

# **Characterization of the Maine lobster fishery using voluntary survey methods**

## **Introduction:**

The Department of Marine Resources (DMR) has completed three voluntary comprehensive gear surveys in the past (2005, 2006, and 2008) with various sub-groups of the lobster fishery to establish and track the baseline gear configurations (number of traps strung together) and density of gear in different areas seasonally. These surveys proved useful in models aimed at determining areas of importance with regards to entanglement risk to endangered large whales and are allowing DMR to advocate for targeted regulations based on these baseline calculations of local fishery practices. In late 2009 and early 2010 DMR undertook additional survey initiatives to update the baseline characterizations of the fisheries and perform further analyses of the information received to update models and assist in efforts to target regulations aimed at reducing the risk of entanglement in vertical lines. This included two types of fishery survey methods: annual logs and gear use surveys.

Annual Logs were sent out to all lobster license holders with their license renewal materials for the 2009 fishing year. These logs had over a 35% return rate (conservative estimate because it does not remove latent licenses from the pool of respondents) and asked respondents to document the maximum number of traps and vertical lines fished per month in different fishing areas and distances from shore. The gear use survey, a more in-depth gear survey, was also mailed to all license holders for the 2009 fishing season in early 2010. These surveys had a 9% return rate (also a conservative estimate) and documented the configurations of gear fished in different areas and months, as well as types of ropes used and typical fishing practices. Both of these surveys are being used by National Marine Fisheries Service (NMFS) and others in models that calculate co-occurrence between whales and gear for locations and seasons of vertical line regulations in the Draft Environmental Impact Statement due out in 2013.

## **Methods/Results:**

Both the Annual Logs (Figure 1) and Gear Surveys (Figure 2) were sent to all license holders, either through the license renewal process or as a direct mailing. As surveys were returned they were entered directly into an Access database. The information from the surveys was pooled into usable geographic and regulatory zones as depicted in Figure 3. In general, data was broken up by Lobster Management Zone and then by regulatory zones, including the exemption area, non-exempt state waters, and federal waters (further broken into 3-12 miles from shore and beyond 12 miles from shore for the Gear Surveys). Response results are summarized in Table 1. Because the Annual Log dataset was the more robust of the two, the responses for that survey are further broken down in Tables 2-8. The results found in these tables detail the number of respondents that reported fishing in each area per month, how many traps and endlines were used, the average trap configuration, and average pieces of gear per fisherman. Additionally, seasonal latency depicts the number of fishermen that reported not fishing at all in a particular month.

There are some general trends that span across the region even while gear configurations are different depending on the Lobster Management Zone. First, fishermen within an area are more likely to fish longer configurations of gear in the winter and trawl lengths also increase

farther from shore. The highest number of traps fished per fishermen is done by those in federal waters, followed by exempt (there is less seasonal change in traps fished offshore), while the highest number of endlines per fishermen is in the exempt waters (peaking at 409 per fishermen in Zone D in July) where shorter configurations are used. Seasonal latency decreases farther offshore (fishermen utilizing federal waters are more likely to fish year round) and there is a high amount of trap latency throughout (lowest percentages being 64%, 62%, 64%, 69%, 68%, 77%, and 66% for zones A, B, C, D, E, F, and G respectively), meaning there are far more trap tags being purchased than are used at any given time in the water. The peak months for active fishermen in the exemption area is July and August, September through November for non-exempt state waters, and November through January in federal waters. The shortest configurations set in regulated waters (non-exempt state and federal zones) occur in zones E, D and B (1.4 - 4.8 traps, 1.5 – 2.8 traps, and 1.7 – 2.8 traps respectively), while the longest configurations are in Zones A (2.2-4.7 traps) and F (2.8 – 6.5). Lastly, the range of average traps and endlines fished per fisherman across months in each zone’s regulated waters is as follows with Zone C fishing the most endlines per fishermen with a high number of traps each:

|          | <b><u>Avg. Traps Fished/Fishermen</u></b> | <b><u>Avg. Endlines Fished/Fishermen</u></b> |
|----------|---|--|
| <b>A</b> | 190-564                                   | 62-127                                       |
| <b>B</b> | 192-408                                   | 94-163                                       |
| <b>C</b> | 293-535                                   | 128-291                                      |
| <b>D</b> | 223-489                                   | 109-273                                      |
| <b>E</b> | 132-438                                   | 65-186                                       |
| <b>F</b> | 80-556                                    | 20-170                                       |
| <b>G</b> | 198-425                                   | 85-171                                       |

An important piece of data that was collected in the Gear Surveys but not the Annual Logs was the exact configuration of traps being fished by each fisherman in different areas and months of the year. The gear configuration data is an important piece to determining the impact of potential future regulations on the fishery. For example, recent conversations have centered around reducing the risk of entanglement to large whales by decreasing the number of vertical or endlines in the water. Some of the solutions have been to put in regulations for minimum trawl lengths. This survey tells managers how gear is currently being fished and therefore, helps determine what the impact of the proposed minimum trawl regulations will be for the fishery, as well as if the reduction is enough to benefit endangered whales. Figures 4-23 display the configurations reported for regulated areas in each zone and what percentage of the reported gear is fished in that particular configuration. Some of the same trends are seen in these figures, including the tendency for trawls to increase further offshore, as well as regional differences in configurations (longer configurations in Zones A, F and G and short sets of gear in C and D).

The next step, after summarizing the data, was to calculate an extrapolated number of endlines that is being used by a given area per month using both the Annual Log and Gear Survey data. This process requires the scaling of the information reported by the survey participants to represent the entire industry. The first step in this process is to determine the number of active industry participants in each zone per month. An outside data source was used to determine these numbers, the 100% dealer reporting database that is maintained at DMR. In

this dataset, every dealer in the State of Maine that purchases lobsters must record the license number of the seller and number of pounds bought. Therefore, this database captures every lobster sold to a dealer in Maine and with it the license number of the individual that caught that lobster. The only individual fishermen that are missed by using this dataset are those that do not sell to or are not a licensed dealer. Licenses were compiled by month for each Lobster Management Zone, yielding a measure of the number of active fishermen that is automatically corrected for both latent licenses (licenses not fished) and seasonal latency (those that fish only seasonally). To achieve totals of truly active fishermen, all licenses that sold fewer than 100 pounds of lobsters in a month were removed. Table 9 displays the entire output for the 2009 latency calculations. The calculations were done for the entire population of license holders in each zone (“state and federal”), as well as those that hold a state lobster license only (“state only”). The output includes the total number of licenses sold in that zone, the number of licenses selling greater than 100 pounds of lobsters, the total pounds sold and the percent of licenses sold in that zone that are active in the particular month. Latency follows similar trends to the gear use data presented above. The percentage of licenses being used is at its greatest during August and September with a higher latency being expressed among those holding only state permits. This is likely a reflection of the seasonal latency in the fishery; those holding state permits fish closer to shore in the summer/fall and then pulling traps up while federal license holders chase the lobsters farther offshore in the fall and winter.

The estimated number of endlines by month in each area (exempt, non-exempt state waters and federal waters for all seven Lobster Management Zones) was calculated the same for both the Annual Logs and the Gear Surveys. First, an average number of endlines per fishermen in a given area and month was calculated. In the Annual log data this was a simple division of the number of endlines reported divided by the number of respondents. The average number of endlines per fishermen for the Gear Survey was calculated by totaling the number of endlines in an area using the reported number of traps fished and their respective gear configurations and then dividing this number by the number of respondents. The resulting average number of endlines fished per fishermen in that area and month was then multiplied by the calculated number of active fishermen in the zone. This number was reached by multiplying the total number of licenses sold in that zone by the corresponding latency calculation (or percent of active fishermen). In the exempt and non-exempt state waters areas the state only latency calculation was used, while the total latency was used for federal waters calculations. The resulting numbers of endlines are displayed in Tables 10 and 11 and Figures 24 and 25. The tables also contain an estimation of endlines per square kilometer based upon measurements of the sizes of the corresponding areas. The highest total of endlines in the state occurs in August and reaches a level of 993,832 lines, as reported by the Annual Log data. The Gear Survey reports a level of 994,758 lines in the same period (a difference of only 926 endlines). The lowest levels in the state are reported during April at 213,411 endlines (as reported by the Annual logs). In general, similar trends are followed by both the Annual logs and Gear Surveys. Endlines are most dense in the exempt waters and peak in August and fall in the winter months. The non-exempt state waters peak at a lower level slightly later in October. There is a discrepancy between the two survey types in this area, with Zone A exhibiting a much higher peak in the Gear Survey data (up to over 80,000 in the fall versus around 25,000). This is likely due to make-up of the respondents that reporting configurations in the Gear Surveys. Since the Annual logs yielded an over 40% return rate in this zone (versus 10% for the Gear Surveys), it is

likely that the Annual log data is a better representation of what is happening in the zone with regards to endline densities. Lastly, the trends in federal waters are very similar between the two surveys with peak endline densities occurring during the winter months (January) while lobsters are offshore and decreasing drastically during the summer when the fishing effort moves inside of state waters.

The Gear Surveys also yielded data on the types of gear used, as well as common fishing strategies practiced regionally. Table 12 is a summary of endline data, including minimum, maximum, and average lengths, depths and the resulting ratios, diameters of endlines, the use of toggles and highflyers, and the percentage of float rope used on an endline. The lowest percent of float rope used on an endline was seen in the southern zones and then moves offshore. This is likely the result of the more eastern zones trying to give additional lift to the bottom of their endlines to reduce chafing against the rockier bottom habitats in these zones. There was a mixed use of toggles with more toggles being used in eastern zones to deal with the increased tidal currents here. Highflyers were more likely to be used in the southern zones, likely to contend with mobile gear in these areas. Table 13 looks primarily at the diameter of rope used as endlines and what percentage of gear is rigged by size. The most common diameter of rope appears to be 3/8" with a range of ropes from 5/16" to 7/16". The southern zones are more likely to use a smaller diameter of rope with larger percentages of 5/16", while the eastern zones are more likely to use the thicker 7/16" ropes.

## **Conclusions**

The solid return rate for the Annual Logs makes it the best data set to use for baseline calculations of endlines in different areas by month. This dataset lacks specific information on the configurations used in each zone, which is an important contribution made by the Gear Survey dataset. Using these two resources combined makes them a powerful tool for characterizing the lobster fishery and making assessments about the impacts of potential regulations on both the fishery and the likelihood for success at risk mitigation for the entanglement of endangered whales. DMR has taken steps to assess the accuracy of these extrapolations by independently measuring buoy densities in the non-exempt state waters of all seven Lobster Management Zones. The final results of that project will be appended to this report when finished. Any questions or data requests regarding these datasets should be directed to Erin Summers at DMR by either phone (207) 633-9556 or email [erin.l.summers@maine.gov](mailto:erin.l.summers@maine.gov).

**Gear Density Annual Log for Atlantic Large Whale Take Reduction Plan**  
**Please Return with your License Renewal Materials**

This log will be used to determine the density of gear that exists in different fishing areas. The information will help managers determine if, where and how regulations are needed in an effort to avoid blanket measures that effect the entire industry.

**License #** \_\_\_\_\_ For more information please contact Erin Summers (207) 633-9556 or Sarah Cotnoir (207) 624-6596

| Gear fished in 2009 |     | Exempted State Waters<br>(float groundline allowed) |                           | Non-exempted State Waters "Sliver"<br>(float groundline prohibited) |                           | Federal Waters<br>(float groundline prohibited) |                           |
|---------------------|-----|---|---------------------------|---|---------------------------|---|---------------------------|
|                     |     | Max traps fished                                    | Max vertical lines fished | Max traps fished  | Max vertical lines fished | Max traps fished                                | Max vertical lines fished |
| Example 1           | A   | 0   | 0                         | 200   | 100                       | 400   | 100                       |
| Example 2*          | A/B | 0   | 0                         | 100/100   | 50/50                     | 300/100   | 75/25                     |
| January             |     |   |                           |   |                           |   |                           |
| February            |     |   |                           |   |                           |   |                           |
| March               |     |   |                           |   |                           |   |                           |
| April               |     |   |                           |   |                           |   |                           |
| May                 |     |   |                           |   |                           |   |                           |
| June                |     |   |                           |   |                           |   |                           |
| July                |     |   |                           |   |                           |   |                           |
| August              |     |   |                           |   |                           |   |                           |
| September           |     |   |                           |   |                           |   |                           |
| October             |     |   |                           |   |                           |   |                           |
| November            |     |   |                           |   |                           |   |                           |
| December            |     |   |                           |   |                           |   |                           |

**Instructions:** Please fill out the above table to the best of your ability for how much gear you fished in each month of 2009. For each month please fill in the maximum number of traps and vertical lines (also called endlines and buoy line) that you fished in each of the identified areas separately (see example 1). If you did not fish in a month please indicate that with a zero. If you return this form before the end of 2009 leave the remaining months blank.

\* If you fished in more than one zone please identify both zones in the "Zone" column separated by a slash (ie A/B), then identify the number of traps and vertical lines you fished in each area for each zone separated by the same slash as is demonstrated in example 2.

Print Name \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

Figure 1. The Annual log that was sent to the entire lobster fishery with their license renewal materials. The log covers the 2009 fishing season and respondents were asked to fill it out on a voluntary basis. Critical information obtained through this survey was the maximum number of traps and endlines (and therefore average configurations of gear) fished in a given area by month.

Name \_\_\_\_\_  Did Not Fish Zone \_\_\_\_\_ **Please Return By March 15, 2010**

| License #                              | License type |         |         |         | # of trap tags purchased |         |         |         | Replacement tags |         |         |         | Federal |  |  |  |
|--|--------------|---------|---------|---------|--------------------------|---------|---------|---------|------------------|---------|---------|---------|---------|--|--|--|
| Area ID Fished (1-30)                  | January      |         |         |         | February                 |         |         |         | March            |         |         |         |         |  |  |  |
|  | Area #1      | Area #2 | Area #3 | Area #4 | Area #1                  | Area #2 | Area #3 | Area #4 | Area #1          | Area #2 | Area #3 | Area #4 |         |  |  |  |
| a) Configuration #1                    |              |         |         |         |                          |         |         |         |                  |         |         |         |         |  |  |  |
| b) Number traps fished                 |              |         |         |         |                          |         |         |         |                  |         |         |         |         |  |  |  |
| c) Configuration #2                    |              |         |         |         |                          |         |         |         |                  |         |         |         |         |  |  |  |
| d) Number traps fished                 |              |         |         |         |                          |         |         |         |                  |         |         |         |         |  |  |  |
| e) Number of EL/rawl                   |              |         |         |         |                          |         |         |         |                  |         |         |         |         |  |  |  |
| f) Total Number of EL's                |              |         |         |         |                          |         |         |         |                  |         |         |         |         |  |  |  |
| g) Length & diameter of EL (fa/inches) |              |         |         |         |                          |         |         |         |                  |         |         |         |         |  |  |  |
| h) Use toggles (Y/N)                   |              |         |         |         |                          |         |         |         |                  |         |         |         |         |  |  |  |
| i) Use highflyer (Y/N)                 |              |         |         |         |                          |         |         |         |                  |         |         |         |         |  |  |  |
| j) Dist to sec. float                  |              |         |         |         |                          |         |         |         |                  |         |         |         |         |  |  |  |
| k) Length & diameter of GL (fa/inches) |              |         |         |         |                          |         |         |         |                  |         |         |         |         |  |  |  |
| l) Avg soak (days)                     |              |         |         |         |                          |         |         |         |                  |         |         |         |         |  |  |  |
| m) Avg depth fished (fa)               |              |         |         |         |                          |         |         |         |                  |         |         |         |         |  |  |  |
| n) Bottom type                         |              |         |         |         |                          |         |         |         |                  |         |         |         |         |  |  |  |

| Area ID Fished (1-30)                  | April   |         |         |         | May     |         |         |         | June    |         |         |         |
|--|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|  | Area #1 | Area #2 | Area #3 | Area #4 | Area #1 | Area #2 | Area #3 | Area #4 | Area #1 | Area #2 | Area #3 | Area #4 |
| a) Configuration #1                    |         |         |         |         |         |         |         |         |         |         |         |         |
| b) Number traps fished                 |         |         |         |         |         |         |         |         |         |         |         |         |
| c) Configuration #2                    |         |         |         |         |         |         |         |         |         |         |         |         |
| d) Number traps fished                 |         |         |         |         |         |         |         |         |         |         |         |         |
| e) Number of EL/rawl                   |         |         |         |         |         |         |         |         |         |         |         |         |
| f) Total Number of EL's                |         |         |         |         |         |         |         |         |         |         |         |         |
| g) Length & diameter of EL (fa/inches) |         |         |         |         |         |         |         |         |         |         |         |         |
| h) Use toggles (Y/N)                   |         |         |         |         |         |         |         |         |         |         |         |         |
| i) Use highflyer (Y/N)                 |         |         |         |         |         |         |         |         |         |         |         |         |
| j) Dist to sec. float                  |         |         |         |         |         |         |         |         |         |         |         |         |
| k) Length & diameter of GL (fa/inches) |         |         |         |         |         |         |         |         |         |         |         |         |
| l) Avg soak (days)                     |         |         |         |         |         |         |         |         |         |         |         |         |
| m) Avg depth fished (fa)               |         |         |         |         |         |         |         |         |         |         |         |         |
| n) Bottom type                         |         |         |         |         |         |         |         |         |         |         |         |         |

Figure 2. The Gear survey that was direct mailed to the entire lobster fishery for the 2009 fishing season. Participation in the survey was on a voluntary basis. Critical information obtained through this survey included the configurations of gear used regionally in each month and the common fishing practices and gear types used throughout the coast.

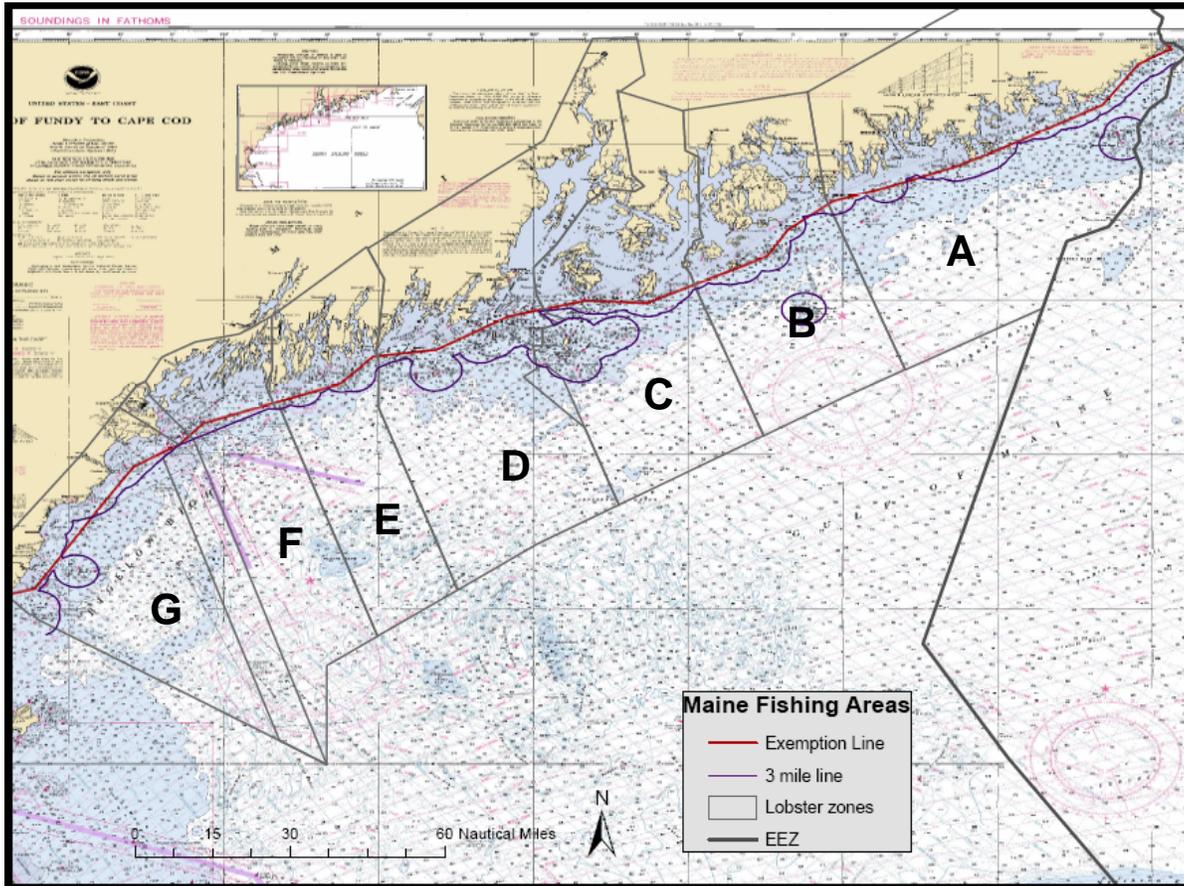


Figure 3. The Lobster Management Zones (A-G) and regulatory lines (exemption and 3-mile lines) used to break down the data in both the Annual logs and Gear surveys (surveys had an additional federal area 12+).

