

## **Gulf of Maine**

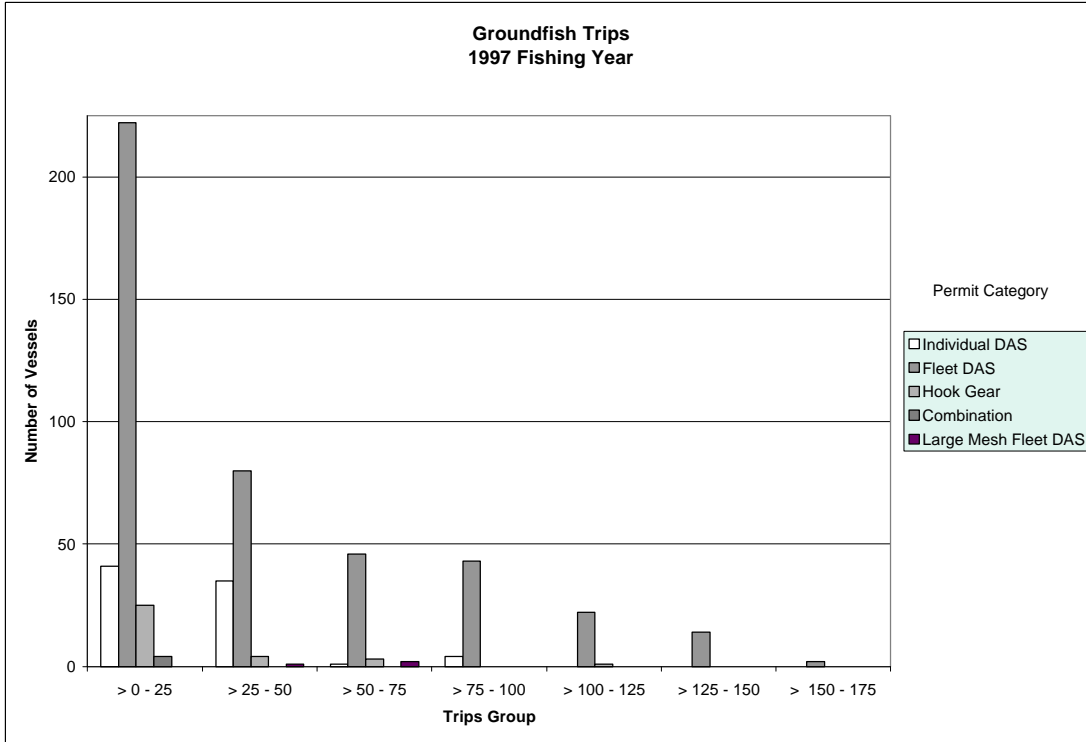
Because there was an initial discussion that increasing the minimum time charged to a vessel would only apply to vessels fishing in the Gulf of Maine, actual fishing activity in fishing year 1997 was analyzed for the impacts of this measure. Figure 21 summarizes, by groundfish permit category, the number of trips taken by vessels that fished in the Gulf of Maine in fishing year 1997. (As described above, data limitations mean that this figure may not accurately reflect the number of trips taken in the Gulf of Maine. Vessels are included in this category if they reported taking any trips from the Gulf of Maine in fishing year 1997). In all permit categories, most vessels take 25 trips or less. For the individual permit category, almost all vessels took 50 groundfish trips or less during the course of the fishing year. Fleet DAS permits had a wider distribution in the number of trips, though again most boats took 50 trips or less. Almost all vessels with hook gear permits took 25 trips or less. Figure 22 summarizes the distribution of trips that were more than three hours in length to twenty-four hours in length. The overwhelming majority of these trips were taken by fleet DAS category permits. As shown in the table, there are some individual and fleet category vessels that did not take any trips of this length. There are a number of fleet category vessels that took more than 50 trips that were of this length.

