the 65-ft cut-off seems arbitrary and should be brought more in line with actual operational considerations. The Captain believes it is logical that there is greater risk from a 30-50 ft. vessel traveling at 30 knots than an 80-ft. vessel traveling 16 knots. One head-boat captain asked about the reason for using 65' as the cutoff for vessels that are included in the strategy. NOAA Fisheries staff indicated that the smallest identified ship that resulted in a death of a right whale was 82' in length; the right whale killed was a calf. The closest established regulatory requirement that captures this size class of vessel is 65 feet (20 meters). The participant commented that there was a big difference between 82' and 65'. (See question 10, [Appendix A](#) for a discussion of vessel size.)

The facilitator asked the Captains questions about the characteristics of their fishing vessels. Their boats are highly maneuverable and can stop in the length of the boat. They stand an active lookout ("never seen a whale in over 50 years of fishing"). Their deckhouses are high and forward. Captains are licensed with decades of experience. Deck hands also function as extra eyes as safety of passengers is paramount. Russell noted that concerns raised would likely be similar for many large commercial recreational-fishing vessels operating along the entire coast. Russell suggested that he would consider recommending to NOAA Fisheries in his report that special operating conditions be considered for all head, party and charter boat operators. Such special measures would not be an exemption, rather could for example be similar to those the Coast Guard employs for its small vessel operations. Russell also suggested that any hydrodynamics study should look at head-boat hull types (planing versus displacement hulls) and propulsion. Captain Jimmy Harper, Carolina Princess offered to provide data to the economists on typical operations.

A NC Ports Authority representative raised several issues to the NOAA Fisheries staff:

- The environmental assessment should be a full Environmental Impact Statement (EIS); NOAA Fisheries staff advised that an EIS is not required based solely on economic impacts.
- The motivation for "port equity" originated from the ports of Boston, MA and Jacksonville, FL.
- Who would have enforcement responsibility? (For a discussion on enforcement, see Appendix A, question 12).

He offered to provide shipping data for the economic analyses. He suggested that the economists contact Tom Chase, American Association of Port Authorities (AAPA) and Mike Lanier, Yang Ming Lines, for the port of Wilmington, NC.

**Advanced Notice of Proposed Rulemaking Stakeholder Meeting  
Notes for National Marine Fisheries Service (NMFS)  
Jacksonville, FL 13 October 2004  
at Jacksonville Port Authority Conference Room**

**Overview of Major Concerns and Questions**

There were five main issues: the Port Access Route Study that will examine the viability of designated routes in the critical habitat; economic impacts related to potential port dislocations within the seasonal management area (i.e. Jacksonville to Brunswick) and to other east coast ports; the justification for operational measures when it seems to the industry that the Early Warning System and Mandatory Ship Reporting System is "working;" ongoing and future of acoustic alarms; and the expectation that if / when NOAA Fisheries institutes Dynamic Management for areas outside the seasonal management area, that it be managed pro-actively to minimize unnecessary impacts.

There were several representatives attending the meeting from shipping companies (container, cruise lines) that operate along much of the East Coast.

No representatives from Nassau Terminal at Fernandina Beach were at the meeting.

There remain some pockets of confusion related to the basis for the speed restriction, in particular related to a perception that ships would be able to spot right whales and maneuver out of harm's way. In particular, some mariners argue that slower speeds will make their vessels less maneuverable. NOAA Fisheries staff explained that mariners are unlikely to see a right whale. In addition, speed restrictions being considered would not, in any way, reduce maneuverability to dangerous levels. Part of the intent of these meetings was to receive feedback on what dangerously low speeds might be. Also, one reason that speed restrictions were being considered is that the mariner would not be expected to make perhaps multiple, maneuvers to avoid a whale.

**Jacksonville Meeting Summary**

The stakeholders meeting was called to order by Bruce Russell, co-chair Northeast Implementation Team (NEIT) for the Recovery of the North Atlantic Right Whale. Russell facilitated the meeting and provided technical background information on the strategy as required. Special thanks to Mike Getchell for coordinating this meeting with the local Harbor Safety Committee. Representing the National Marine Fisheries Service were:

**NMFS Presenters**

- Dr. Greg Silber NMFS Headquarters
- Barbara Zoodsma, NMFS Southeast Regional Office

**NMFS Observers**

- Captain Don Lewis, NMFS Right Whale/Shipping Industry Liaison

A list of all attendees is attached in [Appendix D](#).

Following introductions by all present, NOAA Fisheries staff presented detailed information on the Ship Strike Strategy components and their development.

## **Presentations**

- Greg Silber presented background information and an overview of the overall ship strike strategy.
- Barb Zoodsma presented background information and details of the proposed seasonal operating measures, the PARS study to examine proposed designated lanes, and dynamic management areas in the Southeastern U.S. critical habitat in particular, and the approaches to Savannah, GA. and other mid Atlantic ports. Zoodsma also spoke to the preliminary economic analysis for the port of Jacksonville.

All presentations from the meeting can be viewed at the following web sites:

<http://www.nero.noaa.gov/shipstrike>

[http://www.nmfs.noaa.gov/pr/PR2/Conservation\\_and\\_Recovery\\_Program/msr/ship\\_strike.htm](http://www.nmfs.noaa.gov/pr/PR2/Conservation_and_Recovery_Program/msr/ship_strike.htm)

## **Discussions**

A concern was raised that a carrier currently calling at both Jacksonville and Brunswick might likely drop one port call, thus dislocating regional port operations. This relates to the "delays" from speed restrictions and the impact of the net effect of multiple port calls at ports within the SMA. A tug company owner whose company services both ports raised this concern.

There was an extended discussion about the PARS and the proposed designated routes. NOAA Fisheries staff provided that at the request of the Southeast Recovery Plan Implementation Team, NOAA Fisheries has quantitatively assessed risk reduction that would be achieved via routing in the Southeast critical habitat. This risk assessment has shown that by routing ships through areas where right whales have been seen less frequently (using historical aerial survey data), there is a reduction in the risk to right whales (i.e., reduced probability that a ship will encounter a right whale). All of these navigational issues, including safety, will be fully accounted for during the PARS process. (See [Appendix A](#), question 4 for a discussion on the PARS.)

An industry representative referenced the Jensen and Silber report / database (Jensen et al, 2003) on ship strikes. He noted that sovereign vessels (e.g., U.S. Navy) were responsible for a number of collisions with whales and asked why would U.S. Naval vessels be exempt for the proposed operational measures, when these vessels are the most documented source of whale mortalities? NOAA Fisheries indicated that the database is skewed toward those vessels that are expected to report a strike (U.S. Naval, Coast Guard, and whale watching vessels) –these entities have been good at doing so. This is particularly true with regard to more recent records. Ship operations of Federal agencies are addressed through the Endangered Species Act (ESA) section 7 consultation process.

An industry representative noted that there is a need for a northeasterly route out of Jacksonville, as is current practice. Many participants were concerned that the MSR data reflected incoming

traffic only, and that Jacksonville's commonly used northeast departure route was underrepresented in the MSR data.

The chair of the Harbor Safety Committee advised that pilots board ships at 8-10 knots.

There were a series of questions about whether whales can hear vessels better at higher speeds, and whether whales are attracted to vessels. NOAA Fisheries staff advised that there no data to support these hypotheses. Whales' hearing is within the range of noise (mostly propeller) from ships. This was followed by a discussion of Peter Tyack's and Doug Nowacek's alarms study in the Bay of Fundy (Nowacek, et al, 2004). Concerns included:

- The Nowacek study was for the Bay of Fundy and not the shallow waters off Florida and Georgia.
- The study found that several whales responded to the alarms, not by fleeing but by rising to or near the surface, perhaps a startle response.

Several industry representatives questioned evidence of ship strikes, e.g., from propellers, bulbous bows, and side-impacts. NOAA Fisheries staff reported that there is evidence from propellers and reports of bow and side-impacts.

A representative from the City of Jacksonville is in the process of renewing permits for fish havens (artificial reefs) in the vicinity of the de facto traffic lanes. Timeline is March 2005. The locations of fish havens will be verified using side scan sonar. NOAA Fisheries staff indicated an interest in being kept abreast of this effort as these structures have implications for the routes being proposed under the ship strike reduction strategy.

Representatives from JAXPORT and the Canaveral Port Authority felt that the Early Warning System (EWS) and Mandatory Ship Reporting (MSR) system appeared to be successful, so why not expand /continue the EWS and MSR in lieu of new regulations? They also added that outreach and education should be continued or expanded. NOAA Fisheries staff indicated that the Southeast U.S. (SEUS) critical habitat is too important to exclude from the ship strike reduction strategy. Reproducing females (most important portion of right whale population) use the area, sight-ability of right whales is low, NMFS does not know that right whales haven't been struck and killed by ships traversing the SEUS critical habitat and there have been several "close calls" observed by aerial survey teams. (See question 14, [Appendix A](#) for a complete discussion.)

Many in the shipping industry expressed concern that in order to fully understand the impact on their operations, NOAA Fisheries should to define the speed restriction as soon as possible. The difference in slowing a vessel to 14 knots or 10 knots can represent a 40% difference in operating costs.

An industry representative asked if there would be a buffer zone around the seasonal management area (SMA)? NOAA Fisheries staff advised that the SMA area will be tightly defined and there will be no need for buffers. Right whales falling outside the SMA would be subject to the trigger mechanism and Dynamic Management Areas (DMA).