|                       | Zone A      | Zone B     | Zone C      | Zone D      | Zone E     | Zone F      | Zone G     |
|-----------------------|-------------|------------|-------------|-------------|------------|-------------|------------|
| <b>Total licenses</b> | <b>1170</b> | <b>627</b> | <b>1001</b> | <b>1244</b> | <b>565</b> | <b>1024</b> | <b>485</b> |
| <b>Annual Logs</b>    |             |            |             |             |            |             |            |
| Total responses       | 478         | 267        | 401         | 383         | 179        | 253         | 184        |
| % total licenses      | 41%         | 43%        | 40%         | 31%         | 32%        | 25%         | 38%        |
| Federal               | 141         | 91         | 58          | 82          | 46         | 34          | 54         |
| % of responses        | 29%         | 34%        | 14%         | 21%         | 26%        | 13%         | 29%        |
| Non-exempt state      | 155         | 87         | 118         | 149         | 57         | 55          | 62         |
| % of responses        | 32%         | 33%        | 29%         | 39%         | 32%        | 22%         | 34%        |
| Exempt state          | 415         | 258        | 351         | 341         | 167        | 214         | 152        |
| % of responses        | 87%         | 97%        | 88%         | 89%         | 93%        | 85%         | 83%        |
| <b>Gear Surveys</b>   |             |            |             |             |            |             |            |
| Total responses       | 114         | 74         | 84          | 112         | 40         | 92          | 50         |
| % total licenses      | 10%         | 12%        | 8%          | 9%          | 7%         | 9%          | 10%        |
| 12+ miles             | 9           | 0          | 1           | 5           | 7          | 6           | 4          |
| % of responses        | 8%          | 0%         | 1%          | 4%          | 18%        | 7%          | 8%         |
| 3-12 miles            | 35          | 16         | 7           | 15          | 10         | 13          | 10         |
| % of responses        | 31%         | 22%        | 8%          | 13%         | 25%        | 14%         | 20%        |
| Non-exempt state      | 48          | 22         | 21          | 32          | 11         | 4           | 14         |
| % of responses        | 42%         | 30%        | 25%         | 29%         | 28%        | 4%          | 28%        |
| Exempt state          | 94          | 72         | 75          | 101         | 29         | 89          | 39         |
| % of responses        | 82%         | 97%        | 89%         | 90%         | 73%        | 97%         | 78%        |

Table 1. Total responses to both survey types and the percent of responses that came from each area (the 478 responses in zone A make up 41% of the population and 29% of those reported effort in federal waters).

| <b>Zone A Summary</b> |                                    | Jan   | Feb   | March | April | May   | June   | July   | Aug   | Sept   | Oct    | Nov   | Dec   |
|-----------------------|------------------------------------|-------|-------|-------|-------|-------|--------|--------|-------|--------|--------|-------|-------|
| EXEMPT                | # of active fishermen              | 10    | 9     | 25    | 94    | 170   | 293    | 387    | 394   | 377    | 313    | 180   | 55    |
|                       | Total # of traps fished            | 1895  | 1490  | 6000  | 28140 | 55861 | 108386 | 164950 | 2E+05 | 160557 | 129534 | 69479 | 17058 |
|                       | Total # of endlines fished         | 938   | 742   | 3043  | 16441 | 34022 | 72156  | 114151 | 1E+05 | 106446 | 83599  | 42073 | 8150  |
|                       | Avg. Configuration                 | 2.02  | 2.01  | 1.97  | 1.71  | 1.64  | 1.50   | 1.45   | 1.45  | 1.51   | 1.55   | 1.65  | 2.09  |
|                       | Avg. # of trap per fisherman       | 189.5 | 165.6 | 240.0 | 299.4 | 328.6 | 369.9  | 426.2  | 442.0 | 425.9  | 413.8  | 386.0 | 310.1 |
|                       | Avg. # of endlines per fisherman   | 93.8  | 82.4  | 121.7 | 174.9 | 200.1 | 246.3  | 295.0  | 304.2 | 282.4  | 267.1  | 233.7 | 148.2 |
| NON-EXEMPT            | # of active fishermen              | 24    | 21    | 26    | 71    | 86    | 103    | 106    | 113   | 128    | 131    | 107   | 69    |
|                       | Total # of traps fished            | 4578  | 4140  | 6090  | 18297 | 23365 | 27950  | 30009  | 31783 | 38308  | 40313  | 31940 | 19718 |
|                       | Total # of endlines fished         | 1630  | 1316  | 2189  | 7394  | 9563  | 12080  | 13450  | 14256 | 16829  | 16545  | 12014 | 8329  |
|                       | Avg. Configuration                 | 2.81  | 3.15  | 2.78  | 2.47  | 2.44  | 2.31   | 2.23   | 2.23  | 2.28   | 2.44   | 2.66  | 2.37  |
|                       | Avg. # of trap per fisherman       | 190.8 | 197.1 | 234.2 | 257.7 | 271.7 | 271.4  | 283.1  | 281.3 | 299.3  | 307.7  | 298.5 | 285.8 |
|                       | Avg. # of endlines per fisherman   | 67.9  | 62.7  | 84.2  | 104.1 | 111.2 | 117.3  | 126.9  | 126.2 | 131.5  | 126.3  | 112.3 | 120.7 |
| FEDERAL               | # of active fishermen              | 73    | 67    | 72    | 102   | 112   | 99     | 78     | 79    | 98     | 123    | 124   | 107   |
|                       | Total # of traps fished            | 39851 | 37783 | 39147 | 47082 | 49679 | 41287  | 29788  | 29052 | 38766  | 58978  | 64964 | 58254 |
|                       | Total # of endlines fished         | 8708  | 8090  | 8651  | 11424 | 11739 | 10012  | 6849   | 7253  | 10352  | 15147  | 15446 | 13494 |
|                       | Avg. Configuration                 | 4.58  | 4.67  | 4.53  | 4.12  | 4.23  | 4.12   | 4.35   | 4.01  | 3.74   | 3.89   | 4.21  | 4.32  |
|                       | Avg. # of trap per fisherman       | 545.9 | 563.9 | 543.7 | 461.6 | 443.6 | 417.0  | 381.9  | 367.7 | 395.6  | 479.5  | 523.9 | 544.4 |
|                       | Avg. # of endlines per fisherman   | 119.3 | 120.7 | 120.2 | 112.0 | 104.8 | 101.1  | 87.8   | 91.8  | 105.6  | 123.1  | 124.6 | 126.1 |
| Exempt                | Seasonal Latency of Licenses       | 98%   | 98%   | 94%   | 77%   | 59%   | 29%    | 7%     | 5%    | 9%     | 25%    | 57%   | 87%   |
| Non-exempt            | Seasonal Latency of Licenses       | 85%   | 86%   | 83%   | 54%   | 45%   | 34%    | 32%    | 27%   | 17%    | 15%    | 31%   | 55%   |
| Federal               | Seasonal Latency of Licenses       | 48%   | 52%   | 49%   | 28%   | 21%   | 30%    | 45%    | 44%   | 30%    | 13%    | 12%   | 24%   |
|                       | Seasonal Latency of Traps (Zone A) | 93%   | 93%   | 92%   | 86%   | 80%   | 73%    | 66%    | 64%   | 64%    | 65%    | 74%   | 85%   |

Table 2. Annual log summary information for zone A. Total returns in this zone accounted for 41% of the licenses sold there. The number of endlines used in each area peak in July/August in the exemption area, Sept./Oct in non-exempt state waters, and Oct./Nov. in federal waters. Seasonal latency is a measure of the percent of licenses that are active in a given month and reflects the movement of gear inshore in the summer and further offshore in the fall and winter. Seasonal latency of traps is the percentage of traps that are purchased and available but not fished by month.

| <b>Zone B Summary</b> |                                    | Jan   | Feb   | March | April | May   | June  | July  | Aug    | Sept  | Oct   | Nov   | Dec   |
|-----------------------|------------------------------------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|
| EXEMPT                | # of active fishermen              | 21    | 17    | 29    | 90    | 141   | 212   | 246   | 252    | 237   | 210   | 144   | 63    |
|                       | Total # of traps fished            | 4045  | 3205  | 6435  | 26363 | 45416 | 71951 | 95009 | 103225 | 97196 | 79166 | 49254 | 16447 |
|                       | Total # of endlines fished         | 2416  | 1833  | 3828  | 15082 | 26800 | 44573 | 61787 | 65554  | 59354 | 46605 | 27962 | 9077  |
|                       | Avg. Configuration                 | 1.67  | 1.75  | 1.68  | 1.75  | 1.69  | 1.61  | 1.54  | 1.57   | 1.64  | 1.70  | 1.76  | 1.81  |
|                       | Avg. # of trap per fisherman       | 192.6 | 188.5 | 221.9 | 292.9 | 322.1 | 339.4 | 386.2 | 409.6  | 410.1 | 377.0 | 342.0 | 261.1 |
|                       | Avg. # of endlines per fisherman   | 115.0 | 107.8 | 132.0 | 167.6 | 190.1 | 210.3 | 251.2 | 260.1  | 250.4 | 221.9 | 194.2 | 144.1 |
| NON-EXEMPT            | # of active fishermen              | 29    | 26    | 33    | 51    | 49    | 43    | 40    | 44     | 58    | 73    | 74    | 57    |
|                       | Total # of traps fished            | 5974  | 5624  | 6739  | 12089 | 11724 | 9435  | 8040  | 9220   | 12404 | 15870 | 15330 | 10980 |
|                       | Total # of endlines fished         | 2923  | 2748  | 3413  | 6123  | 5998  | 4983  | 4573  | 5325   | 6648  | 8515  | 8065  | 5660  |
|                       | Avg. Configuration                 | 2.04  | 2.05  | 1.97  | 1.97  | 1.95  | 1.89  | 1.76  | 1.73   | 1.87  | 1.86  | 1.90  | 1.94  |
|                       | Avg. # of trap per fisherman       | 206.0 | 216.3 | 204.2 | 237.0 | 239.3 | 219.4 | 201.0 | 209.5  | 213.9 | 217.4 | 207.2 | 192.6 |
|                       | Avg. # of endlines per fisherman   | 100.8 | 105.7 | 103.4 | 120.1 | 122.4 | 115.9 | 114.3 | 121.0  | 114.6 | 116.6 | 109.0 | 99.3  |
| FEDERAL               | # of active fishermen              | 56    | 53    | 52    | 49    | 40    | 23    | 13    | 19     | 38    | 69    | 81    | 76    |
|                       | Total # of traps fished            | 21788 | 19253 | 18118 | 14708 | 11198 | 6720  | 2990  | 3795   | 9825  | 21172 | 31351 | 31066 |
|                       | Total # of endlines fished         | 7957  | 6779  | 6611  | 5574  | 4579  | 2710  | 1375  | 1800   | 3605  | 8763  | 13221 | 12353 |
|                       | Avg. Configuration                 | 2.74  | 2.84  | 2.74  | 2.64  | 2.45  | 2.48  | 2.17  | 2.11   | 2.73  | 2.42  | 2.37  | 2.51  |
|                       | Avg. # of trap per fisherman       | 389.1 | 363.3 | 348.4 | 300.2 | 280.0 | 292.2 | 230.0 | 199.7  | 258.6 | 306.8 | 387.0 | 408.8 |
|                       | Avg. # of endlines per fisherman   | 142.1 | 127.9 | 127.1 | 113.8 | 114.5 | 117.8 | 105.8 | 94.7   | 94.9  | 127.0 | 163.2 | 162.5 |
| Exempt                | Seasonal Latency of Licenses       | 92%   | 93%   | 89%   | 65%   | 45%   | 18%   | 5%    | 2%     | 8%    | 19%   | 44%   | 76%   |
| Non-exempt            | Seasonal Latency of Licenses       | 67%   | 70%   | 62%   | 41%   | 44%   | 51%   | 54%   | 49%    | 33%   | 16%   | 15%   | 34%   |
| Federal               | Seasonal Latency of Licenses       | 38%   | 42%   | 43%   | 46%   | 56%   | 75%   | 86%   | 79%    | 58%   | 24%   | 11%   | 16%   |
|                       | Seasonal Latency of Traps (Zone B) | 90%   | 91%   | 90%   | 83%   | 78%   | 72%   | 66%   | 63%    | 62%   | 63%   | 69%   | 81%   |

Table 3. Annual log summary information for zone B. Total returns in this zone accounted for 43% of the licenses sold there. The number of endlines used in each area peak in July/August in the exemption area, Oct./Nov. in non-exempt state waters, and Nov./Dec. in federal waters. Seasonal latency is a measure of the percent of licenses that are active in a given month and reflects the movement of gear inshore in the summer and further offshore in the fall and winter. Seasonal latency of traps is the percentage of traps that are purchased and available but not fished by month.

| <b>Zone C Summary</b> |                                    | Jan   | Feb   | March | April | May   | June   | July   | Aug    | Sept   | Oct    | Nov   | Dec   |
|-----------------------|------------------------------------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|-------|-------|
| EXEMPT                | # of active fishermen              | 27    | 23    | 31    | 103   | 172   | 269    | 334    | 340    | 318    | 272    | 176   | 69    |
|                       | Total # of traps fished            | 9433  | 8020  | 9830  | 37475 | 70239 | 114216 | 159848 | 161260 | 150288 | 122397 | 70927 | 25947 |
|                       | Total # of endlines fished         | 5047  | 4302  | 5257  | 20130 | 39605 | 67421  | 93633  | 95017  | 88004  | 70886  | 40114 | 14129 |
|                       | Avg. Configuration                 | 1.87  | 1.86  | 1.87  | 1.86  | 1.77  | 1.69   | 1.71   | 1.70   | 1.71   | 1.73   | 1.77  | 1.84  |
|                       | Avg. # of trap per fisherman       | 349.4 | 348.7 | 317.1 | 363.8 | 408.4 | 424.6  | 478.6  | 474.3  | 472.6  | 450.0  | 403.0 | 376.0 |
|                       | Avg. # of endlines per fisherman   | 186.9 | 187.0 | 169.6 | 195.4 | 230.3 | 250.6  | 280.3  | 279.5  | 276.7  | 260.6  | 227.9 | 204.8 |
| NON-EXEMPT            | # of active fishermen              | 37    | 30    | 34    | 55    | 69    | 68     | 56     | 66     | 77     | 97     | 79    | 59    |
|                       | Total # of traps fished            | 12876 | 9466  | 10926 | 22971 | 34976 | 36196  | 29996  | 32581  | 35791  | 44167  | 35075 | 22355 |
|                       | Total # of endlines fished         | 6218  | 4640  | 5418  | 11396 | 18013 | 19121  | 16286  | 17473  | 18433  | 22208  | 17341 | 10866 |
|                       | Avg. Configuration                 | 2.07  | 2.04  | 2.02  | 2.02  | 1.94  | 1.89   | 1.84   | 1.86   | 1.94   | 1.99   | 2.02  | 2.06  |
|                       | Avg. # of trap per fisherman       | 348.0 | 315.5 | 321.4 | 417.7 | 506.9 | 532.3  | 535.6  | 493.7  | 464.8  | 455.3  | 444.0 | 378.9 |
|                       | Avg. # of endlines per fisherman   | 168.1 | 154.7 | 159.4 | 207.2 | 261.1 | 281.2  | 290.8  | 264.7  | 239.4  | 228.9  | 219.5 | 184.2 |
| FEDERAL               | # of active fishermen              | 39    | 32    | 33    | 35    | 25    | 9      | 5      | 8      | 15     | 40     | 46    | 41    |
|                       | Total # of traps fished            | 20245 | 17545 | 16595 | 15000 | 8700  | 3500   | 1750   | 2350   | 4500   | 13905  | 20930 | 19290 |
|                       | Total # of endlines fished         | 5899  | 4851  | 4742  | 4821  | 3199  | 1634   | 875    | 1141   | 2149   | 5017   | 7076  | 6116  |
|                       | Avg. Configuration                 | 3.43  | 3.62  | 3.50  | 3.11  | 2.72  | 2.14   | 2.00   | 2.06   | 2.09   | 2.77   | 2.96  | 3.15  |
|                       | Avg. # of trap per fisherman       | 519.1 | 548.3 | 502.9 | 428.6 | 348.0 | 388.9  | 350.0  | 293.8  | 300.0  | 347.6  | 455.0 | 470.5 |
|                       | Avg. # of endlines per fisherman   | 151.3 | 151.6 | 143.7 | 137.7 | 128.0 | 181.6  | 175.0  | 142.6  | 143.3  | 125.4  | 153.8 | 149.2 |
| Exempt                | Seasonal Latency of Licenses       | 92%   | 93%   | 91%   | 71%   | 51%   | 23%    | 5%     | 3%     | 9%     | 23%    | 50%   | 80%   |
| Non-exempt            | Seasonal Latency of Licenses       | 69%   | 75%   | 71%   | 53%   | 42%   | 42%    | 53%    | 44%    | 35%    | 18%    | 33%   | 50%   |
| Federal               | Seasonal Latency of Licenses       | 33%   | 45%   | 43%   | 40%   | 57%   | 84%    | 91%    | 86%    | 74%    | 31%    | 21%   | 29%   |
|                       | Seasonal Latency of Traps (Zone C) | 92%   | 93%   | 93%   | 86%   | 79%   | 71%    | 64%    | 64%    | 65%    | 67%    | 76%   | 87%   |

Table 4. Annual log summary information for zone C. Total returns in this zone accounted for 41% of the licenses sold there. The number of endlines used in each area peak in July/August in the exemption area, Sept.-Nov. in non-exempt state waters, and Nov./Dec. in federal waters. Seasonal latency is a measure of the percent of licenses that are active in a given month and reflects the movement of gear inshore in the summer and further offshore in the fall and winter. Seasonal latency of traps is the percentage of traps that are purchased and available but not fished by month.

| <b>Zone D Summary</b> |                                    | Jan   | Feb   | March | April | May   | June  | July   | Aug    | Sept   | Oct    | Nov   | Dec   |
|-----------------------|------------------------------------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|-------|-------|
| EXEMPT                | # of active fishermen              | 16    | 16    | 25    | 74    | 143   | 248   | 316    | 326    | 317    | 269    | 191   | 77    |
|                       | Total # of traps fished            | 4285  | 4785  | 6515  | 23595 | 50388 | 97369 | 158894 | 165808 | 153548 | 123997 | 82290 | 31130 |
|                       | Total # of endlines fished         | 2980  | 3180  | 4710  | 17333 | 36631 | 76182 | 129251 | 132916 | 118262 | 90169  | 56728 | 20260 |
|                       | Avg. Configuration                 | 1.44  | 1.50  | 1.38  | 1.36  | 1.38  | 1.28  | 1.23   | 1.25   | 1.30   | 1.38   | 1.45  | 1.54  |
|                       | Avg. # of trap per fisherman       | 267.8 | 299.1 | 260.6 | 318.9 | 352.4 | 392.6 | 502.8  | 508.6  | 484.4  | 461.0  | 430.8 | 404.3 |
|                       | Avg. # of endlines per fisherman   | 186.3 | 198.8 | 188.4 | 234.2 | 256.2 | 307.2 | 409.0  | 407.7  | 373.1  | 335.2  | 297.0 | 263.1 |
| NON-EXEMPT            | # of active fishermen              | 26    | 19    | 25    | 66    | 88    | 89    | 74     | 87     | 111    | 133    | 121   | 83    |
|                       | Total # of traps fished            | 7480  | 4250  | 6450  | 24565 | 38100 | 39040 | 30480  | 35165  | 46507  | 58582  | 53480 | 34940 |
|                       | Total # of endlines fished         | 3633  | 2083  | 3171  | 13254 | 21823 | 24203 | 20200  | 21401  | 26362  | 30984  | 26833 | 17238 |
|                       | Avg. Configuration                 | 2.06  | 2.04  | 2.03  | 1.85  | 1.75  | 1.61  | 1.51   | 1.64   | 1.76   | 1.89   | 1.99  | 2.03  |
|                       | Avg. # of trap per fisherman       | 287.7 | 223.7 | 258.0 | 372.2 | 433.0 | 438.7 | 411.9  | 404.2  | 419.0  | 440.5  | 442.0 | 421.0 |
|                       | Avg. # of endlines per fisherman   | 139.7 | 109.6 | 126.8 | 200.8 | 248.0 | 271.9 | 273.0  | 246.0  | 237.5  | 233.0  | 221.8 | 207.7 |
| FEDERAL               | # of active fishermen              | 55    | 49    | 49    | 55    | 52    | 29    | 8      | 7      | 18     | 46     | 71    | 71    |
|                       | Total # of traps fished            | 25700 | 23960 | 23710 | 22722 | 20372 | 10475 | 3580   | 2780   | 6112   | 18352  | 31279 | 33879 |
|                       | Total # of endlines fished         | 9637  | 9168  | 9052  | 8867  | 7947  | 3807  | 2175   | 1440   | 2962   | 7981   | 12702 | 13388 |
|                       | Avg. Configuration                 | 2.67  | 2.61  | 2.62  | 2.56  | 2.56  | 2.75  | 1.65   | 1.93   | 2.06   | 2.30   | 2.46  | 2.53  |
|                       | Avg. # of trap per fisherman       | 467.3 | 489.0 | 483.9 | 413.1 | 391.8 | 361.2 | 447.5  | 397.1  | 339.6  | 399.0  | 440.5 | 477.2 |
|                       | Avg. # of endlines per fisherman   | 175.2 | 187.1 | 184.7 | 161.2 | 152.8 | 131.3 | 271.9  | 205.7  | 164.6  | 173.5  | 178.9 | 188.6 |
|                       | Seasonal Latency of Licenses       | 95%   | 95%   | 93%   | 78%   | 58%   | 27%   | 7%     | 4%     | 7%     | 21%    | 44%   | 77%   |
|                       | Seasonal Latency of Licenses       | 83%   | 87%   | 83%   | 56%   | 41%   | 40%   | 50%    | 42%    | 26%    | 11%    | 19%   | 44%   |
|                       | Seasonal Latency of Licenses       | 33%   | 40%   | 40%   | 33%   | 37%   | 65%   | 90%    | 91%    | 78%    | 44%    | 13%   | 13%   |
|                       | Seasonal Latency of Traps (Zone D) | 94%   | 95%   | 94%   | 89%   | 83%   | 78%   | 71%    | 69%    | 69%    | 69%    | 75%   | 85%   |

