

Proposals: Impacts of Opening Western Gulf of Maine and Nantucket Lightship Closures

The scientist's and conservationist's HPTRP proposals suggested codifying existing fisheries management closures into the HPTRP. Several of these closures, such as the rolling closures, are already open to sector vessels. Below we briefly discuss available information regarding two areas that are presently closed all year to both common pool and sector gillnet vessels but may be considered for future opening. Since these areas have not been open since the mid-1990s, it is not possible to get a reasonable estimate of the amount of fishing effort that would occur in these areas should they be opened. Also, it is unknown whether effort simply would be reallocated to these areas, or if fishing effort in these areas would represent an increase in total effort. Therefore, we cannot provide an accurate estimate of the number of harbor porpoise that may be caught in these areas.

That said, as part of the analysis for the 2007 TRT meetings we estimated the number of animals taken in the Western Gulf of Maine closure when the area was open to fishing (see: <http://www.nefsc.noaa.gov/nefsc/publications/crd/crd0809/>). The estimated annual bycatch of harbor porpoises in the Western Gulf of Maine Closure Area during 1989–1997 (before the area was closed) averaged 585 animals, varying between 57 animals in 1997 and 748 animals in 1990. Since this analysis used data that were quite old, we would not expect today's bycatch to mirror past bycatch. However, we would expect high bycatch rates and a significant amount of bycatch in this region. This is supported by high bycatch rates observed in illegal hauls just inside the western edge of the Western Gulf of Maine closure since 1999 (Figure 1), particularly in more recent years since 2007 (Tables 1 and 2 - taken from HPTRT Meeting Materials, Document B7 for Day 2, Tables 23 and 24 in that document). Despite these high observed bycatch rates, if the Western Gulf of Maine closure is opened, it is unknown how much effort would occur there. Because of this, we do not have sufficient data to predict the amount of bycatch that would occur within this area should it be opened.

The Nantucket Lightship area has not been open to gillnet fishing since 1996. Prior to 1996, gillnet fishing effort was not observed within the Nantucket Lightship area. However, as with the Coastal Gulf of Maine closure, bycatch has been observed along the edges of this closure (Figure 1). Also, rates in the Southern New England region are often among the highest in the Northeast during the winter months (Tables 1 and 2). We would expect similar bycatch rates in the Nantucket Lightship area. But, given the lack of accurate data about future effort, the degree to which this effort would be either additional or reallocated effort, and the lack of observer data in this region, we are not able to predict the amount of predicted bycatch should this region be opened.

Figure 1. NEFOP observed hauls and harbor porpoise takes from 1999-2010.