Figure 23 presents information on number of groundfish trips by vessels that fished in the Gulf of Maine, sorted by gear type. Only the major gear types are shown (there are a small number of groundfish trips by vessels who obtain most of their revenues from a wide variety of other gear types). Once again, the most common number of trips is 25 trips or less. There are noticeable differences between the four gear types shown. The majority of bottom trawl vessels take 25 trips or less. With sink gillnet vessels, there is more variation in the number of trips that are taken, with 40 vessels (one-third) taking between 50 and 100 trips. There are some bottom trawl, sink gillnet, and bottom longline vessels that took more than 75 trips in fishing year 1997. **Figure 24** summarize short trips for the four major gear types. Most bottom trawl, bottom longline, and handline vessels make 25 or fewer short trips, though there are some vessels that make more than 50 trips. Sink gillnet vessels show a more even distribution in number of trips. Most sink gillnet vessels take more than 25 trips. There are almost as many sink gillnet vessels taking more than 50 trips as there are taking 25 trips or less.

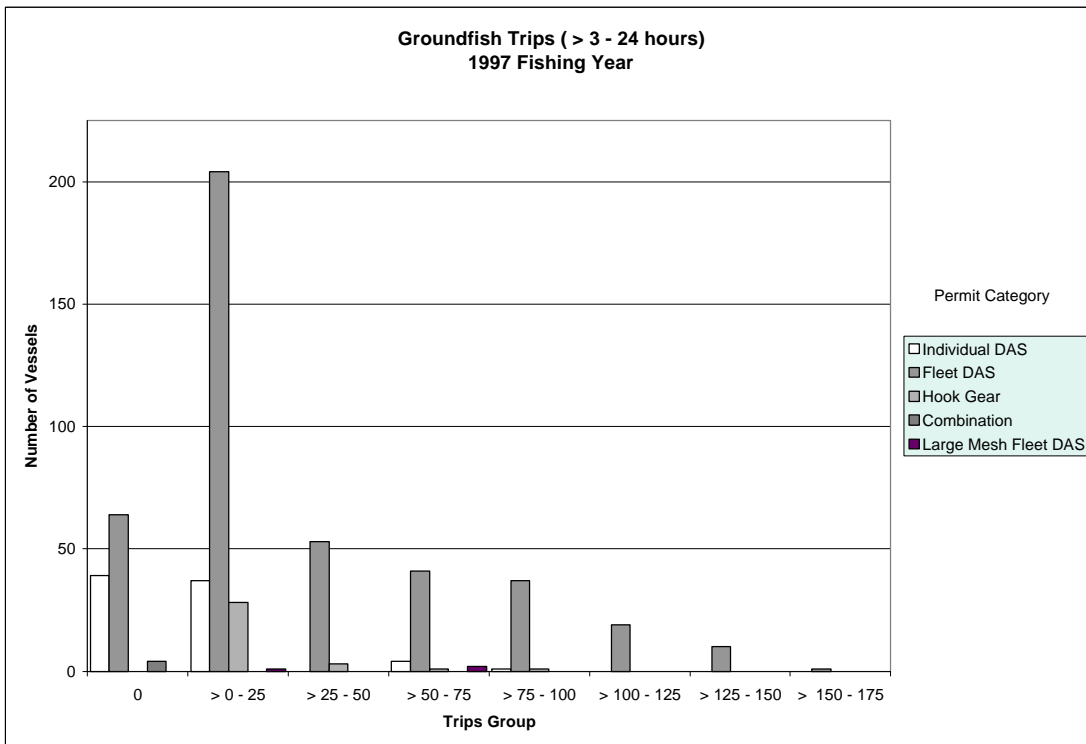
Figure 25 summarize information on the number of trips of all lengths by primary landing port for ten ports abutting the Gulf of Maine. As expected, this figure shows the majority of groundfish trips by vessels that fish in the Gulf of Maine are taken by vessels that land their catch in Gloucester, MA and Portland, ME. The figure also shows that there are differences between these two ports. Almost all of the vessels that land in Portland, ME took 50 groundfish trips or fewer in fishing year 1997. In Gloucester, by comparison, while most vessels also took 50 trips or fewer, there is a larger proportion of vessels that took more than 50 trips in the year. The most common number of trips for vessels that landed in Provincetown, MA was between 50 and 75, and in New Bedford, the most common number of trips taken was 25 to 50. In all other ports, the most common number of trips taken was 25 or fewer. Portsmouth NH, Hampton/Seabrook NH, Scituate MA, and Provincetown MA also show a wide range in the number of trips taken.