An industry representative asked, 'could the use of passive acoustic detection lead to the expansion of SMAs?' NOAA Fisheries staff responded that this was possible –NMFS must consider best available data.

The chairman of the Harbor Safety Committee asked whether there would be negotiations regarding the final ship strike reduction strategy. NOAA Fisheries staff replied that it is the intent of NMFS to fine-tune the strategy and address critical issues identified in the ordinary rulemaking and National Environmental Policy Act (NEPA) processes.

An industry representative asked whether NMFS would consider compensation for impacted entities. NOAA Fisheries staff replied that this would be considered in the economic assessment.

One participant, on behalf of the Jacksonville Harbor Safety Committee, urged that DMAs be actively managed with do consideration of businesses impacted. Passive pro forma management would be problematic.

**Advanced Notice of Proposed Rulemaking Stakeholder Meeting  
Notes for National Marine Fisheries Service (NMFS)  
Savannah, GA 14 October 2004  
at Georgia Ports Authority, Ocean Terminal, Administration Building**

**Overview of Major Concerns and Questions**

There were three general themes at the meeting: right whale biology, mortality, etc.; economic impacts, in particular to vessels operating in multi-port trade on tight time schedules; the impact on new high speed pilot boats in Savannah, the trigger mechanism for dynamic management; and the basis for speed restrictions including a request that NOAA Fisheries examine the hydrodynamics of different ship configurations, load conditions and propulsion. The Savannah pilots are purchasing a new high speed pilot boat and are concerned about the impact on their operations. *[Facilitator note: A similar concern was raised by the Charleston pilots at a SEIT meeting several years ago.]*

There were several representatives attending the meeting from shipping companies (container, car carriers ("Ro-Ro"), oil, Liquefied Natural gas (LNG), and chemical products) that operate along much of the East Coast.

**Savannah Meeting Summary**

The stakeholders meeting was called to order by Bruce Russell, co-chair Northeast Implementation Team (NEIT) for the Recovery of the North Atlantic Right Whale. Russell facilitated the meeting and provided technical background information on the strategy as required. Special thanks to Hope Moorner, Georgia Ports Authority, for coordinating this meeting. Representing the National Marine Fisheries Service were:

**NMFS Presenters**

- Dr. Greg Silber NMFS Headquarters
- Barbara Zoodsma, NMFS Southeast Regional Office

**NMFS Observers**

- Kristen Koyama, NMFS Northeast Regional Office
- Pat Gerrior, NMFS Northeast Regional Office
- Captain Don Lewis, NMFS Right Whale/Shipping Industry Liaison

A list of all attendees is attached in [Appendix D](#).

Following introductions by all present, NOAA Fisheries staff presented detailed information on the Ship Strike strategy components and their development.

## **Presentations**

- Greg Silber presented background information and an overview of the overall ship strike strategy.
- Barb Zoodsma presented background information and details of the proposed seasonal operating measures in the area around and the approaches to Savannah, GA. Ms. Zoodsma also presented information on the seasonal management area in the Southeast U.S. (SEUS) critical habitat, which encompasses the approaches to Brunswick, GA. She also discussed the Port Access Route Study (PARS) study to examine proposed designated lanes, and dynamic management areas in the SEUS U.S. in particular. Ms. Zoodsma also provided a brief overview of seasonal management area around other mid Atlantic ports. Zoodsma also spoke to the preliminary economic analysis for the ports of Savannah and Brunswick, GA.

All presentations from the meeting can be viewed at the following web sites:

<http://www.nero.noaa.gov/shipstrike>

[http://www.nmfs.noaa.gov/pr/PR2/Conservation\\_and\\_Recovery\\_Program/msr/ship\\_strike.htm](http://www.nmfs.noaa.gov/pr/PR2/Conservation_and_Recovery_Program/msr/ship_strike.htm)

## **Discussions**

A port captain raised a question about how NMFS intended to address the cumulative economic impacts of vessels making multiple port calls (coastwise) entering and leaving ports with SMAs in force. The concern is that northbound vessels generally transit offshore to catch the Gulf Stream, whereas southbound vessels often transit within 7-30nm from the coast. During the winter months, when the SMAs would be in force, these measures would play havoc on schedules and that timing for scheduling passage through the Panama Canal is critical. Recent Coast Guard security zones to manage liquefied natural gas (LNG) movements have been costly. NOAA Fisheries staff advised the economists are examining these concerns in the National Environmental Policy Act (NEPA) process.

There was a wide-ranging discussion of right whale biology, mortality, etc. A question was asked about natural mortality of right whales, e.g., through disease, old age and predators. NOAA Fisheries staff advised that right whales have few if any predators; fishing gear is another known source of mortality; that there is ongoing research on potential contaminants that effect the health and reproduction; and that there are studies on the impact of food sources (e.g., whether there are stability and sustainability of the food are factors) with regard to the health of the population. (See question 1, [Appendix A](#).)

A port authority representative asked how speed restrictions were developed. (See question 11, [Appendix A](#).)

A Georgia Port Authority representative asked if NMFS had considered imposing operational measures only when whales are present. The issues of tagging and technological solutions were also raised. NOAA Fisheries staff advised five things:

1. Dynamic management is less predictable and could impact effective voyage planning;
2. Migrating whales are difficult to detect and there is no assurance that all whales will be seen;

3. Sight-ability for resident whales (off Savannah, there are both migrating whales and in some seasons nursing mother/calf pairs) is less than 30-40%.
4. Tagging poses technical problems, though research continues. (See question 8, [Appendix A](#).)
5. Passive acoustics detection is showing some, albeit limited promise (right whales do not always vocalize and background noise sometimes makes it difficult to hear / detect whales).

An association representative asked about Dynamic Management and trigger mechanisms. He suggested that NMFS make a special consideration for how it might be applied in the Savannah approaches.

The Savannah Pilots asked about the reasoning behind the 65-ft. vessel size limit. (See question 10 of [Appendix A](#).) The Savannah Pilots are expecting delivery of a new, high-speed 78' jet pilot boat. The proposed speed restriction period for Savannah would result in a significant impact (pilot boat operation would be reduced to about half speed) to their pilot operations for one half of the year. The Savannah pilots noted they have been active in sighting and reporting right whales. They have, for example, slowed vessels to bare steerage to avoid a right whale. Would NMFS consider special operating measures for pilot boats?

Several industry representatives '...that since there have been no fatalities since 1996 in the Southeast, aren't things getting better with the EWS and MSR and the outreach and education programs?' See question 14, [Appendix A](#). The SEUS is too important to exclude from the ship strike reduction strategy since the most important segment of the right whale population, that is, reproducing females, uses the area. Population models suggest that we can reverse a projected population decline if we can prevent two adult female mortalities per year. We do not know that right whales have not been struck and killed by ships traversing SE waters. There have been calf mortalities, but carcasses were too decomposed, or not recovered to determine cause of death.

- We know ship strikes kill whales.
- We know aerial survey teams witness incidents when ships pass uncomfortably close to right whales, including mother/calf pairs. *[Staff note: Ships are radioed directly from planes during these incidents and "close calls" of this nature, undoubtedly occur without the presence of aircraft overhead or in poor weather conditions. In fact, one aerial survey team documented a ship passing over a mother/calf (m/c) pair on January 7, 2001 and briefly saw the m/c pair re-surface. The mother (#1151) was observed again on January 21; however, without her calf. On January 27 a dead, decomposing calf was found floating and was probably the same as the rotting calf carcass that washed ashore on Flagler Beach on February 13. Genetics testing of a skin sample taken from the carcass in combination with sighting data of #1151 strongly suggest this dead calf was the offspring of #1151].*
- We also have photographic evidence of right whales that were struck, but not killed, in the SEUS by vessels that would most likely fall under the purview of our proposed ship strike strategy.

A port captain asked about the basis for speed restrictions and if NMFS considered or will considered loaded vs. light vessels in hydrodynamic studies? Later, a shipping association representative observed that slowing vessels down to between 10-14 knots could impose huge costs (such as missing the appointed time to pass through the Panama Canal) with no clearly

discernable or quantifiable benefits. NOAA Fisheries staff indicated that these might be reasonable questions for further hydrodynamic studies. Industry representatives asked that the preliminary hydrodynamics papers be posted. Also that any hydrodynamics study also examine watercourses / channels and depth of water. *(These papers are now posted.)*

An industry representative asked how a mariner could be held culpable if there is no way of detecting that a whale is there. NMFS responded that these measures will give the mariner regulatory protection as long as they are complying with the measures.

A port authority representative asked if the outreach and education program is working. Several points were raised:

- By industry--time chartering of ships (makes it difficult to effect an outreach and education program. *(Facilitators note on request of NOAA Fisheries staff: (Time chartering is (very basically) the renting of a vessel and crew for one voyage or port call or a finite amount of time.) The impact of time chartering means for example, that a vessel is hired for perhaps a single voyage and that the crew may never have learned about right whales and may never again return to the U.S. East Coast. The chartering company's relationship with the ship owner and vessel crew of the time-chartered vessel is often for example limited to that single voyage. Education and outreach is then spotty at best for such vessels.)*
- By NOAA Fisheries staff--ship strikes persist; mortality rates are about 0.8- 2.4 per year. Juvenile mortality may be a factor. Modeling exercises suggest adult survival is decreasing. Adult female mortality rates are the most critical.