Table 5. Annual log summary information for zone D. Total returns in this zone accounted for 31% of the licenses sold there. The number of endlines used in each area peak in July/August in the exemption area, Sept.-Nov. in non-exempt state waters, and Nov./Dec. in federal waters. Seasonal latency is a measure of the percent of licenses that are active in a given month and reflects the movement of gear inshore in the summer and further offshore in the fall and winter. Seasonal latency of traps is the percentage of traps that are purchased and available but not fished by month.

| <b>Zone E Summary</b> |                                    | Jan   | Feb   | March | April | May   | June  | July  | Aug   | Sept  | Oct   | Nov   | Dec   |
|-----------------------|------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| EXEMPT                | # of active fishermen              | 25    | 22    | 23    | 49    | 81    | 138   | 161   | 163   | 156   | 137   | 90    | 51    |
|                       | Total # of traps fished            | 7200  | 6270  | 7120  | 12045 | 23461 | 48755 | 65077 | 65102 | 55927 | 46638 | 29559 | 15685 |
|                       | Total # of endlines fished         | 4171  | 3891  | 4409  | 7630  | 14740 | 34836 | 46996 | 46454 | 38870 | 31876 | 20649 | 10650 |
|                       | Avg. Configuration                 | 1.73  | 1.61  | 1.61  | 1.58  | 1.59  | 1.40  | 1.38  | 1.40  | 1.44  | 1.46  | 1.43  | 1.47  |
|                       | Avg. # of trap per fisherman       | 288.0 | 285.0 | 309.6 | 245.8 | 289.6 | 353.3 | 404.2 | 399.4 | 358.5 | 340.4 | 328.4 | 307.5 |
|                       | Avg. # of endlines per fisherman   | 166.8 | 176.9 | 191.7 | 155.7 | 182.0 | 252.4 | 291.9 | 285.0 | 249.2 | 232.7 | 229.4 | 208.8 |
| NON-EXEMPT            | # of active fishermen              | 18    | 15    | 15    | 19    | 26    | 23    | 22    | 26    | 44    | 44    | 40    | 29    |
|                       | Total # of traps fished            | 3130  | 2430  | 1980  | 3350  | 6146  | 5491  | 6261  | 6651  | 12051 | 12151 | 10500 | 7332  |
|                       | Total # of endlines fished         | 1795  | 1420  | 995   | 1949  | 4177  | 3925  | 4006  | 4847  | 7613  | 7503  | 6040  | 4215  |
|                       | Avg. Configuration                 | 1.74  | 1.71  | 1.99  | 1.72  | 1.47  | 1.40  | 1.56  | 1.37  | 1.58  | 1.62  | 1.74  | 1.74  |
|                       | Avg. # of trap per fisherman       | 173.9 | 162.0 | 132.0 | 176.3 | 236.4 | 238.7 | 284.6 | 255.8 | 273.9 | 276.2 | 262.5 | 252.8 |
|                       | Avg. # of endlines per fisherman   | 99.7  | 94.7  | 66.3  | 102.6 | 160.7 | 170.7 | 182.1 | 186.4 | 173.0 | 170.5 | 151.0 | 145.3 |
| FEDERAL               | # of active fishermen              | 39    | 35    | 30    | 23    | 17    | 8     | 2     | 6     | 19    | 33    | 41    | 36    |
|                       | Total # of traps fished            | 16860 | 15330 | 12332 | 8582  | 5158  | 2510  | 620   | 1284  | 3804  | 8720  | 15155 | 14235 |
|                       | Total # of endlines fished         | 6117  | 5650  | 4650  | 3317  | 2056  | 842   | 130   | 407   | 1488  | 3587  | 5992  | 5627  |
|                       | Avg. Configuration                 | 2.76  | 2.71  | 2.65  | 2.59  | 2.51  | 2.98  | 4.77  | 3.15  | 2.56  | 2.43  | 2.53  | 2.53  |
|                       | Avg. # of trap per fisherman       | 432.3 | 438.0 | 411.1 | 373.1 | 303.4 | 313.8 | 310.0 | 214.0 | 200.2 | 264.2 | 369.6 | 395.4 |
|                       | Avg. # of endlines per fisherman   | 156.8 | 161.4 | 155.0 | 144.2 | 120.9 | 105.3 | 65.0  | 67.8  | 78.3  | 108.7 | 146.1 | 156.3 |
| Exempt                | Seasonal Latency of Licenses       | 85%   | 87%   | 86%   | 71%   | 51%   | 17%   | 4%    | 2%    | 7%    | 18%   | 46%   | 69%   |
| Non-exempt            | Seasonal Latency of Licenses       | 68%   | 74%   | 74%   | 67%   | 54%   | 60%   | 61%   | 54%   | 23%   | 23%   | 30%   | 49%   |
| Federal               | Seasonal Latency of Licenses       | 15%   | 24%   | 35%   | 50%   | 63%   | 83%   | 96%   | 87%   | 59%   | 28%   | 11%   | 22%   |
|                       | Seasonal Latency of Traps (Zone E) | 88%   | 89%   | 91%   | 89%   | 85%   | 75%   | 68%   | 68%   | 68%   | 70%   | 76%   | 84%   |

Table 6. Annual log summary information for zone E. Total returns in this zone accounted for 32% of the licenses sold there. The number of endlines used in each area peak in July/August in the exemption area, Sept.-Nov. in non-exempt state waters, and Nov./Dec. in federal waters. Seasonal latency is a measure of the percent of licenses that are active in a given month and reflects the movement of gear inshore in the summer and further offshore in the fall and winter. Seasonal latency of traps is the percentage of traps that are purchased and available but not fished by month.

| <b>Zone F Summary</b> |                                    | Jan   | Feb   | March | April | May   | June  | July  | Aug   | Sept  | Oct   | Nov   | Dec   |
|-----------------------|------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| EXEMPT                | # of active fishermen              | 24    | 23    | 26    | 32    | 62    | 164   | 202   | 210   | 205   | 183   | 118   | 64    |
|                       | Total # of traps fished            | 7344  | 6794  | 7110  | 9615  | 19129 | 66929 | 88981 | 92181 | 90028 | 79850 | 52671 | 28004 |
|                       | Total # of endlines fished         | 2185  | 2067  | 2232  | 2664  | 6939  | 23435 | 29977 | 31465 | 30742 | 26855 | 16606 | 8315  |
|                       | Avg. Configuration                 | 3.36  | 3.29  | 3.19  | 3.61  | 2.76  | 2.86  | 2.97  | 2.93  | 2.93  | 2.97  | 3.17  | 3.37  |
|                       | Avg. # of trap per fisherman       | 306.0 | 295.4 | 273.5 | 300.5 | 308.5 | 408.1 | 440.5 | 439.0 | 439.2 | 436.3 | 446.4 | 437.6 |
|                       | Avg. # of endlines per fisherman   | 91.0  | 89.9  | 85.8  | 83.3  | 111.9 | 142.9 | 148.4 | 149.8 | 150.0 | 146.7 | 140.7 | 129.9 |
| NON-EXEMPT            | # of active fishermen              | 9     | 8     | 8     | 15    | 25    | 36    | 45    | 43    | 43    | 45    | 37    | 21    |
|                       | Total # of traps fished            | 4660  | 4460  | 4460  | 5885  | 8615  | 13945 | 18004 | 18821 | 19185 | 18610 | 14035 | 9000  |
|                       | Total # of endlines fished         | 1410  | 1360  | 1360  | 2105  | 3137  | 4685  | 6206  | 6587  | 6740  | 6460  | 4569  | 2481  |
|                       | Avg. Configuration                 | 3.30  | 3.28  | 3.28  | 2.80  | 2.75  | 2.98  | 2.90  | 2.86  | 2.85  | 2.88  | 3.07  | 3.63  |
|                       | Avg. # of trap per fisherman       | 517.8 | 557.5 | 557.5 | 392.3 | 344.6 | 387.4 | 400.1 | 437.7 | 446.2 | 413.6 | 379.3 | 428.6 |
|                       | Avg. # of endlines per fisherman   | 156.7 | 170.0 | 170.0 | 140.3 | 125.5 | 130.1 | 137.9 | 153.2 | 156.7 | 143.6 | 123.5 | 118.1 |
| FEDERAL               | # of active fishermen              | 16    | 14    | 12    | 8     | 9     | 5     | 1     | 6     | 9     | 19    | 29    | 28    |
|                       | Total # of traps fished            | 6780  | 5430  | 4634  | 3268  | 2798  | 1108  | 80    | 1280  | 2080  | 4420  | 10518 | 10934 |
|                       | Total # of endlines fished         | 1285  | 905   | 759   | 507   | 485   | 202   | 20    | 381   | 578   | 992   | 2078  | 2147  |
|                       | Avg. Configuration                 | 5.28  | 6.00  | 6.11  | 6.45  | 5.77  | 5.49  | 4.00  | 3.36  | 3.60  | 4.46  | 5.06  | 5.09  |
|                       | Avg. # of trap per fisherman       | 423.8 | 387.9 | 386.2 | 408.5 | 310.9 | 221.6 | 80.0  | 213.3 | 231.1 | 232.6 | 362.7 | 390.5 |
|                       | Avg. # of endlines per fisherman   | 80.3  | 64.6  | 63.3  | 63.4  | 53.9  | 40.4  | 20.0  | 63.5  | 64.2  | 52.2  | 71.7  | 76.7  |
| Exempt                | Seasonal Latency of Licenses       | 89%   | 89%   | 88%   | 85%   | 71%   | 23%   | 6%    | 2%    | 4%    | 14%   | 45%   | 70%   |
| Non-exempt            | Seasonal Latency of Licenses       | 84%   | 85%   | 85%   | 73%   | 55%   | 35%   | 18%   | 22%   | 22%   | 18%   | 33%   | 62%   |
| Federal               | Seasonal Latency of Licenses       | 53%   | 59%   | 65%   | 76%   | 74%   | 85%   | 97%   | 82%   | 74%   | 44%   | 15%   | 18%   |
|                       | Seasonal Latency of Traps (Zone F) | 96%   | 97%   | 97%   | 96%   | 94%   | 83%   | 78%   | 77%   | 77%   | 79%   | 84%   | 90%   |

Table 7. Annual log summary information for zone F. Total returns in this zone accounted for 25% of the licenses sold there. The number of endlines used in each area peak in July-Sept. in the exemption area, July-Oct in non-exempt state waters, and Nov./Dec. in federal waters. Seasonal latency is a measure of the percent of licenses that are active in a given month and reflects the movement of gear inshore in the summer and further offshore in the fall and winter. Seasonal latency of traps is the percentage of traps that are purchased and available but not fished by month.

| <b>Zone G Summary</b> |                                    | Jan   | Feb   | March | April | May   | June  | July  | Aug   | Sept  | Oct   | Nov   | Dec   |
|-----------------------|------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| EXEMPT                | # of active fishermen              | 34    | 31    | 31    | 65    | 100   | 120   | 140   | 139   | 141   | 130   | 91    | 55    |
|                       | Total # of traps fished            | 8356  | 7441  | 8167  | 16625 | 32178 | 45440 | 54554 | 54892 | 51210 | 42057 | 28061 | 14642 |
|                       | Total # of endlines fished         | 4605  | 3959  | 4293  | 10008 | 19913 | 28588 | 34286 | 34192 | 31841 | 24094 | 15094 | 7714  |
|                       | Avg. Configuration                 | 1.81  | 1.88  | 1.90  | 1.66  | 1.62  | 1.59  | 1.59  | 1.61  | 1.61  | 1.75  | 1.86  | 1.90  |
|                       | Avg. # of trap per fisherman       | 245.8 | 240.0 | 263.5 | 255.8 | 321.8 | 378.7 | 389.7 | 394.9 | 363.2 | 323.5 | 308.4 | 266.2 |
|                       | Avg. # of endlines per fisherman   | 135.4 | 127.7 | 138.5 | 154.0 | 199.1 | 238.2 | 244.9 | 246.0 | 225.8 | 185.3 | 165.9 | 140.3 |
| NON-EXEMPT            | # of active fishermen              | 26    | 23    | 20    | 29    | 40    | 42    | 43    | 46    | 48    | 54    | 47    | 38    |
|                       | Total # of traps fished            | 8950  | 6520  | 5520  | 8670  | 12909 | 12244 | 13139 | 14254 | 17194 | 20899 | 18790 | 13630 |
|                       | Total # of endlines fished         | 3410  | 2720  | 2610  | 3789  | 5003  | 4973  | 6280  | 6060  | 7420  | 9236  | 7978  | 5985  |
|                       | Avg. Configuration                 | 2.62  | 2.40  | 2.11  | 2.29  | 2.58  | 2.46  | 2.09  | 2.35  | 2.32  | 2.26  | 2.36  | 2.28  |
|                       | Avg. # of trap per fisherman       | 344.2 | 283.5 | 276.0 | 299.0 | 322.7 | 291.5 | 305.6 | 309.9 | 358.2 | 387.0 | 399.8 | 358.7 |
|                       | Avg. # of endlines per fisherman   | 131.2 | 118.3 | 130.5 | 130.7 | 125.1 | 118.4 | 146.0 | 131.7 | 154.6 | 171.0 | 169.7 | 157.5 |
| FEDERAL               | # of active fishermen              | 46    | 40    | 36    | 28    | 21    | 16    | 16    | 18    | 26    | 41    | 44    | 38    |
|                       | Total # of traps fished            | 17295 | 14225 | 12439 | 7505  | 5830  | 3520  | 3170  | 4200  | 6880  | 12790 | 18462 | 16148 |
|                       | Total # of endlines fished         | 5673  | 4648  | 4167  | 2960  | 2300  | 1524  | 1359  | 1654  | 2730  | 4333  | 5681  | 4981  |
|                       | Avg. Configuration                 | 3.05  | 3.06  | 2.99  | 2.54  | 2.53  | 2.31  | 2.33  | 2.54  | 2.52  | 2.95  | 3.25  | 3.24  |
|                       | Avg. # of trap per fisherman       | 376.0 | 355.6 | 345.5 | 268.0 | 277.6 | 220.0 | 198.1 | 233.3 | 264.6 | 312.0 | 419.6 | 424.9 |
|                       | Avg. # of endlines per fisherman   | 123.3 | 116.2 | 115.8 | 105.7 | 109.5 | 95.3  | 84.9  | 91.9  | 105.0 | 105.7 | 129.1 | 131.1 |
| Exempt                | Seasonal Latency of Licenses       | 78%   | 80%   | 80%   | 57%   | 34%   | 21%   | 8%    | 9%    | 7%    | 14%   | 40%   | 64%   |
| Non-exempt            | Seasonal Latency of Licenses       | 58%   | 63%   | 68%   | 53%   | 35%   | 32%   | 31%   | 26%   | 23%   | 13%   | 24%   | 39%   |
| Federal               | Seasonal Latency of Licenses       | 15%   | 26%   | 33%   | 48%   | 61%   | 70%   | 70%   | 67%   | 52%   | 24%   | 19%   | 30%   |
|                       | Seasonal Latency of Traps (Zone G) | 84%   | 87%   | 88%   | 85%   | 77%   | 72%   | 68%   | 67%   | 66%   | 66%   | 71%   | 80%   |

Table 8. Annual log summary information for zone G. Total returns in this zone accounted for 38% of the licenses sold there. The number of endlines used in each area peak in July-Sept. in the exemption area, Sept.-Nov. in non-exempt state waters, and Oct.-Dec. in federal waters. Seasonal latency is a measure of the percent of licenses that are active in a given month and reflects the movement of gear inshore in the summer and further offshore in the fall and winter. Seasonal latency of traps is the percentage of traps that are purchased and available but not fished by month.

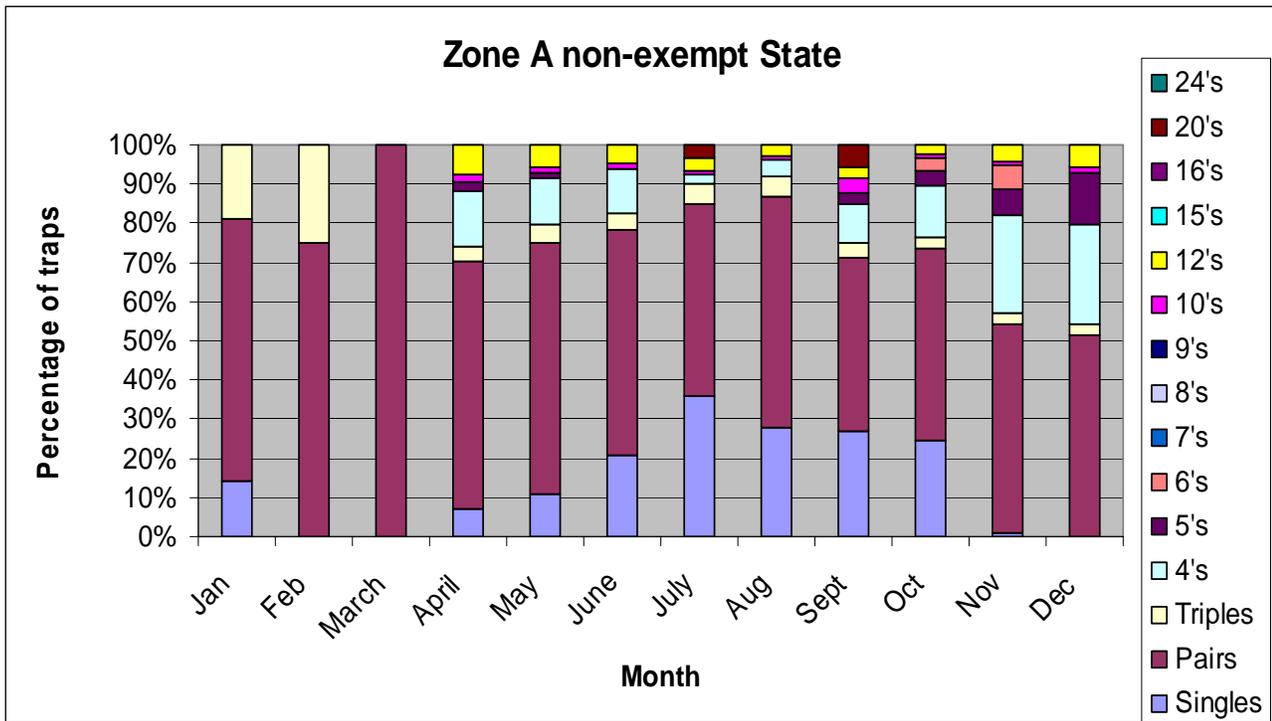


Figure 4. The configurations of gear reported (in percentage of the total makeup) in the non-exempt state waters of zone A by month. The colors are always stacked in the order listed in the legend at the right. This area fishes a significant number of pairs with longer trawls increasing in percentage from April to December (including 3-12 trap trawls).

