

*Science, Service, Stewardship*



# Harbor Porpoise Take Reduction Plan (HPTRP)

## Overview and Report on Year 1 Monitoring

April 26, 2012

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# Objective

1. Share results of Year 1 (Sept 2010-May 2011) monitoring of the Consequence Closure Area Strategy
2. Answer questions
3. Discuss what's next



# Agenda

- Harbor Porpoise Take Reduction Plan Overview
  - Outreach & education efforts following 2010 Plan amendments
- Description of consequence closure area strategy (implemented with 2010 Plan amendments)
  - Calculation of target bycatch rates
- Summary of first monitoring year
  - Observed bycatch rates compared to target rates
  - Compliance
  - Establishment of Coastal Gulf of Maine Closure Area



## Overview Harbor Porpoise Take Reduction Plan

- First implemented in December 1998 and Amended in 2010 to address incidental takes of harbor porpoise during the course of commercial gillnet fishing operations.
- Developed by Take Reduction Team consisting of fishermen, scientists, environmentalists and managers that serve as an advisory body to NOAA Fisheries
- Harbor Porpoise Take Reduction Team consists of 38 members
  - 12 Gillnet fisheries seats
  - 3 Conservationist seats
  - 10 State manager seats
  - 4 Federal seats
  - 3 Fishery Management Organizations (2 Council seats, 1 ASMFC seat)
  - 3 Academic/Scientific seats
  - 3 Gear Research seats



# Overview Harbor Porpoise Take Reduction Plan

## **Goals of the Harbor Porpoise Take Reduction Plan**

Under the MMPA, the TRP must achieve both short and long-term goals for reducing harbor porpoise bycatch.

- The immediate goal is to reduce bycatch to below the stock's Potential Biological Removal Level (PBR) within 6 months of implementation.
  - PBR: The maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population.
- The long-term goal is to reduce harbor porpoise bycatch to insignificant levels approaching a zero mortality and serious injury rate (Zero Mortality Rate Goal) within 5 years.
  - Zero Mortality Rate Goal: 10 percent of the PBR level