A representative of the Georgia Ports Authority asked for information on the population. NOAA Fisheries staff provided information on right whale demographics, birth/death rates, and population size.

A representative of the Georgia Ports Authority related that they had recently completed a detailed economic analysis that might be an important contribution to the environmental assessment. This analysis was done with a MARAD model, possibly the same model being used in the current Boston direct and indirect cost analysis. NOAA Fisheries staff indicated this would be helpful.

Throughout the meeting, a number of industry representatives offered to provide information relative to the NMFS economic analysis currently underway.

**Advanced Notice of Proposed Rulemaking Stakeholder Meeting  
Notes for National Marine Fisheries Service (NMFS)  
New London, CT 20 October 2004  
at SECTER Offices Conference Room, Governor Winthrop Building**

**Overview of Major Concerns and Questions**

This was a meeting attended by individuals representing organisations for which the problem of ship strikes was new, as well as several individuals representing organisations that have been working with the Northeast Implementation Team (NEIT) for several years. Those who were new to the issue asked questions about right whale biology, research and the potential for a wide range of technological solutions. There were two concerns of most of the attendees and one organisation who was not able to attend but provided comments on the draft notes: the timing and management of both the dynamic management areas seasonal management areas as both could affect cruise ship and passenger vessel operations. Note also that in attendance were representatives from the U.S. Military Sealift Command (MSC) who operate MSC (U.S. Naval) and contract vessels that operate along the entire U.S. East Coast.

**New London Meeting Summary**

The stakeholders meeting was called to order by Bruce Russell, co-chair Northeast Implementation Team (NEIT) for the Recovery of the North Atlantic Right Whale. Russell facilitated the meeting and provided technical background information on the strategy as required. Special thanks to Deborah Donovan, South Connecticut Enterprise Region (SECTER), for coordinating this meeting. Note that this was also a special meeting of the Thames River Maritime Coalition. Representing the National Marine Fisheries Service were:

**NMFS Presenters**

- Dr. Greg Silber NMFS Headquarters
- Pat Gerrior, NMFS Northeast Regional Office

**NMFS Observers**

- Kristen Koyama, NMFS Northeast Regional Office
- Kevin Collins, NMFS Northeast Region

A list of all attendees is attached in [Appendix D](#).

Following introductions by all present, NOAA Fisheries staff presented detailed information on the Ship Strike Strategy components and their development.

**Presentations**

- Greg Silber presented background information and an overview of the overall ship strike strategy.

- Pat Gerrior presented background information and details of the proposed seasonal operating measures in the area 30nm south of lines between Montauk PT, NY and Block Island, RI and Block Island to Gay Head. This area encompasses part of the right whales migratory corridor to/from the calving grounds off the Georgia and Florida coasts. Gerrior presented information on the proposed dynamic management measure as it would apply in Block Island Sound and the Narragansett Approaches, including retrospective analysis of whale aggregations in these areas; and the seasonal management areas in the NY approaches and Cape Cod Bay. Ms. Gerrior presented information on the need for a Port Access Route Study (PARS) in Cape Cod Bay. Gerrior also presented a broad overview of all operational measures in the strategy.

All presentations from the meeting can be viewed at the following web sites:

<http://www.nero.noaa.gov/shipstrike>

[http://www.nmfs.noaa.gov/pr/PR2/Conservation and Recovery Program/msr/ship\\_strike.htm](http://www.nmfs.noaa.gov/pr/PR2/Conservation%20and%20Recovery%20Program/msr/ship_strike.htm)

## Discussions

A representative of the Military Sealift Command (MSC) asked about the regulatory development / proposal timeline for the ship strike reduction strategy. NOAA Fisheries staff answered:

- Preparation of the environmental Assessment (EA) (a National Environmental Policy Act (NEPA) requirement) and the formal economic analysis (requirements of NEPA and the Regulatory Flexibility Act (RFA)) have been initiated;
- We anticipate the PARS process will be started within the next few months following discussions with the Coast Guard (See [Appendix A](#), question 4, for amplifying information on the PARS process); and,
- The first Notice of Proposed Rule Making is estimated for late 2005 following findings of several studies, but a number of unforeseen factors may affect this timing. (See [Appendix A](#), question 2, for amplifying information on the project timeline.)

An MSC representative also raised a question whether NMFS had gone to the ‘beginning of the pipe’ to look at the right whale problem. NMFS responded that we are looking at environmental indicators and population health.

A representative from Cross Island Ferries expressed interest in addressing the problem of ship strikes, but expressed concern about potential for DMA restrictions within Block Island Sound and expected that his operations would be affected. Here and later in the meeting, NOAA Fisheries staff presented a retrospective analysis of right whale sightings (Russell et al, 2003) that would have resulted in restrictions, to indicate that the number of DMAs triggered would have been relatively few. (The following comments were received after circulation of the draft notes to all attendees: *"My name is Chip Briscoe and I represented Cross Sound Ferry at the 20 October 2004 right whale stakeholders meeting. In reviewing your draft notes I would like to take this opportunity to more precisely address our concerns. Please note that our operation would fall into the dynamic management zone category and that we have two operations, high speed ferries and vehicle ferries, I think you thought we only ran car ferries.*

1.) *The seven vehicle ferries operate between Orient Point, Long Island and New London, CT. Normal operating speed is between 13 - 15 knots, depending on which vessel you are riding. Schedule of operations can be viewed @ [www.longislandferry.com](http://www.longislandferry.com). Our operations would be effected if we have to depart from these speeds and would be dramatically effected at any speed under 13 knots.*

2.) *We also operate two high-speed ferries, one between Orient Point, Long Island and New London, CT and the other between Block Island, RI and New London, CT. Normal operating speeds are between 30 - 37 knots. Schedule of operations can be viewed at above website. The implementing of a DMA in either Block Island Sound or Eastern Long Island Sound could be devastating to both of these operations since the whales potential to enter these areas is greatest during our busiest time, spring through fall. This potential impact needs to be investigated and addressed. Please let me know how to provide information to the economists. I have asked Mr. Adam Wronowski, Vice President of Cross Sound Ferry Services to address these issues in letter form before the close of comment period on November 20, 2004."*

This was followed by a discussion, initiated by the representative from Fox Navigation of the DMA triggers (both on and off) and the 13-day sunset currently being used in the DAM process for fisheries. Industry representatives expressed concern for the judicious use of the trigger and the need to actively manage the DMA to lift as soon as possible. Industry emphasized that DMA triggers need to be developed to appropriately reflect the behavior of whales in each location.

[The following comments on the draft stakeholder notes were received from Rick Comeau, Fox Navigation. ...*"Although I believe that there should not be a length standard for any vessel operating in a proposed area, I understand that some sort of cut off becomes necessary. The item that caught my eye was saying that a motorboat becomes a larger vessel at 65'. Now I realize I am coming at this from a mariner's point of view, but I have never considered that a "commonly used distinction", nor have I read it anywhere other than this draft. The International Navigational rules have different lighting requirements and conduct within a narrow channel for vessels on either side of the 65' (20 meter) length. The rules only refer to a power driven vessel being propelled by mechanical means, not by length. AIS has the same 65' distinction, but again it has not been because of motor boat vs. larger vessel issues. As you know, most of the rest of the world deals with meters and the 20-meter cutoff has a lot to do with industry (towboats, fishing boats etc.) rather than motor boats. There is an entire Push Boat construction industry that is alive and well building 25 foot 11 inch length boats for the Mississippi River because at 26 feet in length they would be required to put a VHF Radio onboard. They are building them that size to avoid regulation. That 65-foot distinction is in much the same class."*]

There was a discussion about cruise ships within Block Island Sound, Buzzards Bay, and Long Island Sound calling at several New England ports. During the discussion, participants examined the areas and times of year to be impacted. Most port calls would be unaffected [Note: At a subsequent meeting with the Northeast Marine Pilots the facilitator learned that one or more cruise ship lines might be affected in the September / October window when making outside transits from NY and Philadelphia to Martha's Vineyard.]

A shipping report of port calls to the state Pier in New London was provided to NMFS [Following the meeting, SECTER provided NMFS with information on a US flagged coastal cruise line company (American Cruise Line) whose vessels operate from ME to FL with some operations temporally and spatially overlapping right whale distribution]. Alan Stevens can provide the economists with additional information and points of contact for New Haven, CT.

A question was raised about transporting southern right whales (different species) to boost right whale numbers off the U.S. East Coast. NOAA Fisheries staff indicated that these are genetically different species, separated probably for hundreds or thousands of years (raising ethical questions of introducing a new species); and the transporting of a 60+ ton animal would be logistically near impossible.

A question was raised about potential ways to increase reproductive potential through captive breeding or other means. NOAA Fisheries staff indicated that artificial insemination, captive breeding and other means of improving reproduction had not been tried in baleen whales. Again, the logistical obstacles in an animal of this size or attempting to enhance reproduction in the wild are probably insurmountable. Studies are underway to better understand recent anomalies in right whale reproduction.

An MSC representative asked if mariners report sightings or if it should be required. NOAA Fisheries staff advised that NMFS has not asked, nor do they anticipate asking most mariners to report right whale sightings because such data are not always reliable, lookouts have not been trained-in whale spotting and identification, and due to the difficulties NMFS confronts in verifying possible sighting information. However, NOAA Fisheries does ask mariners to report whale carcasses.