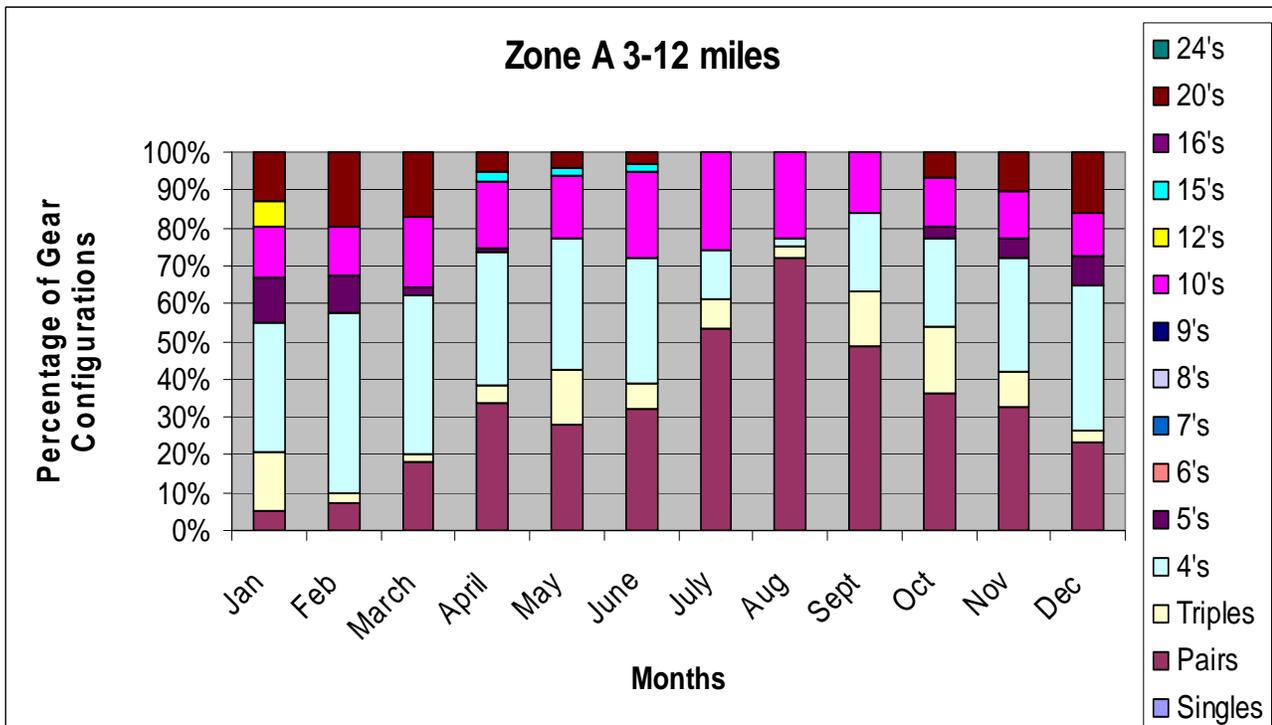


Figure 5. The configurations of gear reported (in percentage of the total makeup) in federal waters from 3-12 miles of zone A by month. The colors are always stacked in the order listed in the legend at the right. This area fishes a significant number of pairs in the summer with longer trawls increasing in percentage in the winter months, including between 4-20 trap trawls.

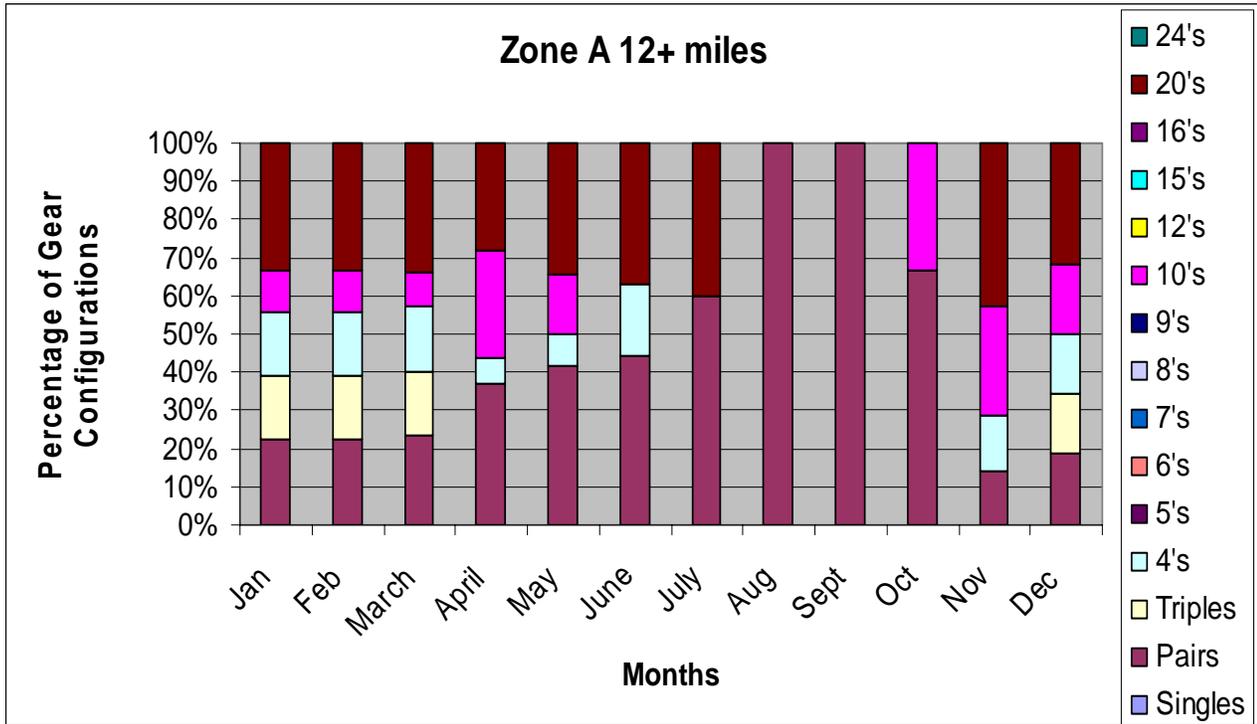


Figure 6. The configurations of gear reported (in percentage of the total makeup) in federal waters beyond 12 miles of zone A by month. The colors are always stacked in the order listed in the legend at the right. This area fishes a significant number of pairs in the summer with longer trawls increasing in percentage the rest of the year, including triples, 4, 10, and 20 trap trawls.

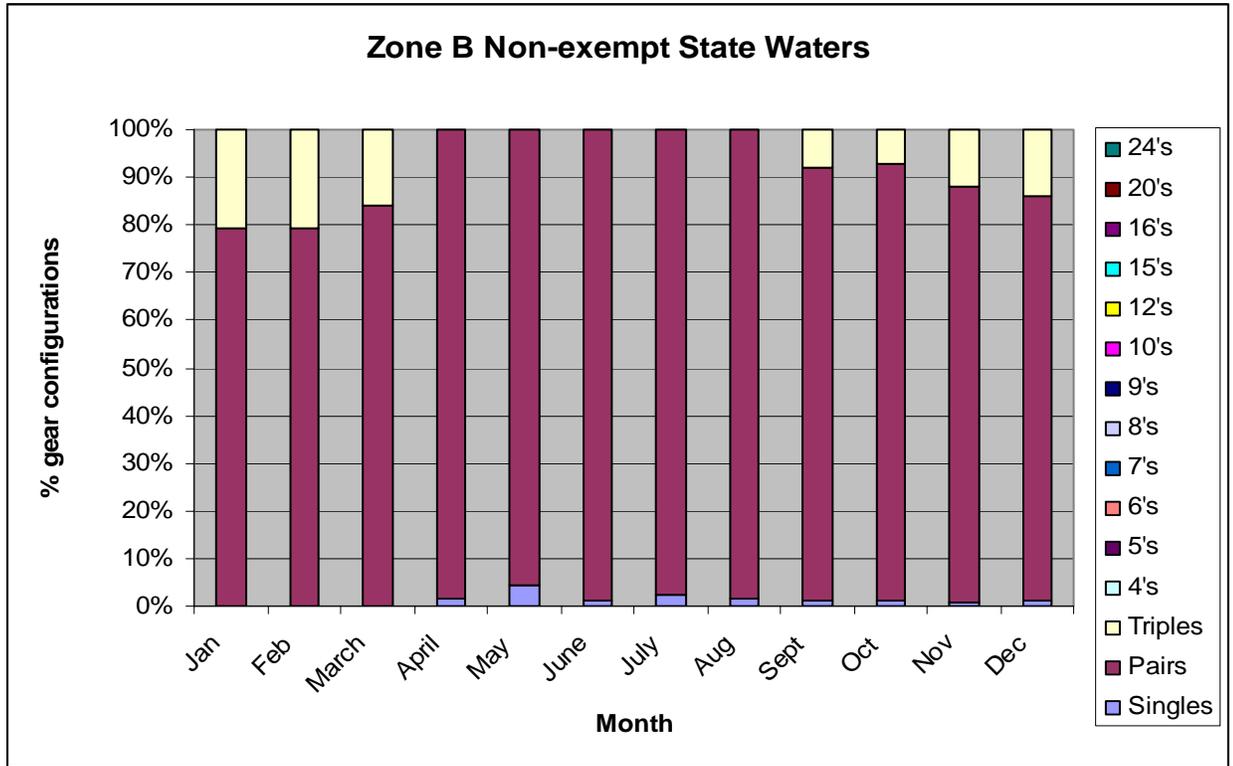


Figure 7. The configurations of gear reported (in percentage of the total makeup) in the non-exempt state waters of zone B by month. The colors are always stacked in the order listed in the legend at the right. This area fishes almost exclusively pairs with some triples appearing in the fall and winter.

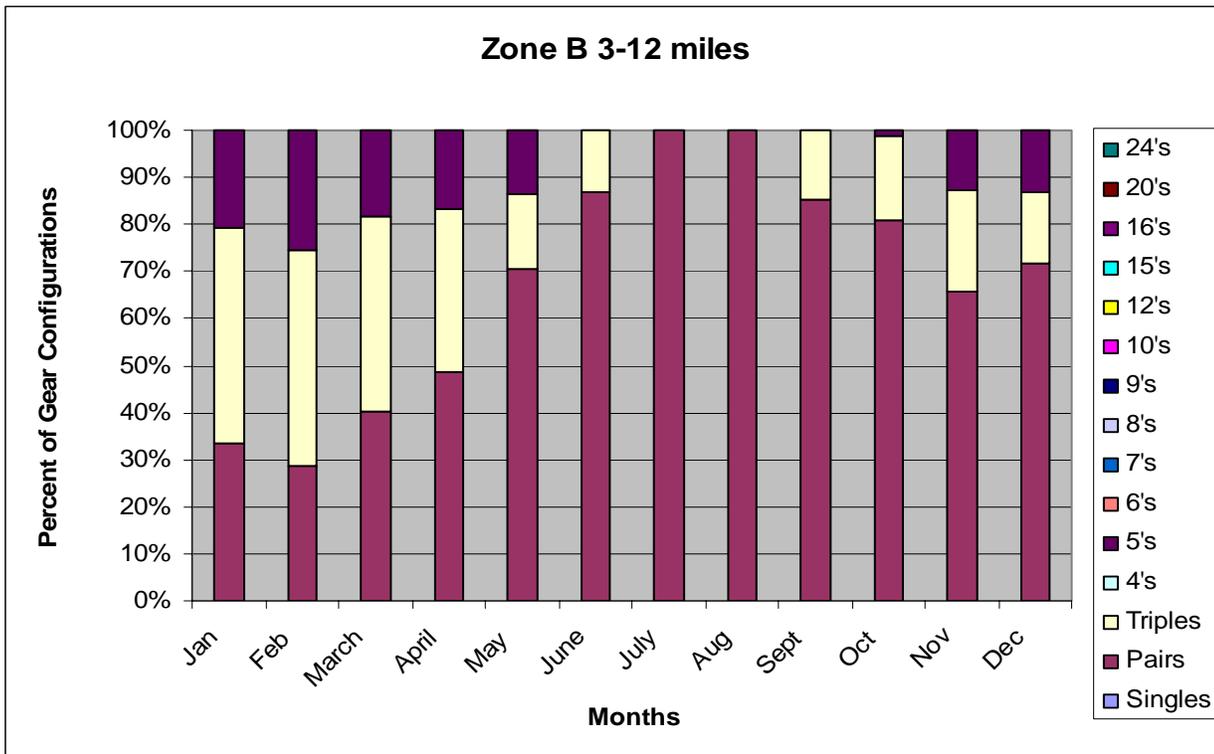


Figure 8. The configurations of gear reported (in percentage of the total makeup) in federal waters from 3-12 miles of zone B by month. The colors are always stacked in the order listed in the legend at the right. This area fishes mostly pairs with some triples and 5 trap trawls in the fall and winter.

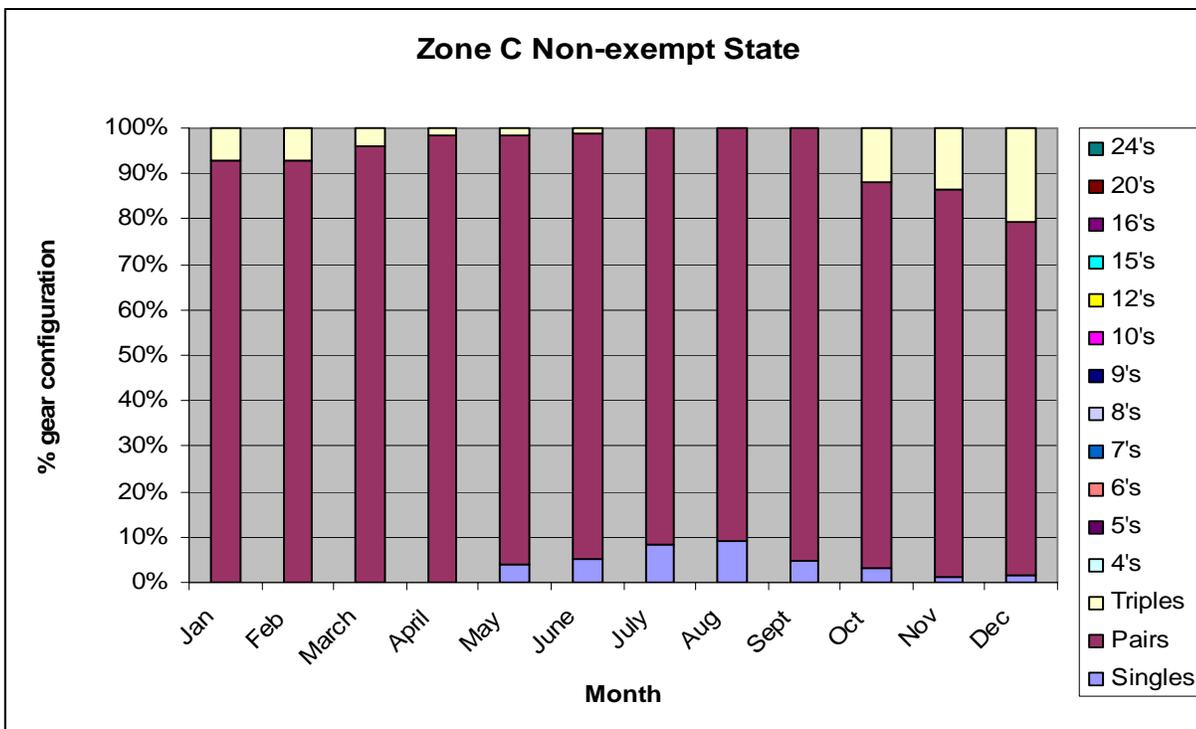


Figure 9. The configurations of gear reported (in percentage of the total makeup) in the non-exempt state waters of zone C by month. The colors are always stacked in the order listed in the legend at the right. This area fishes almost exclusively pairs with some triples in the fall and winter and singles in the summer.

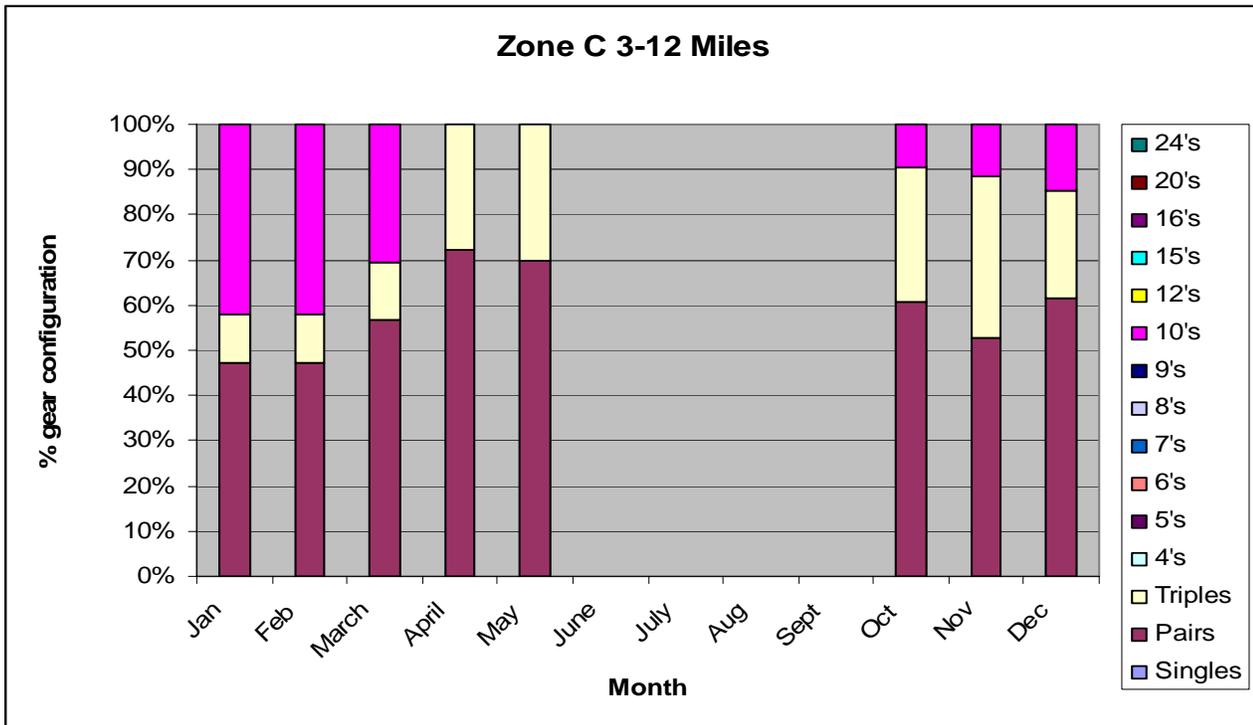


Figure 10. The configurations of gear reported (in percentage of the total makeup) in federal waters from 3-12 miles of zone C by month. The colors are always stacked in the order listed in the legend at the right. This area fishes a mix of pairs, triples, and 10 trap trawls. The gaps represent no fishing reported.

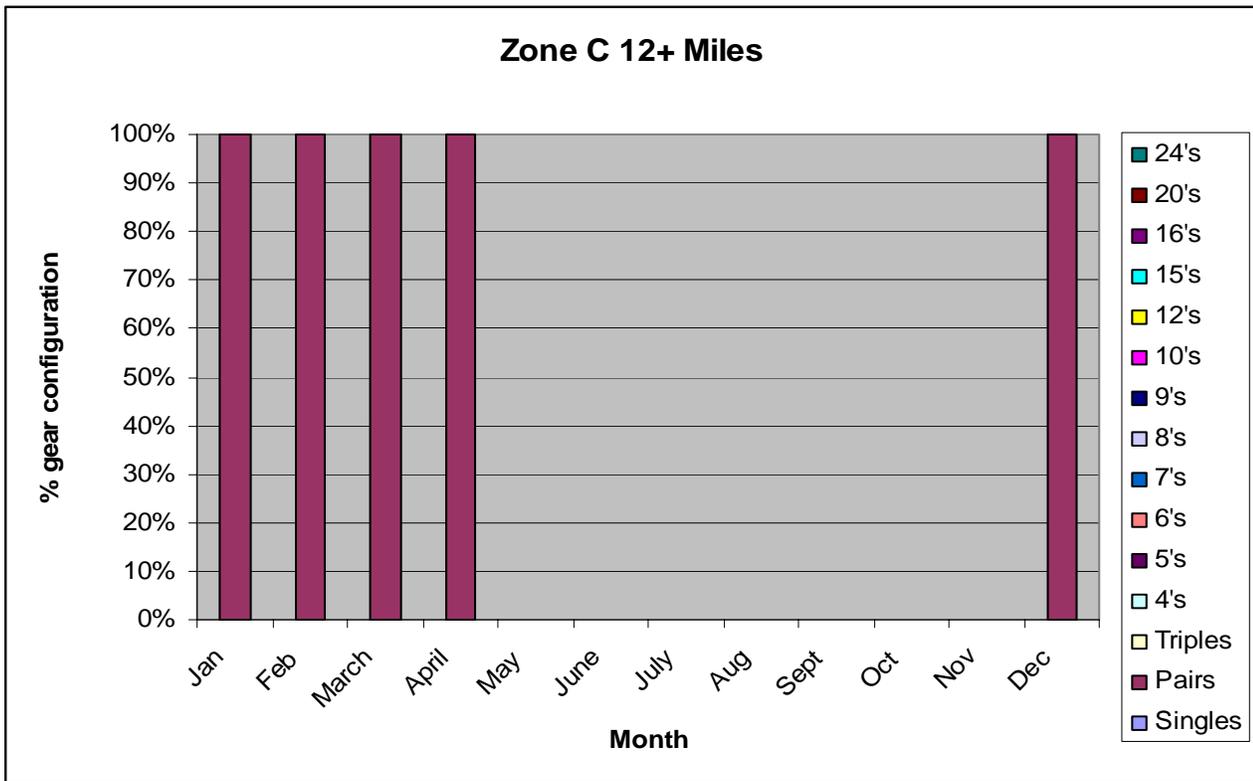


Figure 11. The configurations of gear reported (in percentage of the total makeup) in federal waters beyond 12 miles in zone C by month. The colors are always stacked in the order listed in the legend at the right. This area fishes exclusively pairs. The gaps represent no fishing reported.