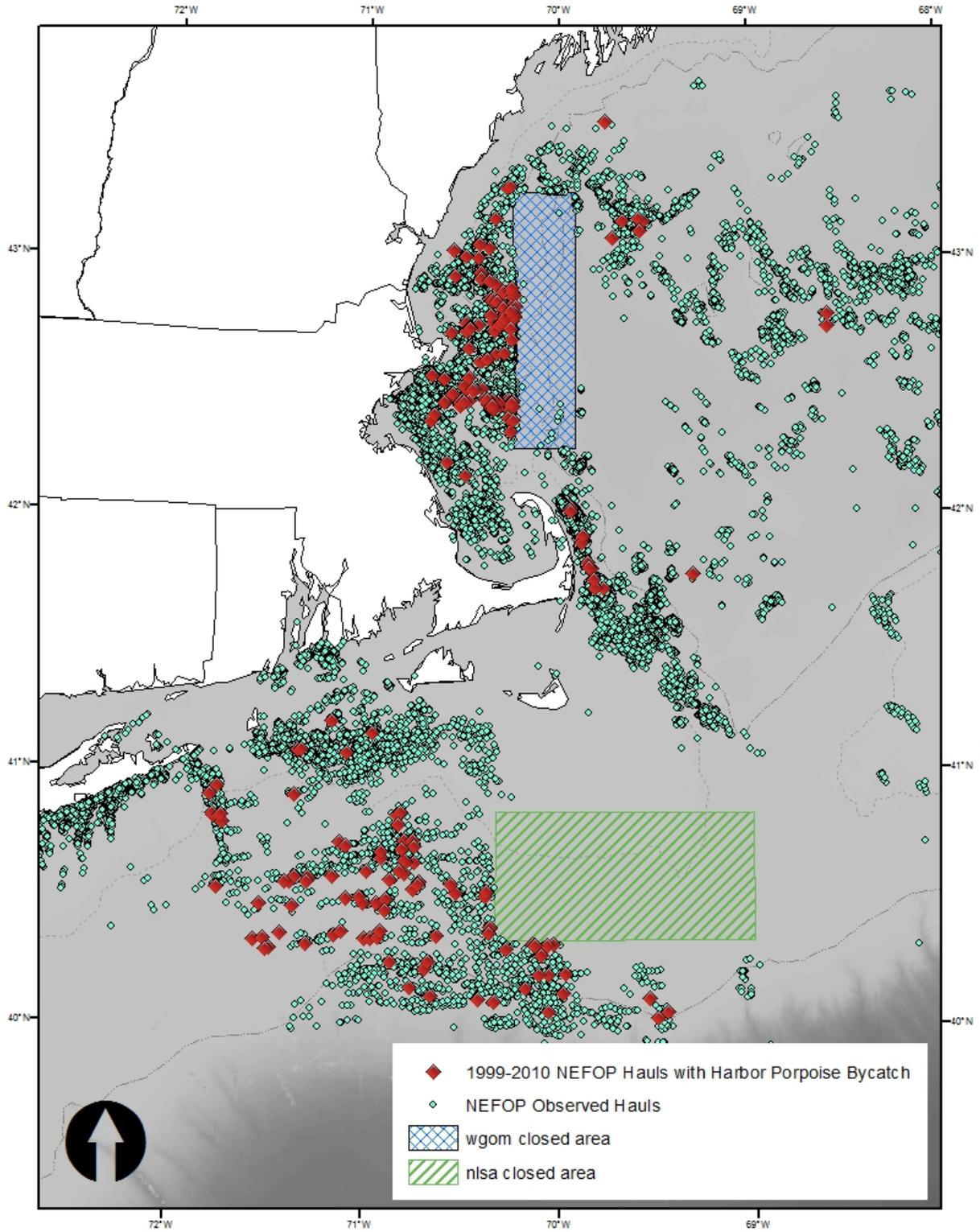


Table 1. Monthly bycatch rate (takes/mtons landed) by Management Area (MA) during the 1998 harbor porpoise take reduction plan (HPTRP) time period. Yellow shaded times and areas require pingers under the 1998 HPTRP, gray shaded times and areas were closed to all gillnets under the 1998 HPTRP. The Cape Cod South MA is part of the Southern New England MA, Cashes Ledge MA is part of the Offshore MA, Cape Cod South Consequence Closure Area (CCA) and Eastern Cape Cod CCA are parts of the Southern New England MA, and the Coastal Gulf of Maine CCA overlaps parts or all of the Mid-Coast, Stellwagen Bank, and Massachusetts Bay (Mass Bay) MAs. Western Gulf of Maine Closed Area (Western GOM) not part of any of the HPTRP MAs.

Bycatch rates in the 1998 HPTRP time period

Month	Cape Cod South	Southern New England ¹	Cashes Ledge	Mass Bay	Mid-Coast	Off shore	Stellwagen ¹	Western GOM ¹	Out side	Cape Cod South-CCA ¹	Coastal GOM-CCA ¹	Eastern Cape Cod-CCA ¹	Total Area ²
Jan	0.104	0.118	0.000	0.046	0.032	0.000	0.081	0.000	0.000	0.109	0.046	0.180	0.068
Feb	0.528	0.149	0.000	0.243	0.444	0.000	0.117	0.382	0.000	0.184	0.146	0.000	0.112
Mar	0.000	0.126	0.000	0.000	1.094	0.000	0.369	0.000	0.000	0.146	0.477	0.000	0.134
Apr	0.000	0.030	0.000	0.000	0.295	0.000	0.000	0.000	0.045	0.039	0.590	0.000	0.034
May	0.011	0.080	0.000	0.000	0.428	0.000	0.000	0.000	0.000	0.046	0.000	0.976	0.058
Jun	0.012	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.000	0.000	0.002
Jul	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.000	0.000	0.000	0.009	0.000	0.002
Aug	0.000	0.000	0.000	0.000	0.026	0.000	0.000	0.000	0.000	0.000	0.009	0.000	0.001
Sep	0.000	0.000	0.000	0.034	0.053	0.000	0.000	0.000	0.000	0.000	0.054	0.000	0.012
Oct	0.000	0.000	0.000	0.000	0.036	0.000	0.000	0.000	0.000	0.000	0.046	0.000	0.007
Nov	0.000	0.014	0.000	0.000	0.038	0.000	0.000	0.000	0.000	0.000	0.038	0.062	0.016
Dec	0.000	0.030	0.000	0.074	0.018	0.000	0.000	0.000	0.000	0.000	0.032	0.137	0.017
Total	0.033	0.032	0.000	0.055	0.042	0.000	0.038	0.016	0.004	0.068	0.043	0.049	0.028

