

# Alaska Fixed Gear Fishery Characteristics

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## Introduction

The North Pacific Fishery Management Council (Council) has established an intention to integrate electronic monitoring (EM) tools into the Observer Program for the fixed gear small-boat groundfish and halibut fisheries. The Council’s intent is to develop EM to collect data to be used in catch estimation for this fleet. The purpose of this document is to provide an overview of aspects of the Alaskan fixed gear groundfish fishery that are likely to influence EM program design for this fleet.

This document was developed through a Council committee, the fixed gear EM Workgroup (EMWG). The EMWG provides a forum for all stakeholders including the commercial fishing industry, agencies, and EM service providers to cooperatively and collaboratively design, test, and develop EM systems that are consistent with Council goals to integrate EM into the Observer Program. The fishery demographics described in this document will continue to be refined and expanded by the EMWG as part of the analyses to support EM implementation decision points, program design approaches, and eventual regulations.

## Landings by Port

Fixed gear landings, both pot and hook and line but excluding state fisheries, were summarized by port and vessel size category (Table 1). Since the 40’ to 57’ size group is the priority for EM, the landing ports were placed in diminishing order using that size category. The homeports for the fixed gear fleet were also summarized (Table 2). In 2013, the fleet included nearly 2,000 vessels and made about 7,300 landings at about 50 ports. There were about the same number of landings in the three vessel size sectors.

Among the 40-57’ vessel size category, landings occur at 33 ports with 50% from three ports, 75% from seven ports and 90% from 19 ports. The top five ports for 40-57’ group are Homer, Juneau, Sitka, Kodiak and Seattle (72% of landings). The <40’ and >58’ size sectors have similar patterns of port concentration yet the ports are different, particularly among the <40’ sector.

There was similarity between the top landing ports and homeports. However, there was a higher percent of landings than the percent of vessels homeported in Homer, Kodiak, Seattle, and Dutch Harbor; whereas there was a lower percent of the landings in Petersburg and Sitka than the percent of vessels with these homeports.

## Landings by Target Species

The fixed gear groundfish landings in 2013 were summarized by month and vessel size category for the Pacific cod, halibut, and sablefish fisheries (Figure 1) to show how landings are distributed by vessel size and target fishery. However, it should be noted that landing patterns do not directly translate to fishing effort, which is likely how monitoring effort would be distributed.

Halibut target trips represent 52% of total landings, followed by Pacific cod (25%) and sablefish (23%). About 70% of the Pacific cod landings occur in the first quarter of the year and landings occur in all months. The majority (60%) of Pacific cod fishing is by the >58' fleet, followed by 40-57' sector (26%).

Half the halibut trips are by <40' sector, followed by 40-57' (30%) and >58' (20%). Conversely, about half (47%) the sablefish trips are by >58' sector, followed by 40-57' (43%) and <40' (10%).

Landing patterns in the <40' halibut fleet are distinctly seasonal, most active June to August, while landings for the larger vessel groups are distributed more evenly between months starting in April through October.

## Landings by Month and Region

The fixed gear groundfish landings from 2013 were summarized by month and geographic region (Figure 2). The highest number of landings occurred in the Southeast region (35%), followed by Southcentral (26%), Aleutian (25%) and the Western region (13%). Among the 40-57' fleet, the greatest activity is the Southeast (44%), followed by Southcentral (32%), Aleutian (24%) and the Western region (0.5%).

The fishery in the Western region is a distinctly summer fishery, mostly (95%) by the <40' vessel group. Southeast landings are mostly March to November period, while Southcentral and Aleutian have landings year round. The early season landings in the latter regions were mostly in the Pacific cod fishery.

## Vessel Activity Patterns

The fixed gear groundfish landings from 2013 were summarized in terms of total fishing days by size sector in each quarter (Figure 3) as well as the number of fishing trips by each size sector in each quarter (Figure 4).

Nearly 70% of the total fixed gear fleet fished 1 to 10 days per year. About 20% fished 11 to 20 days per year, while about 15% fished more than 30 days per year.