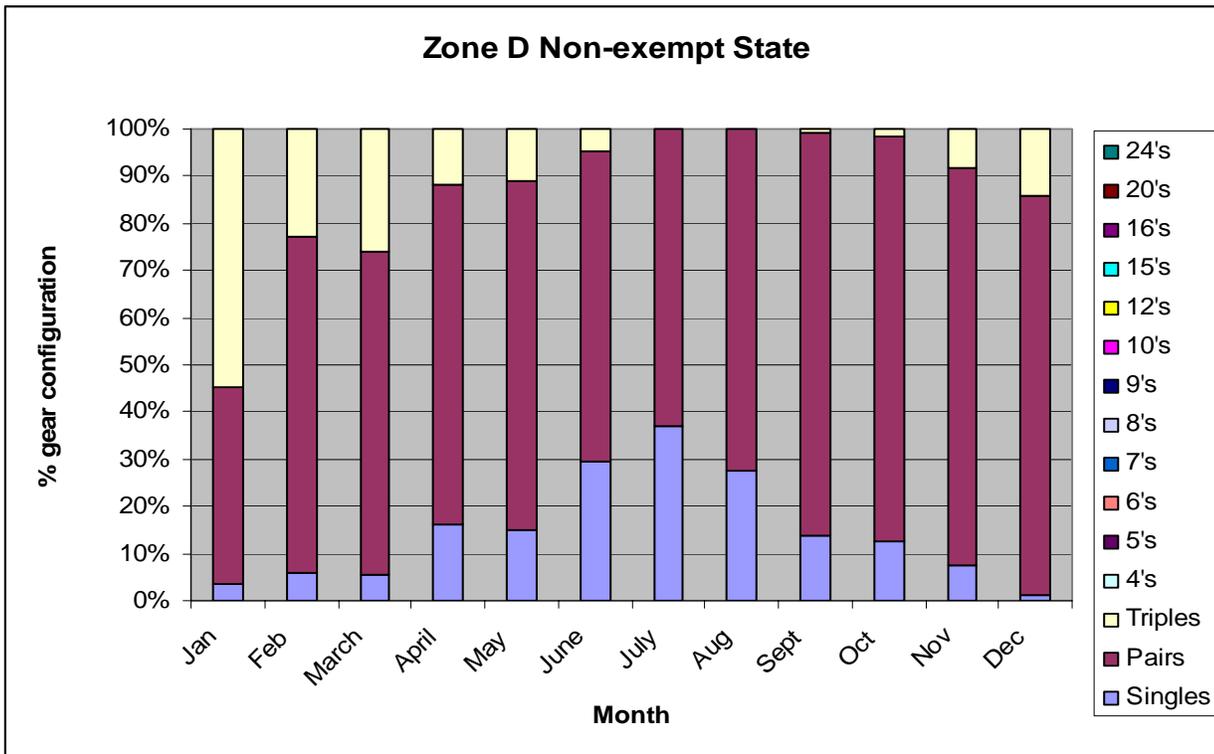


Figure 12. The configurations of gear reported (in percentage of the total makeup) in non-exempt state waters for zone D by month. The colors are always stacked in the order listed in the legend at the right. This area fishes a mix of singles, pairs and triples with sets getting shorter in the summer.

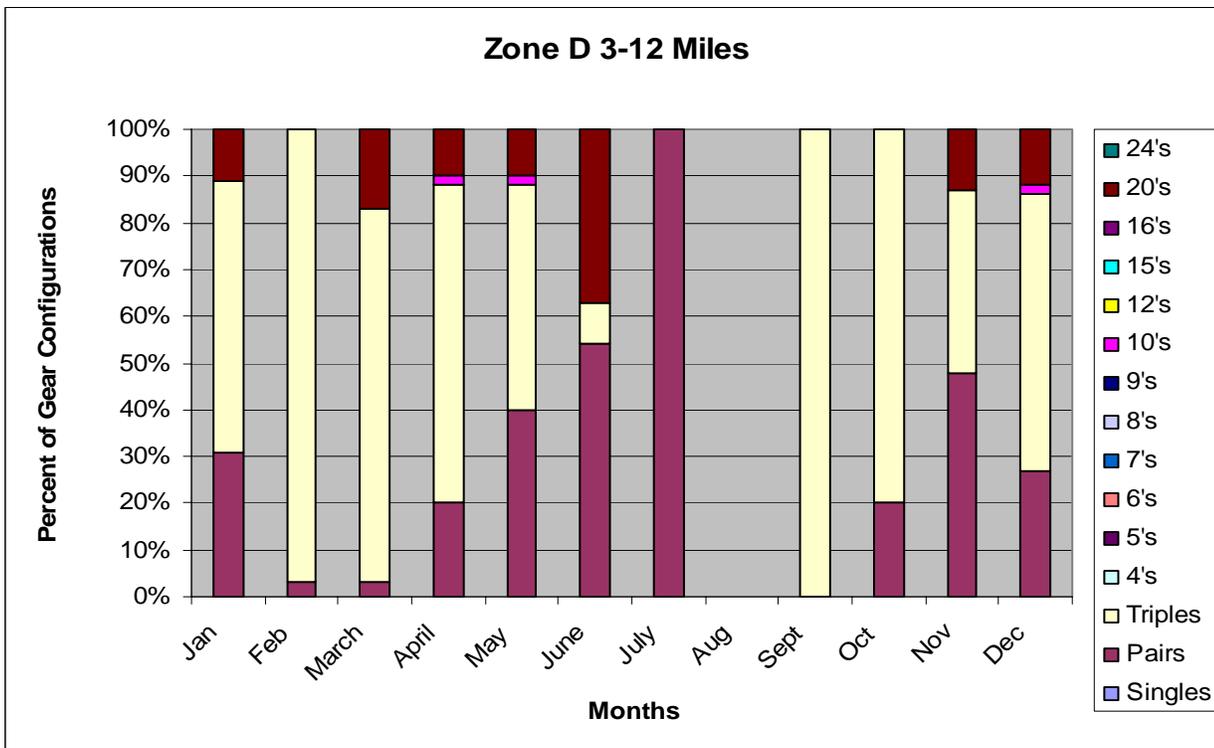


Figure 13. The configurations of gear reported (in percentage of the total makeup) in federal waters from 3-12 miles in zone D by month. The colors are always stacked in the order listed in the legend at the right. This area fishes a mix of pairs, triples, with a few 10 and 20 trap trawls. The gap represents no fishing reported.

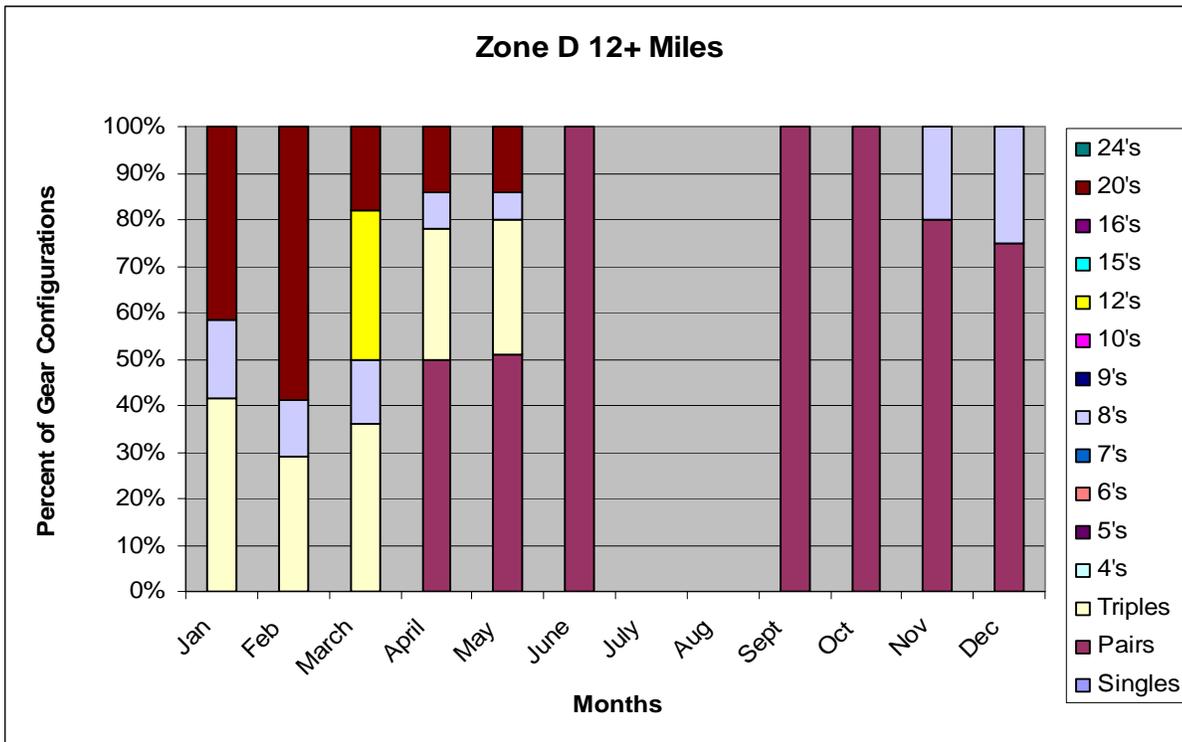


Figure 14. The configurations of gear reported (in percentage of the total makeup) in federal waters beyond 12 miles in zone D by month. The colors are always stacked in the order listed in the legend at the right. This area fishes mostly pairs in the summer and fall with a mix of triples, 8, 12, and 20 trap trawls in the winter. The gaps represent no fishing reported.

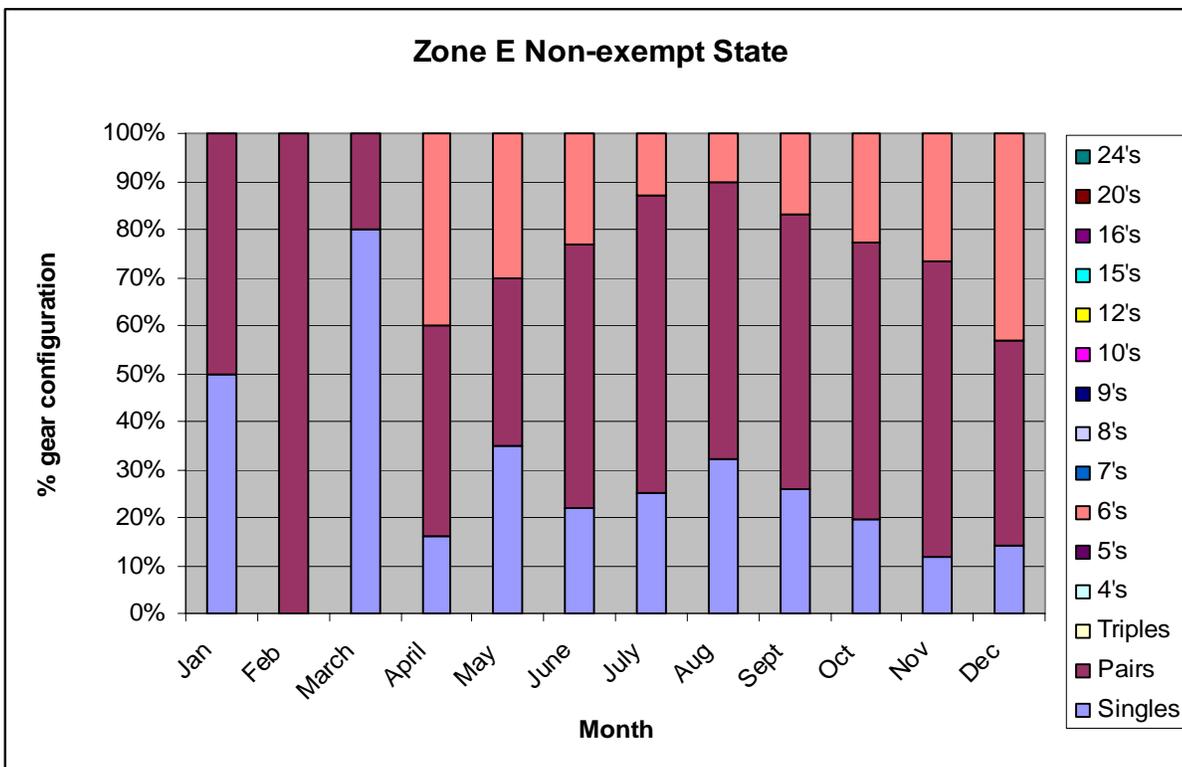


Figure 15. The configurations of gear reported (in percentage of the total makeup) in non-exempt state waters in zone E by month. The colors are always stacked in the order listed in the legend at the right. This area fishes a mix of singles, pairs, and 6 trap trawls.

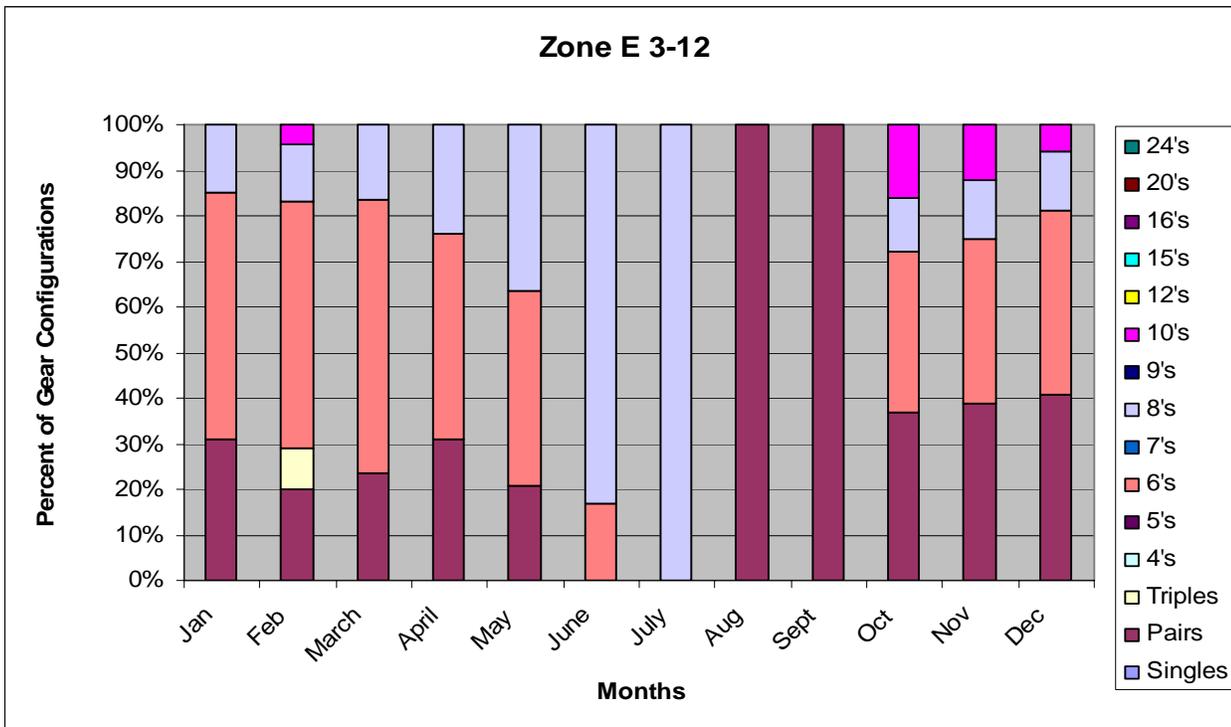


Figure 16. The configurations of gear reported (in percentage of the total makeup) in federal waters from 3-12 miles in zone E by month. The colors are always stacked in the order listed in the legend at the right. This area fishes a mix of pairs (mostly in the summer) with 6 and 8-trap trawls (and some ten's in the fall).

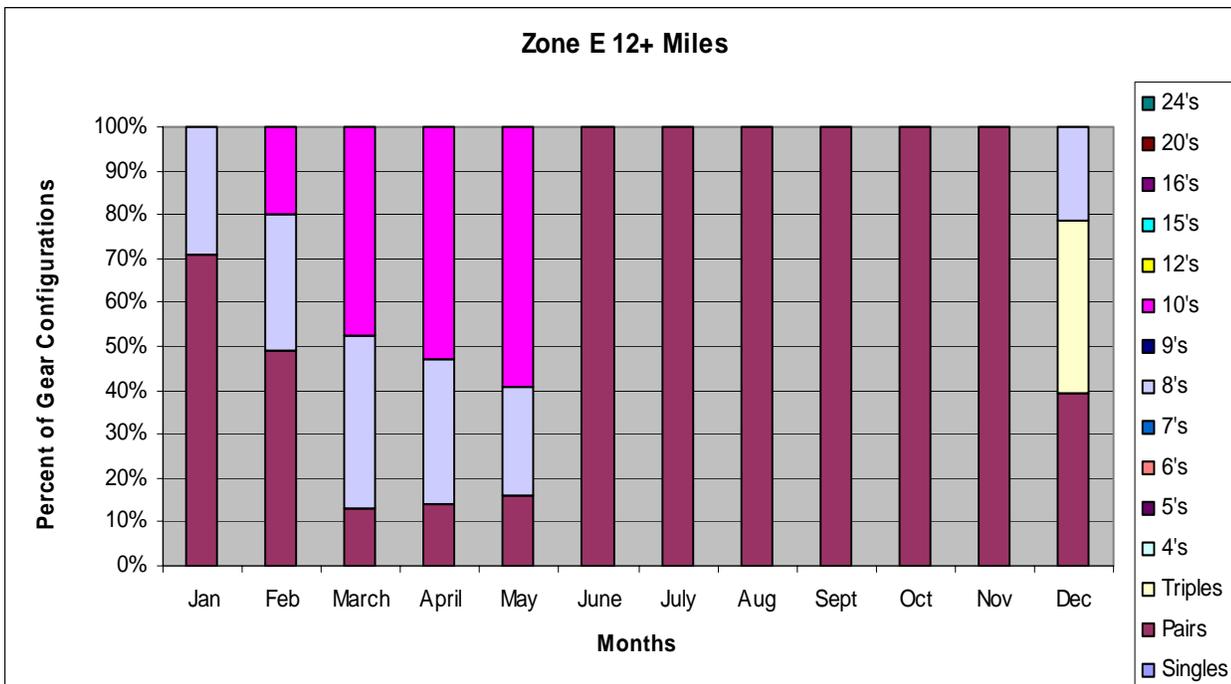


Figure 17. The configurations of gear reported (in percentage of the total makeup) in federal waters beyond 12 miles in zone E by month. The colors are always stacked in the order listed in the legend at the right. This area fishes exclusively pairs in the summer and fall with longer trawls of 8 and 10 traps in the winter.