An MSC representative asked about use of remote sensing and satellite imagery capability. NOAA Fisheries staff advised that NMFS has looked into this and continues to investigate technological solutions. Passive acoustics detection currently holds the most promise in some areas.

A question was raised about whether there was a system, such as Vessel Traffic Services (VTS), to monitor vessel speeds? NOAA Fisheries staff responded that the US Coast Guard would probably be involved in enforcement using a system such as Automated Information Systems (AIS). (See [Appendix A](#), question 12 for a discussion on enforcement.)

It was noted that there are four head boat operators in the Southeast CT area. (M/V Hellcat, MYJOY, Black Hawk and Captain John.)

There was a suggestion that Project Oceanology, a Sea Grant program at the University of Connecticut, Groton (UCONN), might be able to provide opportunistic sightings.

**Advanced Notice of Proposed Rulemaking Stakeholder Meeting  
Notes for National Marine Fisheries Service (NOAA/NMFS)  
Newark, NJ 25 October 2004  
at Seamens' Church Institute, Port Newark, NJ**

**Overview of Major Concerns and Questions**

There were several organisations and individuals that were new to the right whale issue (e.g., biology, the problem of ship strikes, R&D) and the ordinary rulemaking process, and preliminary discussions provided background information on both. There were several concerns and issues raised at the meeting: the impact of the proposed measures in the mid Atlantic region in particular on vessels conducting multiple port calls on their regular routes; the large number of U.S. Naval vessels operating out of the Hampton Roads area; the role of current and future technology; and the need for more comprehensive economic analyses in particular related to passenger vessel operations, secondary or trickle-down impacts, and vessels conducting multiple port calls.

The container carriers' representatives at the meeting represent some of the largest companies operating along the U.S. East Coast. The company bringing Liquefied Natural Gas (LNG) to Cove Point, MD attended the meeting. No representatives from the tug and barge industry attended this meeting. A representative from a passenger vessel operators association attended the meeting and offered to assist NOAA Fisheries staff to make contact with other passenger vessel associations.

**Ports of New York / New Jersey meeting in Newark, NJ.**

The stakeholders meeting was called to order by Bruce Russell, co-chair Northeast Implementation Team (NEIT) for the Recovery of the North Atlantic Right Whale. Russell facilitated the meeting and provided technical background information on the strategy as required. Representing the National Marine Fisheries Service were:

**NMFS Presenters**

- Dr. Greg Silber NMFS Headquarters
- Pat Gerrior, NMFS Northeast Regional Office

**NMFS Observers**

- Kristen Koyama, NMFS Northeast Regional Office
- Kevin Collins, NMFS Northeast Region

A list of all attendees is attached in [Appendix D](#).

Following introductions by all present, NOAA Fisheries staff presented detailed information on the Ship Strike Strategy components and their development.

## **Presentations**

- Greg Silber presented background information and an overview of the overall ship strike strategy.
- Pat Gerrior presented background information and details of the proposed seasonal operating measures in the approaches to the ports of NY & NJ, Delaware Bay and Chesapeake Bay. These areas encompass part of the right whales' migratory corridor to/from the calving grounds off the Georgia and Florida coasts. Gerrior presented information on the proposed dynamic management measure, as it would apply in all waters. Ms. Gerrior also presented an overview of seasonal and dynamic management measures as they would apply in New England waters including Cape Cod Bay (the Port Access Route Study (PARS) study area); the Area to be avoided in the Great South Channel); the mid Atlantic; and the Southeast US critical habitat (including the PARS in the Southeast to examine the designation of lanes).

All presentations from the meeting can be viewed at the following web sites:

<http://www.nero.noaa.gov/shipstrike>

[http://www.nmfs.noaa.gov/pr/PR2/Conservation\\_and\\_Recovery\\_Program/msr/ship\\_strike.htm](http://www.nmfs.noaa.gov/pr/PR2/Conservation_and_Recovery_Program/msr/ship_strike.htm)

## **Discussions**

A passenger-vessel industry association representative asked about the financial commitment on the part of government to recover right whales. NOAA Fisheries staff responded that FY04 right whale funding was about 12 million dollars and FY03 about 10 million dollars.

A passenger-vessel industry association representative asked why NMFS is not preparing an Environmental Impact Statement (EIS) and if the issues of the cumulative impact of additional trucks on the highways and air emissions had been considered. NOAA Fisheries staff explained that NMFS is preparing an environment assessment, which will include an analysis of economic impacts. NOAA Fisheries staff also indicated that economic impacts alone did not trigger the need for an EIS under the National Environmental Policy Act (NEPA).

An industry representative asked if the North Atlantic right whale is a distinct species. NOAA Fisheries staff replied that there is no intermingling of southern right whales with northern right whales or between right whales in the North Pacific and North Atlantic oceans.

A question was asked if there was a correlation with respect to the size of vessels versus ship strikes. NOAA Fisheries staff referred to the two databases on large whale ship strikes (Laist et al, 2001); and Jensen and Silber et al, 2003) and indicated this is the best available information on ship strikes, although probably not completely comprehensive, and they contain some information on vessel size. However, in general, little is known about the vessels that strike and kill right whales. Very preliminary propeller scarring studies from three whales indicate vessel sizes ranging from 82' to 120'-200', and 425-480'. Large vessels (900'+) have been involved in ships strikes of other large whales, most recently a 960' cruise ship collision with a fin whale. An 82' vessel was involved in a known right whale ship strike.

Several industry representatives raised the matter of the large number of military vessels conducting operations offshore near the approaches to Hampton Roads and the large volume of U.S. Naval traffic in the approaches to Chesapeake Bay. NOAA Fisheries staff emphasized that NMFS is in discussions with the Navy and other federal agencies pursuant to section 7 of the Endangered Species Act (ESA) to address the operations of sovereign immune vessels.

NOAA Fisheries staff posed a series of questions related to vessel traffic after providing the average operating speeds by vessel type used in two studies- the preliminary economic analysis (Kite-Powell et al, 2002) and the vessel traffic management analysis (Russell et al, 2003):

- Would the New York Vessel Traffic services (VTS) database be a useful tool to obtain port call information? The U.S. Coast Guard representative responded that the Coast Guard could provide the VTS data for the ports of NY/NJ.
- Do container ship sea speeds range from 17-21 knots? Industry responded some transit at speeds as high as 24 knots.
- What speeds do Liquefied Natural Gas (LNG) vessels operate in the approaches to Chesapeake Bay? Industry responded 19 knots
- Dry bulk carriers operate at ~15-20 knots.
- What is the speed at the pilot buoy? Industry responded as high as 10knots. (*Russell to follow up with Captain McGovern*).
- Do vessels increase speed after picking up pilot? Industry responded that they do; however, it was not clear what speed and for what distance they increase speed. (*Russell to follow up with Captain McGovern*).
- In general, the industry concurs with the average speeds used in these analyses.

An industry representative (container vessels) brought up the issue of vessels making multiple port calls in the mid-Atlantic and encountering speed restrictions at multiple ports. The carrier reported that his company may have to drop a port call (consolidate cargo and rely on trucking and or rail service) or add another vessel to maintain the same level of service. The cumulative impact may be great. Southbound vessels often sail within 7-30nm of the coast to avoid Gulf Stream eddy currents. Northbound vessels often sail the Gulf Stream. His company will work with the World Shipping Council to submit comments on the ANPR related to this concern.

There was discussion about the U.S. Maritime Administration (MARAD) port kit model being used in Boston for analysis of direct and indirect costs related to the proposed ship strike rules. The Port Authority of NY/NJ may be interested in running the MARAD model. [*NOAA Fisheries staff, subsequent to the meeting, has arranged for Joe Monaco (NY/NJ Port Authority) to be provided a copy of the Boston report when completed*].

Several participants reported that some operators in the port of NY/NJ are limited by tide and daylight transits only.

One participant noted that the ship strike database (Jensen et al, 2003) did not include an analysis of vessel size, speeds, or propulsion over the timeframe of the study. NOAA Fisheries staff responded that there is very limited information on type and size of vessel and vessel speed for right and other large whales found ship struck.

A question was raised as to whether the acoustic signature of the vessel could be changed to scare whales or their prey away. NOAA Fisheries staff indicated that some research has been conducted on alarm devices and various types of detection technologies. Participants were referred to the “Technology” white paper that has been posted on the Internet.

Industry raised repeated questions related to overall survivability of the right whale, de-listing criteria in the Recovery Plan, and the carrying capacity of the food supply. (See question 1, [Appendix A](#) for a discussion on right whale biology.)

A representative from the New York Shipping Association raised two points:

1. With as much money that has been spent on technology surely a technological fix can/should be found.
2. Called for an Environmental Impact Statement (EIS) on the basis of slowing ships down can be an increased security risk.

NOAA Fisheries staff noted the need to adhere to national security needs and constraints; and with regard to technologies, referred participants to the “Technology” white paper. (See questions 2, and 7-9, on regulations' timeline and process and technology, [Appendix A](#)).

