

**Key Outcomes Memorandum**  
**Harbor Porpoise Take Reduction Team**  
**December 17-19, 2007, Philadelphia, Pennsylvania**  
*(For distribution to Harbor Porpoise Take Reduction Team members.)*

**I. OVERVIEW**

In response to an increase in harbor porpoise bycatch in commercial gillnet fisheries, NOAA's National Marine Fisheries Service (NMFS) convened the Harbor Porpoise Take Reduction Team (Team) December 17-19 in Philadelphia to consider revisions and updates to the current Take Reduction Plan (Plan). This summary report, prepared by CONCUR Inc., provides an overview of the meeting's key outcomes. It is presented in five main sections: Overview, Participants, Meeting Materials, Key Outcomes (including both options considered and consensus recommendations) and Next Steps.

**II. PARTICIPANTS**

The meeting was attended by 28 of the 39 Team members. Team members in attendance were: William McCann, Steve Welch, Bill Van Druten, Earl (Sonny) Gwin, Kevin Wark (for Rick Marks), Leonard Voss, Greg DiDomenico, Ernie Bowden, David Laist, Melissa Andersen, David Gouveia, Nicole Mihnovets, Erin Burke, Terry Stockwell, Hugh Carberry, Michael Greco, Fentress (Red) Munden, Robert (Steve) Early, Alicia Middleton, Sharon Young, Vicki Cornish, Regina Asmutis-Silvia, Rich Seagraves, Andy Read, Sue Barco, Bill McLellan, Ron Smolowitz and Scott Kraus.

Additionally, the meeting was attended by staffers from NMFS and the US Coast Guard to support the deliberations. David Gouveia and Amanda Johnson with NMFS Northeast Region (Protected Resources Division) convened the meeting. Scott McCreary and Bennett Brooks from CONCUR, an environmental dispute resolution firm specializing in marine resource and water issues, served as the neutral facilitators.

**III. MEETING MATERIALS**

Numerous meeting materials were provided to support the group's deliberations. Much of the material was provided prior to the meeting, but some documents and much of the presentation material was distributed as handouts. A listing of materials distributed in support of the meeting can be found on the project web page ([http://www.nero.noaa.gov/prot\\_res/porptrp/](http://www.nero.noaa.gov/prot_res/porptrp/)) or by contacting Amanda Johnson to request a hard copy (978-281-9300; ext. 6513). Additionally, some new materials were developed during the meeting. These items are referenced in the summary below and are attached to this memorandum.

**IV. KEY OUTCOMES**

Below is a brief summary of the main topics and issues discussed during the three-day meeting. This summary is not intended to be a meeting transcript. Rather, it provides an overview of the

main topics covered, the primary points and options raised in the discussion and areas of full or emerging consensus. Where consensus was not reached, the summary presents the specific options generated.

### **A. *Welcome and Introduction***

The meeting kicked off with a brief review of the meeting purpose and self-introductions. These brief presentations were followed by a review of the agenda and the recommended ground rules. Team members confirmed the proposed approach. The group also confirmed the adequacy of the current Team membership.

### **B. *Background Briefings***

Day One focused on a suite of background presentations intended to brief Team members on both the harbor porpoise Team history and current population and take trends, as well as updates on enforcement, the observer program and other related initiatives.

The initial briefing focused on a review of events since the last HP Team meeting, including why the Team was reconvened. Most importantly, NMFS staff noted that harbor porpoise takes are above PBR (potential biological removal) and, based on data gathered to-date, the problem appears due (1) to non-compliance with the current requirements, and (2) takes occurring outside the current HP Plan management areas.

Following the initial presentation, the remaining briefings covered the following topics:

- Key themes from CONCUR's pre-meeting stakeholder interviews
- HP Plan updates from previous meetings and recent activities
- Review of relevant fishery management plans
- Enforcement update and activities
- Observer Program overview
- Bycatch review and estimates information
- Summary of bycatch patterns
- Abundance and population information

Each presentation was followed by a brief discussion, with most comments centering on clarifying questions. Additionally, the discussion highlighted Team members' interest in better understanding several areas. Among the most important and/or frequently cited topics included the following:

- The potential for enforcement arms of the NMFS and the Coast Guard to effectively police current and potential management actions.
- The impact of targeted closures on fishing effort (and associated take) in adjacent waters.
- The extent to which a shift to large pinger-only areas – rather than closures – would impact bycatch. (Preliminary data developed to answer this question is included as **Attachment 1.**)

- The extent to which partial pinger usage (net strings containing fewer than the required number of working pingers) may increase harbor porpoise takes. Also interest in better understanding pinger failure rate.
- The impact of successful outreach and education efforts on reduced harbor porpoise takes.
- The drivers behind inter-seasonal variability of harbor porpoise takes.
- Percentage of total trips represented by those with observers, as well as the extent to which new vessels were used to host observers each year. (Data developed to answer this question is included as **Attachment 2**.)
- Correlation between soak time and takes.