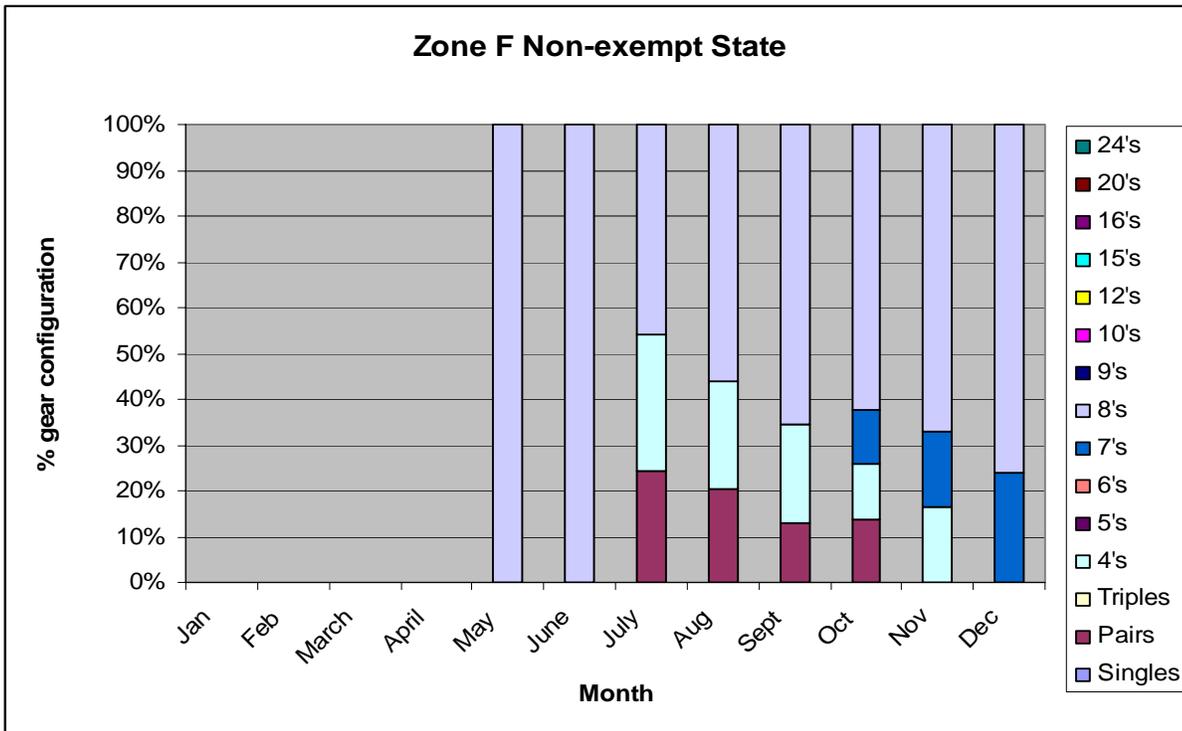


Figure 18. The configurations of gear reported (in percentage of the total makeup) in non-exempt state waters in zone F by month. The colors are always stacked in the order listed in the legend at the right. This area fishes mostly 8 trap trawls, with some pairs, 4 and 7 trap trawls into the fall. The gaps represent no fishing reported.

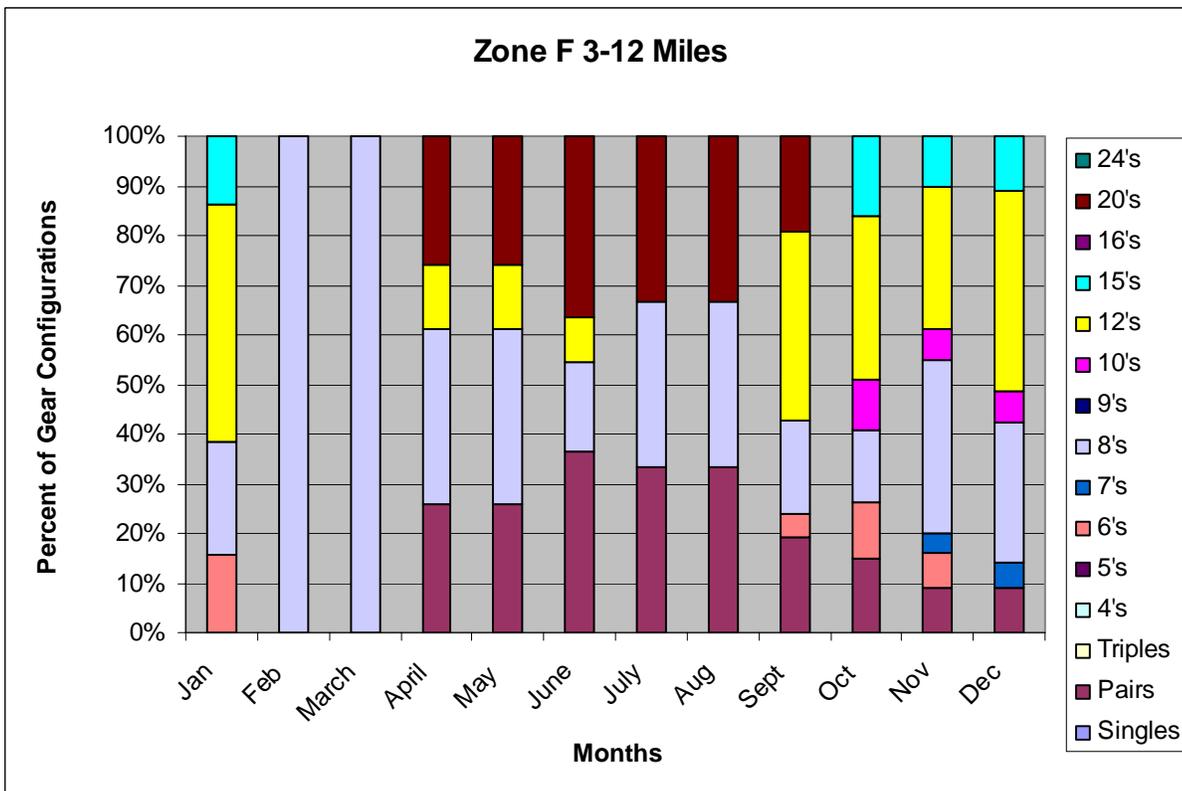


Figure 19. The configurations of gear reported (in percentage of the total makeup) in federal waters 3-12 miles in zone F by month. The colors are always stacked in the order listed in the legend at the right. This area fishes some pairs with a mix of trawls from 6-20 traps.

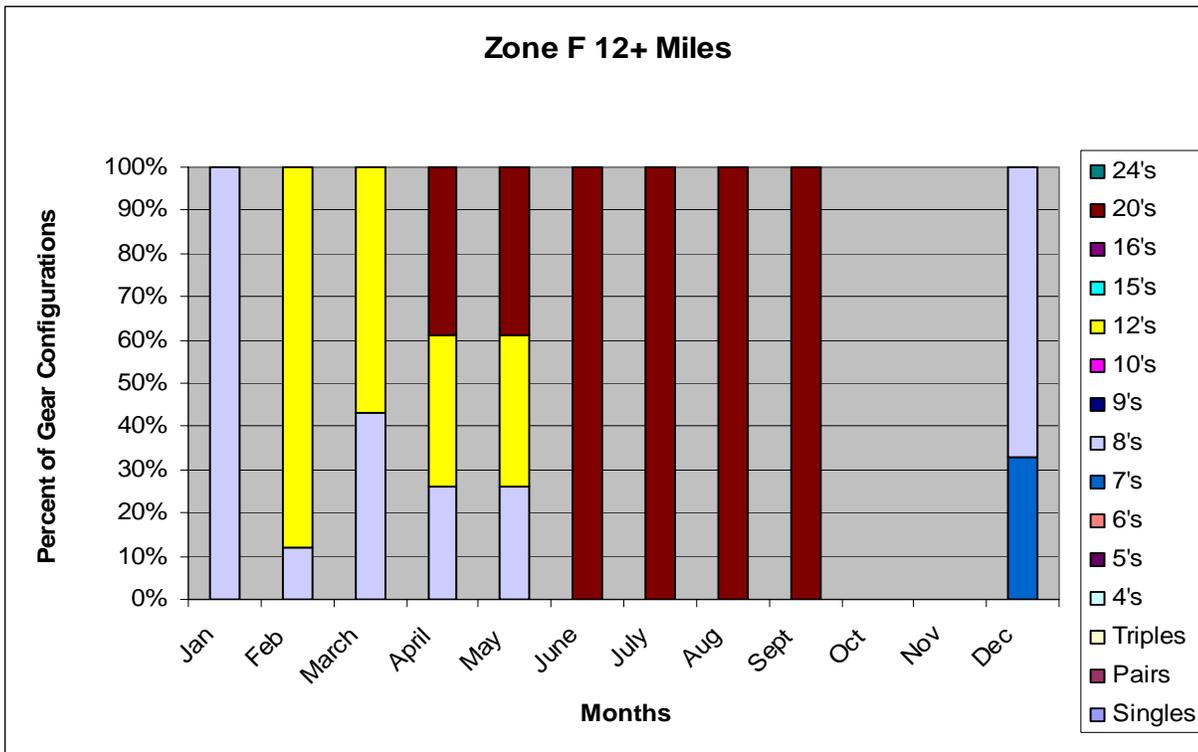


Figure 20. The configurations of gear reported (in percentage of the total makeup) in federal waters beyond 12 miles in zone F by month. The colors are always stacked in the order listed in the legend at the right. This area fishes 8 and 12 trap trawls in the winter before converting to 20's in the summer. The gaps represent no fishing reported.

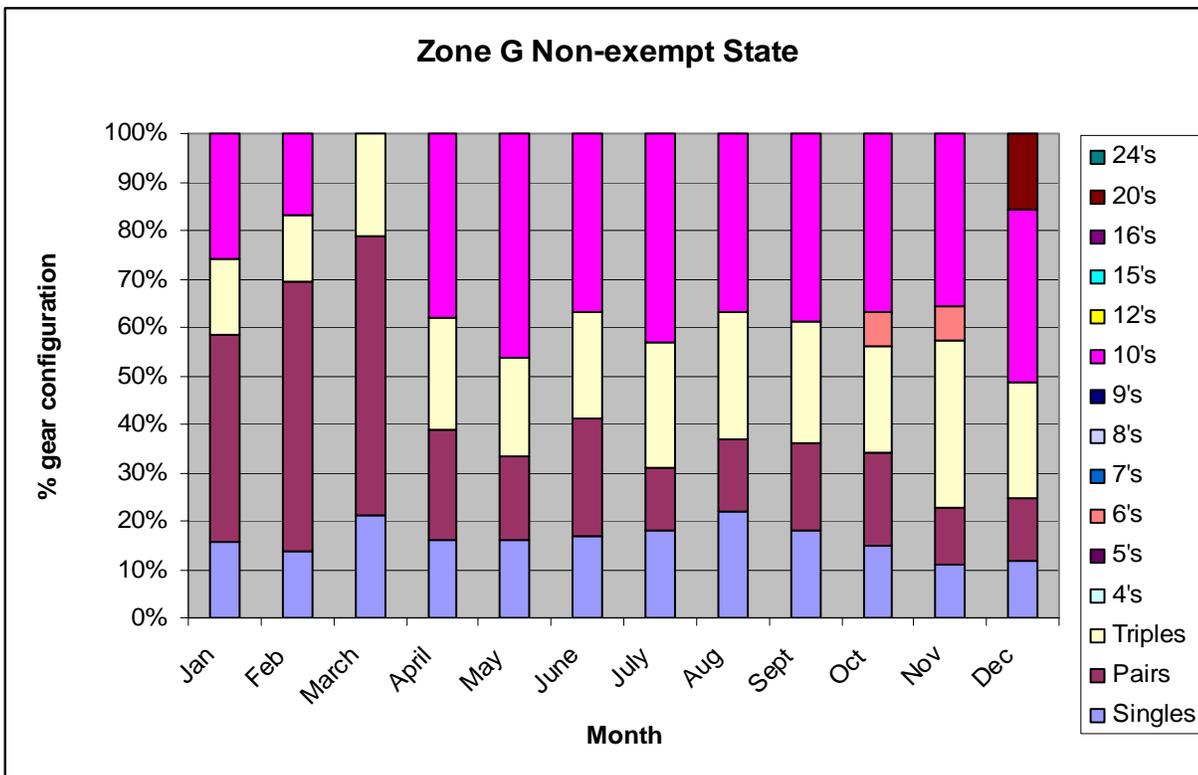


Figure 21. The configurations of gear reported (in percentage of the total makeup) in non-exempt state waters in zone G by month. The colors are always stacked in the order listed in the legend at the right. This area fishes a mix of singles, pairs, and trawls from 3-10 traps.

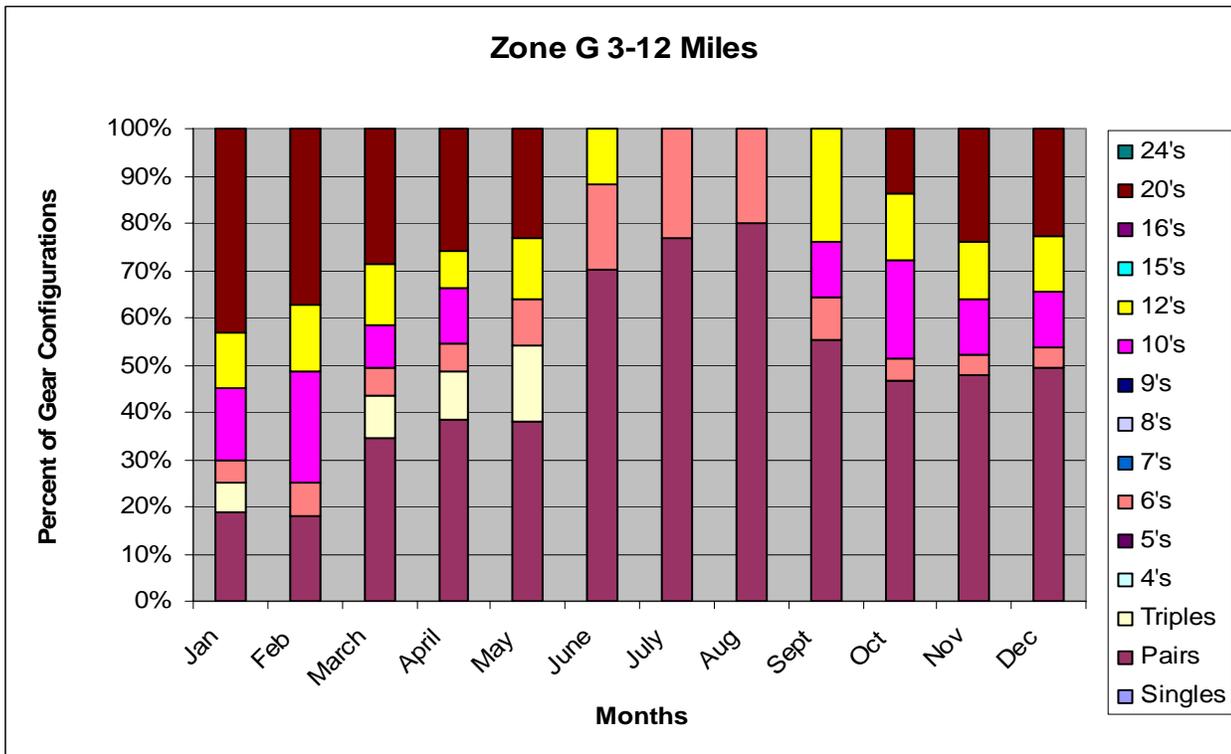


Figure 22. The configurations of gear reported (in percentage of the total makeup) in federal waters from 3-12 miles in zone G by month. The colors are always stacked in the order listed in the legend at the right. This area fishes many pairs in the summer with an increase of trawls in the fall and winter (3-20 trap trawls).

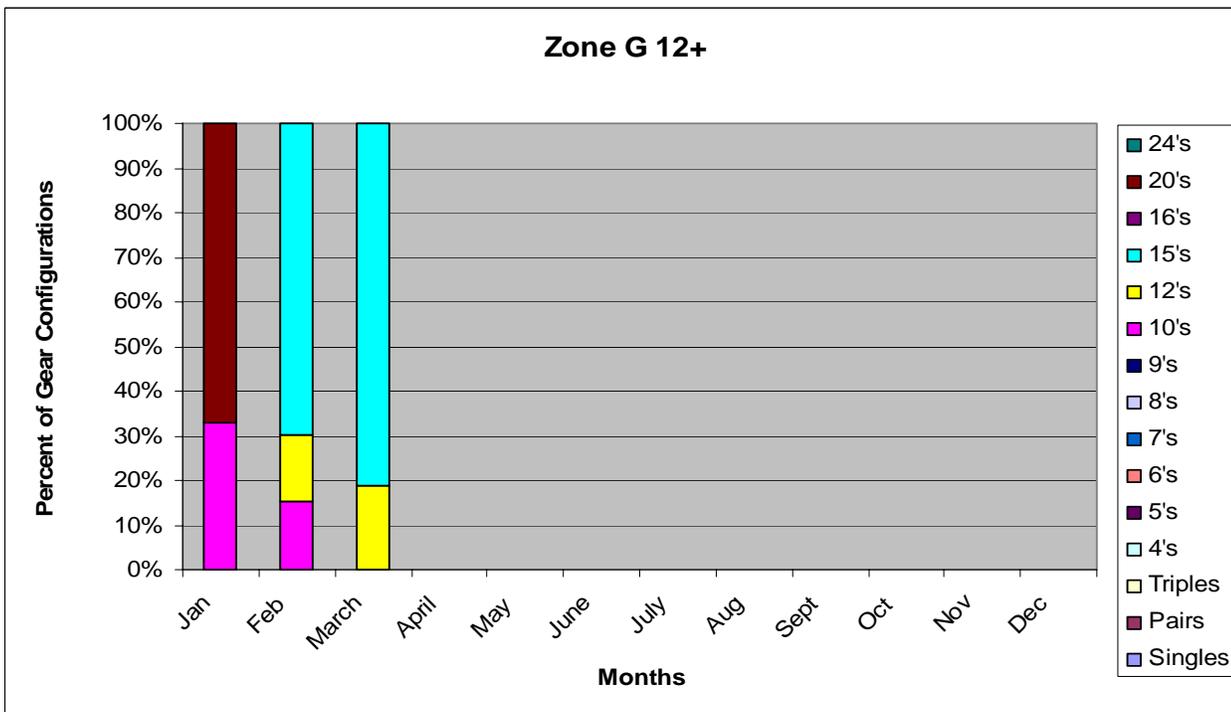


Figure 23. The configurations of gear reported (in percentage of the total makeup) in federal waters beyond 12 miles in zone G by month. The colors are always stacked in the order listed in the legend at the right. This area fishes exclusively trawls including 10, 12, 15, and 20 trap trawls. The gaps represent no fishing reported.

