

DRAFT

Omnibus Essential Fish Habitat Amendment 2

**Amendment 14 to the Northeast Multispecies FMP
Amendment 14 to the Atlantic Sea Scallop FMP
Amendment 4 to the Monkfish FMP
Amendment 3 to the Atlantic Herring FMP
Amendment 2 to the Red Crab FMP
Amendment 2 to the Skate FMP
Amendment 3 to the Atlantic Salmon FMP**

Including a

Draft Environmental Impact Statement

**Prepared by the
New England Fishery Management Council
In cooperation with the
National Marine Fisheries Service**

This document contains excerpts from the DEIS related to description of recreational fishery and analysis of recreational fishing impacts. Additional information may be presented at the 1/22 meeting if available.

Updated January 13, 2014

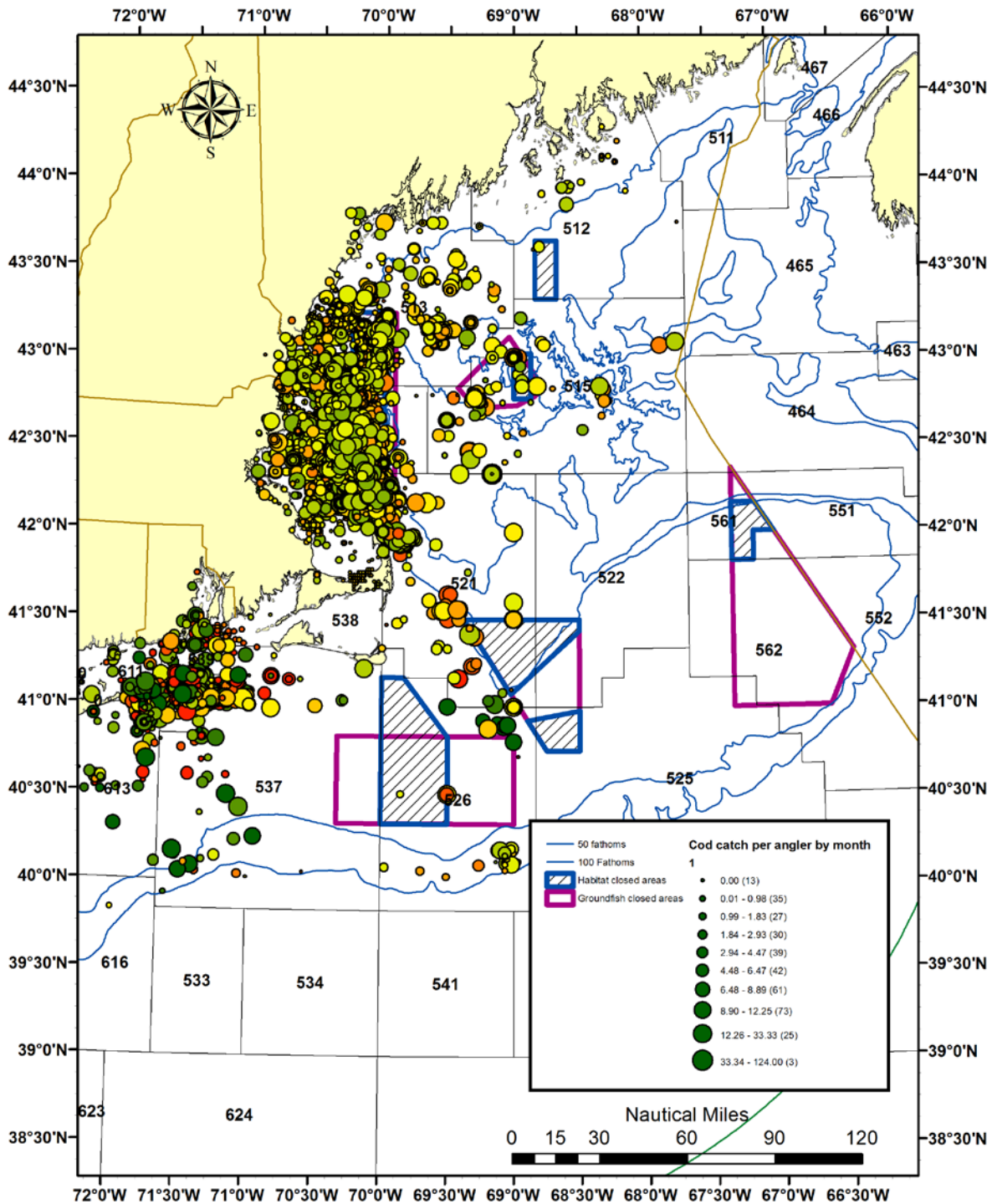
Description of recreational groundfish fishery in affected environment section

Recreational fishing for groundfish is focused primarily Atlantic cod, pollock, haddock, red hake, and winter flounder, although based on comments made during August 2013 informational meetings, redfish are increasingly important to the charter sector as well. Recreational vessels have a closed season from November through April 15, bag limits for some species, and minimum size limits by species. Recreational fishing is conducted by shore-based anglers and anglers with private boats, as well as by anglers aboard party/charter vessels. Amendment 16 to the Multispecies FMP (2009) includes a detailed description of this fishery through 2007. In the New England region, recreational groundfishing is concentrated in the western Gulf of Maine and off the Rhode Island coast (see map below).