### ***C. Meeting Approach***

At the start of the second day, a number of Team members asked that the convenors divert from the approach contemplated in the draft agenda – consideration of the issues and possible actions framed in the NMFS-generated discussion paper. Instead, Team members requested that the Team have a foundational discussion focused on building agreement around a unified problem statement and developing a shared understanding of the effectiveness of different take-reducing strategies. This, several speakers said, would provide a solid base for a subsequent discussion on options and ensure that Team members actively co-invented options grounded in actions widely perceived as being as effective as possible.

Based on this feedback, the morning of the second day was revised to focus on two topics: a unified problem statement and a period dedicated to active brainstorming of potential take-reduction strategies. (Additionally, the convenors agreed to seek suggestions at a later time regarding ways to strengthen the population estimates.) Below is a quick synopsis of the morning conversation.

- ***Problem Statement.*** Team members broadly agreed that the increase in harbor porpoise takes appears to be grounded in two particular issues: (1) non-compliance with existing regulations; and (2) redistribution of harbor porpoise takes beyond current management areas. Moreover, participants agreed that the increase in takes was serious enough to warrant changes in the current Take Reduction Plan.
- ***Potential Strategies.*** Team members developed a list of potential strategies to reduce take in New England and Mid-Atlantic waters, respectively. Below is a brief synopsis of the ideas floated and questions raised during the discussion.
  - ***For Mid-Atlantic.*** Team members recommended several possible strategies for reducing harbor porpoise take in the mid-Atlantic. Among the primary suggestions raised included the following: (1) consider the potential for the current Plan – coupled with enhanced compliance/outreach efforts – to effectively reduce take; (2) expand the season and size of the Mudhole closure; (3) incorporate the use of pingers in this region both spatially and temporally; (4) consider whether waters off northern New Jersey have more in common with New England and should be considered part of that regulatory regime; (5) better understand the potential for twine/net

- requirements to be effective in mid-Atlantic waters; and 6) more fully integrate/coordinate Fishery Management Plans with the Take Reduction Plan.
- ***For New England.*** Team members suggested a number of possible strategies for addressing increased take in New England waters. Two suggestions – expand existing closure time and locations, and/or broaden pinger usage – centered on management techniques now widely used. A third approach – requiring seasonally-mandated pinger usage in much larger geographic areas rather than deploying closures in smaller zones as a strategy to prevent fishing effort from shifting to nearby non-managed areas – put forward a largely untested approach. In doing so, Team members said, fisheries managers must be mindful of the potential impact on: (1) other management plans; (2) industry costs/implementation constraints; (3) need for full compliance; (4) “clean/no take” fisheries in such areas and consider limited exemptions; and (5) other marine fisheries.

More broadly, discussions for both areas emphasized the importance of (1) effective and consistent enforcement; (2) paying close attention to the potential enforceability of any proposed management actions; (3) maintaining frequent and consistent outreach with industry regarding regulatory requirements, recommended fishing practices and current take trends; and (4) the need for research into new and more effective take-reducing technologies and approaches.

Additionally, the discussions highlighted several areas requiring additional information. In the mid-Atlantic, information needs focused on better understanding: (1) the relationship between compliance and takes; (2) what factor(s) account for the inter-annual variability in takes; and (3) take data associated with the shoulder seasons around the Mudhole closure area. In New England, Team members recommended NMFS look at existing data to: (1) assess the potential for twine design/structure and other gear modifications (thickness, stiffness and reflexivity) to reduce take; and (2) better understand pinger reliability over time (effectiveness, impact if partially operative, safety at-sea, tech needs/improvements (reliability, battery life, size).

#### **D. Recommendations**

The bulk of the Team discussion focused on considering recommended approaches for commercial gillnet fisheries within the New England and Mid-Atlantic waters. The mechanism of the Team affords members the opportunity to design regulatory strategies, and thus all members have an incentive to be specific about proposed options and work hard to converge around broadly supported measures.