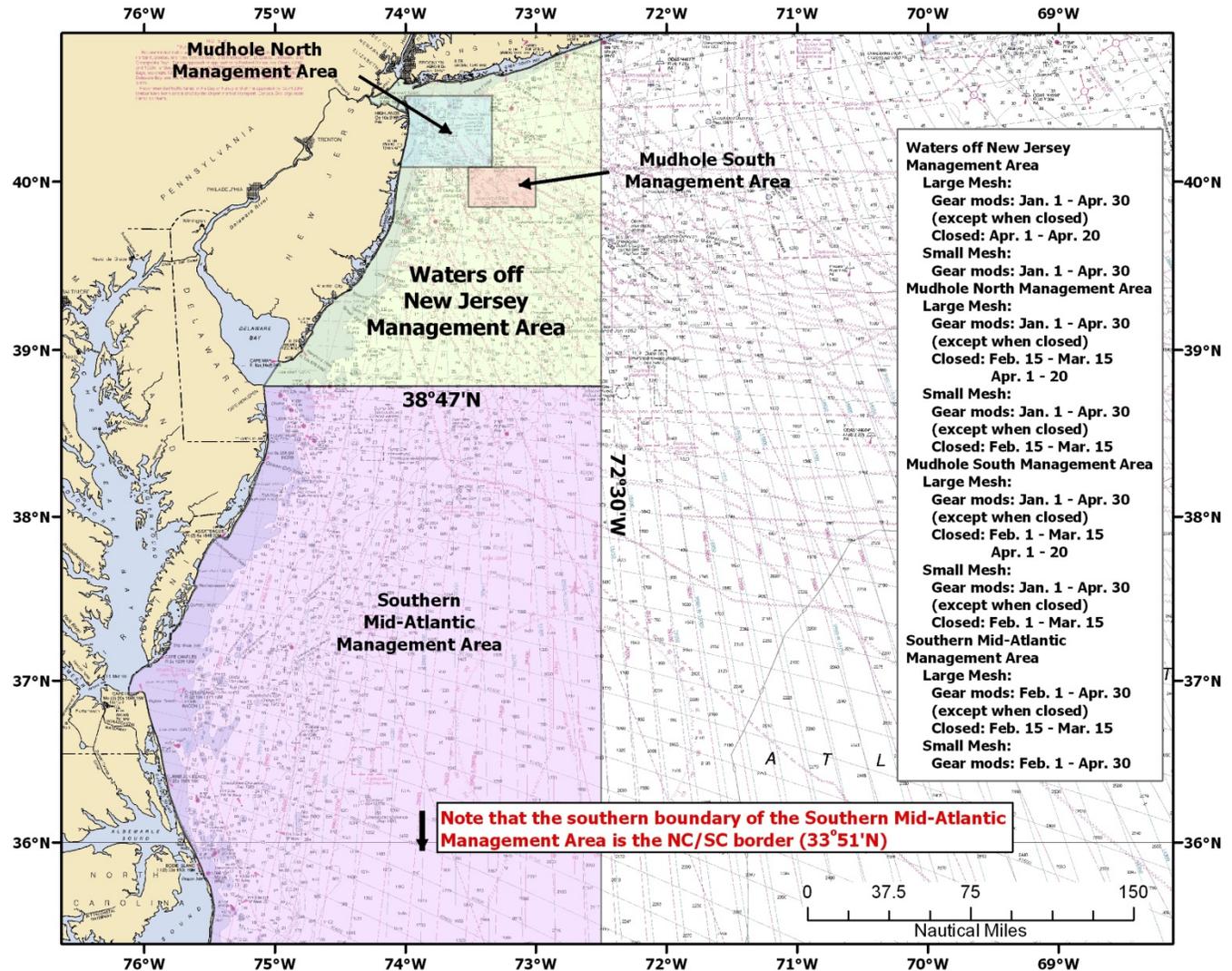
## Background – HPTRP

- First implemented – December 1998
- Revised with additional measures – February 2010
- Mid-Atlantic (NY/NJ through NC)
  - Gear modification requirements (in lieu of pingers)
    - Large mesh (7 - 18 in.)
    - Small mesh (>5 - <7 in.)
  - Time/area closures
- New England (ME through RI)
  - Time/area closures
  - Seasonal use of pingers
  - One-time pinger training required

# HPTRP – Mid-Atlantic Management Areas

## Mid-Atlantic HPTRP Measures:

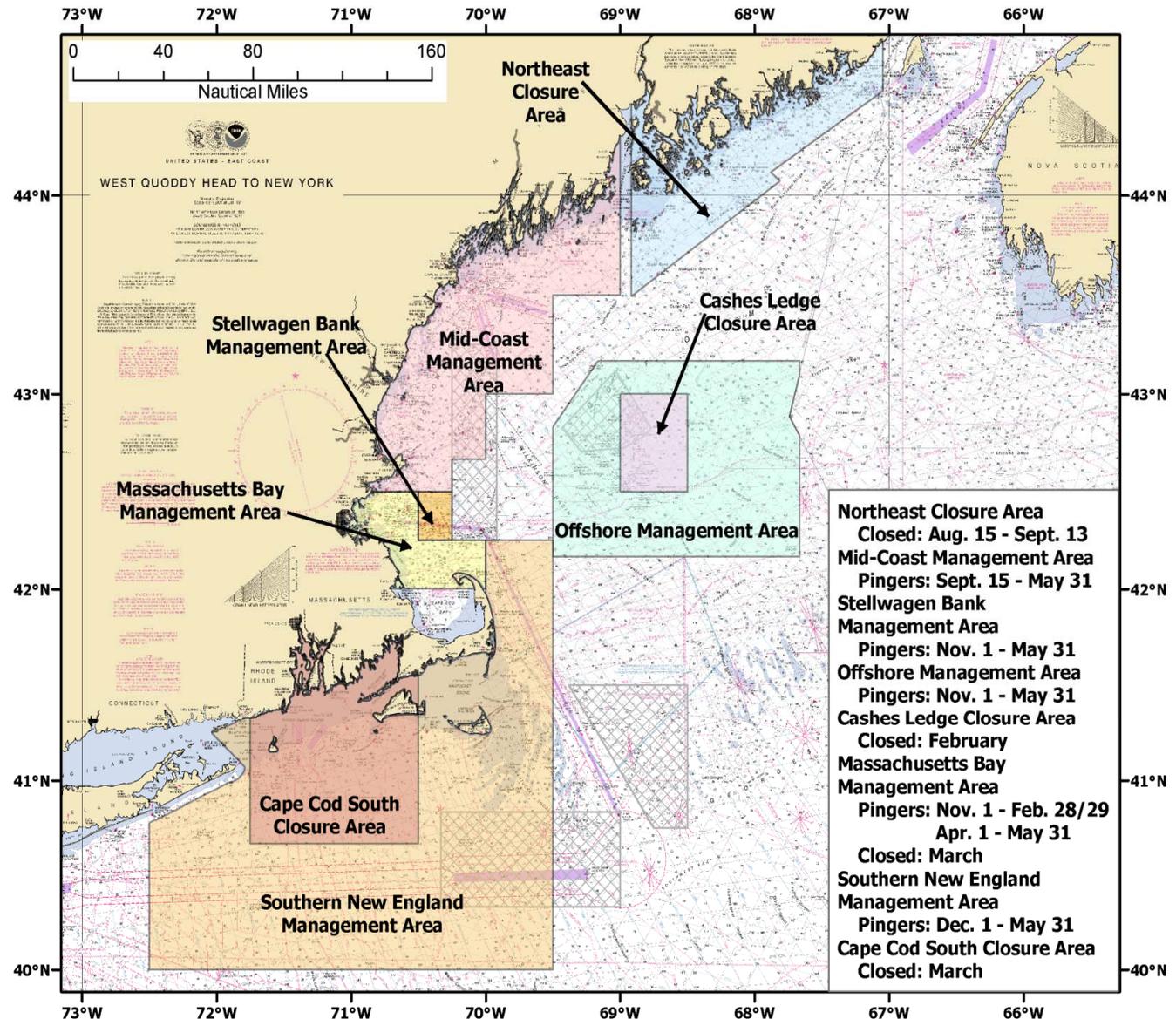
- Seasonal gillnet closures
- Seasonal gillnet gear modification requirements for:
  - Number of nets/string
  - Number of nets/vessel
  - Tie-down use
  - Net size
  - Twine size