\*Table 9 spans four pages

2009

2009

**STATE and FEDERAL Licenses**

**STATE ONLY Licenses**

| ZONE A |            |                 |            |            | 1170 |
|--------|------------|-----------------|------------|------------|------|
| Month  | # licenses | Total pounds    | % licenses | % latent   |      |
| 1      | 151        | 138479          | 13%        | 87%        |      |
| 2      | 96         | 56441           | 8%         | 92%        |      |
| 3      | 92         | 48179           | 8%         | 92%        |      |
| 4      | 208        | 157226          | 18%        | 82%        |      |
| 5      | 327        | 472627          | 28%        | 72%        |      |
| 6      | 420        | 549260          | 36%        | 64%        |      |
| 7      | 682        | 1543837         | 58%        | 42%        |      |
| 8      | 749        | 3011210         | 64%        | 36%        |      |
| 9      | 731        | 3344738         | 62%        | 38%        |      |
| 10     | 660        | 3600277         | 56%        | 44%        |      |
| 11     | 498        | 2396056         | 43%        | 57%        |      |
| 12     | 306        | 691409          | 26%        | 74%        |      |
|        | <b>749</b> | <b>16009740</b> | <b>64%</b> | <b>92%</b> |      |

| ZONE A |            |                |            |             | 883 |
|--------|------------|----------------|------------|-------------|-----|
| Month  | # licenses | Total pounds   | % licenses | % latent    |     |
| 1      | 14         | 3993           | 2%         | 98%         |     |
| 2      | 5          | 672            | 1%         | 99%         |     |
| 3      | 4          | 644            | 0%         | 100%        |     |
| 4      | 53         | 18601          | 6%         | 94%         |     |
| 5      | 125        | 89526          | 14%        | 86%         |     |
| 6      | 194        | 131428         | 22%        | 78%         |     |
| 7      | 419        | 749370         | 47%        | 53%         |     |
| 8      | 482        | 1453083        | 55%        | 45%         |     |
| 9      | 462        | 1491569        | 52%        | 48%         |     |
| 10     | 349        | 1091744        | 40%        | 60%         |     |
| 11     | 245        | 354567         | 28%        | 72%         |     |
| 12     | 84         | 59769          | 10%        | 90%         |     |
|        | <b>482</b> | <b>5444966</b> | <b>55%</b> | <b>100%</b> |     |

| ZONE B state and federal |            |                |            |            | 627 |
|--------------------------|------------|----------------|------------|------------|-----|
| Month                    | # licenses | Total pounds   | % licenses | % latent   |     |
| 1                        | 86         | 81570          | 14%        | 86%        |     |
| 2                        | 63         | 28812          | 10%        | 90%        |     |
| 3                        | 77         | 32522          | 12%        | 88%        |     |
| 4                        | 114        | 91992          | 18%        | 82%        |     |
| 5                        | 174        | 230262         | 28%        | 72%        |     |
| 6                        | 213        | 217091         | 34%        | 66%        |     |
| 7                        | 330        | 643934         | 53%        | 47%        |     |
| 8                        | 378        | 1815564        | 60%        | 40%        |     |
| 9                        | 364        | 1887130        | 58%        | 42%        |     |
| 10                       | 343        | 1827374        | 55%        | 45%        |     |
| 11                       | 269        | 1188989        | 43%        | 57%        |     |
| 12                       | 186        | 426912         | 30%        | 70%        |     |
|                          | <b>378</b> | <b>8472152</b> | <b>60%</b> | <b>90%</b> |     |

| ZONE B state only |            |                |            |            | 465 |
|-------------------|------------|----------------|------------|------------|-----|
| Month             | # licenses | Total pounds   | % licenses | % latent   |     |
| 1                 | 17         | 5259           | 4%         | 96%        |     |
| 2                 | 8          | 1653           | 2%         | 98%        |     |
| 3                 | 17         | 4554           | 4%         | 96%        |     |
| 4                 | 41         | 16942          | 9%         | 91%        |     |
| 5                 | 82         | 70638          | 18%        | 82%        |     |
| 6                 | 118        | 75701          | 25%        | 75%        |     |
| 7                 | 214        | 337559         | 46%        | 54%        |     |
| 8                 | 258        | 861434         | 55%        | 45%        |     |
| 9                 | 241        | 859978         | 52%        | 48%        |     |
| 10                | 220        | 638353         | 47%        | 53%        |     |
| 11                | 152        | 241661         | 33%        | 67%        |     |
| 12                | 80         | 58614          | 17%        | 83%        |     |
|                   | <b>258</b> | <b>3172348</b> | <b>55%</b> | <b>98%</b> |     |

| ZONE C | state and federal | <b>1001</b>     |            |            |  |
|--------|-------------------|-----------------|------------|------------|--|
| Month  | # licenses        | Total pounds    | % licenses | % latent   |  |
| 1      | 196               | 27087           | 20%        | 80%        |  |
| 2      | 150               | 84618           | 15%        | 85%        |  |
| 3      | 138               | 73213           | 14%        | 86%        |  |
| 4      | 220               | 196849          | 22%        | 78%        |  |
| 5      | 323               | 512526          | 32%        | 68%        |  |
| 6      | 382               | 455114          | 38%        | 62%        |  |
| 7      | 599               | 2147774         | 60%        | 40%        |  |
| 8      | 637               | 4325748         | 64%        | 36%        |  |
| 9      | 603               | 4020644         | 60%        | 40%        |  |
| 10     | 563               | 3049690         | 56%        | 44%        |  |
| 11     | 433               | 2003447         | 43%        | 57%        |  |
| 12     | 293               | 887565          | 29%        | 71%        |  |
|        | <b>637</b>        | <b>17784276</b> | <b>64%</b> | <b>86%</b> |  |

| ZONE C | state only | <b>853</b>      |            |            |  |
|--------|------------|-----------------|------------|------------|--|
| Month  | # licenses | Total pounds    | % licenses | % latent   |  |
| 1      | 98         | 79534           | 11%        | 89%        |  |
| 2      | 70         | 234696          | 8%         | 92%        |  |
| 3      | 60         | 19338           | 7%         | 93%        |  |
| 4      | 115        | 70256           | 13%        | 87%        |  |
| 5      | 204        | 268748          | 24%        | 76%        |  |
| 6      | 267        | 269211          | 31%        | 69%        |  |
| 7      | 464        | 1354500         | 54%        | 46%        |  |
| 8      | 499        | 2725279         | 58%        | 42%        |  |
| 9      | 468        | 2508450         | 55%        | 45%        |  |
| 10     | 405        | 1672084         | 47%        | 53%        |  |
| 11     | 303        | 787387          | 36%        | 64%        |  |
| 12     | 172        | 278653          | 20%        | 80%        |  |
|        | <b>499</b> | <b>10268136</b> | <b>58%</b> | <b>93%</b> |  |

| ZONE D | state and federal | <b>1244</b>     |            |            |  |
|--------|-------------------|-----------------|------------|------------|--|
| Month  | # licenses        | Total pounds    | % licenses | % latent   |  |
| 1      | 197               | 260260          | 16%        | 84%        |  |
| 2      | 141               | 79871           | 11%        | 89%        |  |
| 3      | 121               | 68825           | 10%        | 90%        |  |
| 4      | 211               | 169318          | 17%        | 83%        |  |
| 5      | 339               | 47418           | 27%        | 73%        |  |
| 6      | 485               | 469151          | 39%        | 61%        |  |
| 7      | 697               | 1955014         | 56%        | 44%        |  |
| 8      | 756               | 3638454         | 61%        | 39%        |  |
| 9      | 719               | 3436343         | 58%        | 42%        |  |
| 10     | 698               | 3270363         | 56%        | 44%        |  |
| 11     | 584               | 2122575         | 47%        | 53%        |  |
| 12     | 382               | 934875          | 31%        | 69%        |  |
|        | <b>756</b>        | <b>16452467</b> | <b>61%</b> | <b>90%</b> |  |

| ZONE D | state only | <b>1046</b>    |            |            |  |
|--------|------------|----------------|------------|------------|--|
| Month  | # licenses | Total pounds   | % licenses | % latent   |  |
| 1      | 78         | 44909          | 7%         | 93%        |  |
| 2      | 45         | 14702          | 4%         | 96%        |  |
| 3      | 38         | 11865          | 4%         | 96%        |  |
| 4      | 91         | 41258          | 9%         | 91%        |  |
| 5      | 196        | 189785         | 19%        | 81%        |  |
| 6      | 332        | 282727         | 32%        | 68%        |  |
| 7      | 523        | 121518         | 50%        | 50%        |  |
| 8      | 578        | 2271593        | 55%        | 45%        |  |
| 9      | 552        | 2162455        | 53%        | 47%        |  |
| 10     | 523        | 1942760        | 50%        | 50%        |  |
| 11     | 410        | 902242         | 39%        | 61%        |  |
| 12     | 228        | 255323         | 22%        | 78%        |  |
|        | <b>578</b> | <b>8241137</b> | <b>55%</b> | <b>96%</b> |  |

| ZONE E |            | state and federal |            |            | <b>565</b> |
|--------|------------|-------------------|------------|------------|------------|
| Month  | # licenses | Total pounds      | % licenses | % latent   |            |
| 1      | 123        | 152961            | 22%        | 78%        |            |
| 2      | 84         | 48230             | 15%        | 85%        |            |
| 3      | 86         | 44692             | 15%        | 85%        |            |
| 4      | 95         | 68910             | 17%        | 83%        |            |
| 5      | 144        | 120467            | 25%        | 75%        |            |
| 6      | 187        | 135308            | 33%        | 67%        |            |
| 7      | 310        | 771855            | 55%        | 45%        |            |
| 8      | 321        | 875008            | 57%        | 43%        |            |
| 9      | 301        | 778053            | 53%        | 47%        |            |
| 10     | 284        | 798005            | 50%        | 50%        |            |
| 11     | 236        | 724248            | 42%        | 58%        |            |
| 12     | 198        | 381491            | 35%        | 65%        |            |
|        | <b>321</b> | <b>4899229</b>    | <b>57%</b> | <b>85%</b> |            |

| ZONE E |            | state only     |            |            | <b>444</b> |
|--------|------------|----------------|------------|------------|------------|
| Month  | # licenses | Total pounds   | % licenses | % latent   |            |
| 1      | 48         | 25418          | 11%        | 89%        |            |
| 2      | 28         | 8098           | 6%         | 94%        |            |
| 3      | 29         | 9199           | 7%         | 93%        |            |
| 4      | 32         | 14719          | 7%         | 93%        |            |
| 5      | 71         | 35051          | 16%        | 84%        |            |
| 6      | 103        | 59578          | 23%        | 77%        |            |
| 7      | 203        | 366918         | 46%        | 54%        |            |
| 8      | 215        | 414270         | 48%        | 52%        |            |
| 9      | 200        | 372627         | 45%        | 55%        |            |
| 10     | 182        | 325465         | 41%        | 59%        |            |
| 11     | 137        | 228062         | 31%        | 69%        |            |
| 12     | 102        | 88551          | 23%        | 77%        |            |
|        | <b>215</b> | <b>1947954</b> | <b>48%</b> | <b>94%</b> |            |

| ZONE F |            | state and federal |            |            | <b>1024</b> |
|--------|------------|-------------------|------------|------------|-------------|
| Month  | # licenses | Total pounds      | % licenses | % latent   |             |
| 1      | 119        | 156940            | 12%        | 88%        |             |
| 2      | 85         | 61595             | 8%         | 92%        |             |
| 3      | 84         | 46347             | 8%         | 92%        |             |
| 4      | 104        | 92171             | 10%        | 90%        |             |
| 5      | 131        | 94639             | 13%        | 87%        |             |
| 6      | 329        | 263019            | 32%        | 68%        |             |
| 7      | 501        | 1908176           | 49%        | 51%        |             |
| 8      | 525        | 1876676           | 51%        | 49%        |             |
| 9      | 592        | 1944835           | 58%        | 42%        |             |
| 10     | 499        | 1585903           | 49%        | 51%        |             |
| 11     | 385        | 946214            | 38%        | 62%        |             |
| 12     | 198        | 381491            | 19%        | 81%        |             |
|        | <b>592</b> | <b>9358006</b>    | <b>58%</b> | <b>92%</b> |             |

| ZONE F |            | state only     |            |            | <b>843</b> |
|--------|------------|----------------|------------|------------|------------|
| Month  | # licenses | Total pounds   | % licenses | % latent   |            |
| 1      | 38         | 22335          | 5%         | 95%        |            |
| 2      | 25         | 9310           | 3%         | 97%        |            |
| 3      | 22         | 7156           | 3%         | 97%        |            |
| 4      | 44         | 31440          | 5%         | 95%        |            |
| 5      | 57         | 29035          | 7%         | 93%        |            |
| 6      | 210        | 143569         | 25%        | 75%        |            |
| 7      | 343        | 1022197        | 41%        | 59%        |            |
| 8      | 362        | 950225         | 43%        | 57%        |            |
| 9      | 365        | 1028636        | 43%        | 57%        |            |
| 10     | 388        | 763081         | 46%        | 54%        |            |
| 11     | 234        | 307351         | 28%        | 72%        |            |
| 12     | 102        | 88551          | 12%        | 88%        |            |
|        | <b>388</b> | <b>4402886</b> | <b>46%</b> | <b>97%</b> |            |

| ZONE G state and federal |            |                |            |            | ZONE G state only |            |                |            |            |
|--------------------------|------------|----------------|------------|------------|-------------------|------------|----------------|------------|------------|
| Month                    | # licenses | Total pounds   | % licenses | % latent   | Month             | # licenses | Total pounds   | % licenses | % latent   |
|                          |            |                |            | <b>485</b> |                   |            |                |            | <b>347</b> |
| 1                        | 134        | 154728         | 28%        | 72%        | 1                 | 34         | 11381          | 10%        | 90%        |
| 2                        | 107        | 63936          | 22%        | 78%        | 2                 | 22         | 6844           | 6%         | 94%        |
| 3                        | 84         | 46347          | 17%        | 83%        | 3                 | 22         | 7156           | 6%         | 94%        |
| 4                        | 128        | 79611          | 26%        | 74%        | 4                 | 37         | 12856          | 11%        | 89%        |
| 5                        | 131        | 94639          | 27%        | 73%        | 5                 | 57         | 29035          | 16%        | 84%        |
| 6                        | 195        | 156766         | 40%        | 60%        | 6                 | 90         | 47303          | 26%        | 74%        |
| 7                        | 246        | 515776         | 51%        | 49%        | 7                 | 134        | 177640         | 39%        | 61%        |
| 8                        | 263        | 748984         | 54%        | 46%        | 8                 | 143        | 226895         | 41%        | 59%        |
| 9                        | 268        | 827011         | 55%        | 45%        | 9                 | 144        | 247531         | 41%        | 59%        |
| 10                       | 254        | 805259         | 52%        | 48%        | 10                | 126        | 210168         | 36%        | 64%        |
| 11                       | 217        | 825546         | 45%        | 55%        | 11                | 91         | 151478         | 26%        | 74%        |
| 12                       | 179        | 529953         | 37%        | 63%        | 12                | 65         | 62356          | 19%        | 81%        |
|                          | <b>268</b> | <b>4848557</b> | <b>55%</b> | <b>83%</b> |                   | <b>144</b> | <b>1190642</b> | <b>41%</b> | <b>94%</b> |

Table 9. Latency calculations for the 2009 fishing season by month for each zone. The bold number at the start of each zone is the total number of licenses purchased in that zone. The rest of the data is taken from DMR’s 100% dealer reporting program. The number listed under “number of licenses” is the number of fishermen that sold at least 100 pounds to a dealer in that month. That number was divided by the total number of licenses available to come up with the percent of active fishermen by month (% licenses). The reverse of that number is the number of licenses that are latent during that time period. This process was done for both the entire population of fishermen in that zone (left hand side), as well as state license holders only (right hand side). These calculations of latency include both latent licenses (never fished) and seasonal latency (a license that is only fished part of the year).

| <b>Exempt</b>     | <b>Zone A</b> | <b>Zone B</b> | <b>Zone C</b> | <b>Zone D</b> | <b>Zone E</b> | <b>Zone F</b> | <b>Zone G</b> | <b>Total</b> |
|-------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------|
| Jan               | 268           | 808           | 6616          | 3089          | 4250          | 2664          | 3333          | 21027        |
| Feb               | 114           | 328           | 4785          | 2138          | 2398          | 1671          | 1858          | 13293        |
| March             | 0             | 1247          | 4847          | 2824          | 3229          | 1714          | 1795          | 15656        |
| April             | 6995          | 6976          | 17463         | 13024         | 4250          | 2728          | 6433          | 57870        |
| May               | 23317         | 19769         | 42667         | 42235         | 13597         | 5852          | 14487         | 161923       |
| June              | 53371         | 32346         | 65584         | 100753        | 30587         | 30609         | 25387         | 338637       |
| July              | 147698        | 71857         | 133190        | 232353        | 71013         | 52222         | 40532         | 748866       |
| Aug               | 179804        | 88306         | 141812        | 254737        | 72823         | 55866         | 42230         | 835577       |
| Sept              | 152381        | 78347         | 132741        | 219641        | 58826         | 55935         | 38142         | 736013       |
| Oct               | 112859        | 59455         | 101987        | 161629        | 47949         | 57499         | 25496         | 566872       |
| Nov               | 49402         | 31789         | 60483         | 96569         | 29404         | 31532         | 14529         | 313708       |
| Dec               | 6113          | 7930          | 21268         | 31150         | 15727         | 13394         | 7987          | 103569       |
| <b>Non-exempt</b> | <b>Zone A</b> | <b>Zone B</b> | <b>Zone C</b> | <b>Zone D</b> | <b>Zone E</b> | <b>Zone F</b> | <b>Zone G</b> | <b>Total</b> |
| Jan               | 465           | 977           | 8151          | 3766          | 1829          | 1719          | 2468          | 19376        |
| Feb               | 203           | 492           | 5161          | 1401          | 875           | 1099          | 1277          | 10508        |
| March             | 0             | 1112          | 4995          | 1901          | 729           | 1044          | 1091          | 10872        |
| April             | 3146          | 2832          | 9886          | 9959          | 1086          | 2156          | 2435          | 31500        |
| May               | 6554          | 4424          | 19406         | 25161         | 3853          | 2645          | 3640          | 65684        |
| June              | 8935          | 3616          | 18600         | 32009         | 3446          | 6119          | 4416          | 77142        |
| July              | 17403         | 5318          | 23166         | 36313         | 6053          | 10811         | 7424          | 106489       |
| Aug               | 21384         | 7173          | 26078         | 41016         | 7598          | 11695         | 7485          | 122429       |
| Sept              | 24091         | 8775          | 27804         | 48961         | 11521         | 12263         | 8888          | 142304       |
| Oct               | 22336         | 10863         | 31952         | 55539         | 11286         | 13831         | 9773          | 155580       |
| Nov               | 14107         | 9169          | 26146         | 45678         | 8601          | 8676          | 7680          | 120056       |
| Dec               | 6247          | 4945          | 16356         | 26504         | 6224          | 3996          | 6197          | 70469        |
| <b>Federal</b>    | <b>Zone A</b> | <b>Zone B</b> | <b>Zone C</b> | <b>Zone D</b> | <b>Zone E</b> | <b>Zone F</b> | <b>Zone G</b> | <b>Total</b> |
| Jan               | 59639         | 28604         | 46396         | 85632         | 35128         | 14098         | 29567         | 299064       |
| Feb               | 39854         | 20645         | 36419         | 73978         | 26699         | 8048          | 22543         | 228186       |
| March             | 35255         | 19918         | 33102         | 56982         | 22867         | 6606          | 17074         | 191804       |
| April             | 14581         | 12891         | 22842         | 45159         | 13726         | 3427          | 11416         | 124041       |
| May               | 40227         | 10696         | 11488         | 34722         | 7112          | 2396          | 6879          | 113519       |
| June              | 26592         | 4641          | 3999          | 12115         | 2218          | 697           | 3956          | 54218        |
| July              | 17347         | 2503          | 2097          | 6882          | 376           | 74            | 3337          | 32615        |
| Aug               | 18396         | 3262          | 2731          | 4516          | 1170          | 1416          | 4335          | 35826        |
| Sept              | 26789         | 6955          | 5363          | 8719          | 4154          | 2226          | 7179          | 61383        |
| Oct               | 42260         | 18077         | 13668         | 25179         | 11054         | 2817          | 11845         | 124900       |
| Nov               | 57001         | 32794         | 26080         | 48790         | 22570         | 11696         | 19140         | 218070       |
| Dec               | 77928         | 41266         | 37745         | 72981         | 28541         | 17539         | 22529         | 298530       |
| <b>Total</b>      | <b>Zone A</b> | <b>Zone B</b> | <b>Zone C</b> | <b>Zone D</b> | <b>Zone E</b> | <b>Zone F</b> | <b>Zone G</b> | <b>Total</b> |
| Jan               | 60372         | 30389         | 61162         | 92487         | 41206         | 18481         | 35369         | 339467       |
| Feb               | 40171         | 21466         | 46364         | 77517         | 29972         | 10818         | 25678         | 251986       |
| March             | 35255         | 22276         | 42944         | 61707         | 26825         | 9365          | 19960         | 218333       |
| April             | 24722         | 22699         | 50192         | 68142         | 19062         | 8310          | 20284         | 213411       |
| May               | 70098         | 34889         | 73560         | 102118        | 24562         | 10893         | 25005         | 341125       |
| June              | 88898         | 40604         | 88184         | 144877        | 36252         | 37425         | 33759         | 469998       |
| July              | 182447        | 79679         | 158454        | 275548        | 77442         | 63107         | 51293         | 887971       |
| Aug               | 219584        | 98741         | 170621        | 300269        | 81591         | 68977         | 54050         | 993832       |
| Sept              | 203260        | 94078         | 165908        | 277320        | 74501         | 70424         | 54209         | 939700       |
| Oct               | 177455        | 88394         | 147607        | 242346        | 70289         | 74147         | 47114         | 847352       |
| Nov               | 120509        | 73752         | 112710        | 191037        | 60575         | 51904         | 41349         | 651835       |
| Dec               | 90287         | 54142         | 75369         | 130635        | 50492         | 34929         | 36713         | 472568       |

Table 10. Annual log extrapolated numbers of endlines for each area and total overall by zone and month.