**Figure 26** summarizes information on short trips, by principal landing port, for vessels that fished in the Gulf of Maine. This chart shows that very few vessels that landing in Portland ME had more than 25 trips that were between 3 and 24 hours in length. Almost as many vessels in Portland did not have any short trips. New Bedford is the only port that the most common occurrence of short trips was not to have any. In Gloucester and the other ports, there is a wide range in the number of short trips that vessels have.

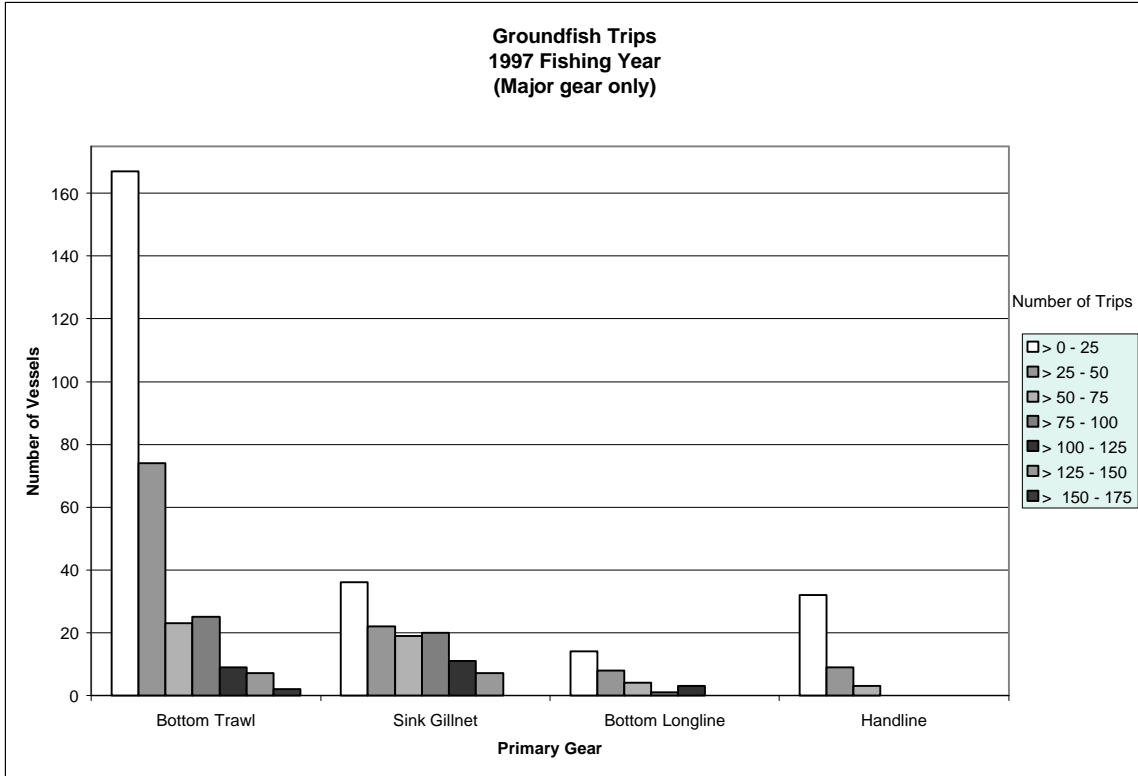
Some preliminary conclusions can be inferred from the number of trips shown in these figures. These conclusions are not unexpected. Generally, individual DAS vessels take fewer trips than the other permit categories. Since other data shows these vessels use the highest percentage of allocated DAS, in general these vessels must be taking longer trips than the other permit categories. With respect to gear type, all gear types show a wide range in the number of trips taken. The distribution in number of trips for sink gillnet vessels is more even than in the other permit categories. With respect to ports, a higher proportion of vessels that land in Portland appear to take fewer trips than in other ports. These observations suggest that, based on observed 1997 fishing activity, any measure designed to change the DAS counting method for trips between 3 and 24 hours will have fewer impacts on individual DAS vessels and vessels that landed in Portland. It will also have the greatest impact on sink gillnet vessels.



