Northeast Fisheries Science Center Reference Document 09-14

Update on Harbor Porpoise Take Reduction Plan Monitoring Initiatives:

Compliance and Consequential Bycatch Rates from June 2007 through May 2008; Pinger Tester Development and Enforcement from January 2008 through July of 2009

by Christopher D. Orphanides, Sara Wetmore, and Amanda Johnson

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ABSTRACT

Harbor Porpoise Take Reduction Plan (HPTRP) compliance and bycatch rate analyses are updated for US Northwestern Atlantic gillnet fisheries data from June 2007 through May 2008. These updates stem from the recent Harbor Porpoise Take Reduction Team (HPTRT) meeting (December 17-19, 2007) and follow-up conference call (January 31, 2008). Updates are also provided for pinger tester development and HPTRP enforcement for the period from January of 2008 through July 2009. The observed compliance rate with HPTRP regulations for the Northeast and Mid-Atlantic gillnet fisheries was 62.2%. Bycatch rates in areas that would trigger closures under the proposed modifications to the HPTRP were significantly higher than the proposed target bycatch rates. The combined bycatch rate in times and areas that would trigger the Gulf of Maine Consequence Closure Area (CCA) was 0.067 harbor porpoise takes per metric ton landed, over twice the proposed target bycatch rate (0.031). Bycatch rates in the proposed Southern New England Management Area (MA) (0.096) were over four times the proposed target rate (0.023). Exceeding these proposed target bycatch rates in two consecutive management seasons would result in closures of the corresponding CCAs. Over 97% of the incidental takes observed occurred in times and areas of existing or proposed management measures, with over 80% occurring in newly proposed times and areas. This suggests that proposed HPTRP modifications are targeted towards appropriate times and in the appropriate areas to reduce bycatch. Bycatch rates in existing MAs, in nets that had the required number of pingers, were about half that of non-pingered nets in the same times and areas. If proposed HPTRP modifications had been in place during the 2007-2008 management season, it is conservatively estimated that observed bycatch could have been reduced by 58% with full compliance. Limited pinger testing showed that 88% of pingers tested were working. Steps are also being taken to improve pinger testers and enforcement efforts.

INTRODUCTION

Regulations to limit harbor porpoise bycatch in US Northwest Atlantic commercial gillnet fisheries have been in place for over a decade. Management actions to reduce the serious injury and mortality of the Gulf of Maine/Bay of Fundy stock of harbor porpoises were first implemented through a Harbor Porpoise Take Reduction Plan (HPTRP) on January 1, 1999. The Harbor Porpoise Take Reduction Team (HPTRT) was reconvened in Philadelphia, PA from December 17-19, 2007 in response to recent harbor porpoise bycatch estimates that were above the stock's Potential Biological Removal[1] (PBR) level. On January 31, 2008 a follow-up HPTRT conference call occurred to continue discussions from the December 2007 meeting. The HPTRT aimed to develop further management actions to reduce the level of bycatch to below PBR, and if possible, to a level approaching a zero mortality and serious injury rate, known as the Zero Mortality Rate Goal (ZMRG), which is 10% of PBR. The HPTRT addressed the two-part problem of observed interactions occurring outside of existing Management Areas (MA), as well as documented non-compliance with existing management measures. The *Federal Register* notice describing the proposed modifications to the HPTRP (74 FR 36058; July 21, 2009) is available at http://www.nero.noaa.gov/nero/regs/frdoc/09/09HPTRPpr.pdf.

At the December 2007 HPTRT meeting, several key points were discussed that could influence the effectiveness of the proposed modifications to the HPTRP (NMFS 2009). These included:

1. Degree of compliance with HPTRP regulations;
2. Observed bycatch rates in the Gulf of Maine and Southern New England regions relative to the target bycatch rates proposed in the modified HPTRP, 0.031 and 0.023 harbor porpoises per metric tons (mtons) landed in two consecutive management seasons, respectively;
3. Development of pinger testers; and
4. Degree to which the HPTRP regulations are enforced.

For these four components, this manuscript aims to provide an update since the December 2007 meeting and associated subsequent research (e.g., Palka and Orphanides 2008a). HPTRP compliance and bycatch rates are supplied for the time period from June 2007 through May 2008, which updates the compliance and bycatch information previously provided from January 1, 1999 through May 31, 2007 in Palka *et al*. (2008) and Palka and Orphanides (2008a, 2008b). Compliance with existing regulations is summarized and bycatch rates are provided for existing MAs, and the existing and proposed MAs that could trigger closures of Consequence Closure Areas (CCAs) under the proposed modified HPTRP. In addition, updates for the period from January 2008 through July 2009 are provided on the development and assessment of pinger testers, and on the enforcement of the HPTRP regulations.

METHODS AND DATA

Bycatch and Compliance

Northeast Fishery Observer Program (NEFOP) data were used to calculate bycatch and compliance rates. Bycatch rates were calculated as the number of harbor porpoise takes per metric tons (mtons) of live fish landed. Dressed landed weights were converted to live weights using established

[1] PBR is defined as the maximum number of animals that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population. For the specifics on the harbor porpoise PBR, see the harbor porpoise stock assessment in the most recent report on the US Atlantic and Gulf of Mexico Marine Mammal Stock Assessments (Waring et al 2009) (http://www.nefsc.noaa.gov/publications/tm/tm210/index.htm)

conversion factors (Warden and Orphanides 2008), and rare missing values were imputed through medians from representative strata as in Warden and Orphanides (2008). Six out of the eight variables used in the bycatch and compliance analysis (pinger use, gear length, latitude, longitude, net length, and tie down use) contained less than 1% (<50 out of 4957) missing values. Mesh size was recorded on all but one observed haul, though for 97.18% (4817 out of 4957) of hauls it was recorded as a single value, and on 2.8% of hauls (139 of 4957) it was recorded as minimum and maximum values. When a minimum and maximum range was recorded, the average of these mesh sizes was used in the analysis. Missing twine size information on 3.81% of hauls (189 out of 4957) accounted for most of the imputed values in the dataset. Latitude and longitude was missing for 32 (0.6%) out of 4957 hauls. These locations were left unknown and therefore are not included when compliance and bycatch information was summarized by time and area. No hauls with harbor porpoise bycatch had missing or filled in values for any variables used in the analysis.