The representative from the passenger vessel association made the following points:

- The preliminary economic impacts analysis (Kite-Powell et al, 2002) did not examine the impact on fisheries, whale watching, ferries, and other small passenger vessel operations. NOAA Fisheries replied that these would be examined in the economic analysis being conducted under the National Environmental Policy Act (NEPA) and the Regulatory Flexibility Act (RFA).
- The ANPR strategy as published is pretty thin. The ANPR referenced the Caswell et al, 1999 study in the ANPR, but it was not clear that NMFS endorsed this study and based the proposed rules on this study. NOAA Fisheries staff replied that the ANPR, and any proposed and final rules review the best available scientific information, as the ANPR did in the case of the Caswell et al, 1999 paper. The paper that was questioned at the meeting, Caswell et al., 1999, appeared in a peer-reviewed paper, originally appeared as a National Academy of Sciences report, was reviewed by the International Whaling Commission’s Scientific Committee, and was reviewed internally by a team of NOAA Fisheries scientists. The paper is part of the body of scientific literature considered by NOAA Fisheries in making population assessments, assessing threats to right whales, and in making policy decisions. NOAA Fisheries also stated that background white papers are now posted on the web sites and the Strategy would be posted on the web site.
- The government should produce documents on the legal authorities to regulate beyond 12nm out to the Exclusive Economic Zone (EEZ). The NOAA Fisheries general counsel's office representative responded that the U.S. has the authority under Endangered Species Act (ESA) and Marine Mammal Protection Act (MMPA) to exercise port state control pursuant to the law of the sea.
- Would measures that relate to innocent passage be sent through International Maritime Organization (IMO)? NOAA Fisheries responded that the Area to be Avoided (ATBA) in the Great South Channel (GSC) is the only measure currently being considered for submission to IMO.

A question was asked about dialogue with the Coast Guard on legal authorities, enforcement, PARS, and overall implementation. NOAA Fisheries staff advised that there is an ongoing dialogue with the U.S. Coast Guard. (See questions 4 and 12, [Appendix A](#), for discussions on PARS and enforcement.)

An industry representative raised several questions related to "process:"

- How are comments on the ANPR handled, are they public documents? Answer: Yes. (See question 2, [Appendix A](#) for a discussion of the timeline and process.)
- How are whales removed from the endangered species list (example the recent removal of the gray whale)? NOAA Fisheries staff indicated that de-listing criteria are provided in the right whale recovery plan, as required by the Endangered Species Act (ESA) and, given the current status of this population and indications about its prospects for recovery, it may be many years, perhaps decades, before considerations are made about changing the North Atlantic right whales' listing status.

An industry representative (container) asked about the NOAA Fisheries staff plans for work groups as described in the Recovery Plans. NOAA Fisheries staff cited the ongoing work of the Implementation Teams and NOAA Fisheries staff intent to continue this collaboration.

The passenger-vessel industry association representative advised that there are many other associations not represented at this meeting (*or other stakeholder meetings*). He would assist NOAA Fisheries staff to identify these associations and points of contact.

**Advanced Notice of Proposed Rulemaking Stakeholder Meeting  
Notes of National Marine Fisheries Service (NMFS)  
Baltimore / Washington, DC 27 October 2004  
at Maritime Institute Technology and Graduate Studies (MITAGS)  
Linthicum, MD**

**Overview of Major Concerns and Questions**

This was the last in the series of industry stakeholder meetings, deliberately held last and also in proximity to many of the industry and port associations based in Washington, DC. Several of the associations' representatives had spoken with their membership who attended earlier meetings. Indeed a cruise-ship-servicing agency based in Boston accompanied the association representative for the cruise lines to this meeting. At this time participants were focussed on the question of whether reducing speed to 10-14 knots is an effective tool and are looking to NMFS to provide evidence, for example a hydrodynamics study that reduced speed reduces the likelihood of a ship strike.

There were several concerns and issues raised at the meeting: the impact of the proposed measures in the mid Atlantic region in particular on vessels conducting multiple port calls on their regular routes; the large number of U.S. Naval vessels operating out of the Hampton Roads area; the need to address the economic impacts to all affected vessel types; and the need for more comprehensive economic analyses related to secondary or trickle-down impacts and vessels conducting multiple port calls.

There remain some pockets of confusion related to the basis for the speed restriction, in particular related to a perception that ships would be able to spot right whales and maneuver out of harm's way. In particular, some mariners argue that slower speeds will make their vessels less maneuverable. NOAA Fisheries staff explained that mariners are unlikely to see a right whale. In addition, speed restrictions being considered would not, in any way, reduce maneuverability to dangerous levels. Part of the intent of these meetings was to receive feedback on what dangerously low speeds might be. Also, one reason that speed restrictions were being considered is that the mariner would not be expected to make perhaps multiple maneuvers to avoid a whale.

**Baltimore / Washington DC area meeting**

The stakeholders meeting was called to order by Bruce Russell, co-chair Northeast Implementation Team (NEIT) for the Recovery of the North Atlantic Right Whale. Russell facilitated the meeting and provided technical background information on the strategy as required. Representing the National Marine Fisheries Service were:

**NMFS Presenters**

- Dr. Greg Silber NMFS Headquarters
- Pat Gerrior, NMFS Northeast Regional Office
- Barbara Zoodsma, NMFS Southeast Region

## **NMFS Observers**

- Kristen Koyama, NMFS Northeast Regional Office
- Nicholas Chrobak, NMFS Southeast Region

A list of all attendees is attached in [Appendix D](#).

Following introductions by all present, NOAA Fisheries staff presented detailed information on the Ship Strike Strategy components and their development.

## **Presentations**

- Greg Silber presented background information and an overview of the overall ship strike strategy.
- Pat Gerrior NMFS Northeast Region presented background information and details of the proposed seasonal operating measures in the approaches to the ports of NY & NJ, Delaware Bay and Chesapeake Bay. These areas encompass part of the right whales migratory corridor to/from the calving grounds off the Georgia and Florida coasts. Gerrior presented information on the proposed dynamic management measure, as it would apply in all waters. Ms. Gerrior also presented an overview of seasonal and dynamic management measures, as they would apply in New England waters including Cape Cod Bay (the PARS study area) and the Area to be avoided in the Great South Channel, and the northern mid Atlantic.
- Barb Zoodsma, NMFS Southeast Region presented information the Southeast US critical habitat (including the PARS in the Southeast to examine the designation of lanes) and the southern mid Atlantic.

All presentations from the meeting can be viewed at the following web sites:

<http://www.nero.noaa.gov/shipstrike>

[http://www.nmfs.noaa.gov/pr/PR2/Conservation\\_and\\_Recovery\\_Program/msr/ship\\_strike.htm](http://www.nmfs.noaa.gov/pr/PR2/Conservation_and_Recovery_Program/msr/ship_strike.htm)

## **Discussions**

The Maryland Pilots advised that pilots board at the entrances to Chesapeake Bay at speeds up to 10-12 knots depending on sea conditions. Their pilot boats operate at 20-30 knots. Many vessels, after entering the Chesapeake and Delaware Bays do resume sea speed after boarding the pilot.

Representatives from the Chamber of Shipping of America and the World Shipping Council (WSC) advised that charter rates may be too low (\$20K used in 2002 analysis likely now about \$24K/day) on the preliminary economic analyses (Kite-Powell et al, 2002). NOAA Fisheries staff will be looking for current information for use in the formal economic analysis. Both associations offered to assist. Also WSC will assist the economists with container traffic information for Hampton Roads, Charleston and NY/NJ. The industry also noted that charter rates are proprietary and only ranges may be provided.

WSC reiterated a concern from their membership (*see Newark meeting notes*) that there is the potential for severe economic impacts for one or more of their members. One of their members

advised that another ship may be required for service to maintain its weekly multiple port call route in the southern mid-Atlantic due to the cumulative impact of incorporating a 2-hour delay at each port (4 port calls average on East Coast) because of speed restrictions.

A concern was raised about the frequency of a right whale entering a harbor area and disrupting or shutting down a port. NOAA Fisheries staff reported that such events are rare but that the matter, and an appropriate contingency plan, needed to be discussed with the Coast Guard. Several years ago, a right whale had entered Portland, ME harbor and was provided a "vessel escort" by the Coast Guard.

The Chamber of Shipping of America representative pointed out that the right whale population is small. She understood agency mandates under the Endangered Species Act (ESA) and that several thousand individual right whales would be needed before NMFS considered changing its status under the ESA. The representative agreed there was clearly a problem with right whale avoidance since ships along the East Coast "operate in a whale turnpike." Also, her association was concerned if one outcome of this process was the courts stepping in and shutting down a port with an injunction ... she noted that courts have made similar determinations in the past.

The Chamber of Shipping of America and the American Association of Port Authorities (AAPA) suggested, "only as an idea," that NMFS consider a PARS for every port and consider routing measures vs. speed restrictions for mid Atlantic and SEUS ports. In particular NMFS should consider one perpendicular approach designated into every port, and then actively monitor and dynamically manage for the single approach lanes to these ports (NY/NJ, Baltimore, Norfolk, etc.). The WSC offered that there be an option to proceed under a speed restriction or transit via a designated route; to that end, the idea of managing these areas dynamically was also discussed. There was much discussion, but not agreement, on this. The WSC countered the suggestion by pointing out that a ship entering such a lane may still be required to slow down, so there really is no point. The idea of managing these areas dynamically was also discussed. WSC is also concerned that this alternative would increase the impact on ships making multiple port calls. Also, a discussion ensued about the pitfalls (difficult to see all whales) and resources needed in the heavy monitoring required under such a scenario. NOAA Fisheries staff asked about interest by the ports in being involved in and funding the monitoring. The CSA representative summarized that the primary point was that the mariner needed more than one alternative so that he/she could decide which was the most economically viable option, not necessarily that routing measures would be preferable to speed restrictions. The representative indicated that a one-size-fits-all approach does not make sense, but also understood that there are limited options in the mid Atlantic.