Below is a synopsis of the discussion, highlighting – for each area – the options considered, the recommendations developed and the extent of consensus reached. In all of the discussions, Team members looked carefully at the available data to assess trends and identify those times and areas with the greatest takes and/or bycatch rates.

One important note: Options were first brainstormed by the full group. As the Team began to focus in on one or two approaches, more effort was made by both the convenors and the group to

flesh out various implementation details. Accordingly, the different strategies were developed to varying levels of detail. This variance is reflected in the summaries below.

#### **DISCUSSION: WATERS OFF NEW JERSEY/MUDHOLE CLOSURE AREA**

***Options Considered.*** Team members considered a range of options to address the recent increase in harbor porpoise takes in areas near the currently regulated Mudhole. Much of the discussion centered on various strategies to address the increased takes south and east of the current Mudhole, from expanding the existing Mudhole area, to creating new areas, to continuing (with only minor revisions and expanded outreach efforts) the current plan. As well, the group considered the tradeoffs inherent in closures versus creating pinger areas in this region. Primary approaches suggested by Team members centered on the following actions:

- ***Expand existing closure.*** In this option, the southern boundary of the Mudhole would be extended south to the 40° 00'N latitude. Additionally, small and large mesh gillnet fishing would be prohibited from February 1 through March 15 – an increase of two weeks from the current February 15 to March 15 closure. Finally, this effort would be coupled with extensive outreach to fishermen regarding fisheries management regulations and take-reducing fishing practices. This approach, proponents said, would prevent takes in the areas and timeframes of greatest concern while not unduly constraining fishing effort.
- ***Redistribute the closure south and east of the current Mudhole Closure Area to encompass areas of recent take.*** This option calls for setting a closure area intended to encompass the greatest number of takes. In this case, the current northern boundary of the Mudhole would be lowered to eliminate the northern most waters without takes and, in exchange, the southern boundary would be dropped sufficiently below latitude 40° north to encompass those waters with more recent takes. (No specific coordinates were discussed, though the intent was to target the closure at the locations with the greatest number of takes.)
- ***Focus on pingers, not closure.*** This proposal changes the management strategy from closures to a pinger-only zone. In this option, the area in the Waters Off New Jersey north of latitude 39° 40'N and east to the EEZ would be open for commercial gillnet fishing to only those vessels using pingers. The intent would be to allow ongoing fishing, while creating a large enough pinger-only zone to prevent fishing effort (and any associated takes) from shifting elsewhere within the Waters Off New Jersey. No specific timeframes were noted.
- ***Shift existing closure zone east.*** This proposal calls for taking the existing Mudhole closure and shifting a similarly sized box to the east to encompass a greater number of the recent takes. Again, the intent was to redraw the closure area around waters with the greatest number of takes. No specific coordinates or timeframes were noted.
- ***Create a second separate closure area within the Waters Off New Jersey.*** This proposal focuses on creating a second, separate closure area: the original Mudhole Closure Area

would remain in place and a second closure area would be created to capture the recent takes in the areas to the south and east of the current Mudhole Closure Area. No specific coordinates were discussed, but the intent was to draw the second box in a way that encompasses the most recent takes. (Debi Palka was able to draw a box for this new area using Arc GIS.)

More broadly, participants agreed that closure areas, in general, should: (1) seek to minimize the overall area (to the extent practicable), focusing on high risk areas where increased fishing effort overlaps with high abundance areas for harbor porpoise, both spatially and temporally; and; (2) avoid anything other than 90° angles in boxes, as that makes both compliance and enforcement more straight forward.

**Team Recommendations.** Based on the discussion, the Team reached full consensus (with one abstention) on the following option:

- Establish a new closure area distinct from the existing Mudhole area by drawing a box (exact coordinates to be drawn based on the graphic presented by Debi Palka) that encompasses the recent takes to the south and the east within the Waters Off New Jersey. The closure – a complete gear-out-of-the-water closure for commercial gillnet fisheries – would be from February 1 to March 15.
- In addition to the temporal and area specifics of the closure, the Team agreed to several other elements: (1) increase the current tie-down spacing requirements from no more than 15 feet to no more than 24 feet; (2) expand outreach efforts to fishermen to ensure they are aware of current regulations and preferred fishing practices (shorter soak times, etc.); and (3) improve enforcement efforts within the closure areas to enhance compliance. Finally, to the extent that it's relevant, NMFS was asked to explore the impact on takes of vessels using four anchors versus two to identify any potential correlations that would be beneficial to management.