Discussion questions:

- *What are key aspects of the recreational groundfish fishery that should be provided as background in the DEIS?*
- *What are the key regulations that govern recreational groundfish fishing that should be noted in this section in order to evaluate impacts?*
- *How does the recreational groundfish fishery overlap with other recreational fisheries? Other recreational fisheries discussed in this background section include bluefish, summer flounder/scup/black sea bass, and tilefish.*
- *What additional maps or figures might be helpful?*

Map 1 – Trip location and cod catch per angler as reported on 2008-2012 Vessel Trip Reports. Increasing circle size indicates amount of catch, and circle color from dark green to red indicates month of the year, starting in January.



Preliminary analysis - Impacts of Stellwagen DHRA reference areas on recreational fishing

Alternative 3 would designate the Stellwagen DHRA with a reference area along the southern border (Option A), a reference area shifted five nm north (Option B), or no reference area (Option C).

Option A excludes recreational groundfish fishing from the southern DHRA reference area. Figure 1 summarizes the number of trips in this southern reference area, grouped by whether groundfish were caught on the trip or not. As can be seen from the graph, the majority of trips reported to have occurred within the southern reference area land at least one groundfish. The results suggest that almost all trips occurring within the reference area would be affected to some extent by this alternative.

Figure 2 presents the total revenue estimated to have been generated from trips within the southern reference area, delineated by a ranked grouping of 5 permit blocks. The graph indicates that the 5 permits with the highest revenue estimated to fall within the southern reference area account for 63% of the total revenue estimates in 2011 and 2012. The revenue in 2010 seems to have been only slightly more diffuse, with 51% of the revenue share generated by the top 5 permits.

Figure 3 indicates the average percentage of each ranked group's total revenue, including commercial revenue, that the recreational revenue within the southern reference area represents. Group 1 generates the highest annual revenue within the reference area, and the percent of total revenue that this fishing represents remains relatively constant 2010 – 2012, between 20-30% of total revenue each year. When 2012 is compared to 2010, there are fewer groups in 2012, and for the groups with the smallest revenue the percentage of total revenue coming from the reference area is lower.

Table 1 presents a longer-term summary of trips falling within the southern reference area. The statistics indicate that a slightly higher number of permit holders are currently using the reference area when compared to the longer-run averages, with an annual average consistently less than 40 permits. However, most of the other statistics are lower in the last three years when compared to longer run averages. In general, there does not seem to be a recent substantial increase in dependence on the reference area from historical patterns.

Taken together, the data suggest that the southern reference area is used intensively, and consistently, by a relatively small number of charter and party permit holders. The recreational revenue generated from the trips in southern reference area catching groundfish is a substantial portion of these individual's total fishing income, and thus the exclusion of these individuals from the reference area is likely to have a large negative impact for these individuals, when compared to no action, or to a designation of the research area without the reference area (Option C).

Option B excludes recreational groundfish fishing from the northern DHRA reference area. Figure 4 graphs the total number of charter and party boat trips in the northern reference area,

grouped by whether or not at least a single groundfish was caught on the trip. The vast majority of trips reported to fall within the northern reference area catch groundfish.

Figure 5 presents the total revenue estimated to have been generated from trips within the northern reference area, delineated by a ranked grouping of 5 permit blocks. The graph indicates that the 5 permits with the highest revenue estimated to fall within the northern reference area account for 63%, 62%, and 51% of the total revenue estimates in 2012, 2011, and 2010 respectively. This is a very similar pattern to the estimates for the southern reference area, although the total revenues in 2012 are roughly \$125,000 higher in the northern area.

Figure 6 graphs the average percentage of each ranked group's total revenue, including commercial revenue, that the recreational revenue within the northern reference area represents. The importance of the northern reference area seems to be increasing for individuals fishing in this area, as defined by the percentage of total revenue generated. This seeming trend is in contrast to the southern reference area in which the percentages were relatively constant across 2010 – 2012.

Table 2 details the longer-term trends in trips within the northern reference area. Although the number of permit holders is lower than the number fishing within the southern reference area, the other statistics are consistently higher for the northern, when compared to the southern, reference area.

When compared to No Action or Option C, Option B is expected to generate a large negative impact for the charter and party boats fishing within these waters. Although the VTR data are unlikely to classify trips inside versus outside these small reference area with any precision, they should accurately represent general trends of intensity. Thus, although some of the trips reporting latitude/longitude within the northern reference area likely expended effort in the southern reference area and vice versa, the relative magnitude should indicate which of the areas is more heavily fished. In all indicators, save the number of permit holders, the northern reference area looks to be more intensively fished when compared to the southern reference area. The magnitude of the negative impact of Option B on recreational fishermen is thus expected to be larger than Option A.