The AAPA challenged the justification for the strategy in the mid Atlantic on the basis of the sparse data available.

A question was asked about the "hundreds of measures" considered. NMFS provided a few examples and will provide more complete information through the EA process.

A question was asked about how information dissemination could be enhanced, in particular through the Mandatory Ship Reporting system (MSR). NOAA Fisheries staff pointed out the

effectiveness of the MSR as an educational tool and as a source of good data on vessel traffic. NMFS also noted that MSR compliance rates have continued to improve due to the efforts of the U.S. Coast Guard, marine pilots, shipping agents and others. Other information avenues are either already underway or are being developed. (See question 15, [Appendix A](#).)

A representative from the cruise ship industry association (International Council of Cruise lines (ICCL)) suggested that speed restrictions be related to maneuvering speeds of vessels. NMFS reiterated that the intent of the speed restrictions was not related to the masters' ability to maneuver around a whale but to minimize fatal ship strikes, which several studies indicate may be related to ship speed.

There was a discussion, which included input from a naval architectural consultant, on the need for a comprehensive hydrodynamics study. NOAA Fisheries staff acknowledged that further hydrodynamic studies likely would be beneficial and that, if pursued, staff would seek advice from industry experts on the nature of the study including for example propulsion (e.g., water jets, vessel appendages, hull pressure at varying speeds and varying hull types and load conditions, and watercourses). The naval architect added that recreational vessels are an area of concern since the trend for these vessels is increasing size, propulsion, configuration, and speed. An industry representative suggested that twin-screw vessels should be seriously looked at in any hydrodynamic analysis.

There was a brief discussion on vessel noise from machinery and propulsion (e.g., cavitation) and the issue under study by the Marine Mammal Commission.

Several industry representatives raised the matter of the large number of military vessels conducting operations offshore of the approaches to Hampton Roads and the large volume of U.S. Naval traffic in the approaches to Chesapeake Bay. NOAA Fisheries staff emphasized that NMFS is in discussions with the Navy and other Federal agencies pursuant to section 7 of the Endangered Species Act to address the operations of sovereign immune vessels.

An industry association representative reinforced the need to bring whale watch vessels in under any proposed ship strike regulations.

The facilitator asked about a general question on the industries views on the time and geographic extent of the proposed rules in the mid Atlantic in relation to the overall impact on vessel operations. Rather than answer this question, the industry representatives and associations indicated that they were more concerned and doubted the effectiveness of speed and reiterated the need for additional justification for speed restriction, for example hydrodynamic studies.

The WSC inquired if the threat of lawsuits were presently impacting the ship strike strategy process. NMFS replied that there were none pending, though one was filed in 1999 by the Humane Society of the United States, and settled earlier. And that NMFS is attempting to move the process along in response to, and commitments made in regard to, that suit and similar suits filed in the past.

One industry association representative from Boston expressed a concern that if a shipping line was forced to drop a port, it would not be New York and other ports would experience this loss. Further, there will never be "port parity."

Several industry representatives asked about the timeline (see questions 2-4, Appendix A):  
NOAA Fisheries staff replied:

- The Environmental Assessment required by the National Environmental Policy Act (NEPA) and the economic analysis (required by both NEPA and the Regulatory Flexibility Act (RFA)) have been initiated;
- The PARS are anticipated to begin in the coming months (following discussions with the Coast Guard) and, depending on a number of factors, are expected to take 6-18 or more months.
- The first Notice of Proposed Rule Making estimated for late 2005 following findings of several studies. However, given the steps needed, the timing of such is often unpredictable.

## **APPENDIX A: Answers to Commonly Asked Questions**

This Appendix contains NMFS responses to questions that arose frequently, but which, due to time constraints and other considerations, could not be fully addressed during the meetings. Because these questions reflected common concerns, it seemed appropriate to provide these answers to ensure that all parties are well informed.

### **Right Whale Biology**

1. Repeated interest was expressed in the population size, reproduction, and the point at which right whales would no longer be considered endangered. "What is the official count of right whales? Why are there still only 300 right whales when there have been so many calves born over the last 4 years?" Why doesn't the reported population number reflect the number of calves that are born?" Changes in population size are a result of the number of births and a combination of juvenile and adult survival. While many calves have been born in recent years, this period was preceded by a number of years with a very low number of births. Whether the two have balanced out and led to an increase in the number of whales surviving to adulthood is partially a result of juvenile survival. The year-to-year survival of young whales is very hard to estimate but we do know that it is much lower than adult survival. We also know that a number of young whales have died recently. So, it is not clear that even if there has been a net gain in calves born recently, that there will be an increase in the number of whales surviving to adulthood to reproduce. Finally, we do know that adult survival has decreased significantly in the past decades (Caswell, et al, 1999). So even if more juveniles survive to adulthood, it may not be enough to offset the annual increases in adult deaths. It would take a long time to bring the population to a level whereby the North Atlantic right whale would be no longer classified as critically endangered. The right whale population is not believed to be at a point of reproductive failure but that the protection and recruitment of females is essential to the survival of this species. Deaths by natural causes are hard to quantify. Necropsies of recovered dead right whales look for both man made and natural causes. Pre and post mortem accidents are determined. Only those right whale deaths that the scientists are 100% attributable to a vessel strike are reported in NMFS' database.

An overview of right whale biology and explanation of why the number of right whales has remained relatively unchanged despite the number of births, please see the PowerPoint presentation entitled "Right Whale Demographics" posted on the NOAA web sites.

### **ANPR Timelines and Processes**

2. An environmental assessment (EA) is currently being developed. A key component of this EA will be an economic impact assessment. This economic impact assessment is different from and in addition to preliminary economic analyses that have been conducted and are currently being revised under contract. These preliminary economic analyses primarily focused on primary impacts to shipping and have not addressed the potential for secondary or trickle down impacts including port dislocations. The formal analyses required under the National Environmental Policy Act and the Regulatory Flexibility Act, will build on this initial work and will address the potential for secondary or trickle down impacts including

port dislocations. As discussed at all meetings, the economists will be contacting industry for information necessary for these studies.

3. **Timeline:** The Environmental Assessment is underway and a draft should be completed late spring 2005. Notices of Proposed Rulemakings (NPR(s)) should be published in 12-24 months.
4. **The Port Access Route Study (PARS) process**
  - A PARS is a study of the potential traffic density and the need for safe access routes for vessels in a particular area in which the Coast Guard is considering implementing vessel routing measures under the Ports and Waterways Safety Act. The study may recommend new routing measures or changes to existing routing measures, and may lead to the development of regulations through the rulemaking process. It would ensure that a full hearing takes place so that any routing measure is fully considered and would allow for the integration of views relating to maritime safety, and right whale protection, from all entities.
  - The precise parameters of where and how the PARS will be conducted is not yet settled. The Strategy, however, specifically calls for PARS to be conducted for the Southeastern United States and Cape Cod Bay.
  - The PARS process includes a Federal Register announcement of a PARS, the holding of public meetings to gather information, conducting the study, a Federal Register announcement of the results, and engaging in Federal rulemaking if warranted. Throughout the process, the U.S. Coast Guard will coordinate with Federal and state agencies, as well as consider the views of the maritime community, environmental groups, and other interested stakeholders.

Depending on a number of factors, a PARS analysis is expected to take 6 to 18 or more months.

- Other PARS recently or new designated routes (recommended routes) conducted or implemented by the U.S. Coast Guard independent of the ship strike reduction strategy in the Northeast include: approaches to Bar Harbor, ME, and within Buzzards Bay, Rhode Island and Block Island Sounds.
5. **Economic Impacts:** Concern was raised at most meetings that the preliminary economic assessment of direct costs on shipping, conducted by Dr. Hauke Kite-Powell, is based on outdated data, did not look at ferry services and is not based on NMFS current strategy. Kite-Powell is updating and revising this assessment. Additional, comprehensive economic analysis is being done as part of the environmental assessment and federal rulemaking process.
  6. **U.S. Naval Operations:** Industry raised concerns at several meetings about U.S. Naval operations, in particular in/out and off the approaches to Chesapeake Bay. At these meetings, industry noted that the operational measures would not apply to sovereign immune vessels. NOAA Fisheries advised that agencies with sovereign immune vessels would be requested to address their operations through their Endangered Species Act (ESA) Section 7 consultations with NOAA Fisheries. Therefore, sovereign immune vessels (e.g., Navy, Coast Guard, EPA, National Oceans Service, MSC and MARAD) will be addressed via a consultation process per the Endangered Species Act (via section 7 consultations).

## **Technological Solutions and Research**

### **7. *Isn't there a technological solution to this problem? Is funding devoted to finding a technological solution?***

NOAA Fisheries provided the following: Many industry representatives called for increased spending on finding technological solutions... "Technological solutions are the preferred solutions." Technological solutions are limited, though research continues. FY-2004 funding was about \$12M, and it is the agency's intention to continue and expand ongoing research, some of which is devoted to research and development on technologies. A "white" paper on technological solutions is posted on the NMFS' web sites. The paper summarizes studies on various technologies and the advantages and disadvantages of each.