## **DISCUSSION: WATERS SOUTH OF CAPE COD**

**Options Considered.** The Team began discussions on the Waters South of Cape Cod by first brainstorming a list of possible options. Participants considered a range of possible strategies – from expanding zones and creating new areas, to relying on pingers versus closures. The discussion also included extensive consideration of strategies to prevent fishing effort (and associated takes) from shifting to areas beyond existing management zones. Below is a summary of the options discussed.

- ***Expand the geographic extent of the current measures.*** This proposal calls for expanding the current measures (Cape Cod South Closure Area) south to 40° 00'N latitude and east (map associated with Discussion Paper Item #2) to encompass those areas with recent takes. This larger area would be completely closed to commercial gillnet operations in March and be a pinger-only zone from December to May.

- ***Create new area south of current zone.*** In this proposal, the Plan would add a new closure area south of the current closure/pinger area (again, see the map associated with Discussion Paper Item #2). This zone would be completely closed to commercial gillnet operations in March and be a pinger-only zone from February to April.
- ***Expand pinger usage rather than closures.*** In this proposal, the Plan would rely on greatly expanded pinger zones – coupled with enhanced outreach and enforcement – rather than closures. This approach would aim to prevent fishing effort and the associated takes from shifting elsewhere within the waters south of Cape Cod (as appears to be the case with bounded closure areas) while avoiding the more economically restrictive closures.
- ***Create new southern box.*** This proposal calls for the Plan to incorporate a new managed area south of the current Cape Cod South Closure Area, but targets the new closure at the months of February and April – the two months with the most significant bycatch. No specific coordinates were discussed, but the intent was to target the bycatch more precisely by encompassing the area of recent takes in Figure 3 of the Discussion Paper. (Note: A separate proposal focused on closing this new area for just the month of April.)
- ***Adopt two-step processes, with the second step contingent on specific findings.*** In these competing proposals, the Plan would call for one of two two-step processes. In one case, the Plan would call for closures first, followed by a regulatory-stipulated shift to pingers if industry was hitting previously agreed upon compliance and bycatch rates. An alternative approach – pitched as more of an incentive to fishermen – would start with requirements to use pingers, track compliance and effectiveness, and then shift to a predetermined fallback plan (closures in either broad or more targeted areas) if agreed-upon targets are not hit.

Additionally, the discussion encompassed other ideas and general non-consensus recommendations, including: (1) providing funding to fishermen to help defray the cost of pingers; (2) aiming for 100% compliance (or close) if any new effort is to be keyed to industry compliance with current regulations; (3) improve research efforts to raise confidence in the efficacy of pinger-only management areas; (4) change regulations to allow for the timely testing of higher-frequency and emerging-technology pingers; (5) improve dockside enforcement of pinger usage (i.e., available, functioning); and, (6) explore potential to annually certify fishermen to improve compliance.

**Team Recommendations.** Based on the discussion, the group reached full consensus on the following option:

- Create a large pinger-only zone in an area within the waters south of Cape Cod bordered approximately to the north by 41° 30'N latitude, to the south by 40° 00'N latitude, to the east by 69° 30'W longitude, and to the west by 72° 30'W longitude. The exact coordinates are to be put forward in a consolidated proposal to be developed following the meeting by NMFS. Within this zone, pingers would be required for commercial gillnet fisheries from December through May with no gillnet prohibitions. The current

Cape Cod South Closure Area would be absorbed within this area. Target rates for compliance with the pinger requirements would be set at 90%. A target bycatch rate would be set at .03.

- If take rates are at .03 or below, the pinger-only requirement would be continued. If the take rate is greater than .03, a full closure would go into effect from February through April for the two specific areas with the highest take as shown in Figure 3 of the Discussion Paper and presented by D. Palka during the Team meeting. (NMFS is to develop specific coordinates for consideration within the NMFS consolidated proposal.)
- The closure consequence – to be stipulated within the new Plan – would be immediate and would not require any new rule-making. If warranted, a closure would go into effect three years from initial implementation of the larger pinger-only zone. No formal consequence is triggered by failure to hit compliance rates, though it would be expected to result in expanded education, outreach and enforcement efforts.
- In addition to these requirements, the recommended approach encompassed several other elements: (1) undertake an annual review to assess ongoing effectiveness; (2) conduct annual workshops with fishermen to disseminate recent compliance and take data and provide education on effective gear and fishing practices; (3) enter into cooperative agreements with the relevant states to annually certify fishermen to improve pinger-related compliance; and (4) facilitate more timely testing of emerging pinger technologies and designs within the Waters South of Cape Cod.