# HPTRP – New England Management Areas

## New England HPTRP Measures:

- Seasonal gillnet closures
- Seasonal pinger usage on gillnets
  - Pinger specifications
  - Pinger placement
  - Pinger training required



- Depth units = fathoms / Not for navigational purposes

- Northeast Multispecies FMP Year-Round Closures are depicted as gray cross-hatched areas

Chart Name: West Quoddy Head to NY - East Coast

Chart #: 13006\_1



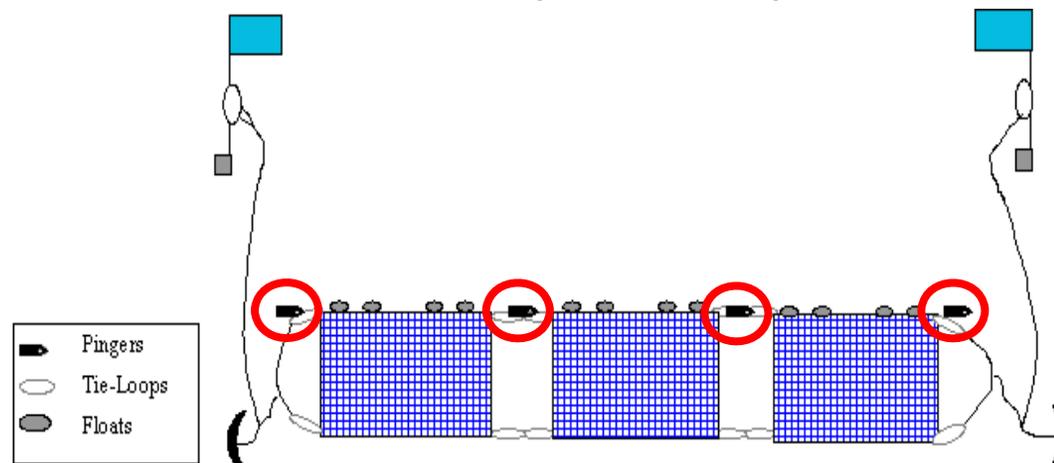
## 2010 Final Rule

- Published on February 19, 2010
- Mid-Atlantic – changes
  - Established new management area; modified tie-down requirement; technical corrections
- New England – changes
  - New and expanded pinger areas
  - Expanded pinger season in Gulf of Maine
  - Consequence closure strategy with established targets



## Extensive Industry Outreach

- Extensive education and outreach effort prior to and after implementation of the 2010 amendment
  - Explain proper use of pingers and other requirements of the HPTRP
- Dockside training on the regulations, including proper placement and maintenance of pingers
  - Since 1998, 470 fishermen have received pinger training from NMFS
  - 67 were trained after the 2010 HPTRP amendment (403 trained prior)
  - Trainees receive an authorization, which is required to be present on vessels using pingers





## Outreach: Pre-2010 Amendment

- Gillnet permit holder letters
  - Mass Bay March closure reminder (March 2004)
  - HPTRP requirements reminder & graphics (Feb. 2005)
- Response to Council regarding March closure of Mass Bay (Aug. 2005)
- Pinger authorizations re-printed and mailed with laminated placards to pinger-trained gillnetters (Oct. 2006)
- Commercial Fisheries News
  - Outreach best way to increase compliance (Oct. 2006)
- Outreach meetings (Oct. 2006 through Jan. 2007)
  - Series of 9 meetings from Maine to New Jersey
- Council Briefing – June 2008
  - Updates on recent HPTRT meetings and deliberations



## Outreach: Post-2010 Amendment

- **Commercial Fisheries News articles**
  - Final Rule Fact Sheet (Feb. 2010)
  - New rules take effect on Sept. 15 (Aug. 2010)
  - Preliminary analysis of year 1 bycatch rates for consequence areas (NOAA Navigator, Nov. 2011)
- **Gillnet Permit Holder Letters**
  - Final rule (Feb. 2010), Delay of new pinger requirements (Mar. 2010), Southern New England delay clarification (Apr. 2010), Reminder of new requirements & consequence areas (Sept. 2010)
- **Distributed 1,100 laminated, key-ringed placards**
- **Press releases (July 2009 [proposed rule] and Feb. 2010 [final rule]) and website updates**

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# Consequence Closure Area Strategy