### **8. *"Tell us where the whales are and we will avoid...why aren't all whales tagged?"***

Tagging work by Dr. Bruce Mate and others has provided some very good information on right whale movements (migration patterns and routes), speed and distance traveled, residency periods, and dive durations. Aircraft surveys are also used to locate whales and to quantify distribution. However, it is not feasible to maintain tags on all right whales, but merely a sample of the animals. As such, tagging is not a technological solution to reducing ship strikes. Even if tagging were to be partially successful, the mariner would still be asked to route around or slow down, which would introduce delays that are even more unpredictable than those currently proposed as part of the present ship strike reduction strategy. With regard to tagging, right whales tagged in the Bay of Fundy and offshore showed movement in and out of the Bay of Fundy, throughout the Gulf of Maine and Great South Channel and along the US East Coast. While implantable, satellite tags have become much more reliable since last applied to right whales; the tags have a short operational life of less than one year. Also, right whales apparently are quite capable of shedding the tags or rendering them non-functional. A tag on a female right whale, Piper, functioned approximately 5 months in 2000 and documented the whale traveling south along the East Coast, past most of the major east coast ports and through the Traffic Separation Lanes (TSS) off these ports. It stopped functioning about the time the whale reached the GA calving grounds and was sighted by aerial survey teams. Locations of tagged right whales have been included in Sighting Advisory System (SAS) alerts sent to mariners allowing mariners flexibility to route around or reduce speed when traveling in or near the reported locations. NMFS anticipates continued support of tagging studies.

### **9. *What about "acoustic of audible Alarms?"***

NOAA Fisheries staff reported that the use of alarm devices to warn small cetaceans and pinnipeds away from fishing and aquaculture operations has received mixed success thus far, and the issue of habituation is significant (i.e., animals becoming accustomed to the sound of a repeated alarm so that it is no longer effective as a deterrent). There is no evidence that large whales would respond to such a signal or that they would perceive a signal to be a threat; in fact, a recent study (Nowacek, et al, 2004), of 6 right whales, indicates that right whales responded to sound stimuli by positioning themselves in the water column that put them at greater risk to ship strike (at or near the water's surface). (In follow-on discussions, several industry representatives questioned the veracity and several technical aspects of these studies.) Further, exposure to alarms may induce stress in right whales; also, in response to alarm stimuli, right whales may abandon important feeding, mating, or calving areas which could have significant adverse

effects on the population. At present, this type of technology warrants further study, but does not represent a “solution” as a right whale ship strike mitigation measure.

### **Rationale and Justification for Operational Measures**

10. NOAA Fisheries staff emphasized that proposed speed restrictions are so as not to endanger the vessel and navigation safety.

11. ***"Why (what is the rationale/justification) does this rule apply to vessels 65' (20m) or greater?"***

NMFS examined known sizes of vessels, which resulted in right whale deaths to determine what vessel size classes should fall under regulatory requirements. The smallest identified ship that resulted in a death of a right whale was 82 feet in length; the right whale killed was a calf. Thus, this vessel size poses the risk of fatality to right whales, and was used as the upper limit for minimum vessel size to be included in the ship strike strategy. The closest established regulatory requirement that captures this size class of vessel is 65 feet (20 meters). This length is a commonly used distinction between a motorboat and a larger vessel (e.g., International Navigational Rules Act, Rules of the Road sections; and Automated Identification System).

12. ***"What are the bases (what is the rationale/justification) for the speed restrictions?"***

- **The ideal means to minimize right whale / ship interactions are to route ships away from known right whale locations. But this is not always possible.** First, most often we only know that right whales are in a general area based on our understanding of their habitats and movement patterns. And second, it is not always possible to route ships away from or around right whale habitats, for example in port approaches intersecting the right whales' migratory corridor between their northern feeding and breeding grounds and their calving grounds in the Southeast. Unfortunately there are no other measures currently available to minimize ship strikes. (Though at one meeting, an industry representative did ask that NMFS consider routing options in the mid Atlantic. At the same meeting other industry representatives argued against this.)
- **Some in the conservation community have argued that slower speeds will give right whales the opportunity to get out of the way.** While this may be true, it does not account for right whales indifference when logging (sleeping), feeding or in large courtship groups. Unfortunately, it is difficult to conduct an experiment without jeopardizing the whale!
- **The industry has argued that there is little or no direct evidence that slower speeds will save right whales.** There are three hydrodynamics modeling studies that looked at speed as a causal factor in ship strikes (Clyne, 1999; "The MIT Hydrodynamic Study," Knowlton et al, 1995 & 1998). The conclusions of the authors are that at slower speeds (11-12 knots) a whale, within close enough proximity of a ship to experience it's hydrodynamic affects, will be pushed out of the way of a vessel, where as at higher speed many whales will be drawn in. However, the goal is for ships to avoid right whales in such a way that the hydrodynamic forces of a ship never affect the animals. Two papers on whale mortalities and ship strikes, written by Laist et al, 2001 and Jensen and Silber 2003, suggest that speeds below 13 knots may reduce ship strikes. "Generally, there is a direct relationship between the occurrence of a whale strike and the speed of the vessel involved in the collision. Most mortalities that have been documented occur when a vessel is traveling in excess of 13 knots (Laist et al. 2001).

- **The industry has argued that slower speeds will increase time through an area (exposure) and thus increase the probability of a whale ship interaction.** This concern is under study and will be modeled as part of an ongoing risk assessment.
- **One of the arguments is that slower speeds will give the whales a chance to swim away. The industry has argued that slower speeds make it difficult to maneuver around a whale.** It will be a rare circumstance that a mariner will actually see a whale. At night, in reduced visibility, wind conditions creating a sea state with over 2-3 foot seas make spotting a whale near impossible. Unfortunately these are pre-dominant conditions in coastal and offshore waters.
- **There are several precedents for speed restrictions.** In California (the ports of LA/LB), vessels have been asked to voluntarily slow their speeds to reduce air emissions. The Fish and Wildlife Service imposes speed restrictions on vessels in certain areas to protect manatees. Coast Guard assists with enforcement of speed zones under a Memorandum of Agreement (MOU). Glacier Bay National Park has set a 13-knot speed limit for vessels greater than or equal to 262-ft (80 m), to be in effect as needed in Glacier Bay on a year-round basis. “The Superintendent may impose a 13-knot speed limit, as necessary, for motor vessels greater than or equal to 262 feet (80 meters) in length throughout Glacier Bay due to the presence of humpback whales. Park Service staff will monitor whale abundance, movements, and distribution, and provide this information to the park superintendent, who will then determine whether to set a 13-knot speed limit for vessels of this length or greater.” (Glacier Bay Vessel Quotas and Operating Requirements EIS 2004).

### **Enforcement and Performance Measures**

13. **"How will the regulations be enforced?"** N OAA Fisheries staff advised that they recognize that the enforcement of measures is a very important issue. They underscored that NMFS intends that the measures will be fully enforced in order to achieve the objectives of the Strategy and avoid the possibility of giving non-compliant ships a competitive advantage over those that comply. As NMFS goes forward with the process of developing and implementing the operational measures, NMFS welcomes the opportunity to work with the U.S. Coast Guard and other experts to develop an enforcement plan for the various measures. NMFS has generally considered the possibility of using such tools as vessel monitoring system technology, automated identification systems, long-range tracking of ships using the Global Maritime Distress and Safety System, passive acoustic tracking, shore-based radar technologies, and the use of intermittent monitoring by the Early Warning System and other NMFS aircraft surveys.
14. ***"How will we know that these measures are actually doing any good?"*** In response to a range of questions and several meetings related to NMFS' estimates of the strategy' risk reduction related to for example speed and distance / area and duration, NOAA Fisheries advised that the agency's goal is to eliminate 1 or 2 losses per year, in particular females. Ideally, performance measures will be developed. It is difficult to do this with the relatively large number of ship transits vs. the relatively low number of right whales and the relatively rare number of fatal ship strikes.

**15. In the Southeast U.S., the Early Warning Systems and Mandatory Ship Reporting Systems have been successful. Why not expand these in lieu of new regulations?**

- The SEUS is too important to exclude from the ship strike reduction strategy since the most important segment of the right whale population, reproducing females, use the area. Population models suggest that we can reverse a projected population decline if we can prevent two adult female mortalities per year. See also answer to population question below.
- Aerial surveys do not operate at night, low visibility and high winds. Sight-ability of right whales is 30-40% at best.
- We do not know that right whales have not been struck and killed by ships traversing SE waters. There have been calf mortalities, but carcasses were too decomposed, or not recovered to determine cause of death.
- We know ship strikes kill whales.
- We know aerial survey teams witness incidents when ships pass uncomfortably close to right whales, including mother/calf pairs. Ships are radioed directly from planes during these incidents and “close calls” of this nature, undoubtedly occur without the presence of aircraft overhead or in poor weather conditions. In fact, one aerial survey team documented a ship passing over a mother/calf (m/c) on January 7, 2001 and briefly saw the m/c pair re-surface prior to having to depart the area to refuel. The mother (#1151) was observed again on January 21; however, without her calf. On January 27 a dead, decomposing calf was found floating and was probably the same as the rotting calf carcass that washed ashore on Flagler Beach on February 13. Genetics testing of a skin sample taken from the carcass in combination with sighting data of #1151 strongly suggest this dead calf was the offspring of #1151.
- We also have photographic evidence of right whales that were struck, but not killed, in the SEUS by vessels that would most likely fall under the purview of our proposed ship strike strategy.