Recorded gear configurations were used to check for HPTRP compliance. Northeast sink gillnet gear was considered in compliance with pinger regulations if 90% of the required pingers were present. On a typical gillnet gear configuration with 10 nets, each 300 feet long, 11 pingers would be required (one pinger on each end of the string, and one in between each net). In this gear configuration, a string with 10 out of the 11 required pingers would be considered in compliance. In the Mid-Atlantic large mesh and small mesh regulations, tie-down spacing and number of nets per vessel were not checked because this information was not recorded on observer logs. The gear requirements that were checked include: pinger use, floatline length, net length, twine size, number of nets per string, tie-down length, and tie-down prohibition or requirement, depending on the fishery. Additionally, compliance with seasonal HPTRP closures to gillnet fishing was examined.

Pinger Testers and Enforcement

Pinger testers are hand held devices used by NEFOP observers to check if pingers are working properly. When a net is pulled from the water, observers can check to see if the pingers on the net are active by placing the pinger tester near a pinger attached to the net. The NEFOP attempted to improve existing pinger testers through contracting with an engineer, and by repairing existing pinger testers in-house. The NEFOP also solicited quotes to develop a new pinger tester design. Pinger testers were deployed on 5 trips and the number of functioning pingers was recorded. In addition, NMFS has taken steps to improve HPTRP compliance monitoring.

RESULTS

Compliance

The overall observed compliance rate for the study period was 62.2% (Table 1). The Northeast sink gillnet fishery had very high compliance rates in the Massachusetts Bay MA (96.6%), and poorer compliance in the other management times and areas where there was observed effort (Mid-Coast, Cape Cod South, and Offshore MAs), resulting in an overall Northeast compliance rate of 66.3%. No hauls were observed in the Northeast MA or in the Cashes Ledge MA when they were closed to gillnets. The Mid-Atlantic had much poorer overall compliance rates, with an overall rate of 48.4%. For current HPTRP regulations see Table 2, and Figures 1a and 1b.

In the Northeast sink gillnet fishery, all non-compliant hauls were comprised of nets without the required number of pingers; no fishing was observed in areas closed to all gillnet fishing (Table 3). In contrast, in the Mid-Atlantic, about a quarter (25.2%) of all non-compliant hauls occurred in a closed area. Many (49.5%) of the Mid-Atlantic non-compliant hauls had smaller than regulation twine size,

and several (20.0%) that were not in compliance had longer than regulated total gear lengths and more nets than allowed (Table 3).

Bycatch rates

Bycatch rates during the 2007-2008 management season were higher than the proposed target bycatch rates in areas that could trigger closures under proposed management actions (Table 4). The proposed modifications to the HPTRP state that if the average bycatch rate from two consecutive management seasons in the Gulf of Maine CCA trigger area (composed of the Massachusetts Bay, Mid-Coast, and proposed Stellwagen Bank MAs) exceeds the target bycatch rate of 0.031 harbor porpoises/mtons landed, the result would be the seasonal closure of the Gulf of Maine CCA (Figure 1c). For the 2007-2008 management season, the combined bycatch rate (0.067 harbor porpoises/mtons landed) in these regions was over twice this target bycatch rate. It should be noted, however, that there are currently no HPTRP management measures in place in the proposed Stellwagen Bank MA.

Under the proposed modifications to the HPTRP, if the average bycatch rate for two consecutive management seasons in the proposed Southern New England MA exceeds the target bycatch rate of 0.023 harbor porpoises/mtons landed, the result would be the seasonal closure of the Cape Cod South Expansion CCA and the Eastern Cape Cod CCA (Figure 1c). For the 2007-2008 management season, the combined bycatch rate (0.096 harbor porpoise/mtons landed) in these regions was over four times the target bycatch rate (Table 4). It should be noted, however, that there are currently no HPTRP management measures in place for the proposed Southern New England MA aside from the current requirements in the Cape Cod South MA.

Twenty-nine (80.5%) of the 36 incidental takes observed between June 2007 and May 2008 occurred in times and areas of newly proposed management measures, and all of the remaining takes except for one occurred in existing MAs (Table 5, Figure 2). Among the seven bycatch events that did not occur in proposed MAs, 1 haul did not have pingers and was not required to, 3 hauls used pingers and were compliant with existing HPTRP regulations, and 3 hauls did not use pingers even though pingers were required; each of these hauls had one incidental take per haul (Table 5). In the existing HPTRP MAs, no bycatch was observed in the Cape Cod South and Offshore MAs, and 5 out of 6 bycatch events occurred in the Mid-Coast MA (Table 6). When current HPTRP MA hauls were in compliance with pinger regulations, the average bycatch rate was nearly half the rate of non-pinger compliant hauls in these same times and areas (0.019 vs. 0.038) (Table 6).

Twenty of the 29 takes that occurred in proposed MAs occurred in times and areas when pingers are not required currently, but are proposed for management under the proposed HPTRP modifications (Table 5, Figure 2). Fourteen of these 20 were observed in the proposed Southern New England MA on hauls with no pingers, and the other six were observed in the proposed Stellwagen Bank MA, of which two hauls had pingers on their nets at a level that would be compliant with proposed HPTRP modifications (Table 5). Nine of the 29 incidental takes in proposed MAs occurred in the proposed Mudhole South MA, which under the proposed measures would be closed when these takes occurred (Table 5, Figure 2). Included in the proposed Mudhole South bycatch was one haul that caught 4 harbor porpoises (the most of any haul during the study period) while using smaller than regulation twine size.