Option C would not restrict recreational groundfishing and is thus expected to have similar impacts to No Action in terms of the party and charter recreational groundfishing industry. For reference, Table 3 summarizes recreational revenue for the entire Stellwagen DHRA area, including both reference areas and the portion of the DHRA outside the reference areas.

Discussion questions:

- *Does this analysis make sense to you?*
- *What other information would you like to see included, if possible?*

Figure 1 – The total number of recreational trips (party and charter) reported within the southern reference area, grouped by whether at least one groundfish was caught on the trip

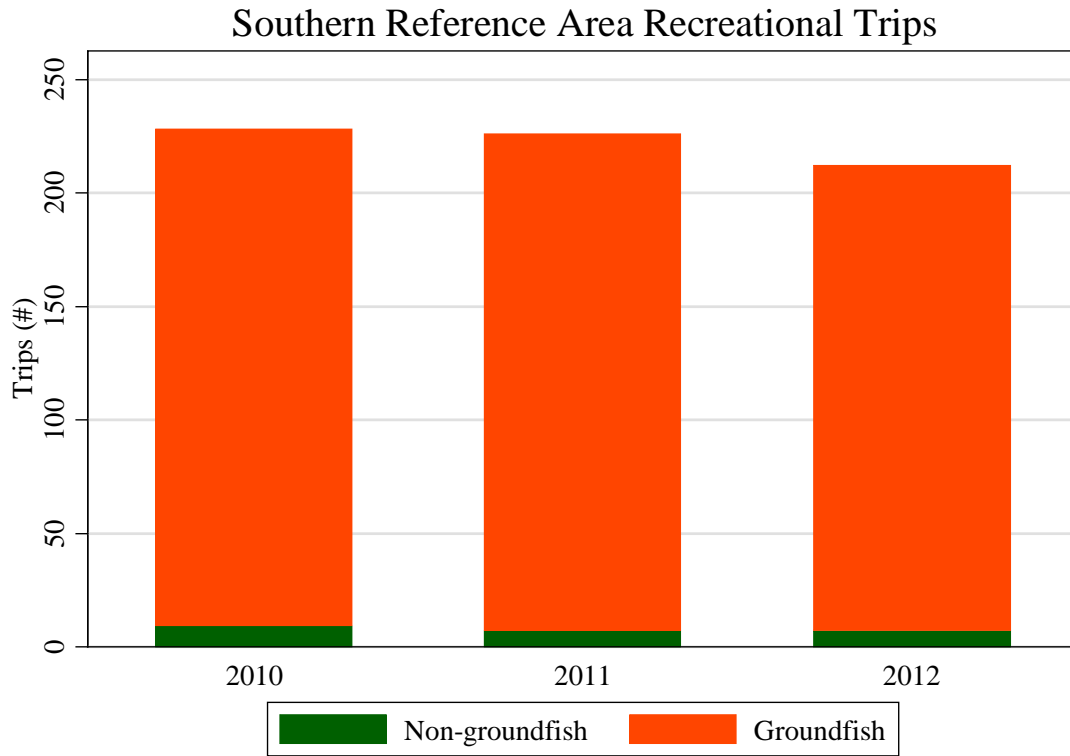


Figure 2 – Recreational revenue estimated to have been generated by trips reported within the southern reference area, with groups representing blocks of 5 permits, ranked by the revenue estimated to fall within the reference area. Note: Groups do not necessarily consist of the same individuals across years.