## OVERVIEW



## Consequence Closure Area Overview

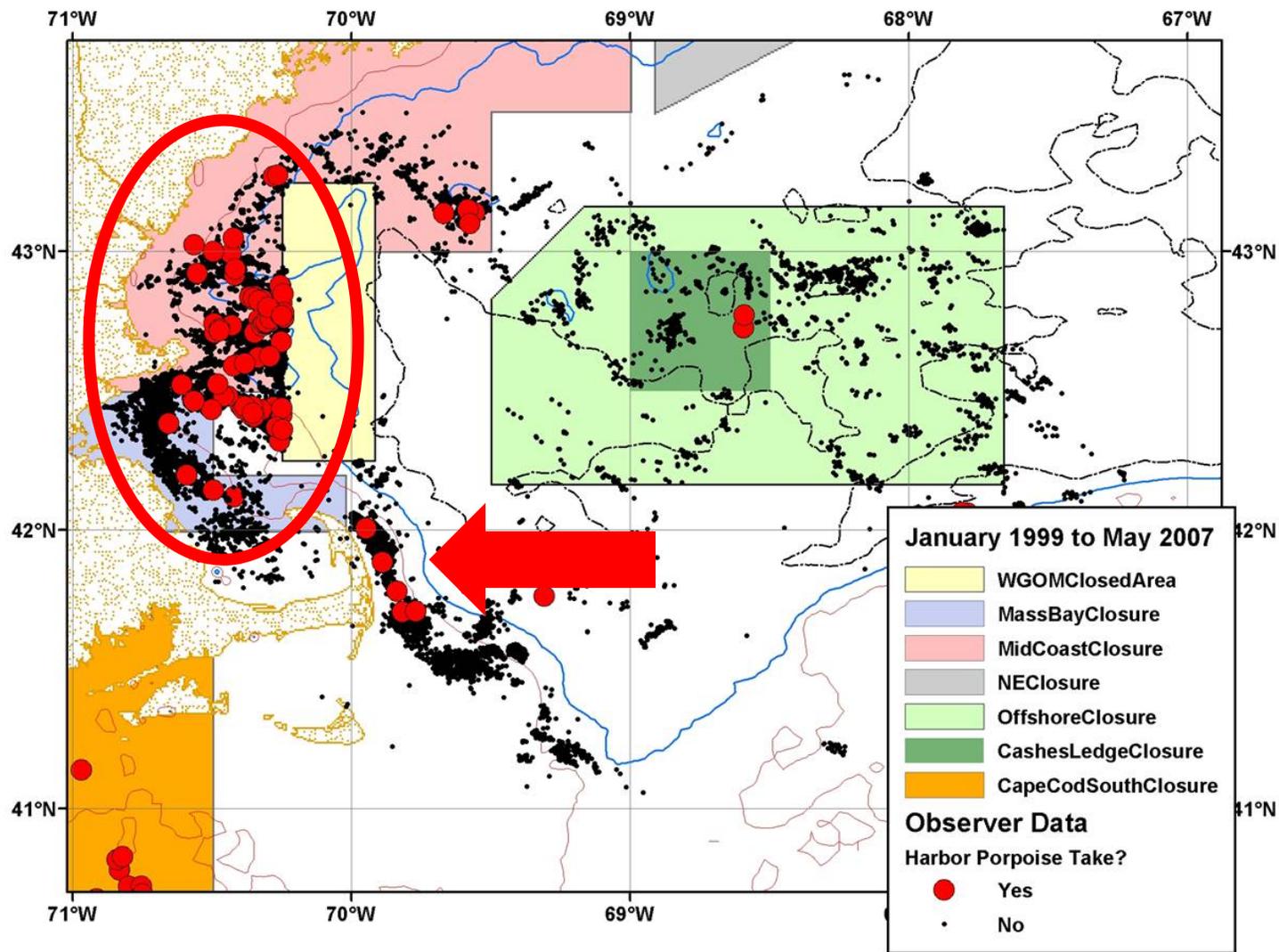
- New management measure implemented with 2010 Harbor Porpoise Take Reduction Plan amendments
- What is it?
  - Establishes bycatch rate thresholds in management areas with historically high harbor porpoise bycatch levels
  - If thresholds are exceeded after 2 consecutive management seasons, seasonal closures are established
  - Monitor bycatch and landings by the Plan's management season and compare to the established thresholds
    - Year 1: September 2010 through May 2011
    - Year 2: September 2011 through May 2012