| <b>Exempt</b>     | <b>Zone A</b> | <b>Zone B</b> | <b>Zone C</b> | <b>Zone D</b> | <b>Zone E</b> | <b>Zone F</b> | <b>Zone G</b> | <b>Total</b> |
|-------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------|
| Jan               | 313           | 749           | 1590          | 1596          | 971           | 1973          | 1640          | 8833         |
| Feb               | 32            | 679           | 1157          | 977           | 377           | 971           | 838           | 5030         |
| March             | 0             | 1642          | 236           | 980           | 494           | 1170          | 868           | 5391         |
| April             | 4982          | 11290         | 18026         | 8603          | 2373          | 3160          | 3141          | 51575        |
| May               | 974           | 28900         | 43633         | 32907         | 14794         | 5619          | 8920          | 135748       |
| June              | 46249         | 40101         | 66156         | 103622        | 23950         | 32585         | 13661         | 326324       |
| July              | 134190        | 89320         | 127953        | 219883        | 59196         | 59933         | 25648         | 716123       |
| Aug               | 161223        | 99274         | 138504        | 236443        | 55772         | 63576         | 23826         | 778617       |
| Sept              | 132050        | 77983         | 121700        | 196735        | 51780         | 60035         | 26086         | 666369       |
| Oct               | 91885         | 62809         | 95357         | 156037        | 44252         | 64343         | 20561         | 535245       |
| Nov               | 38697         | 19721         | 59426         | 90817         | 31746         | 39828         | 12313         | 292549       |
| Dec               | 75833         | 6064          | 19144         | 37418         | 17579         | 15993         | 5032          | 177064       |
| <b>Non-exempt</b> | <b>Zone A</b> | <b>Zone B</b> | <b>Zone C</b> | <b>Zone D</b> | <b>Zone E</b> | <b>Zone F</b> | <b>Zone G</b> | <b>Total</b> |
| Jan               | 782           | 907           | 4894          | 7187          | 3108          | 0             | 3258          | 20136        |
| Feb               | 430           | 491           | 3559          | 3000          | 188           | 0             | 2602          | 10270        |
| March             | 0             | 918           | 625           | 2790          | 1112          | 0             | 1598          | 7042         |
| April             | 8126          | 2671          | 15678         | 11906         | 1964          | 0             | 4095          | 44440        |
| May               | 18148         | 4579          | 21511         | 21024         | 4599          | 83            | 5571          | 75516        |
| June              | 24965         | 4065          | 19434         | 23050         | 7191          | 252           | 6800          | 85756        |
| July              | 59815         | 5455          | 25338         | 22278         | 12766         | 1116          | 10646         | 137415       |
| Aug               | 79942         | 6653          | 24958         | 28969         | 15392         | 1351          | 13246         | 170510       |
| Sept              | 72082         | 8514          | 28410         | 46083         | 14369         | 1549          | 11068         | 182074       |
| Oct               | 80999         | 8390          | 30052         | 53377         | 12179         | 2832          | 9649          | 197478       |
| Nov               | 40270         | 8366          | 26193         | 44168         | 8903          | 2122          | 8579          | 138600       |
| Dec               | 18557         | 5255          | 18831         | 18820         | 6317          | 1221          | 9041          | 78043        |
| <b>Federal</b>    | <b>Zone A</b> | <b>Zone B</b> | <b>Zone C</b> | <b>Zone D</b> | <b>Zone E</b> | <b>Zone F</b> | <b>Zone G</b> | <b>Total</b> |
| Jan               | 62899         | 14123         | 71792         | 78820         | 32709         | 27223         | 22793         | 310360       |
| Feb               | 49478         | 11192         | 58739         | 55148         | 21196         | 19802         | 17200         | 232756       |
| March             | 44100         | 10699         | 5740          | 43203         | 16929         | 11106         | 17895         | 149671       |
| April             | 15353         | 6903          | 11473         | 42036         | 9264          | 13855         | 15905         | 114790       |
| May               | 44934         | 5344          | 4870          | 35487         | 5129          | 7774          | 5471          | 109009       |
| June              | 36048         | 1977          | 0             | 6518          | 3834          | 3722          | 3469          | 55567        |
| July              | 27259         | 4089          | 0             | 1579          | 3846          | 3983          | 2806          | 43562        |
| Aug               | 31036         | 3061          | 0             | 0             | 3359          | 4817          | 3356          | 45630        |
| Sept              | 39652         | 8436          | 0             | 3055          | 5359          | 6716          | 6270          | 69489        |
| Oct               | 49543         | 18259         | 5516          | 9034          | 10024         | 6068          | 10224         | 108668       |
| Nov               | 68920         | 26839         | 16965         | 37844         | 19401         | 16875         | 15333         | 202177       |
| Dec               | 85476         | 21045         | 32525         | 62555         | 23260         | 32426         | 26591         | 283877       |
| <b>Total</b>      | <b>Zone A</b> | <b>Zone B</b> | <b>Zone C</b> | <b>Zone D</b> | <b>Zone E</b> | <b>Zone F</b> | <b>Zone G</b> | <b>Total</b> |
| Jan               | 63995         | 15779         | 78275         | 87603         | 36788         | 29196         | 27692         | 339328       |
| Feb               | 49940         | 12362         | 63455         | 59126         | 21761         | 20773         | 20640         | 248056       |
| March             | 44100         | 13258         | 6601          | 46972         | 18536         | 12276         | 20361         | 162105       |
| April             | 28462         | 20864         | 45177         | 62545         | 13602         | 17015         | 23141         | 210805       |
| May               | 64057         | 38823         | 70014         | 89418         | 24522         | 13476         | 19962         | 320272       |
| June              | 107262        | 46143         | 85591         | 133190        | 34974         | 36559         | 23929         | 467647       |
| July              | 221265        | 98864         | 153290        | 243740        | 75808         | 65033         | 39100         | 897100       |
| Aug               | 272201        | 108987        | 163462        | 265412        | 74524         | 69744         | 40428         | 994758       |
| Sept              | 243784        | 94933         | 150110        | 245873        | 71508         | 68300         | 43423         | 917932       |
| Oct               | 222427        | 89458         | 130925        | 218449        | 66455         | 73243         | 40434         | 841391       |
| Nov               | 147887        | 54926         | 102584        | 172829        | 60050         | 58825         | 36225         | 633325       |
| Dec               | 179866        | 32365         | 70500         | 118793        | 47156         | 49641         | 40664         | 538985       |

Table 11. Gear survey extrapolated numbers of endlines for each area and total overall by zone and month.

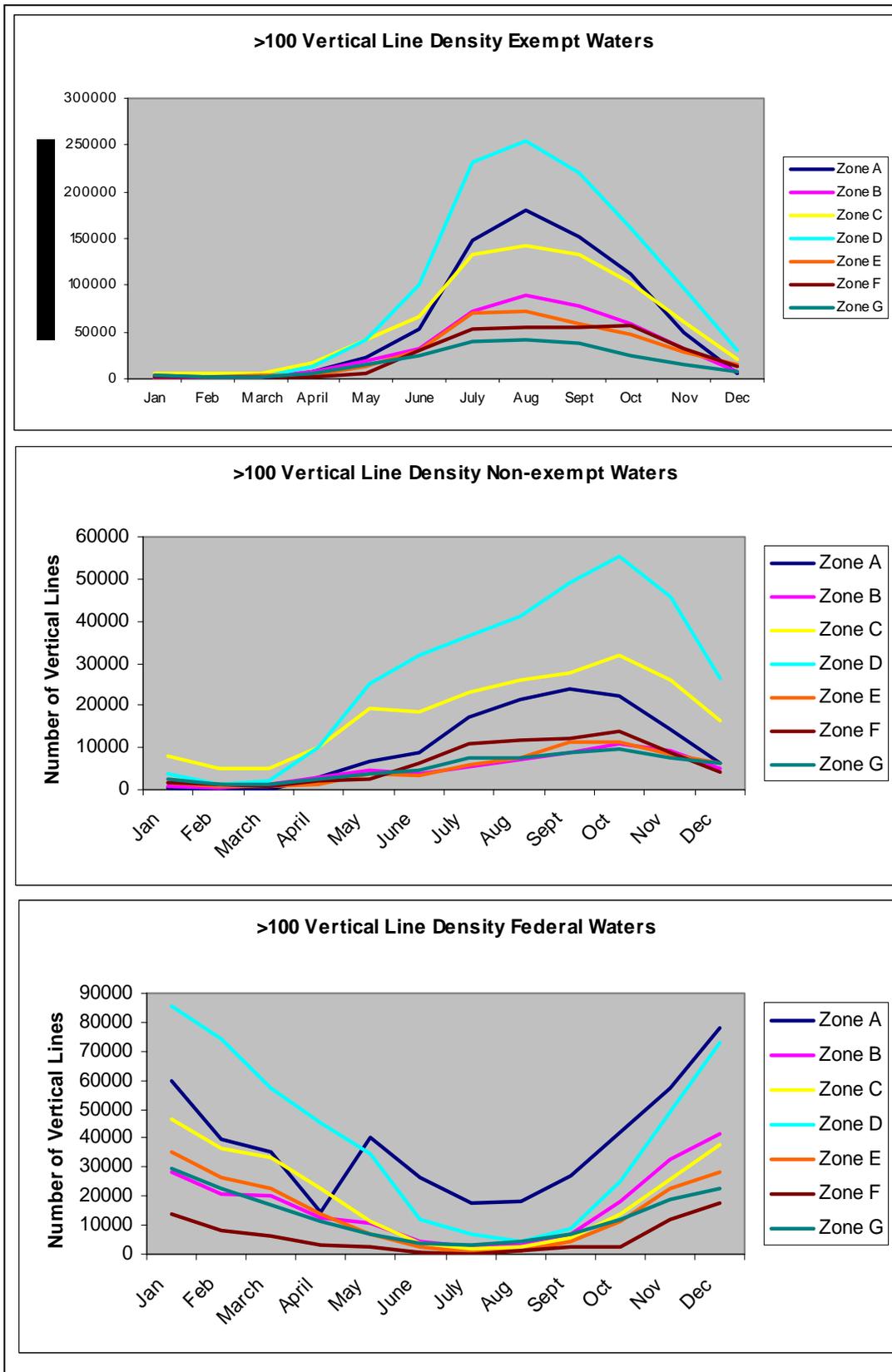


Figure 24. The number of vertical lines in the fishery by month extrapolated from the Annual logs for each area. Please note the different scales on the y-axis, which are different so that trends can be seen even at lower densities of endlines. Zones D, C, and A are the zones with the highest number of endlines in all area and months. The exemption area peaks during the summer when lobsters are closer to shore, non-exempt state waters in the fall and federal water in the winter.

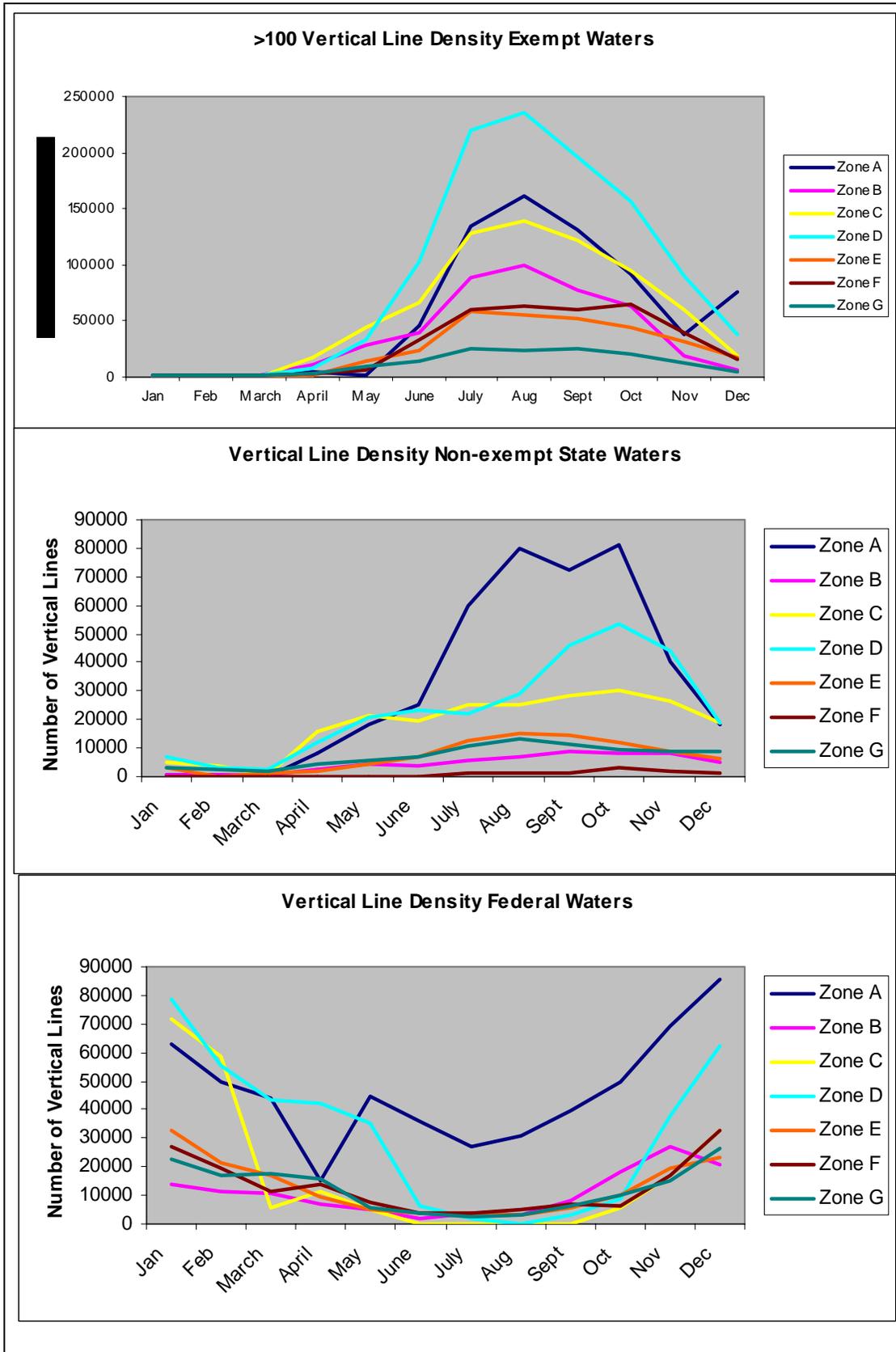


Figure 25. The number of vertical lines in the fishery by month extrapolated from the Gear surveys for each area. Please note the different scales on the y-axis, which are different so that trends can be seen even at lower densities of endlines. The data from these surveys follows similar trends to the Annual log data in Figure 24 with the exception of Zone A, which was extrapolated much higher in the non-exempt state waters.

| Areas  |     | Length EL (fa) | Diameter EL (") | Toggles | Highflyer | Avg depth (fa) | EL length/depth | % of float |
|--------|-----|----------------|-----------------|---------|-----------|----------------|-----------------|------------|
| A 3-12 | Avg | 69             |                 | both    | no        | 50             | 1.4             | 48%        |
|        | Min | 35             | 11/32           |         |           | 20             | 1.8             | 45%        |
|        | Max | 90             | 3/8             |         |           | 60             | 1.5             | 50%        |
| A 12+  | Avg | 95             |                 | yes     | both      | 54             | 1.7             | 49%        |
|        | Min | 50             | 3/8             |         |           | 25             | 2.0             | 45%        |
|        | Max | 180            | 7/16            |         |           | 100            | 1.8             | 50%        |
| B 3-12 | Avg | 55             |                 | yes     | no        | 40             | 1.4             | 47%        |
|        | Min | 6              | < 5/16          |         |           |                |                 | 25%        |
|        | Max | 80             | 7/16            |         |           | 60             | 1.3             | 60%        |
| C 3-12 | Avg | 70             |                 | yes     | no        | 57             | 1.2             | 56%        |
|        | Min | 40             | 3/8             |         |           | 40             | 1.0             | 30%        |
|        | Max | 100            | 7/16            |         |           | 80             | 1.3             | 75%        |
| C 12+  | Avg | 80             |                 | yes     | no        | 70             | 1.1             | 0%         |
|        | Min | 80             | 7/16            |         |           | 70             | 1.1             | 0%         |
|        | Max | 80             | 7/16            |         |           | 70             | 1.1             | 0%         |
| D 3-12 | Avg | 54             |                 | both    | no        | 43             | 1.2             | 43%        |
|        | Min | 5              | 11/32           |         |           | 5              | 1.0             | 20%        |
|        | Max | 90             | 7/16            |         |           | 75             | 1.2             | 66%        |
| D 12+  | Avg | 73             |                 | both    | both      | 49             | 1.5             | 34%        |
|        | Min | 45             | 11/32           |         |           | 30             | 1.5             | 30%        |
|        | Max | 100            | 7/16            |         |           | 70             | 1.4             | 55%        |
| E 3-12 | Avg | 49             |                 | both    | both      | 40             | 1.2             | 54%        |
|        | Min | 20             | 5/16            |         |           | 10             | 2.0             | 20%        |
|        | Max | 100            | 7/16            |         |           | 70             | 1.4             | 75%        |
| E 12+  | Avg | 37             |                 |         |           | 30             | 1.2             | 27%        |
|        | Min | 4              | 5/16            |         |           | 5              | 0.8             | 0%         |
|        | Max | 100            | 1/2             |         |           | 80             | 1.3             | 75%        |
| F 3-12 | Avg | 41             |                 | both    | both      | 34             | 1.2             | 18%        |
|        | Min | 12             | 5/16            |         |           | 10             | 1.2             | 0%         |
|        | Max | 70             | 3/8             |         |           | 65             | 1.1             | 30%        |
| F 12+  | Avg | 52             |                 | both    | both      | 43             | 1.2             | 0%         |
|        | Min | 12             | 5/16            |         |           | 10             | 1.2             | 0%         |
|        | Max | 90             | 7/16            |         |           | 80             | 1.1             | 0%         |
| G 3-12 | Avg | 45             |                 | both    | both      | 34             | 1.3             | 34%        |
|        | Min | 12             | 3/8             |         |           | 16             | 0.8             | 0%         |
|        | Max | 75             | 7/16            |         |           | 60             | 1.3             | 50%        |
| G 12+  | Avg | 80             |                 | most no | both      | 66             | 1.2             | 17%        |
|        | Min | 70             | 3/8             |         |           | 60             | 1.2             | 0%         |
|        | Max | 100            | 3/8             |         |           | 80             | 1.3             | 22%        |

Table 12. Summary of vertical line information recorded in the Gear surveys by area. "Both" in the Toggle and Highflyer columns indicates a mixed response for use. The average, minimum and maximum reports for endline length, endline diameter, set depth, endline length to depth ratio and the percentage of float rope on the endline are all presented here.

|                   | < 5/16    | 5/16      | 11/32     | 3/8        | 7/16       | 1/2       | > 1/2     |
|-------------------|-----------|-----------|-----------|------------|------------|-----------|-----------|
| A Exempt          | 0%        | 4%        | 6%        | 59%        | 30%        | 0%        | 0%        |
| A Non-exempt      | 0%        | 1%        | 12%       | 65%        | 22%        | 0%        | 0%        |
| A 3-12            | 0%        | 1%        | 3%        | 57%        | 39%        | 0%        | 0%        |
| A 12+             | 0%        | 0%        | 0%        | 80%        | 20%        | 0%        | 0%        |
| B Exempt          | 1%        | 8%        | 12%       | 63%        | 13%        | 3%        | 0%        |
| B Non-exempt      | 3%        | 6%        | 20%       | 62%        | 10%        | 0%        | 0%        |
| B 3-12            | 3%        | 0%        | 5%        | 78%        | 14%        | 0%        | 0%        |
| C Exempt          | 1%        | 8%        | 6%        | 67%        | 18%        | 0%        | 0%        |
| C Non-exempt      | 0%        | 5%        | 0%        | 55%        | 41%        | 0%        | 0%        |
| C 3-12            | 0%        | 0%        | 0%        | 59%        | 41%        | 0%        | 0%        |
| C 12+             | 0%        | 0%        | 0%        | 0%         | 100%       | 0%        | 0%        |
| D Exempt          | 2%        | 4%        | 5%        | 66%        | 18%        | 2%        | 3%        |
| D Non-exempt      | 3%        | 3%        | 6%        | 65%        | 23%        | 0%        | 0%        |
| D 3-12            | 0%        | 0%        | 11%       | 73%        | 16%        | 0%        | 0%        |
| D12+              | 0%        | 0%        | 32%       | 28%        | 40%        | 0%        | 0%        |
| E Exempt          | 0%        | 4%        | 10%       | 55%        | 31%        | 0%        | 0%        |
| E Non-exempt      | 0%        | 23%       | 1%        | 62%        | 14%        | 0%        | 0%        |
| E 3-12            | 0%        | 29%       | 6%        | 62%        | 3%         | 0%        | 0%        |
| E 12+             | 0%        | 26%       | 12%       | 47%        | 0%         | 15%       | 0%        |
| F Exempt          | 0%        | 4%        | 7%        | 53%        | 26%        | 3%        | 6%        |
| F Non-exempt      | 0%        | 71%       | 0%        | 29%        | 0%         | 0%        | 0%        |
| F 3-12            | 0%        | 11%       | 7%        | 82%        | 0%         | 0%        | 0%        |
| F 12+             | 0%        | 38%       | 19%       | 38%        | 6%         | 0%        | 0%        |
| G Exempt          | 0%        | 4%        | 9%        | 59%        | 29%        | 0%        | 0%        |
| G Non-exempt      | 0%        | 0%        | 0%        | 84%        | 16%        | 0%        | 0%        |
| G 3-12            | 0%        | 0%        | 0%        | 74%        | 26%        | 0%        | 0%        |
| G 12+             | 0%        | 0%        | 0%        | 100%       | 0%         | 0%        | 0%        |
| <b>% of Total</b> | <b>1%</b> | <b>5%</b> | <b>7%</b> | <b>63%</b> | <b>22%</b> | <b>1%</b> | <b>1%</b> |

Table 13. The percentage of different diameters of rope used for endlines. The majority of vertical lines are 3/8” rope (63%). 13% of the respondents report using weaker rope at or below 11/32” diameter. There is a trend for smaller diameter ropes to be used inshore and also in more southern zones, while the larger ropes are mostly fished offshore and towards the eastern zones.