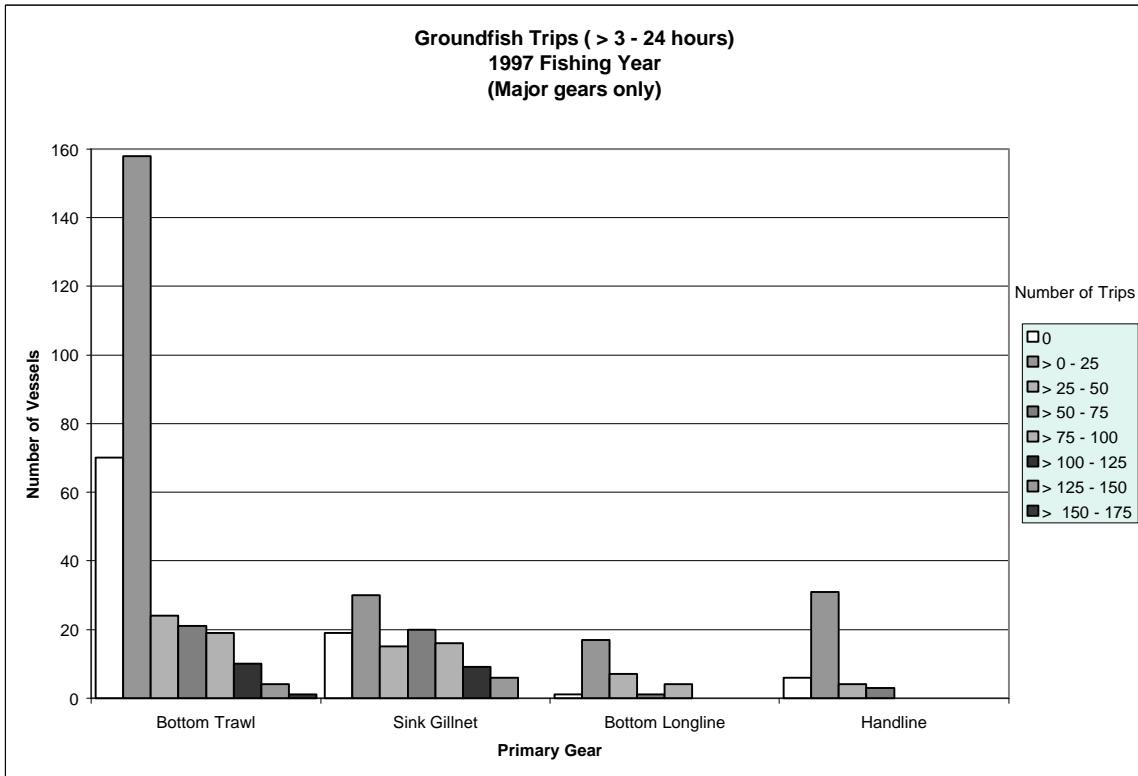
**Figure 21 – Number of groundfish trips for vessels that fished in the Gulf of Maine, fishing year 1997**