## **DISCUSSION: GULF OF MAINE**

***Options Considered.*** As with the other geographic areas, discussions among the Team members focused initially on listing possible regulatory changes to the Plan for the Gulf of Maine. Much of the discussion centered on whether pingers or closures were the most appropriate method given the recent increase in takes. Additionally, participants spent significant time discussing the sequencing of the different strategies; specifically, whether the Plan should look first to closures or pingers for areas with increased takes. Below is a listing of the main options considered.

- ***Create new area to address increased takes.*** One option focused on establishing a new closure/pinger-only area in the hashed area (see Figure 2 in the Discussion Paper) between the Massachusetts Bay Closure Area and the Western Gulf of Main Closure Area. In this approach, the new area (referred to in discussion as the “X” box) would be closed to all gillnet commercial fishing in February and would be a pinger-only area from December through January and March. The intent would be to address recent takes in an area not now covered by the Plan.
- ***Pinger versus closures versus outreach for Mid-Coast Closure Area.*** The Team spent significant time considering the strategies for the Mid-Coast Closure, an area with increased takes. One proposal calls for a full closure in October with pinger-only fishing in the other 11 months. Under this approach, if takes decline below a .041 bycatch rate within a set period of time, the October closure would shift to a pingers-only requirement.

If, however, the takes were over a .041 bycatch rate, the October closure would be expanded to encompass November; pinger use would continue to be required in the other months. (Proponents of this approach felt closures were warranted given their perception of (1) the extent of bycatch, and (2) area fishermen's longstanding awareness of the problem.) An alternative approach centered first on aggressive state efforts to foster and certify fishermen pinger usage as a way to lower bycatch. If such an approach proved unsuccessful, only then would it be appropriate to consider closures. Such a carrot-and-stick approach, proponents said, would provide an effective incentive to fishermen eager to avoid closures and make them willing partners in the effort to reduce bycatch. It would also, they said, provide an opportunity for fishermen not now aware of the issue to improve pinger usage before facing the severity of closures.

- ***Exempt "trip" fishermen in Offshore Closure Area.*** One Team member recommended that the Offshore Closure Area be exempted for "trip" gillnet fishermen, who tend their nets on a daily basis and whose fishing methods do not contribute to harbor porpoise takes.
- ***Expand Massachusetts Bay Closure Area.*** This approach would focus on expanding the existing Massachusetts Bay Closure Area to encompass the increased harbor porpoise takes to the east. The current rules for the Massachusetts Bay Closure Area would exist for the new, expanded area.
- ***Target closures in new managed area.*** In this option, the Plan would call for more targeted closures in the "X" box during specific months when takes are most pronounced. No specific dates were discussed.
- ***Consider package approach combining several elements.*** Given the issues to be addressed in the Gulf of Maine area, this approach focuses on a package approach: (1) permitting pinger-only fishing in the "X" box from December through February and (2) closing the Mid-Coast Closure Area in October and November – months of significant takes.

**Team Recommendations.** Based on the discussion, the group agreed to a consensus approach on some but not all actions. Below is a summary of the group's conclusions.

- ***Consensus actions.*** The group reached full consensus on the following actions to reduce takes in the Gulf of Maine:
  - For the "X" box: February gillnet closure coupled with pinger-only area for December and January
  - For Massachusetts Bay Closure Area: Expand pinger-only timeframe to include November
  - For the east side of Cape Cod: Expand the northern boundary of the south of Cape Cod approach agreed to above – large pinger zone followed by targeted closures if allowable bycatch rates exceeded

- For Western Gulf of Maine: Codify the Western Gulf of Maine year-round closure (under the groundfish FMP) in Harbor Porpoise Plan regulations
  - For Offshore Area Closure Area: Eliminate the Offshore Closure Area, excluding Cashe's Ledge
  - Expand efforts by the states and others to foster and certify fishermen pinger usage as a way to lower bycatch.
- ***Areas requiring further discussion.*** The group was unable to reach consensus regarding the Mid-Coast Closure Area. After much discussion, the group's discussion centered on the two distinct approaches discussed above: (1) limited closures now, with the promise of more or fewer closures dependent on future bycatch rates; or (2) aggressive outreach to fishermen to improve pinger usage, with a reliance on closures only if and when outreach proves ineffective.