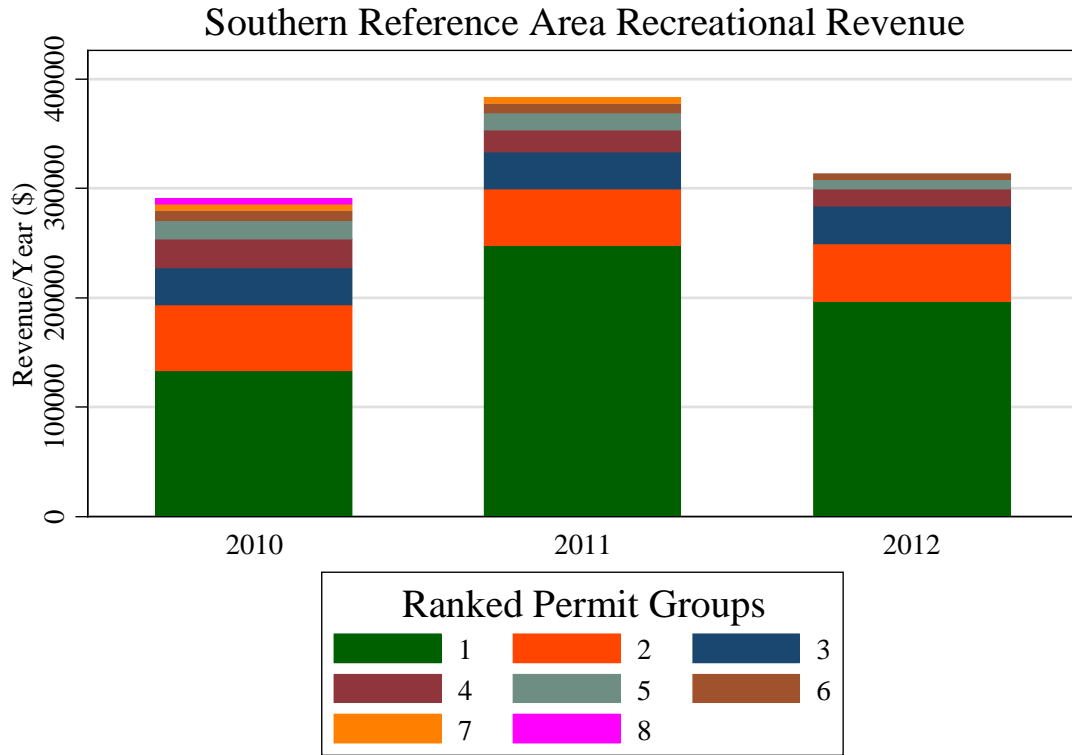
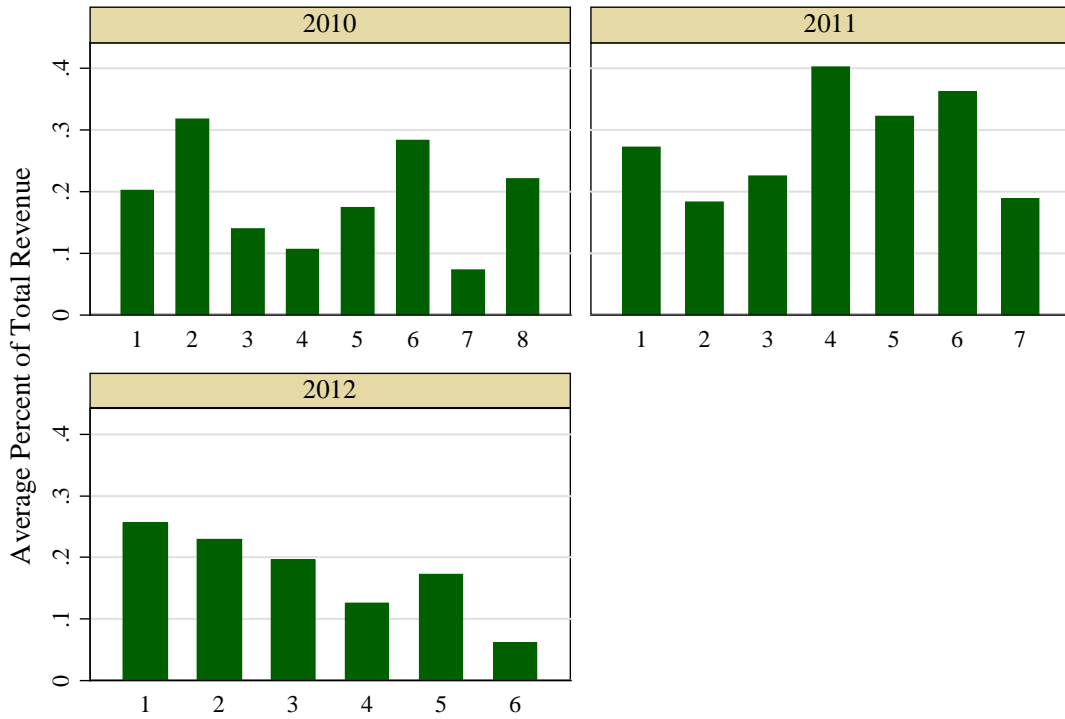


Figure 3 – Percent, averaged across permits, of each ranked group’s total revenue (including commercial revenue) estimated to have been generated by recreational trips within the southern reference area



Graphs by year

Figure 4 – The total number of recreational trips (party and charter) reported within the northern reference area, grouped by whether at least one groundfish was caught on the trip