## Consequence Closure Area Overview (continued)

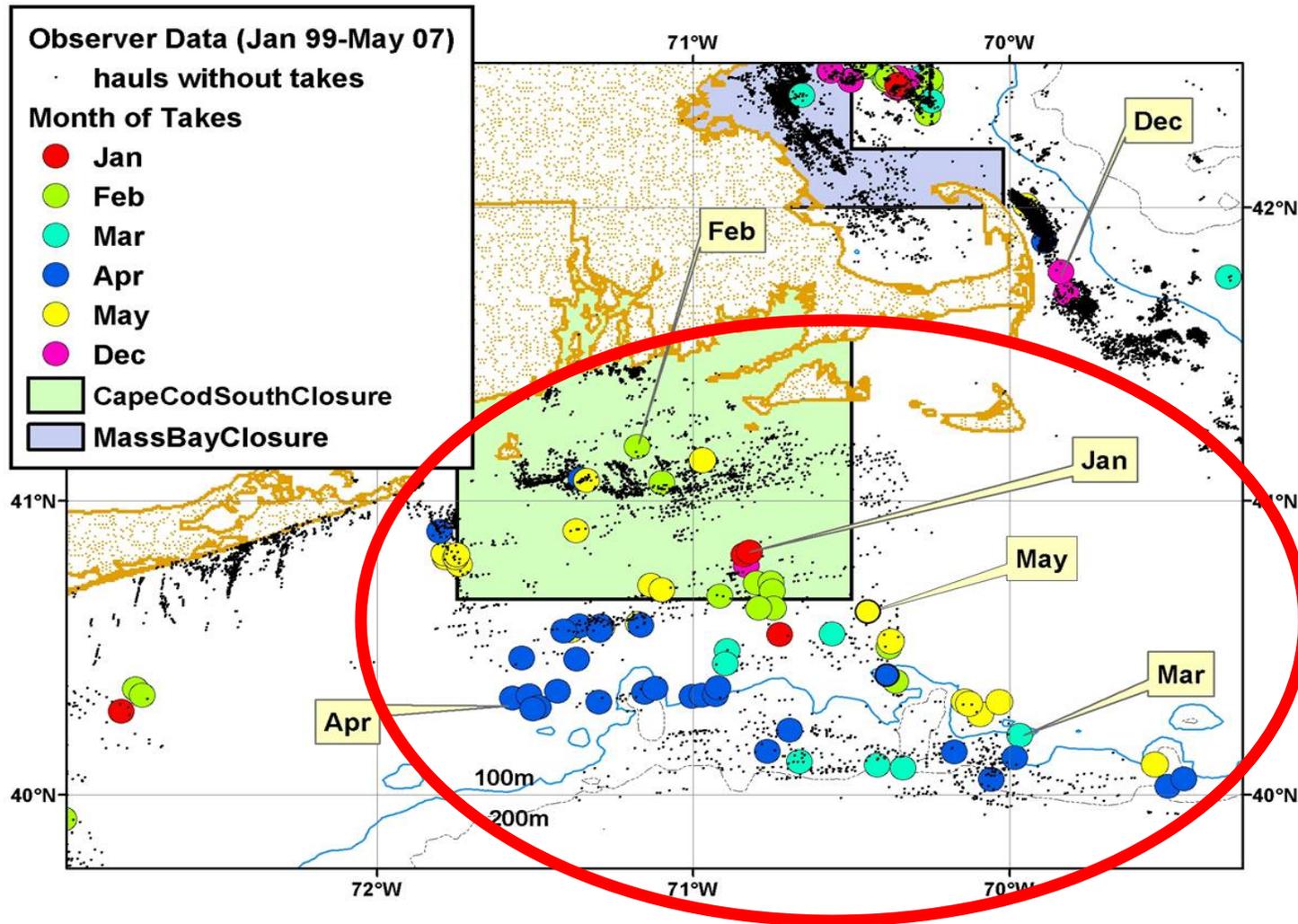
- Why implement such a measure?
  - Harbor Porpoise Take Reduction Team concerned about continued bycatch and non-compliance with pinger requirements in specific management areas
    - Mid-Coast, Stellwagen Bank, and Massachusetts Bay Areas
    - Areas south and east of Cape Cod
  - Consequence closure area strategy establishes bycatch rate thresholds in specific areas
  - Incentive is to increase compliance with pingers
    - If thresholds are exceeded, these areas seasonally close to gillnet fishing

# Gulf of Maine – Areas with Historically High Bycatch Levels



Bycatch information from observed gillnet hauls from January 1, 1999 through May 31, 2007

# Southern New England – Areas with Historically High Bycatch Levels



Bycatch information from observed gillnet hauls from January 1, 1999 through May 31, 2007



## Establishing the Consequence Closure Areas

- What areas did the Team focus on?
  - Areas with historically high bycatch levels, even when pinger requirements were in place
    - Gulf of Maine (1 bycatch rate threshold; 1 consequence area)
      - Northern MA, all of NH, southern ME
    - Southern New England (1 bycatch rate threshold; 2 consequence areas)
      - One area east of Cape Cod; other area south of MA/RI



## Calculating the Bycatch Rate Thresholds

- Bycatch rate thresholds were calculated by the NMFS Northeast Fisheries Science Center
- What is a bycatch rate?
  - Number of harbor porpoises observed as bycatch relative to the amount of observed fishing effort
  - Unit of fishing effort is metric tons of landings
  - Bycatch rates within each of the Plan's management areas are monitored using observer program data



## Consequence Closure Area Overview (continued)

- **Why are we using landings to equate to effort?**
  - It is the best measure of effort available.
  - Other possible measures of effort such as gear length and soak time are not recorded accurately in the VTR data and are not recorded at all in the Dealer data.
  - In order to estimate the number of incidental takes for the whole fishery, the measure of effort variable must be available in both the observer data, and the effort data for the whole fishery (such as VTR or Dealer data).
  - Landings is the most statistically appropriate measure of effort available in both the observer data, used to calculate the bycatch rate, and the effort data, used to apply that bycatch rate to the whole fishery to generate a total bycatch estimate.