#### **DISCUSSION: SOUTHERN MID-ATLANTIC WATERS**

Several Team members voiced concern regarding the socioeconomic impacts of the February 15 to March 15 closure for large-mesh gear in the Southern Mid-Atlantic Waters. Specifically, Team members representing that area requested that an exemption be granted to striped bass fishermen. David Gouveia agreed to talk separately with industry representatives from that region to better understand the issue and craft a recommended approach for consideration by the full Team as part of the NMFS consolidated proposal.

#### **DISCUSSION: OTHER TOPICS**

In addition to the geographically focused discussions, the Team briefly considered several other topics. Due to time constraints at the Team meeting, there was only limited discussion on each of these topics. Accordingly, NMFS is to develop proposed approaches for consideration by the Team during a follow-on discussion of the NMFS consolidated proposal. Below is a brief synopsis of each discussion area.

- ***Scientific Research.*** Though not considered in a focused way during the meeting, the Team's discussions highlighted on any number of occasions the need for a more prioritized and streamlined approach to research. In particular, the Team discussed in broad terms the imperative to amend current regulations to allow for timely experimental testing and/or fisheries to reduce bycatch of harbor porpoises. Additionally, the Team considered several priority research areas. Pinger effectiveness was most frequently mentioned; net reflectivity was also cited. Given the preliminary nature of the conversation, NMFS is to develop a proposal for the group's follow-on consideration.
- ***Technical amendments.*** NMFS put forward a handful of "minor" technical amendments intended to clean up small errors that were present when the Plan rules were promulgated. The Team asked that these proposed changes be updated in light of the group's recommended changes and then brought back to the Team for its follow-on consideration.

## V. NEXT STEPS

Based on the discussion, the Team agreed to the following three next steps:

- CONCUR is to prepare a written meeting summary. The summary will be structured as a Key Outcomes Memorandum, highlighting key discussion points, options considered by the group, areas of consensus, and areas of divergence. (It will not be a transcript.) This summary is to be distributed to the full Team by mid-January.
- NMFS is to prepare a recommended approach to bringing harbor porpoise takes back below PBR. The recommended approach will draw heavily on Team discussions, building off the areas of consensus and putting forward multiple options for those few areas where Team members were unable to reach agreement. This approach is to be distributed to members roughly two weeks prior to any follow-on discussion to provide sufficient time for members to review the materials and, as appropriate, seek feedback from their respective constituencies and/or organizations.
- Team members are asked to prepare for the teleconference by reviewing options and conferring with their respective constituencies.
- The Team is to reconvene via teleconference in early February to review NMFS' recommended approach and either confirm or revise the proposed actions. The call is to be facilitated by CONCUR. The goal for the call is to reach consensus on a set of recommendations for all geographic areas.
- In the event full consensus cannot be reached, CONCUR will draft a summary of the various viewpoints. As with the summary from the Philadelphia meeting, CONCUR will prepare a Key Outcomes Memorandum from the February conference call for subsequent distribution to the Team. CONCUR and the convenors anticipate distributing the summary within two to three weeks after the February call.

Questions or comments regarding this Key Outcomes Memorandum should be directed to Scott McCreary or Bennett Brooks with CONCUR. Scott can be reached at 510-649-8008. Bennett can be reached at 646-761-0652.

# Attachment 1

## Predicted bycatch under potential mitigation measure scenarios

**Debra Palka**  
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**Woods Hole, MA**

### INTRODUCTION

During discussions at the Harbor Porpoise Take Reduction Team (TRT) meeting, questions arose from TRT members regarding the effectiveness of the existing Take Reduction Plan and in particular, the effectiveness of using pingers as a bycatch reduction measure. Before discussing potential options for modifying the current management plan, the TRT asked for information on what the bycatch of harbor porpoises could have been under three different potential bycatch mitigation measure scenarios. The predicted bycatch under these scenarios could then be compared to the current bycatch estimates to determine if the potential mitigation measure might reduce bycatch to below the Potential Biological Removal (PBR) level, which is currently 610, or to levels below the Zero Mortality Rate Goal (ZMRG) level, which is currently 61. The three scenarios were:

- I. What if there had been 100% compliance with the regulations as specified in the current Take Reduction Plan?
- II. What if pingers (1 more pinger than nets within a string) were required in the fall and winter for the entire Northeast gillnet fishery (the Gulf of Maine and southern New England waters north of New York)?
- III. In addition to the conditions in scenario 2 above, what if pingers were required in the Waters off New Jersey, including the Mudhole, during January to April?