**16. Education and outreach:** The following avenues are currently being used to distribute information on right whales and sightings:

- NAVTEX
- NOAA weather radio
- Coast Guard Notice to Mariners and Safety Voice Broadcasts
- Local Notice to Mariners written notices
- The US Army Corps of Engineers (Cape Cod Canal Traffic Control)
- E-mails and Faxes
- The Early Warning System (EWS) in the Southeast US
- Recreational vessels brochures and placards
- The Sighting Advisory System (SAS) in the Northeast
- MSR return messages
- US Coast Pilots
- Merchant Mariner education for mariner licensing and training
- NOAA Fisheries Service shipping industry liaisons direct work with industry

Additional education and outreach materials are currently being developed.

## APPENDIX B: References

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## APPENDIX C: Acronyms Used

<b>AIS</b>	Automated Identification System)
<b>AAPA</b>	American Association of Port Authorities
<b>ANPR</b>	Advanced Notice of Proposed Rulemaking
<b>ATBA</b>	Area to be Avoided
<b>DAM</b>	Dynamic Area Management (fisheries)
<b>DMA</b>	Dynamic Management Area
<b>EEZ</b>	Exclusive Economic Zone
<b>ESA</b>	Endangered Species Act
<b>GSC</b>	Great South Channel
<b>IMO</b>	International Maritime Organization
<b>LNG</b>	Liquefied Natural Gas (ship)
<b>MARAD</b>	U.S. Maritime Administration
<b>MMPA</b>	Marine Mammal Protection Act
<b>MOU</b>	Memoranda of Understanding
<b>MSC</b>	U.S. Military Sealift Command
<b>NARW</b>	North Atlantic Right Whales
<b>NEPA</b>	National Environmental Policy Act
<b>NEIT</b>	Northeast Implementation Teams
<b>NMFS</b>	National Marine Fisheries Service, NOAA Fisheries
<b>NOAA</b>	National Oceanic and Atmospheric Administration
<b>PARS</b>	Port Access Route Study
<b>RFA</b>	Regulatory Flexibility Act
<b>SEIT</b>	Southeast Implementation Team
<b>SEUS</b>	Southeast U.S. critical habitat
<b>SMA</b>	Seasonal Management Area
<b>TSS</b>	Traffic Separation Scheme
<b>VTS</b>	Vessel Traffic Services
<b>WSC</b>	World Shipping Council

## **APPENDIX D: Meeting Attendees**

Boston Meeting

Name	Affiliation
William R. McNamara	International Longshoremens Union
Bernard O'Donnell	International Longshoremens Union
Michael Payne	NMFS
David Gouveia	NMFS
Joe Pelczarski	MASS CZM/EOEA
Brad Wellock	MASSPORT
Marty McCabe	Boston Pilots
Bob Schrader	Scotia Prince Cruises
Jeff Stieb	MASSPORT
Claudia Gelzer	US Coast Guard
Andrew Beaver	NOAA/NOS/CS
Bill Eldridge	MSC
Deb Hadden	MASSPORT
Richard Meyer	Boston Shipping Association
Walter Egee	P&O Ports
Ross Pope	Moran Shipping
John Mauro	USCG D1
Brian Jeffery	USCG D1
Marc Silver	Tractebel LNG NA LLC
Holly Fergusson	Tractebel LNG NA LLC
Gwen Pratt	Tractebel LNG NA LLC
Bob Gottsche	Mirant Canal LLC
Peter J. Closson	Esco Terminals, Co, Inc
	V.P. Propeller Club
Rick Nolan	Boston Harbor Cruise

Portland Meeting

Name	Affiliation
John Mauro	USCG D1
Donald Cormier	Bay Ferries LTD
Judith Harris	City of Portland DoT
John R. Bass	Portland Propeller Club
Capt Jeff Monroe	City of Portland DoT

Norfolk Meeting

Name	Affiliation
David White	Hampton Roads Maritime Association
Gadi Shvarzhan	ZIN
Ted Brown	CFFC US Navy
Aileen Smith	CFFC, US Navy
Melveyn Fernandes	ICL
Capt. Bill Cofer	VA Pilots
Heather Wood	VA Port Authority
Capt. Marty Moynihan	Port of Richmond
Willie Barnes	MARAD S Atlantic Region
Nuns Jain	MARAD S Atlantic Region
Katie Moore	US Coast Guard
Amy Lutz-Sexton	US Coast Guard
Scott Schubert	Anders Williams-Inchcape

Morehead City Meeting

Name	Affiliation
Mike Marshall	NC Marine Fisheries
Tom Flynn	USCG d5
Susan Markham	NC Ports
Layton Bedsole	NC Ports
Patricia Smith	Jacksonville Daily News
Barbie Byrd	NMFS
Patrick Kaunan	Continental Shelf
Jimmy Harper	Carolina Princess
Capt. Andrew Midgett, Jr.	Morehead Pilots Association
Joseph Esposito	self
Millie Lilley	Rep Walter B. Jones
Mary Ellen Stens	Rep. Mike McIntyre
Stephen Draughton	Bill Collectors
Sonny Davis	Capt. Stacy, Inc.
Ron Owens	USCG Group Fort Macon

### Jacksonville Meeting

Name	Affiliation
Larry Krepp	NOAA/OCS
Domenico Tringale	Carnival Cruise Lines
Harry Moran	CP Ships (Tampa)
Barbara Howe	U.S. Navy Region Southeast
Mike Getchell	Crowley Liner Services
Mike Vona	Hual North America
Steve Nichols	City of Jacksonville
Jeannie Adame	Canaveral Port Authority
Barrie R.Snider	St Johns Bar Pilots
Jamison Smith	FI FWCC
William Taft	ATG Mayport / NAVY
Bill Weisenborn	Sea Star line
Rich McDaniel	COMCARSTRK GRU 14, US Navy
LouRae Langevin	COMCARSTRK GRU 14, US Navy
Mark Farthing	ATG Mayport / NAVY
Chris Cavanaugh	ATG Mayport / NAVY
Jeff Price	JAXPORT
Ron Eickhoff	COMNAVREG SE, US Navy
Carl Swinson	US Coast Guard
Joseph Cocking	US Coast Guard
Tom Craighead	Moran
Steve Tornello	Sea Star Line

### Savannah Meeting

Name	Affiliation
Capt S. Lakshman	Colonial Marine
Steve Calver	Savannah District US Army COE
Tom Wright	WSPM
Charles Pidgeo	NYK Lines
Charles Rice	GA Ports Authority
Richard Mock	WWL
Mary Tritch	WWL
Marvin Pontiff	Mediterranean Shipping
Jamison Smith	FI FWCC
Clay George	GA DNR
Don Lewis	NOAA Fisheries Industry lision
Capt. Tommy Browne	Savannah Pilots
Charles Sutlive	Savannah Martime Association
Hope Moorer	GA Ports Authority

New London Meeting

Name	Affiliation
Kent Pope	Military Sealift Command
Dr. John Austen	Military Sealift Command
Rick Comeau	Fox Navigation
Eric Smith	CT DEP
Dick Conant	US Navy Region NE
Alan.T.Stevens	CT DOT
Rudy D'Ambrosio	Logistec ( <i>New Haven</i> )
Jeff Ryalls	Logistec ( <i>New Haven</i> )
Jim Avery	Thames Yacht Club
Chip Briscoe	Cross Island Ferry
Dennis Pyskaty	Pfizer, New London
Judy Benson	The New London Day
Lt. Andrea Logman	USCG Gru/MSO Long Island Sound
Tom Fetherston	US Navy / NEIT
Pat Glynn	SECTER
Deborah Donovan	SECTER
John Gambe	CT DEP
Andrew Beaver	NOAA / Coast Survey
Brian Jeffrey	US Coast Guard D1

Newark Meeting

Name	Affiliation
Al Gephardt	P&O Nedlloyd
Ed Welch	Passenger Vessel Association
Shawn Ewen	OOCL
Kevin Mullin	Statoil Natural Gas
Hanson Lee	Port Authority of NY/NJ
Joe Monaco	Port Authority of NY/NJ
Richard Heym	K-Sea Transportation
Beverly Fedorko	Ny Shipping Association
Capt Wolfram Guntermann	Hapag-Lloyd
James McNamara	Atlantic Container Line
C.L. Chen	Evergreen America Corp.
Brian Houst	Hual North America
Scott White	US Coast Guard
Capt Andrew McGovern	Harbor Operations Committee

Baltimore / Washington DC  
Meeting

Name	Affiliation
Eric Friend	MITAGS
Ted Thompson	ICCL
Kathy Metcalf	Chamber of Shipping
Crystal Darcy	Port of Baltimore
David Giles	Thorny Croft Giles & Associates
Brian Weitz	Senate Commerce Committee
Meridith Martino	AAPA
Don O'Hare	World Shipping Council
Doug Schneider	World Shipping Council
Eric Neilsen	Maryland Pilots
Walter Egee	P&O Ports / Boston Shipping Ass.
Richard Corley	MARAD