## Calculating the Bycatch Rate Thresholds (continued)

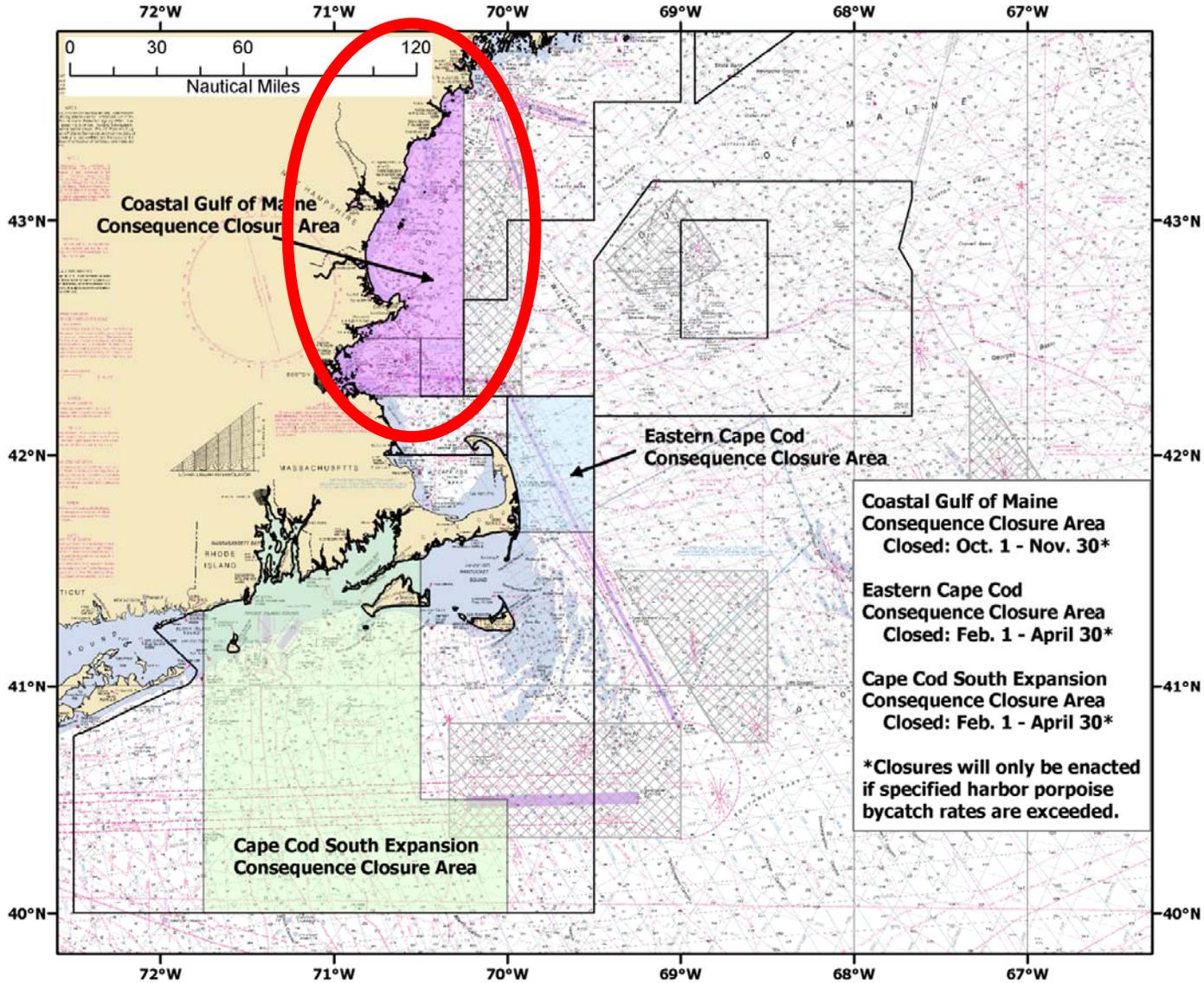
- What data were used to calculate the thresholds?
  - Northeast Fisheries Observer Program data collected between January 1, 1999 and May 31, 2007
  - Observed gillnet hauls that utilized the full complement of pingers (presence/absence only, regardless of functionality)
    - This allowed calculation of a bycatch rate in gillnet strings that contained the appropriate number of pingers under the Plan's requirements
  - Bycatch information in the Gulf of Maine and southern New England for areas identified by the Team



## Gulf of Maine Consequence Closure Area

- Area name (if established)
  - Coastal Gulf of Maine Closure Area
- Bycatch rate threshold
  - 0.031 harbor porpoise takes/mtons observed landings (equivalent to 1 harbor porpoise taken per 71,117 lbs.)
- How was this calculated?
  - Averaged the bycatch rates for compliant hauls from three areas that overlap the consequence area (Mid-Coast, Massachusetts Bay, and Stellwagen Bank)
- If established, will become seasonally closed
  - October and November

# Coastal Gulf of Maine Consequence Closure Area



- Depth units = fathoms / Not for navigational purposes

- Northeast Multispecies FMP Year-Round Closures are depicted as gray cross-hatched areas