Over 75% of the total fixed gear fleet made 1 to 3 fixed gear trips per year. About 16% make between 4 and 6 trips per year, while about 15% fished more than 30 days per year. Within any given quarter, the vast majority of active vessels made between 1 to 3 trips. The three vessel size sectors were similar in activity patterns.

**Table 1. Landings (count and percent) in 2013 by port and vessel size.** Green shaded percentage cells represent the ports that collectively account for 50% of the total landings within the size category. Yellow cells, represents the next 25% such that the two colors together account for 75% of the total landings. Source: Landings data provided AKFIN, summarized by Archipelago Marine Research.

Port	Event Count				Percent			
	<40	40-57	>=58	Total	<40	40-57	>=58	Total
Homer	383	753	105	1,241	16.1	32.3	4.1	17.0
Juneau	106	301	201	608	4.5	12.9	7.8	8.3
Sitka	181	264	112	557	7.6	11.3	4.3	7.6
Kodiak	188	189	822	1,199	7.9	8.1	31.9	16.5
Seattle	10	181	697	888	0.4	7.8	27.0	12.2
Dutch Harbor	0	136	31	167	0.0	5.8	1.2	2.3
Petersburg	101	134	288	523	4.3	5.7	11.2	7.2
King Cove	0	64	33	97	0.0	2.7	1.3	1.3
Sand Point	15	61	73	149	0.6	2.6	2.8	2.0
Anchorage	7	39	0	46	0.3	1.7	0.0	0.6
Douglas	6	33		39	0.3	1.4	0.0	0.5
Seward	20	32	140	192	0.8	1.4	5.4	2.6
Craig	16	30		46	0.7	1.3	0.0	0.6
Cordova	42	26	24	92	1.8	1.1	0.9	1.3
Ketchikan	17	24	0	41	0.7	1.0	0.0	0.6
Pelican	4	19	0	23	0.2	0.8	0.0	0.3
Wrangell	48	18	0	66	2.0	0.8	0.0	0.9
Portland	28	18	0	46	1.2	0.8	0.0	0.6
Port Alexander	0	10	0	10	0.0	0.4	0.0	0.1
St Paul Island	285	0	0	285	12.0	0.0	0.0	3.9
Yakutat	163			163	6.9	0.0	0.0	2.2
Savoonga	149			149	6.3	0.0	0.0	2.0
Mekoryuk	121			121	5.1	0.0	0.0	1.7
Toksook Bay	106			106	4.5	0.0	0.0	1.5
St George Island	74			74	3.1	0.0	0.0	1.0
Unalaska	12	0	54	66	0.5	0.0	2.1	0.9
Tununak	59			59	2.5	0.0	0.0	0.8
Kipnuk	44			44	1.9	0.0	0.0	0.6
Togiak	37			37	1.6	0.0	0.0	0.5
Haines	24	0	0	24	1.0	0.0	0.0	0.3
Ouzinkie	14	0		14	0.6	0.0	0.0	0.2
Atka	13	0		13	0.5	0.0	0.0	0.2
Hooper Bay	13			13	0.5	0.0	0.0	0.2
Chefornak	11			11	0.5	0.0	0.0	0.2
Gustavus	10	0		10	0.4	0.0	0.0	0.1
Kasilof	10	0		10	0.4	0.0	0.0	0.1

Port	Event Count				Percent			
	<40	40-57	>=58	Total	<40	40-57	>=58	Total
Goodnews Bay	10			10	0.4	0.0	0.0	0.1
Hoonah	9	0	0	9	0.4	0.0	0.0	0.1
Kenai	8			8	0.3	0.0	0.0	0.1
Kake	7	0		7	0.3	0.0	0.0	0.1
Valdez	6	0		6	0.3	0.0	0.0	0.1
Clam Gulch	6			6	0.3	0.0	0.0	0.1
Nome	5	0		5	0.2	0.0	0.0	0.1
Metlakatla	4			4	0.2	0.0	0.0	0.1
<b>Grand Total</b>	<b>2,372</b>	<b>2,332</b>	<b>2,580</b>	<b>7,284</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table 2. Vessels registered in each homeport in 2013 by vessel size category.** Source: Landings data provided AKFIN, summarized by Archipelago Marine Research.