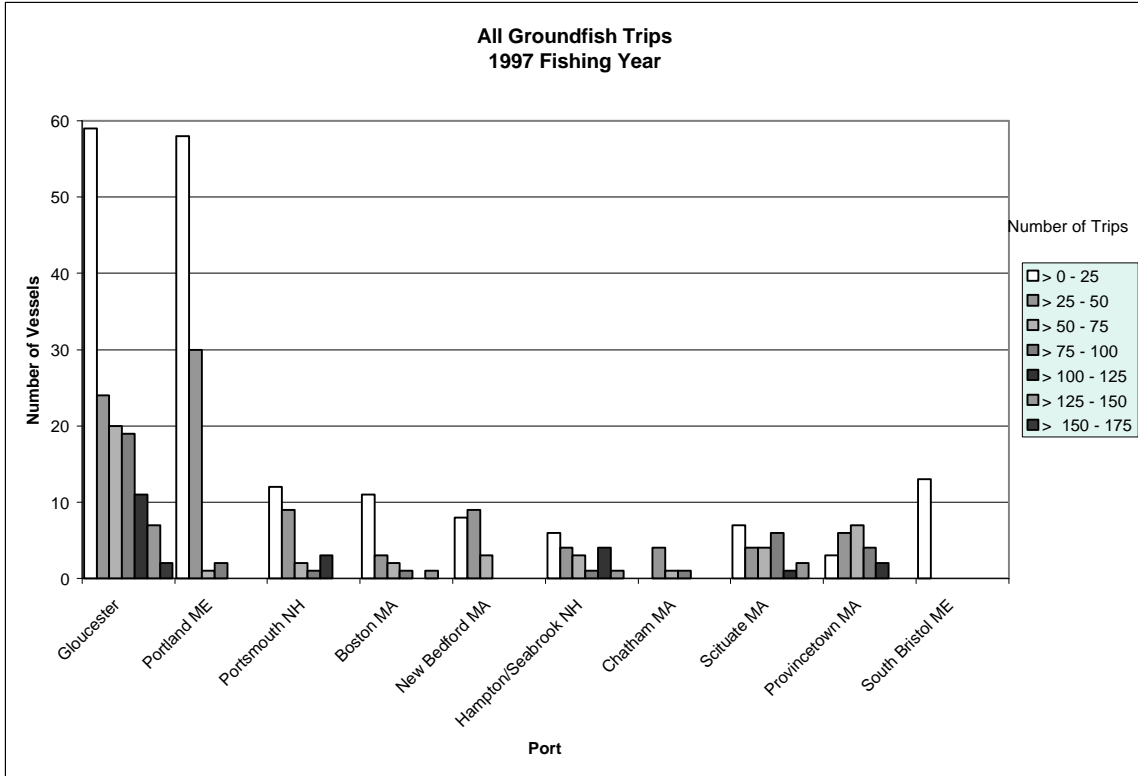
**Figure 22 - Number of groundfish trips (> 3 – 24 hours) for vessels that fished in the Gulf of Maine, fishing year 1997**



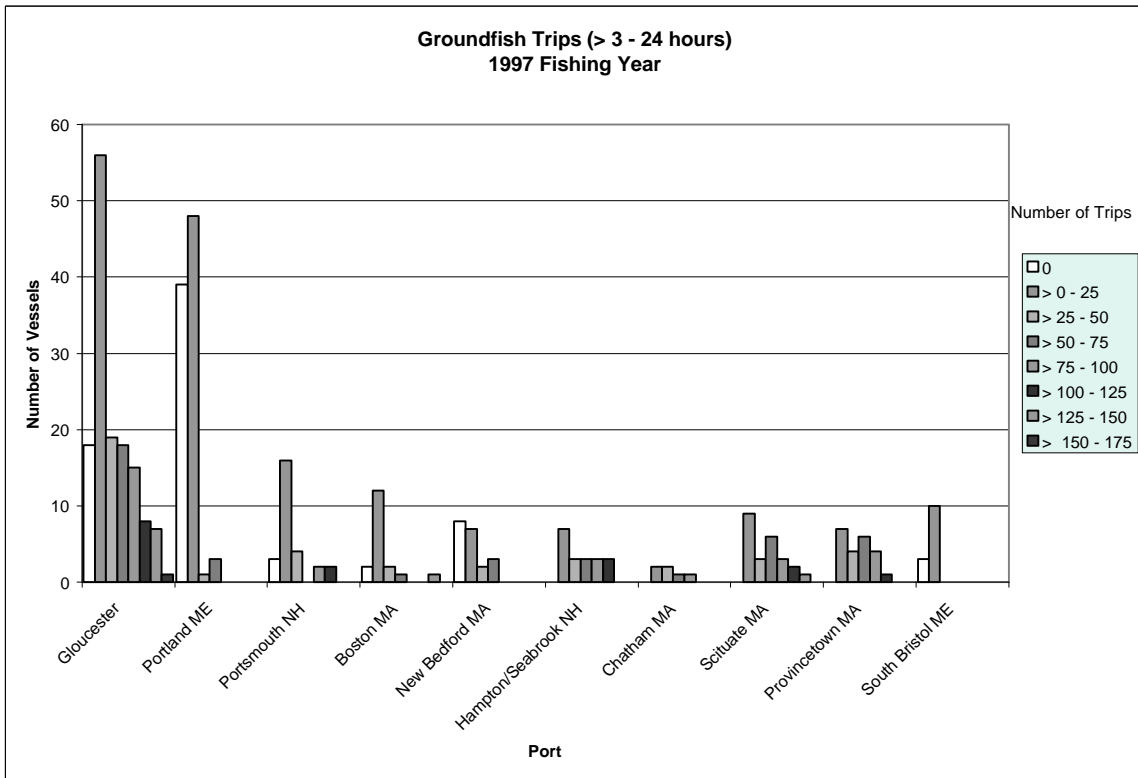
**Figure 23 – Groundfish trips by vessels that fished in the Gulf of Maine, by major gear types, fishing year 1997**