Pinger Testers

Development of NEFOP tester

Since the previous pinger tester update at the December HPTRT meeting, the NEFOP contracted with an engineering student at the University of Rhode Island to reconfigure 10 existing pinger testers that were not working optimally. NEFOP trained observers were issued the new testers and determined over the course of several months that the units that were reconfigured did not perform

well in the field. In February 2008 NEFOP started new market research to develop a new type of unit. A request for a quote to develop a new type of unit was published in June 2008. One proposal was submitted in response. After months of limited communication with the organization that submitted the proposal, in October 2008 the proposal was not accepted and it was determined that additional vendors were needed. The Northeast Regional Office (NERO) and NEFOP continued to search for possible vendors and found two additional potential vendors. In July 2009 the process to request a quote to design 32 testers was started and is currently in process.

While working on these requests for quotes, NEFOP has also been working on evaluating currently used testers. In January 2009 all testers were brought back to the NEFOP training center to evaluate their functionality. Several units that were not working well were repaired in-house and then were re-issued to observers that would be performing gillnet trips in the future. Though the testers still suffer from lack of durability and battery-life issues, six testers are currently in the field.

Summary of current pinger tester data

Since December 2007, pinger testers were deployed on 5 trips that were out of Gloucester, MA and Portland, ME. Of the 25 pingers tested, 22 (88%) were working (Table 7).

Enforcement

Enforcement is an essential component of monitoring regulatory compliance. Currently, NMFS is working to develop protocols to monitor compliance with the HPTRP requirements through coordination with NMFS' Office of Law Enforcement (OLE) and state partners. These protocols will facilitate the implementation of activities, including special operations, designed to monitor fishery management compliance through enforcement actions, and will ensure effective and efficient coordination between management and the OLE. The law enforcement operations outcomes, in conjunction with other data sources such as Fishery Observer sampling data, will provide the basis for future management decisions (e.g., consequence closure area implementation) and assist in monitoring the overall effectiveness of the HPTRP.

DISCUSSION

Overall compliance with pinger regulations in the Northeast during the 2007-2008 management season has improved from previous years (Palka and Orphanides 2008b). Compliance with regulations in the Waters off New Jersey decreased from the January to May 2007 period, though compliance rates were similar to the 2006 rates, and were greater than during the period from 2002 through 2006 (Palka and Orphanides 2008b). While it is encouraging to see increased compliance in the Northeast, where much of the bycatch occurs, the overall compliance rate is still poor. Roughly half of all observed hauls in the Mid-Atlantic during the study period were non-compliant, and more than a third were non-compliant in the Northeast.

Bycatch rates in areas that would trigger closures were far above target bycatch rates. However, the majority of bycatch occurred in areas that would be targeted in the proposed HPTRP modifications, thus suggesting that the proposed regulations are properly aimed and may provide significant decreases in bycatch if enacted. If the proposed HPTRP modifications had been in place for the 2007-2008 management season, and there was 100% compliance, we can assume that the 9 harbor porpoises incidentally caught in the proposed Mudhole South MA would not have been taken because the area would have been closed to gillnet fishing. This represents 25% of all observed takes. Also, given historically lower bycatch rates of 50-70% when pingers are used properly in the Northeast sink gillnet fishery (Palka et al. 2008), which is consistent with the rates observed during the 2007-2008

management season, we can conservatively estimate that, given 100% compliance, the number of harbor porpoises observed taken without pingers in the Northeast sink gillnet fishery would have been reduced from 23 to 12. This is another 33% decrease, for a total estimated decrease of 58% if the proposed HPTRP regulations had been in place and there was 100% compliance.

Reducing bycatch in the US Northwest Atlantic gillnet fishery is largely dependent on compliance with existing and future regulations. Enforcement of these regulations will be an integral part of monitoring the HPTRP in the coming years, as the bycatch rates will determine whether or not CCAs are enacted. In combination with enforcement, pinger testing can help improve the effectiveness of pingers by alerting fishers when their pingers are not functioning, and thus also improve and monitor compliance.

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Table 1. Observed overall Harbor Porpoise Take Reduction Plan (HPTRP) compliance by time period and Management Area (MA).

Time Period	Management Area	Total Observed Hauls in Non-Compliance	Total Observed Hauls	Percent Compliant Hauls
Dec 1 - May 31	Cape Cod South	47	137	65.7
Dec 1 - May 31	MassBay	3	88	96.6
Sep 15 - May 31	MidCoast	117	336	65.2
Nov 1 - May 31	Offshore	79	170	53.5
	Northeast Total	*246*	*731*	*66.3*
Jan 1 - Apr 30	Mudhole Large Mesh	2	2	0.0
Jan 1 - Apr 30	Mudhole Small Mesh	0	0	NA
Feb 1 - Apr 30	Southern Mid-Atlantic Large Mesh	50	89	43.8
Feb 1 - Apr 30	Southern Mid-Atlantic Small Mesh	30	75	60.0
Jan 1 - Apr 30	Waters off New Jersey Large Mesh	27	47	42.6
Jan 1 - Apr 30	Waters off New Jersey Small Mesh	6	10	40.0
	Mid-Atlantic Total	*115*	*223*	*48.4*
	All Areas Total	*361*	*954*	*62.2*

Table 2. Harbor Porpoise Take Reduction Plan (HPTRP) management measures for large and small mesh nets in the Mid-Atlantic gillnet fishery.