¹ Not a managed area under the 1998 HPTRP.

² Bycatch rates in the “Total Area” were calculated from the sum of the following MAs: Southern New England, Massachusetts Bay, Mid-Coast, Offshore, Stellwagen Bank, Western Gulf of Maine Closed Area, and outside.

Table 2. Monthly bycatch rate (takes/mtons landed) by Management Area (MA) during the 2010 harbor porpoise take reduction plan (HPTRP) time period. Yellow shaded times and areas require pingers under the 2010 HPTRP, gray shaded times and areas are closed to all gillnets under the 2010 HPTRP. The Cape Cod South MA is part of the Southern New England MA, Cashes Ledge MA is part of the Offshore MA, Cape Cod South Consequence Closure Area (CCA) and Eastern Cape Cod CCA are parts of the Southern New England MA, and the Coastal Gulf of Maine CCA overlaps parts or all of the Mid-Coast, Stellwagen Bank, and Massachusetts Bay MAs. Western Gulf of Maine Closed Area (Western GOM) not part of any of the HPTRP MAs.

Bycatch rates in the 2010 HPTRP time period

Month	Cape Cod South	Southern New England	Cashes Ledge	Mass Bay	Mid Coast	Off shore	Stellwagen	Western GOM ¹	Out side	Cape Cod South-CCA	Coastal GOM-CCA	Eastern Cape Cod-CCA	Total Area ²
Jan	0.032	0.062	0.000	0.000	0.180	0.000	0.078	0.059	0.000	0.055	0.081	0.000	0.062
Feb	0.000	0.118	0.000	0.144	0.517	0.000	0.086	0.229	0.000	0.118	0.113	0.000	0.095
Mar	0.000	0.012	0.000	12.417 ¹	0.336	0.000	0.136	0.125	0.000	0.013	0.193	0.000	0.087
Apr	0.098	0.013	0.000	0.000	0.328	0.000	0.000	0.000	0.000	0.007	0.000	0.000	0.031
May	0.020	0.009	0.000	0.000	0.309	0.000	0.013	0.212	0.000	0.013	0.011	0.000	0.014
Jun	0.000	0.000	0.000	0.000	0.014	0.000	0.026	0.000	0.000	0.000	0.013	0.000	0.006
Jul	0.000	0.000	0.000	0.000	0.003	0.020	0.000	0.000	0.000	0.000	0.003	0.000	0.002
Aug	0.000	0.000	0.000	0.000	0.012	0.000	0.000	0.000	0.000	0.000	0.013	0.000	0.005
Sep	0.000	0.000	0.000	0.000	0.015	0.000	0.000	0.047	0.000	0.000	0.018	0.000	0.005
Oct	0.000	0.005	0.000	0.136	0.050	0.000	0.010	0.046	0.000	0.000	0.045	0.015	0.021
Nov	0.000	0.000	0.000	0.024	0.033	0.000	0.012	0.044	0.000	0.000	0.029	0.000	0.016
Dec	0.041	0.026	0.000	0.028	0.030	0.034	0.066	0.000	0.000	0.037	0.046	0.000	0.030
Total	0.016	0.011	0.000	0.026	0.027	0.004	0.045	0.038	0.00	0.022	0.035	0.002	0.020

¹ Calculated from only four observed hauls where three harbor porpoises were taken on one haul.

² Bycatch rates from the "Total Area" was calculated from the sum of the following MAs: Southern New England, Massachusetts Bay, Mid-Coast, Offshore, Stellwagen Bank, Western Gulf of Maine, and outside.