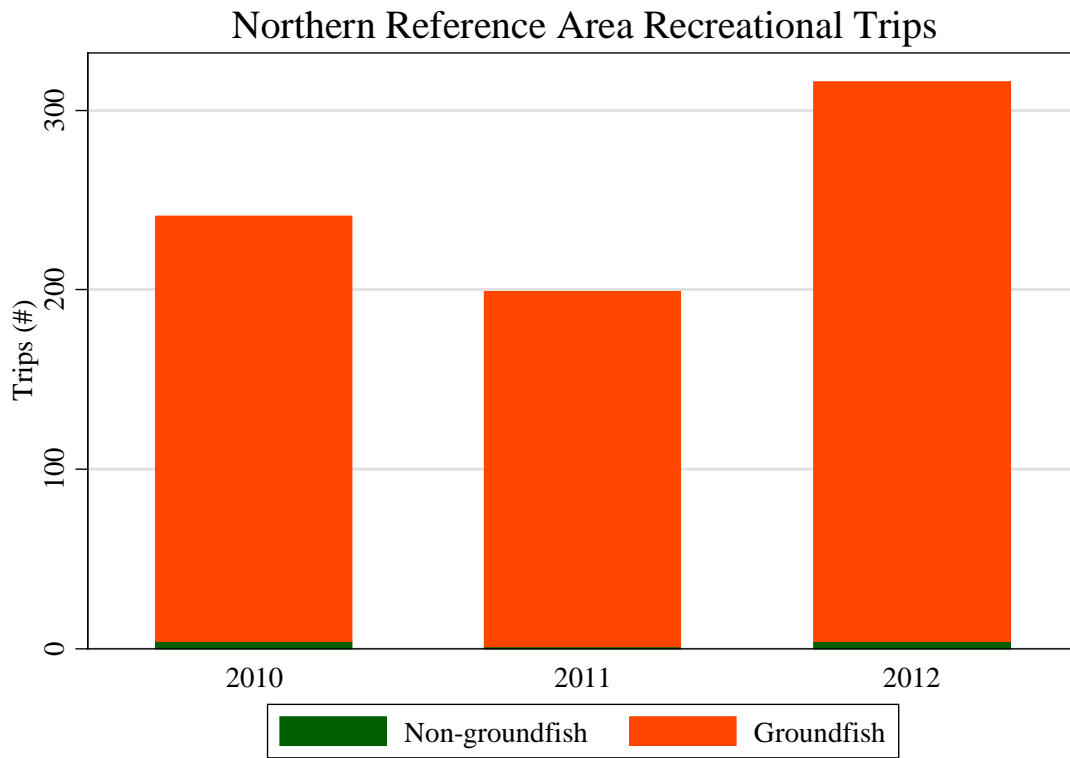


Figure 5 – Recreational revenue estimated to have been generated by trips reported within the northern reference area, with groups representing blocks of 5 permits, ranked by the revenue estimated to fall within the reference area. Note: Groups do not necessarily consist of the same individuals across years