LARGE MESH FISHERY (7 inches to 18 inches)	
Floatline length:	
NJ Mudhole	<= 3,900 ft
NJ waters (excluding the Mudhole)	<= 4,800 ft
Southern Mid-Atlantic waters	<= 3,900 ft
Twine Size	>= 0.90 mm
Tie Downs	Required; spaced not more than 15 ft apart along floatline; not more than 48 inches in length
Net Number per Vessel	<= 80 nets
Net Size	<= 300 ft
Number of Nets within a Net String	
NJ Mudhole	<= 13 nets
NJ waters (excluding the Mudhole)	<= 16 nets
Southern Mid-Atlantic waters	<= 13 nets
Time/Area Closures:	
NJ waters (including the Mudhole)	Closed from Apr 1 – 20
NJ Mudhole	Closed from Feb 15 – Mar 15, April 1 -20
Southern Mid-Atlantic waters	Closed from Feb 15 – Mar 15
Gear Modification Requirements:	
NJ waters (excluding the Mudhole)	Jan 1 – Mar 30 and Apr 21 – 30
NJ Mudhole	Jan 1 – Feb 14; Mar 16 – Mar 31; and Apr 21 – 30
Southern Mid-Atlantic waters	Feb 1 – Feb 14 and Mar 16 – Apr 30
SMALL MESH FISHERY (> 5 inches to < 7 inches)	
Floatline length:	
NJ waters (including the Mudhole)	<= 3,000 ft
Southern Mid-Atlantic waters	<= 2,118 ft
Twine Size	>= 0.81 mm
Tie Downs	Prohibited
Net Number per Vessel	<= 45 nets
Net Size	<= 300 ft
Number of Nets within a Net String	
NJ Waters (including the Mudhole)	<= 10 nets
Southern Mid-Atlantic waters	<= 7 nets
Time/Area Closures:	
NJ Mudhole	Closed from Feb 15 - Mar 15
Gear Modification Requirements:	
NJ waters (excluding Mudhole)	Jan 1 – Apr 30
NJ Mudhole	Jan 1 – Feb 14 and Mar 16 – Apr 30
Southern Mid-Atlantic waters	Feb 1 – Apr 30

Table 3. Observed compliance with Harbor Porpoise Take Reduction Plan (HPTRP) regulations categorized by compliance infraction. NA indicates possible violation categories that are not applicable. For additional details on existing gear modification requirements, see Table 2 or the HPTRP Mid-Atlantic Guide online at: http://www.nero.noaa.gov/prot_res/porptrp/doc/HPTRPGuideMidAtlantic.pdf. For more information on existing HPTRP regulations, view the NOAA Fisheries Service Northeast Regional Office's HPTRP website at: http://www.nero.noaa.gov/prot_res/porptrp/

			General Violation Categories		Specific Violation Categories							
Time Period	Management Area	Total Observed Hauls in Non-Compliance	Gear Modification	Closed Area	Multiple Violations Per Haul	Pingers Required	Gear Length	Number of Nets	Twine Size	Tie-Down Lengths	Tie-Downs Required / Prohibited	Net Length
Dec 1 - May 31	Cape Cod South	47	47	0	0	47	NA	NA	NA	NA	NA	NA
Dec 1 - May 31	Massachusetts Bay	3	3	0	0	3	NA	NA	NA	NA	NA	NA
Sep 15 - May 31	Mid-Coast	117	117	0	0	117	NA	NA	NA	NA	NA	NA
Nov 1 - May 31	Offshore	79	79	0	0	79	NA	NA	NA	NA	NA	NA
Jan 1 - Apr 30	Mudhole Large Mesh	2	2	0	2	NA	2	2	0	0	NA	0
Jan 1 - Apr 30	Mudhole Small Mesh	0	0	0	0	NA	0	0	0	0	0	0
Feb 1 - Apr 30	Southern Mid-Atlantic Large Mesh	50	30	20	13	NA	12	12	17	0	5	0
Feb 1 - Apr 30	Southern Mid-Atlantic Small Mesh	30	30	0	0	NA	0	0	30	0	0	0
Jan 1 - Apr 30	Waters off New Jersey Large Mesh	27	18	9	9	NA	9	9	4	5	0	0
Jan 1 - Apr 30	Waters off New Jersey Small Mesh	6	6	0	0	NA	0	0	6	0	0	0

Table 4. Harbor porpoise bycatch rates in Northeast Management Areas (MA) that could trigger closures under proposed Harbor Porpoise Take Reduction Plan (HPTRP) management actions. In the proposed management actions, an average bycatch rate over two consecutive years that is above 0.031 harbor porpoises/mtons landed in the Gulf of Maine Consequence Closure Area (CCA) trigger area (comprised of the Massachusetts Bay, Mid-Coast, and the proposed Stellwagen Bank MAs) would result in the seasonal closure of the Gulf of Maine CCA. An average bycatch rate over two consecutive years that is above 0.023 harbor porpoises/mtons landed in the Southern New England MA would trigger the seasonal closure of the Cape Cod South Expansion CCA and the Eastern Cape Cod CCA.

Time Period	Management Area	Hauls	Landings (mtons)	Harbor Porpoise	Bycatch Rate
Nov 1 - May 31	Massachusetts Bay (including proposed changes)	91	10.37	1	0.096
Sep 15 - May 31	Mid-Coast	336	148.65	5	0.034
Nov 1 - May 31	Proposed Stellwagen Bank MA	214	19.84	6	0.302
Sep 15 - May 31	*Gulf of Maine CCA Trigger Area*	641	178.86	12	*0.067*
Dec 1 - May 31	*Proposed Southern New England MA*	436	145.75	14	*0.096*

Table 5. Number of harbor porpoise bycatch by year, month, Mangement Areas (MA), pinger use (whether at least 90% of the required number of pingers was used), and Harbor Porpoise Take Reduction Plan (HPTRP) compliance. For the purposes of this table, pinger use (Yes/No) in the proposed Stellwagen Bank MA was put into "Yes" and "No" categories by the same 90% cutoff as other current MAs, even though pingers are not currently required there.