Chart Name: West Quoddy Head to NY - East Coast

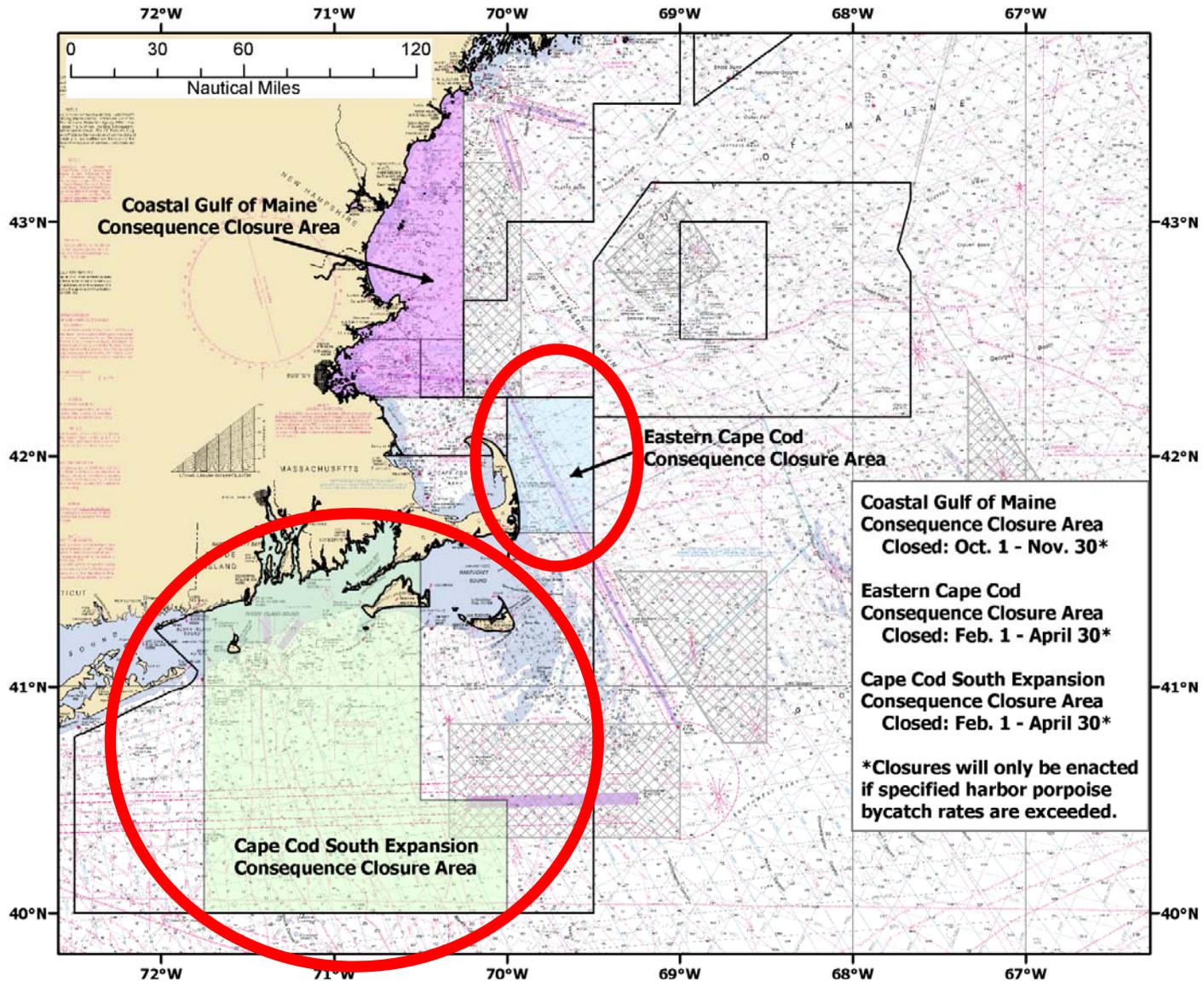
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## Southern New England Consequence Closure Areas

- Area names (if established)
  - Cape Cod South Expansion Closure Area
  - Eastern Cape Cod Closure Area
- Bycatch rate threshold
  - 0.023 harbor porpoise takes/mtons observed landings (equivalent to 1 harbor porpoise taken per 95,853 lbs.)
- How was this calculated?
  - Averaged the bycatch rates for compliant hauls from two areas (Cape Cod South Area and area to the south and east of it)
- If established, both areas will become seasonally closed
  - February through April

# Eastern Cape Cod and Cape Cod South Expansion Consequence Closure Areas



- Depth units = fathoms / Not for navigational purposes

- Northeast Multispecies FMP Year-Round Closures are depicted as gray cross-hatched areas

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# HPTRP Monitoring YEAR ONE (SEPT. 2010-MAY 2011)



## Consequence Closure Area Monitoring

- Monitoring began in September 2010
- Two full, consecutive management seasons are averaged to determine if target threshold(s) exceeded
- If exceeded – areas become seasonally closed until:
  - Zero Mortality Rate Goal (ZMRG) is achieved for this harbor porpoise stock (e.g., 10% of the potential biological removal level); or
  - NMFS, in collaboration with the Team, develops and implements new measures



## Consequence Closure Area Monitoring – Year 1

- First full monitoring season completed
  - September 15, 2010 – May 31, 2011
- Observer program data available for analysis
- Locations of observed bycatch occurred within the Plan's management areas
  - Heavily concentrated in areas affected by consequence areas



## Year 1 Bycatch Rates

	Two-Year Threshold Bycatch Rate Established in 2010	Year 1 Observed Bycatch Rate
Coastal Gulf of Maine	0.031	0.078
Southern New England	0.023	0.012

Bycatch rate units are harbor porpoise takes per metric tons landed



## Compliance – Year 1

	Total number of observed hauls	Observed hauls with correct number of pingers	Percentage of hauls with correct number of fully functioning pingers	Number of hauls with the correct number of fully functioning pingers	Percent compliance
Coastal Gulf of Maine	883	728	50%	364	$364/883 =$ <b>41%</b>
Southern New England	238	154	100%	154	$154/238 =$ <b>65%</b>



## Enforcement Update

- Enforcement cases from Year 1
  - 1 case has been referred to NOAA Office of Law Enforcement and is being reviewed by Law Enforcement's General Counsel
- Cape Cod South Closure Area March 2011 patrol
  - Gillnets prohibited during March
  - NOAA OLE and Rhode Island DEM enforcement
  - No gillnet gear found during 6 hour patrol