### METHODS

These scenarios were evaluated using data from 2005 and 2006. The starting point was the bycatch estimated for 2005 as documented in “Estimates of Cetacean and Pinniped Bycatch in the 2005 Northeast Sink Gillnet and Mid-Atlantic Coastal Gillnet Fisheries” (binder document 3.1) and the bycatch estimated for 2006 as documented in “Estimates of Cetacean and Pinniped Bycatch in the 2006 Northeast Sink Gillnet and Mid-Atlantic Coastal Gillnet Fisheries” (binder document 3.b).

The times and areas were based on the categorizations in the above two documents. For the 2005 document, see Table 4 on page 8 and Table 11 on page 14, and for the 2006 document, see Table 5 on page 14 and Table 12 page 19. For the Northeast gillnet fishery, referred to as the “Northeast” (the Gulf of Maine and southern New England waters north of New York), winter represents January-May, summer represents June-August, and fall represents September-December. For the Mid-Atlantic gillnet fishery,

only the Waters off New Jersey, including the Mudhole, between January and April were considered and is referred to as “NJ MidAtlantic.”

The predicted bycatch under the different scenarios was estimated by multiplying the average bycatch rate that was applicable to that scenario (see next paragraph) to the actual effort observed (mtons landed) within each strata used in the original bycatch estimate. This procedure assumes the following: 1) landings are not affected by the action of complying with the potential mitigation measure; 2) in the future, the factors affecting the bycatch rate and landings are similar to that during 1999 and 2007; 3) there is a cause-and-effect relationship between the bycatch rate and the actions proposed in the scenarios; and 4) in the future, the bycatch rate of hauls in the Waters off New Jersey and in the Mudhole that use pingers is similar to the average bycatch rate observed in the Midcoast Closure Area.

The average bycatch rate of hauls observed from January 1, 1999 to May 31, 2007 that used all of the required number of pingers within the Midcoast Closure was 0.041 harbor porpoises per metric ton (mton) of landings, and the rate within the Cape Cod South Closure Area was 0.023 harbor porpoises per mton landings (see Figure 5, page 12 of the document “Effect of Pingers on Harbor Porpoise and Seal Bycatch” (binder document 3.c). The average bycatch rate of hauls observed in the Waters off New Jersey and the Mudhole that followed all of the Take Reduction Plan regulations that apply for this area was 0.203 harbor porpoises per mton of landings.

## **RESULTS**

If all observed hauls had complied with the current Take Reduction Plan (Scenario I in Tables 1 and 2), the predicted bycatch for 2005 (=651) and 2006 (=630) was slightly higher than the current PBR (=610) and much higher than ZMRG (=61).

If all observed hauls within the Northeast gillnet fishery used the required number of pingers (Scenario II in Tables 1 and 2), the predicted bycatch was nearly cut in half from the predicted bycatch from Scenario I; predicted bycatch was 367 for 2005 and 373 for 2006.

If the vessels fishing in the Waters off New Jersey, including the Mudhole, during January to April also used the required number of pingers (Scenario III in Tables 1 and 2), the predicted bycatch was reduced even further, but was still over ZMRG; predicted bycatch was 246 for 2005 and 240 for 2006.

**Table 1. Predicted bycatch from 2005 under different potential take reduction management actions**

		Scenario I.		Scenario II.		Scenario III.	
Time/Area	2005 bycatch estimates	Bycatch when all hauls are in compliance under current TRP	Details about changes	Bycatch when required number of pingers used everywhere in NE (Winter and Fall)	Details about changes	Bycatch when required number of pingers used in NE (winter and fall) and in NJ (Jan-Apr)	Details about changes
Winter NE	306	306		68	Bycatch rate = 0.041 for all areas	68	Bycatch rate = 0.041 for all areas
Summer NE	52	52		52		52	
Fall NE	272	141	Midcoast closure bycatch rate = 0.041 (117->36) + Mass Bay closures bycatch rate = 0.041 (56->6)	95	Bycatch rate = 0.041 for all areas	95	Bycatch rate = 0.041 for all areas
<b>NORTHEAST SUBTOTAL</b>	<b>630</b>	<b>499</b>		<b>215</b>		<b>215</b>	
NJ MidAtlantic	470	152	Average compliant bycatch rate = 0.203	152	Average compliant bycatch rate = 0.203	31	Bycatch rate = 0.041 for all areas
<b>GRAND TOTAL</b>	<b>1100</b>	<b>651</b>		<b>367</b>		<b>246</b>	