Year	Month	Current Management Areas	Current and Proposed Mgmt. Areas (and Mgmt. Measures)	Harbor Porpoise	Pingers Used	Compliance with Current HPTRP	HPTRP Violation Type
2007	July		None	1	No	Compliant	None
2007	Dec	Mid-Coast	Mid-Coast (Pingers)	1	Yes	Compliant	None
2008	Jan		Southern New England (Pingers)	1	No	Compliant	None
2008	Jan		Southern New England (Pingers)	1	No	Compliant	None
2008	Jan		Southern New England (Pingers)	1	No	Compliant	None
2008	Jan		Southern New England (Pingers)	1	No	Compliant	None
2008	Feb		Southern New England (Pingers)	1	No	Compliant	None
2008	Feb		Stellwagen Bank (Pingers)	1	Yes	Compliant	None
2008	Feb		Stellwagen Bank (Pingers)	1	Yes	Compliant	None
2008	Feb		Stellwagen Bank (Pingers)	1	No	Compliant	None
2008	Feb	Massachusetts Bay	Massachusetts Bay (Pingers)	1	Yes	Compliant	None
2008	Feb	Mid-Coast	Mid-Coast (Pingers)	1	Yes	Compliant	None
2008	Feb	Waters off New Jersey	Mudhole South (Closure)	4	NA	Non-Compliant	Small Twine Size
2008	Feb	Waters off New Jersey	Mudhole South (Closure)	2	NA	Compliant	None
2008	Feb	Waters off New Jersey	Mudhole South (Closure)	2	NA	Compliant	None
2008	Feb	Waters off New Jersey	Mudhole South (Closure)	1	NA	Compliant	None
2008	March		Southern New England (Pingers)	1	No	Compliant	None
2008	March		Southern New England (Pingers)	2	No	Compliant	None
2008	March		Southern New England (Pingers)	3	No	Compliant	None
2008	March		Stellwagen Bank (Pingers)	1	No	Compliant	None
2008	March		Stellwagen Bank (Pingers)	1	No	Compliant	None
2008	March		Stellwagen Bank (Pingers)	1	No	Compliant	None
2008	March	Mid-Coast	Mid-Coast (Pingers)	1	No	Non-Compliant	No Pingers Used
2008	March	Mid-Coast	Mid-Coast (Pingers)	1	No	Non-Compliant	No Pingers Used
2008	May		Southern New England (Pingers)	2	No	Compliant	None
2008	May		Southern New England (Pingers)	1	No	Compliant	None
2008	May	Mid-Coast	Mid-Coast (Pingers)	1	No	Non-Compliant	No Pingers Used

Table 6. Bycatch rates in current HPTRP Management Areas (MA) by pinger use compliance.

Time Period	Existing HPTRP Management Areas	Pinger Compliance	Observed Hauls	Landings (mtons)	Harbor Porpoise	Bycatch Rate
Dec 1 - May 31	Cape Cod South	No	47	12.76	0	0.000
Dec 1 - May 31	Cape Cod South	Yes	90	15.10	0	0.000
Dec 1 - May 31	MassBay	No	3	0.36	0	0.000
Dec 1 - May 31	MassBay	Yes	85	9.85	1	0.102
Sep 15 - May 31	MidCoast	No	117	34.70	3	0.086
Sep 15 - May 31	MidCoast	Yes	219	113.95	2	0.018
Nov 1 - May 31	Offshore	No	79	31.04	0	0.000
Nov 1 - May 31	Offshore	Yes	91	20.56	0	0.000
Totals	All Mgmt Areas	No	246	78.86	3	0.038
Totals	All Mgmt Areas	Yes	485	159.45	3	0.019

Table 7. Summary of pinger tester data collected since January 2008

Trip	not tested (tester malfunction)	inaudible, tested, and working	audible, tested, and working	inaudible, tested, and not working
Trip 1	4	2	1	1
Trip 2 - first haul		1	3	1
Trip 2 - second haul		1	4	1
Trip 3 (data discarded due to recording error)				
Trip 4			6	
Trip 5 - first haul			2	
Trip 5 - second haul			2	
Totals	4	4	18	3