## Outcome After Year 1 – Gulf of Maine

- **Year 1 bycatch rate – 0.078 harbor porpoises/mtons**
  - Observed bycatch rate in Year 1 more than double the established threshold
- **Nearly impossible** for a small enough bycatch rate in Year 2 to be achieved so that 2-year average is below 0.031 takes/mtons threshold
- Seasonal closure of the Coastal Gulf of Maine Closure Area will begin October 1, 2012
  - Closure yearly during October and November
  - When not closed, pinger requirements still apply



## Outcome After Year 1 – Southern New England

- **Year 1 bycatch rate – 0.012 harbor porpoises/mtons**
- Established threshold (0.023 takes/mtons) not exceeded in Year 1
- A bycatch rate of approximately 0.034 takes/mtons (1 take in 64,842 pounds landed) in Year 2 would provide a 2-year average of 0.023 takes/mtons
- Seasonal closure of the Eastern Cape Cod and Cape Cod South Expansion Closure Areas not warranted at this time

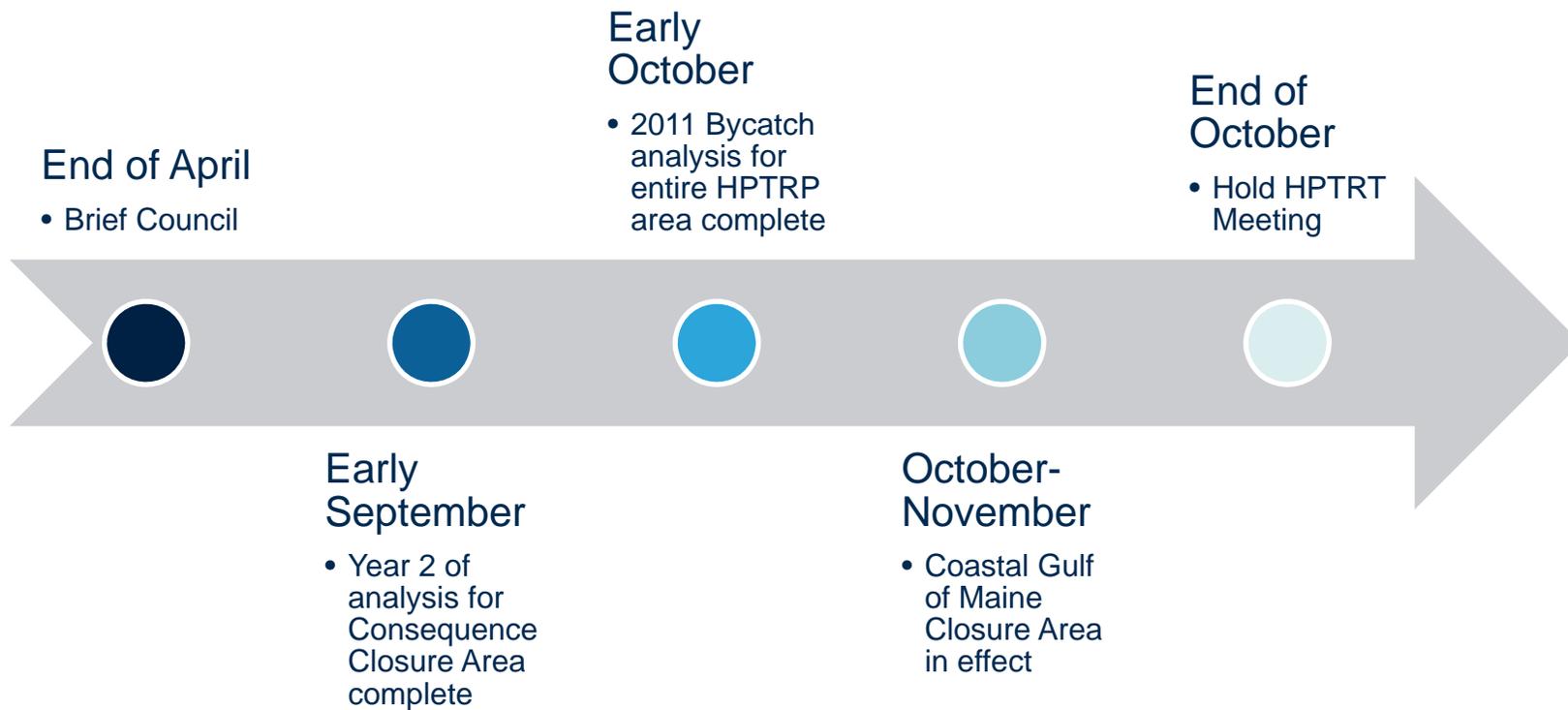


## Upcoming Analyses

- New harbor porpoise abundance estimate based on a 2011 abundance survey is currently in review
- Harbor porpoise bycatch analysis for 2011 will be generated when data are available.
- Observed harbor porpoise bycatch during first few months of 2011 appears to be high.
- Bycatch numbers have fluctuated above and below the PBR acceptable level.



# Next Steps



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For more information

[www.nero.noaa.gov/hptrp](http://www.nero.noaa.gov/hptrp)