**Table 2. Predicted bycatch from 2006 under different potential take reduction management actions**

		Scenario I.		Scenario II.		Scenario III.	
Time/Area	2005 bycatch estimates	Bycatch when all hauls are in compliance under current TRP	Details about changes	Bycatch when required number of pingers used everywhere in NE (Winter and Fall)	Details about changes	Bycatch when required number of pingers used in NE (winter and fall) and in NJ (Jan-Apr)	Details about changes
Winter NE	420	369	Bycatch rate in S. Cape Closure = 0.023 (67->16)	123	Bycatch rate = 0.041 for all areas	123	Bycatch rate = 0.041 for all areas
Summer NE	37	37		37		37	
Fall NE	57	57		46	Bycatch rate = 0.041 for all areas	46	Bycatch rate = 0.041 for all areas
<b>NORTHEAST SUBTOTAL</b>	<b>514</b>	<b>463</b>		<b>206</b>		<b>206</b>	
NJ MidAtlantic	512	167	Average compliant bycatch rate = 0.203	167	Average compliant bycatch rate = 0.203	34	Bycatch rate = 0.041 for all areas
<b>GRAND TOTAL</b>	<b>1026</b>	<b>630</b>		<b>373</b>		<b>240</b>	

## Attachment 2

### Vessel Selection

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During the December 2007 meeting, the HPTRT had requested additional information on the number of vessels covered by the Observer Program, as there was concern that the same vessels are covered from year to year.

There are two ways to look at fishing effort: an inquiry into the Vessel Trip Report database and an inquiry into the Permits database. A summary was provided that demonstrated how many different vessels were observed over a period of one calendar year as compared to the number of gillnet vessels that submitted a Vessel Trip Report, and the number of vessels that hold a valid gillnet permit, from 2000 through 2006. For example, in years of lower coverage, in 2002, 40% of the gillnet vessels that submitted a Vessel Trip Report (VTR) were covered, whereas, more recently with higher coverage rates, in 2006, 87% of the gillnet vessels with VTRs were observed. This will most likely be an overestimate of the proportion of vessels covered as not all gillnet vessels are required to submit VTRs. Looking at the number of vessels that hold a gillnet permit, in 2002, 8% of the vessels were covered and in 2006, 15% of the vessels were covered. This will most likely be an underestimate of the proportion of vessels covered as not all the permits are actively fished during the year.

The number of new vessels covered, as compared to the vessels covered in the previous year, was also presented. As an example, in 2003, 52% of the vessels covered were not the same as the vessels covered in 2002. In 2006, 35% of the vessels covered had not been covered in 2005. This comparison is from one year to the previous year (and not previous"s").

The NMFS Northeast Fisheries Observer Program has an Operations Coordinator and two Area Leads who examine the observer service provider's ability to spread out coverage evenly to all fishery participants. Vessels are selected at the dock or on the phone by an individual observer or area coordinator, or with a selection letter. A seaday schedule is provided by NMFS to the service provider and is broken down into identifying how many days are needed per month in each geographic area fished. This schedule is assigned with a statistical algorithm that takes into account the fishing effort in that quarter of the previous year, and the statistical power needed to achieve significant by-catch estimates of the species of concern. The service provider is supplied with a Vessel Selection List provided by NMFS. The Vessel Selection List assigns a random number to each known active gillnet vessel in the particular fleets of interest per a three-month period (quarter). The service provider must work through the list on a quarterly basis, covering the vessels in order from lowest to highest based on the random number

assigned to each vessel. The service provider must report back to NMFS on a quarterly basis and indicate whether the vessel was covered, and if it was not, what the reason was (i.e. safety concerns, vessel no longer fishing, seaday schedule was met before completing the list, etc.).

Vessels are not covered on back-to-back trips by the same observer within a calendar month. Coverage is often dictated by how many observers are available, the number of active vessels, the number of trips allowed into certain areas, and the variability of catch and by-catch in a given area. Since real time fishing effort information is not available when fisheries do not have a Days-At-Sea reporting, observer call-in, Vessel Trip Reporting, or Vessel Monitoring System requirements, the observer company employs three area coordinators, a regional coordinator, and field coordinators to locate fishing effort by visiting ports, especially for fisheries that use small boats, are highly mobile, have short season, variable landings and offloading procedures. If reports of uncovered effort are received by NMFS, the observer service provider is notified immediately. As individual states share reliable and applicable vessel information with NMFS, better vessel selection procedures can be established, in particular for the Category I and II (as defined by the Marine Mammal Protection Act in the annual List of Fisheries) state fisheries that may not have any other federal reporting requirements.