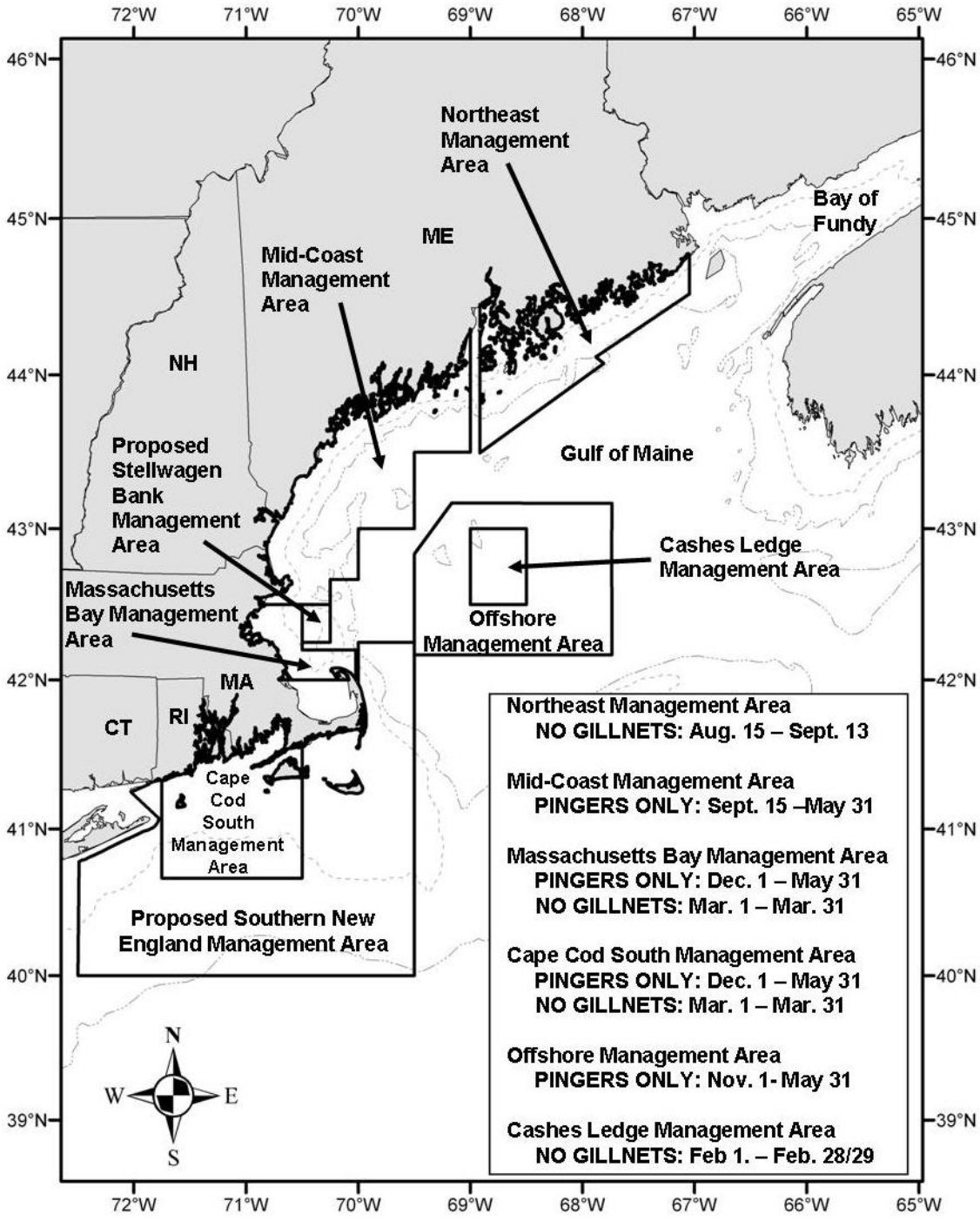

Figure 1a. Current Northeast Harbor Porpoise Take Reduction Plan (HPTRP) Closure Areas and the management measures associated with them, and two newly proposed Management Areas (MA). Note that under the proposed HPTRP modifications, part of the Massachusetts Bay Closure Area would be expanded slightly to the north, eliminating the small gap between it and the proposed Stellwagen Bank MA to the north. Under the proposed HPTRP modifications, the time period for the Massachusetts Bay MA would be lengthened to include November, which would match the time period for the adjacent proposed Stellwagen Bank MA (Nov 1 – May 31). The time period for the proposed pinger requirement in the Southern New England MA would be from Dec 1 through May 31. For more information on existing and proposed HPTRP regulations, view the NOAA Fisheries Service Northeast Regional Office's HPTRP website at: http://www.nero.noaa.gov/prot_res/porptrp/