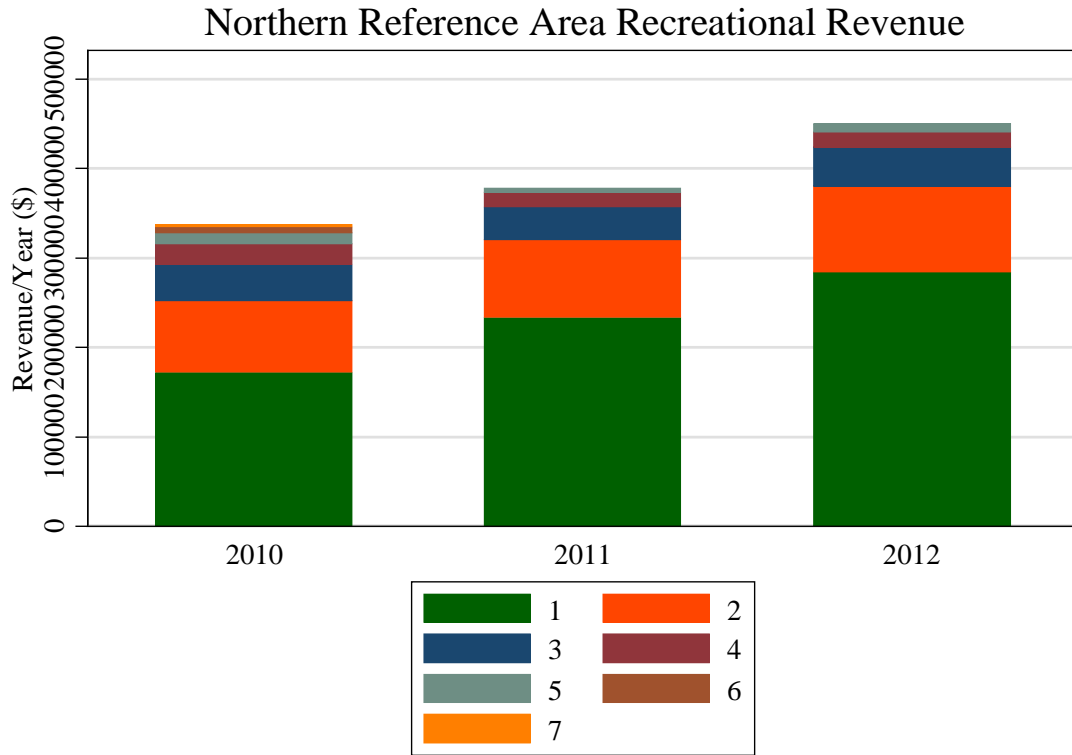
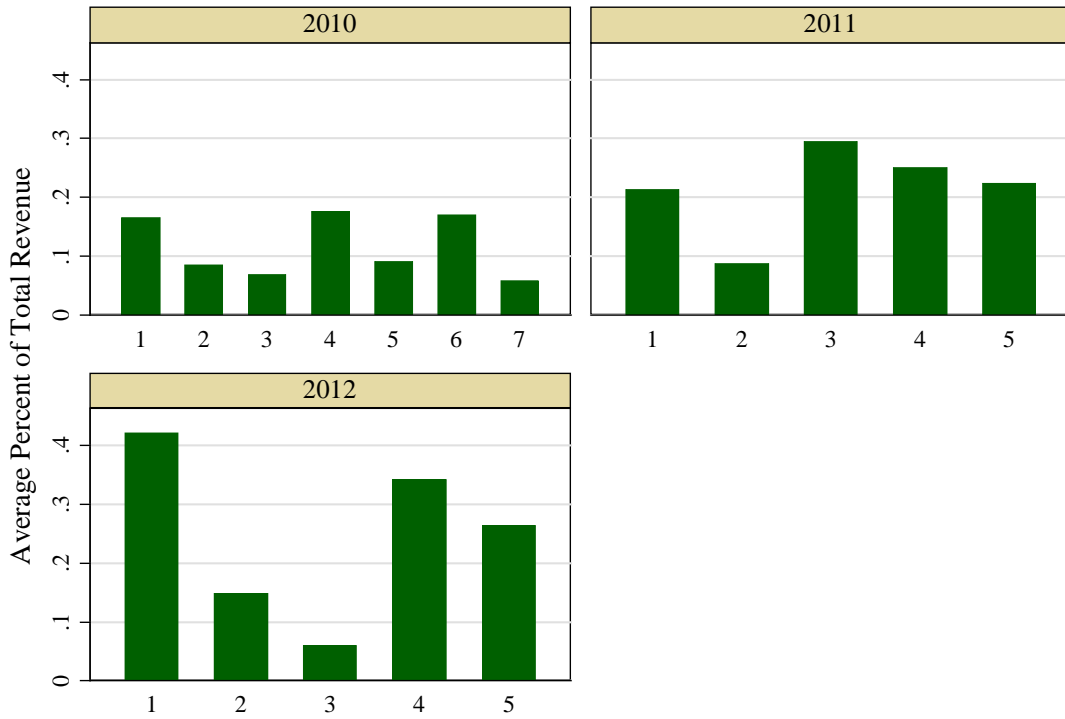


Figure 6 – Percent, averaged across permits, of each ranked group’s total revenue (including commercial revenue) estimated to have been generated by recreational trips within the northern reference area



Graphs by year

Table 1 – Recreational fishing revenue currently associated with the Southern Reference area. Revenue generated from MRIP data, using average annual revenue per angler by state. Annual Revenue is the mean annual revenue, Individuals represents the average number of permit holders fishing in the area, and Anglers represents the Average number of anglers per year. All other statistics are estimates at the trip level. Dashes indicate information censored due to privacy concerns.

| Area | Years | Annual Revenue | Individuals | Anglers | Mean Revenue | Median Revenue | SD Revenue |
|--------------------|-------------|----------------|-------------|----------|--------------|----------------|------------|
| Southern Reference | 2006 - 2012 | 387,262.61 | 34.14 | 2,094.43 | 1,742.18 | 1,117.74 | 2,215.63 |
| Southern Reference | 2008 - 2012 | 349,076.66 | 35.00 | 1,887.40 | 1,578.10 | 1,117.74 | 1,895.38 |
| Southern Reference | 2010 - 2012 | 328,839.68 | 36.67 | 1,768.00 | 1,481.26 | 1,117.74 | 1,737.60 |

Table 2 – Recreational fishing revenue currently associated with the Northern Reference area. Revenue generated from MRIP data, using average annual revenue per angler by state. Annual Revenue is the mean annual revenue, Individuals represents the average number of permit holders fishing in the area, and Anglers represents the Average number of anglers per year. All other statistics are estimates at the trip level. Dashes indicate information censored due to privacy concerns

| Area | Years | Annual Revenue | Individuals | Anglers | Mean Revenue | Median Revenue | SD Revenue |
|--------------------|-------------|----------------|-------------|----------|--------------|----------------|------------|
| Northern Reference | 2006 - 2012 | 556,480.9 | 30.71 | 3,003.00 | 2,077.53 | 1,117.74 | 2,665.28 |
| Northern Reference | 2008 - 2012 | 382,553.7 | 28.80 | 2,060.00 | 1,606.02 | 1,117.74 | 1,948.86 |
| Northern Reference | 2010 - 2012 | 388,290.5 | 29.00 | 2,084.33 | 1,540.84 | 1,117.74 | 1,874.70 |