**Figure 24 – Groundfish trips (> 3 – 24 hours), by gear type, by vessels that fished in the Gulf of Maine, fishing year 1997**



**Figure 25 – Groundfish trips by vessels that fished in the Gulf of Maine, by landing port, fishing year 1997**



**Figure 26 – Groundfish trips (> 3 – 24 hours) for vessels that fished in the Gulf of Maine, by port, fishing year 1997**

## **Estimated Impacts**

As noted above, the DAS used by each vessel were broken down into two categories based on the length of the trips: trips that were three hours to twenty-four hours in length, and total trips. DAS used were summed for each category. Only trips that were three hours to twenty-four hours in length will be impacted by the proposal. These trips would be counted as a minimum of twenty-four hours in length. The proposal was applied to observed fishing activity in fishing year 1997. For every vessel that fished in the Gulf of Maine, the DAS calculated if the proposal were in effect totals the number of DAS used on trips of less than three hours or more than twenty-four hours (trips that are unaffected by the proposal), plus one DAS for every trip of three to twenty-four hours.

Applying the proposal to observed activity in a previous fishing year results in a calculated DAS level that is higher than the DAS actually charged. While this will change the apparent DAS used, effort will only be reduced if the calculated DAS exceed the vessel's allocated DAS. The assumption in the analysis is that since the proposal impacts trips of one day or less, the reaction of the fisherman will be to take fewer trips of one day or less. Because these trips will be charged a minimum of twenty-four hours, the number of trips that will not be taken is calculated to be equal to the difference between the calculated DAS and the allocated DAS. Since a vessel cannot take a partial trip, fractional DAS/trips are rounded up to the next whole number. The number of trips that would be "lost" are then summed. The results of this analysis are summarized in the following series of tables.

## **All Areas**

Table 4 summarizes the estimated impacts by vessel permit category for fishing year 1997. Of the DAS used by individual DAS vessels, 14% of their trips were short trips but they used only 2% of their DAS on these trips. Applying a 24 hour minimum to short trips would result in 8% of the vessels losing a total of 1% of the trips taken by these vessels. 38% of the DASu used by fleet DAS vessels were used on short trips; in fact, the majority of the trips – 77% - taken by these vessels were between 3 and 24 hours in length. Applying the 24 hour minimum to these trips would result in 14% of the vessels losing 10% of the trips. 81% of the trips taken by hook gear permits were short trips, and 54% of the DAS used by this category were used on short trips. Because these vessels used only a small portion of their DAS, applying the 24 hour minimum to these trips results in the loss of only 2% of the trips by 2% of the vessels.