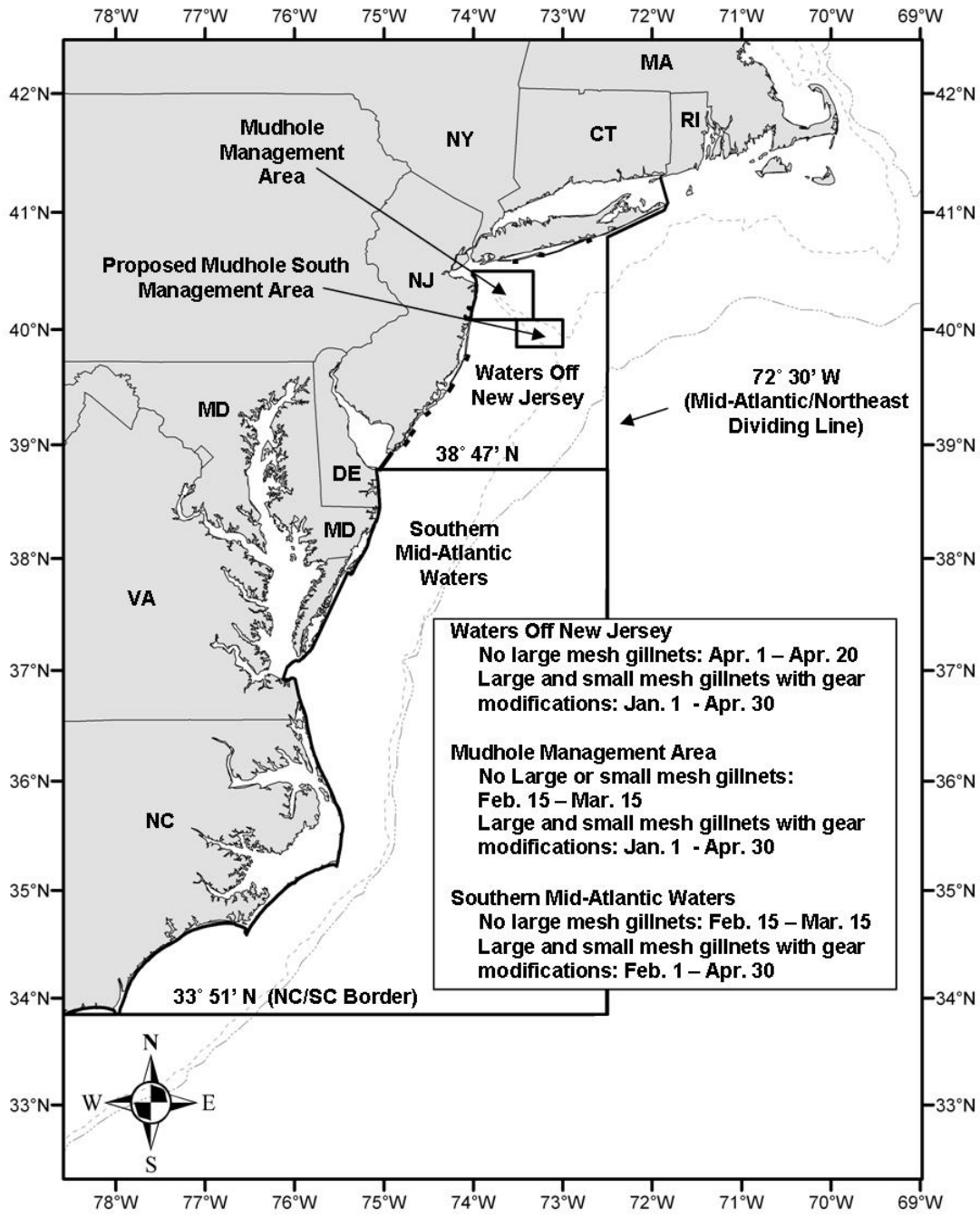

Figure 1b. Current Mid-Atlantic Harbor Porpoise Take Reduction Plan (HPTRP) Management Areas (MA) and a summary of the associated regulations, and one proposed MA. The proposed Mudhole South MA would be closed to gillnet gear from February 1 through March 15, and gear requirements would be mandatory from January 1 through April 30, except when the existing Mudhole or Waters off New Jersey closures apply. Under the proposed HPTRP modifications, the existing Mudhole Closure Area would be renamed the Mudhole North Management Area. *Under the proposed HPTRP modifications, the boundary between the Northeast and the Mid-Atlantic would be modified so that it intersects the south shore of Long Island, instead of ending at 40°40'N as is shown in the figure and in the current regulations. For more details on existing gear modification requirements, see Table 2 or the HPTRP Mid-Atlantic Guide online at: http://www.nero.noaa.gov/prot_res/porptrp/doc/HPTRPGuideMidAtlantic.pdf. For more information on both existing and proposed HPTRP regulations, view the NOAA Fisheries Service Northeast Regional Office's HPTRP website at: http://www.nero.noaa.gov/prot_res/porptrp/