Table 3 – Recreational fishing revenue currently associated with the entire Stellwagen DHRA. Revenue generated from MRIP data, using average annual revenue per angler by state. Annual Revenue is the mean annual revenue, Individuals represents the average number of permit holders fishing in the area, and Anglers represents the Average number of anglers per year. All other statistics are estimates at the trip level. Dashes indicate information censored due to privacy concerns

| Area | Years | Annual Revenue | Indiv. | Anglers | Mean Revenue | Median Revenue | SD Revenue |
|----------------|-------------|----------------|--------|-----------|--------------|----------------|------------|
| StellwagenDHRA | 2006 - 2012 | 2,101,074 | 72.86 | 12,070.71 | 2,466.05 | 1,117.74 | 2702.337 |
| StellwagenDHRA | 2008 - 2012 | 1,785,023 | 70.6 | 10,352 | 2,252.11 | 1,117.74 | 2429.294 |
| StellwagenDHRA | 2010 - 2012 | 1,767,647 | 71.67 | 10,052.33 | 2,213.25 | 1,117.74 | 2443.019 |

Additional summary table – recreational fishing effort by area

These tables are based on Vessel Trip Reports submitted by Charter or Party recreational vessels. Each VTR includes a single fishing position (latitude and longitude); if this point fell within the boundaries of a particular management area, the trip was considered to have occurred in the area. In reality, on a given trip, vessels may be fishing both within and outside an area. Revenues were assigned to each trip based on the number of anglers per trip as reported VTR, with the charter fee paid per angler taken from the MRIP database. Specifically, the 2011 price paid per angler was used; these values vary by state.

The Cashes Ledge results are for the existing Cashes Ledge habitat and groundfish closures combined. Although some recreational fishing has been reported for the current Jeffreys Bank closed area, the data cannot be presented due to privacy concerns. In Closed Areas I and II, dashes indicate information censored due to privacy concerns.

Table 4 – Recreational fishing revenue associated with various management areas. Revenue generated from MRIP data, using average annual revenue per angler by state. Annual Revenue is the mean annual revenue, Individuals represents the average number of permit holders fishing in the area, and Anglers represents the average number of anglers per year. All other statistics are estimates at the trip level.

| Eastern Gulf of Maine | | | | | | | |
|-----------------------|-------------|----------------|-------------|----------|--------------|----------------|------------|
| Area | Years | Annual Revenue | Individuals | Anglers | Mean Revenue | Median Revenue | SD_Revenue |
| EMaineL | 2006 - 2012 | 1249.764 | 0.571429 | 7.857143 | 2187.088 | 1970.975 | 2206.69 |
| EMaineL | 2008 - 2012 | 1719.84 | 0.6 | 10.8 | 2866.4 | 3430.45 | 2129.654 |
| EMaineL | 2010 - 2012 | 1722.917 | 0.666667 | 10.33333 | 2584.375 | 2584.375 | 2931.488 |
| Central Gulf of Maine | | | | | | | |
| Area | Years | Annual Revenue | Individuals | Anglers | Mean Revenue | Median Revenue | SD Revenue |
| Platts Bank | 2006 - 2012 | 29355.19 | 3.142857 | 197.4286 | 1360.836 | 1193.2 | 583.5898 |
| Platts Bank | 2008 - 2012 | 25704.98 | 3 | 173.2 | 1460.51 | 1416.925 | 663.2817 |
| Platts Bank | 2010 - 2012 | 22507.52 | 3 | 152.3333 | 1534.603 | 1491.5 | 731.2774 |
| Cashes Ledge | 2006 - 2012 | 70130.55 | 5.14 | 405.86 | 4631.26 | 4537.7 | 2776.84 |
| Cashes Ledge | 2008 - 2012 | 66321.63 | 4 | 374 | 4670.54 | 5029.83 | 2589.67 |
| Cashes Ledge | 2010 - 2012 | 62794.66 | 4.67 | 360 | 3844.57 | 4098.38 | 2321.80 |
| Western Gulf of Maine | | | | | | | |
| Area | Years | Annual Revenue | Individuals | Anglers | Mean Revenue | Median Revenue | SD Revenue |