Table 5 summarizes the estimated impacts by principal gear type. 15% of the DAS used by bottom trawl vessels were on short trips, compared to 50% of the DAS used by sink gillnet vessels, 51% of the DAS used by bottom longline vessels, and 52% of eh DAS used by handline vessels. Applying the 24 hour minimum would result in 11% of the bottom trawl vessels losing 7% of their trips, 28% of the sink gillnet vessels losing 13% of their trips, 15% of the bottom longline vessels losing 11% of their trips, and 2% of the handline vessels losing 1% of their trips.

Table 6 estimates the impacts based on principal landing port. Chargin vessels a minimum of 24 hours for short trips would have the most impact on the number of trips by vessels

that landed in Gloucester, Hampton/Seabrook NH, Chatham, Boston, and Atlantic City NJ. It would have the least impact on Portland, Barnstable, and New Bedford.

Table 13 through Table 15 estimate the impacts if trips over three hours in length were counted as a minimum of 24 hours during fishing year 1998. These tables show that there were fewer trips in 1998, and fewer short trips, even though the number of DAS used increased. The percentage of shore trips decreased for individual, fleet, and hook gear permit categories, but increased for combination and large mesh fleet DAS categories. Overall, the percentage of DAS used on short trips also decreased. When DAS used is examined based on gear type, sink gillnet vessels used a lower percentage of DAS on short trips in 1998, while bottom trawl, bottom longline, and handline vessels all used a higher percentage.

These statistics indicate that vessels took longer trips in 1998. It's unclear if this means vessels were on the water more, or if the running clock is reflected in an apparent increase in trip length. In any case, the result is that the impacts of the proposal are slightly less than if based on 1997 fishing activity. Overall, 7% of trips in 1998 would have been "lost", and 10% of the vessels using DAS would have lost trips. The impacts are in the same range as in 1997.

|   | Permit Category |            |            |             |                      | Grand Total |
|---|-----------------|------------|------------|-------------|----------------------|-------------|
|   | Individual DAS  | Fleet DAS  | Hook Gear  | Combination | Large Mesh Fleet DAS |             |
| Number of Vessels   | 150             | 809        | 106        | 15          | 11                   | 1,091       |
| Total Number of Trips                                       | 3,419           | 27,620     | 1,895      | 98          | 438                  | 33,470      |
| Total Trips > 3 - 24 hours                                  | 484             | 21,173     | 1,540      | 2           | 282                  | 23,481      |
| <b>Percentage of short trips</b>                            | <b>14%</b>      | <b>77%</b> | <b>81%</b> | <b>2%</b>   | <b>64%</b>           | <b>70%</b>  |
| DAS Allocated   | 19,028          | 71,093     | 9,328      | 1,136       | 1,320                | 101,905     |
| Total DAS Used  | 15,980          | 30,757     | 1,545      | 596         | 585                  | 49,463      |
| <b>Percentage of DAS used</b>                               | <b>84%</b>      | <b>43%</b> | <b>17%</b> | <b>52%</b>  | <b>44%</b>           | <b>49%</b>  |
| DAS Used on Trips > 3 - 24 Hours                            | 271             | 11,538     | 834        | 1           | 189                  | 12,832      |
| <b>% Used DAS on &gt; 3 - 24 Hour Trips (% of used DAS)</b> | <b>2%</b>       | <b>38%</b> | <b>54%</b> | <b>0%</b>   | <b>32%</b>           | <b>26%</b>  |
| Sum of Lost Trips   | 24              | 2,675      | 37         | 0           | 6                    | 2,742       |
| <b>Percentage of trips "lost"</b>                           | <b>1%</b>       | <b>10%</b> | <b>2%</b>  | <b>0%</b>   | <b>1%</b>            | <b>8%</b>   |
| Number of Vessels "Losing" Trips                            | 10              | 114        | 2          | 0           | 1                    | 127         |
| <b>Percentage of vessels losing trips</b>                   | <b>8%</b>       | <b>14%</b> | <b>2%</b>  | <b>0%</b>   | <b>9%</b>            | <b>12%</b>  |

**Table 4 – Estimated impacts, by permit category, of proposal to charge 24 hours for trips of > 3 – 24 hours, based on observed 1997 fishing activity**