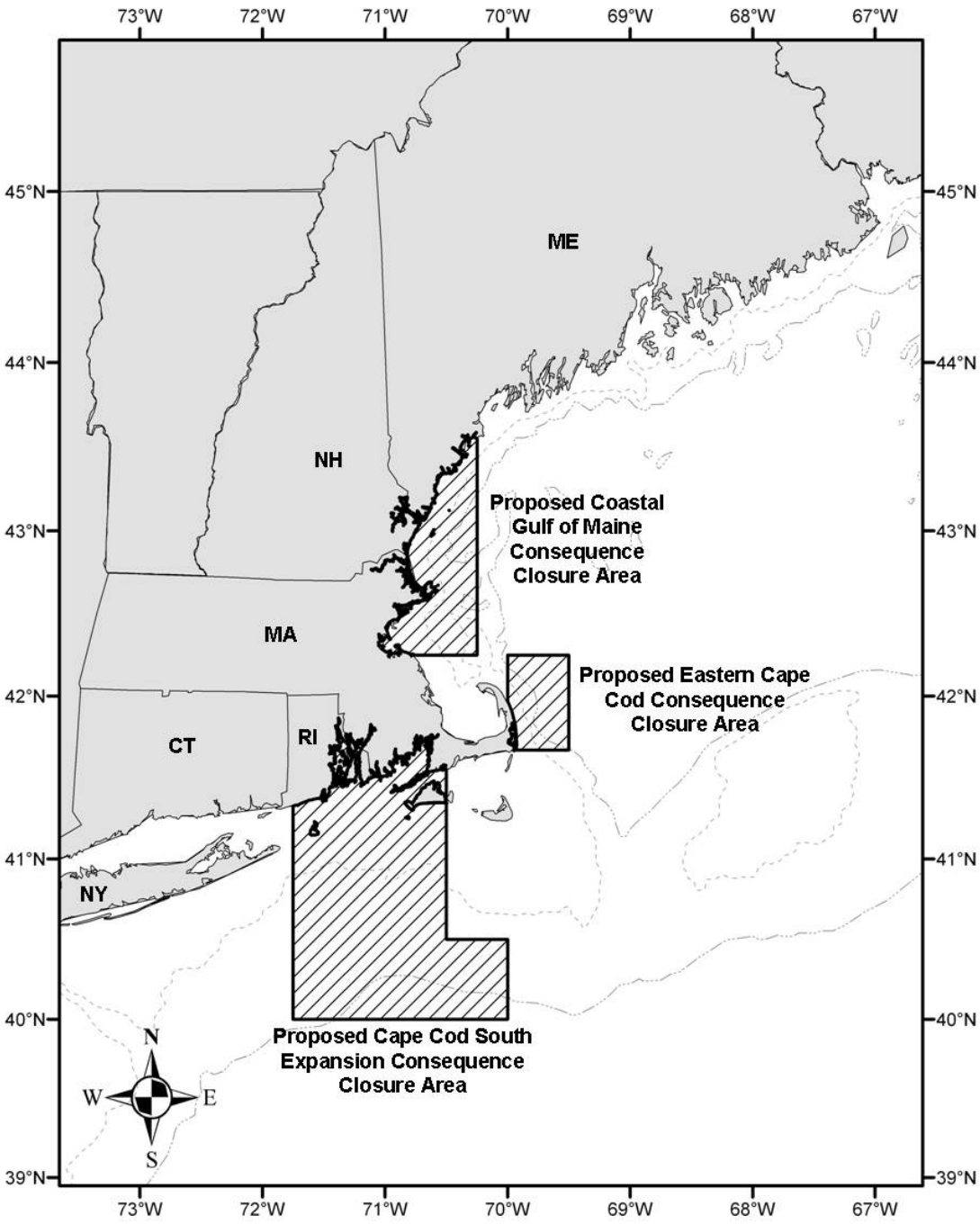

Figure 1c. Harbor Porpoise Take Reduction Plan (HPTRP) proposed seasonal Consequence Closure Areas (CCA). In the proposed management actions, an average bycatch rate over two consecutive years that is above 0.031 harbor porpoises/mtons landed in the Gulf of Maine CCA trigger area (comprised of the Massachusetts Bay, Mid-Coast, and the proposed Stellwagen Bank Management Areas (MA), see Figure 1a) would result in the closure of the Gulf of Maine Consequence Closure Area (CCA) during October and November. An average bycatch rate over two consecutive years that is above 0.023 harbor porpoises/mtons landed in the Southern New England MA would trigger the seasonal closure of the Cape Cod South Expansion CCA and the Eastern Cape Cod CCA from February through April. For more information on proposed HPTRP regulations, view the NOAA Fisheries Service Northeast Regional Office's HPTRP website at: http://www.nero.noaa.gov/prot_res/porptrp/

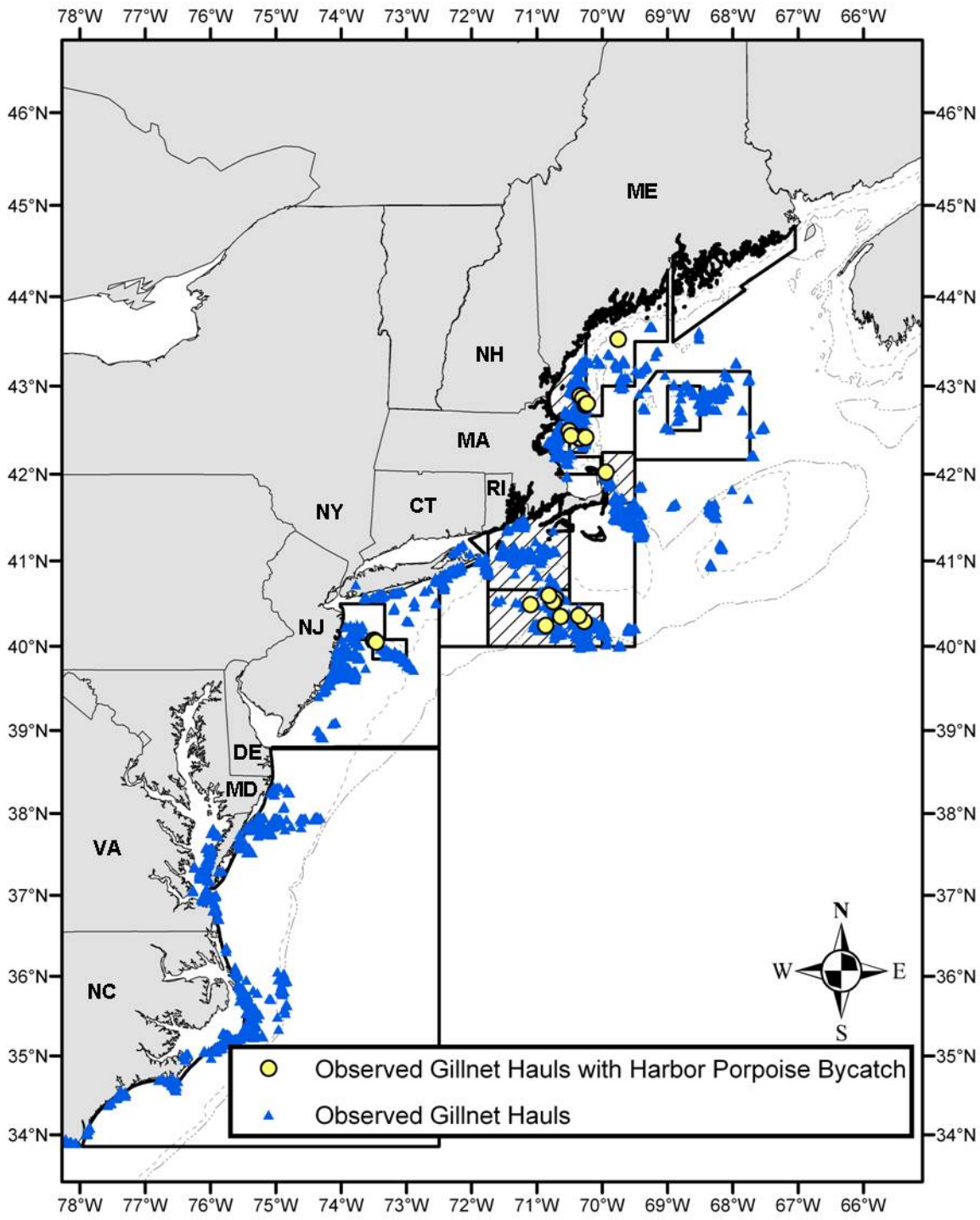

Figure 2. NEFOP Observed gillnet hauls and harbor porpoise bycatch from June 2007 and May 2008 overlaid on top of existing and proposed regulatory areas shown in Figure 1. The hatched areas depict Consequence Closure Areas (CCA) that would be triggered should the target bycatch rates be exceeded in the future.

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