Habitat Omnibus Amendment DEIS – draft sections relative to recreational fishery

| BigelowL | 2006 - 2012 | 1,118,180.22 | 41.14 | 10,085.86 | 2,196.20 | 1,790.25 | 1,736.98 |
|---|--------------|-----------------------|--------------------|----------------|---------------------|-----------------------|-------------------|
| BigelowL | 2008 - 2012 | 1,011,674.03 | 40.20 | 9,287.00 | 2,215.67 | 1,875.50 | 1,698.56 |
| BigelowL | 2010 - 2012 | 915,081.68 | 36.67 | 8,174.00 | 2,314.71 | 2,046.00 | 1,723.44 |
| BigelowS | 2006 - 2012 | 796,808.50 | 35.14 | 7,903.57 | 2,022.36 | 1,534.50 | 1,715.14 |
| BigelowS | 2008 - 2012 | 780,816.36 | 35.20 | 7,712.40 | 2,118.33 | 1,705.00 | 1,734.67 |
| BigelowS | 2010 - 2012 | 687,350.03 | 32.67 | 6,629.00 | 2,226.84 | 1,875.50 | 1,763.07 |
| WGOM | 2006 - 2012 | 4,401,368.01 | 104.29 | 33,601.14 | 2,284.56 | 1,117.74 | 2,122.40 |
| WGOM | 2008 - 2012 | 3,836,231.91 | 99.20 | 29,995.40 | 2,159.80 | 1,117.74 | 1,905.85 |
| WGOM | 2010 - 2012 | 3,581,579.90 | 97.33 | 28,521.67 | 2,081.10 | 1,117.74 | 1,855.08 |
| Georges Bank | | | | | | | |
| Area | Years | Annual Revenue | Individuals | Anglers | Mean Revenue | Median Revenue | SD Revenue |
| CAI | 2006 - 2012 | 13,120.14 | 1.29 | 70.43 | 3,401.52 | 1,117.74 | 3,141.37 |
| CAI | 2008 - 2012 | 17,511.26 | 1.00 | 94.00 | 4,169.35 | 4,098.38 | 3,166.64 |
| CAI | - | - | - | - | - | - | - |
| CAII | - | - | - | - | - | - | - |
| CAII | - | - | - | - | - | - | - |
| CAII | - | - | - | - | - | - | - |
| Great South Channel and Southern New England | | | | | | | |
| Area | Years | Annual Revenue | Individuals | Anglers | Mean Revenue | Median Revenue | SD Revenue |
| GreatSChannelL | 2006 - 2012 | 80,829.54 | 9.14 | 459.14 | 2,595.44 | 1,117.74 | 2,598.89 |
| GreatSChannelL | 2008 - 2012 | 35,831.25 | 6.80 | 198.40 | 1,905.92 | 931.45 | 2,161.29 |
| GreatSChannelL | 2010 - 2012 | 9,438.69 | 4.67 | 50.67 | 884.88 | 838.31 | 428.48 |
| CoxLedge | 2006 - 2012 | 105,303.00 | 12.00 | 974.14 | 2,340.07 | 2,034.52 | 1,755.97 |
| CoxLedge | 2008 - 2012 | 109,873.91 | 11.40 | 1,016.00 | 2,357.81 | 2,034.52 | 1,765.19 |
| CoxLedge | 2010 - 2012 | 106,187.16 | 12.33 | 971.00 | 2,123.74 | 1,820.36 | 1,615.31 |
| GreatSChannelS | 2006 - 2012 | 64,469.76 | 6.00 | 365.86 | 3,049.25 | 1,117.74 | 2,709.01 |
| GreatSChannelS | 2008 - 2012 | 31,024.97 | 4.20 | 172.60 | 2,543.03 | 1,117.74 | 2,455.78 |
| GreatSChannelS | 2010 - 2012 | 6,458.05 | 2.67 | 34.67 | 1,019.69 | 931.45 | 462.06 |
| NantucketShoalsS | 2006 - 2012 | 40,207.49 | 6.43 | 221.57 | 1,481.33 | 1,117.74 | 1,605.44 |
| NantucketShoalsS | 2008 - 2012 | 36,047.85 | 5.40 | 195.80 | 1,802.39 | 931.45 | 2,016.68 |
| NantucketShoalsS | 2010 - 2012 | 9,252.40 | 3.00 | 49.67 | 957.15 | 931.45 | 184.45 |
| GSC GMA | 2006 - 2012 | 96,898.40 | 5.14 | 538.14 | 4,743.28 | 5,588.70 | 2,772.29 |
| GSC GMA | 2008 - 2012 | 46,132.36 | 3.60 | 251.40 | 4,271.51 | 5,047.22 | 2,834.63 |
| GSC GMA | 2010 - 2012 | 24,466.09 | 3.33 | 131.33 | 2,823.01 | 1,117.74 | 2,193.29 |
| NantucketShoalsL | 2006 - 2012 | 55,776.01 | 7.71 | 305.14 | 1,323.50 | 931.45 | 1,428.93 |

Habitat Omnibus Amendment DEIS – draft sections relative to recreational fishery

| | | | | | | | |
|------------------|-------------|-----------|------|--------|----------|--------|----------|
| NantucketShoalsL | 2008 - 2012 | 49,050.89 | 6.80 | 265.60 | 1,459.85 | 931.45 | 1,693.14 |
| NantucketShoalsL | 2010 - 2012 | 22,603.19 | 5.00 | 121.33 | 1,027.42 | 931.45 | 828.13 |