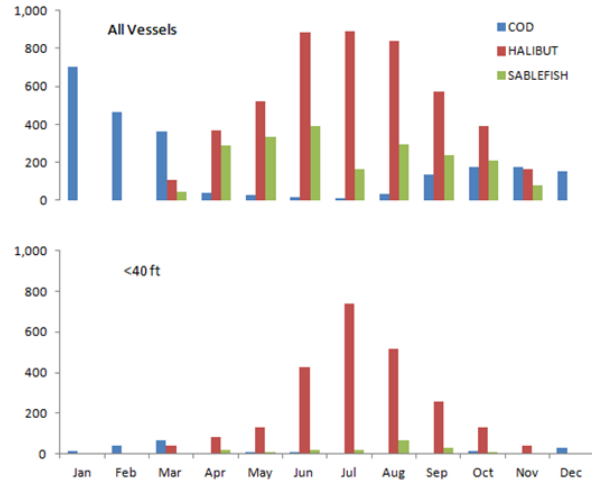
Home port	<40 ft	40-57 ft	>=58 ft	Total
Homer	63	118	18	199
Juneau	36	94	35	165
Sitka	65	72	25	162
Petersburg	33	49	68	150
Kodiak	31	41	114	186
Seattle	6	38	96	140
Ketchikan	9	18	5	32
Craig	4	18	0	22
Sand Point	5	16	12	33
Dutch Harbor	5	13	6	24
Wrangell	19	12	5	36
Douglas	3	10	0	13
Cordova	17	9	7	33
Seward	4	7	13	24
Portland	3	6	5	14
St Paul Island	12	5	5	22
Haines	8	5	5	18
Anchorage	5	5	5	15
Bellingham	5	5	5	15
Hoonah	5	5	5	15
King Cove	5	5	4	14
Unalaska	4	5	3	12
Adak	0	5	5	10
Auke Bay	5	5	0	10
Edna Bay	5	5	0	10
Elfin Cove	5	5	0	10
False Pass	0	5	5	10
Gig Harbor	5	5	0	10
Hollis	5	5	0	10
Ilwaco	0	5	5	10
Kake	5	5	0	10
Newport	0	5	5	10

Old Harbor	5	5	0	10
Port Angeles	5	5	0	10
Port Townsend	0	5	5	10
Thorne Bay	5	5	0	10
Whittier	5	5	0	10
Ouzinkie	4	5	0	9
Atka	3	5	0	8
Gustavus	3	5	0	8
Kasilof	3	5	0	8
Valdez	3	5	0	8
Nome	2	5	0	7
Bow	0	5	0	5
Halibut Cove	0	5	0	5
Hydaburg	0	5	0	5
Kachemak	0	5	0	5
Ketchikan	0	5	0	5
Marysville	0	5	0	5
Mt Vernon	0	5	0	5
Nikolaevsk	0	5	0	5
Port Orchard	0	5	0	5
Ventura	0	5	0	5
Willow	0	5	0	5
Woodburn	0	5	0	5
Port Alexander	5	4	5	14
Pelican	3	4	5	12
Yakutat	25	0	0	25
Mekoryuk	23	0	0	23
Toksook Bay	30	0	0	20
Savoonga	12	0	0	12
Tununak	11	0	0	11
Anacortes	5	0	5	10
Dillingham	5	0	5	10
Everett	5	0	5	10
Saint Paul Island	5	0	5	10
Seldovia	5	0	5	10
Togiak	10	0	0	10
Kipnuk	9	0	0	9
Akutan	5	0	0	5
Anton/Larsen Bay	5	0	0	5
Astoria	0	0	5	5
Bethel	5	0	0	5
Brookings	0	0	5	5
Cheformak	5	0	0	5
Chignik Lagoon	0	0	5	5
Clarks Point	5	0	0	5
Egegik	5	0	0	5
Excursion Inlet	5	0	0	5
Fort Bragg	0	0	5	5
Glacier Bay	5	0	0	5
Hat Island	0	0	5	5

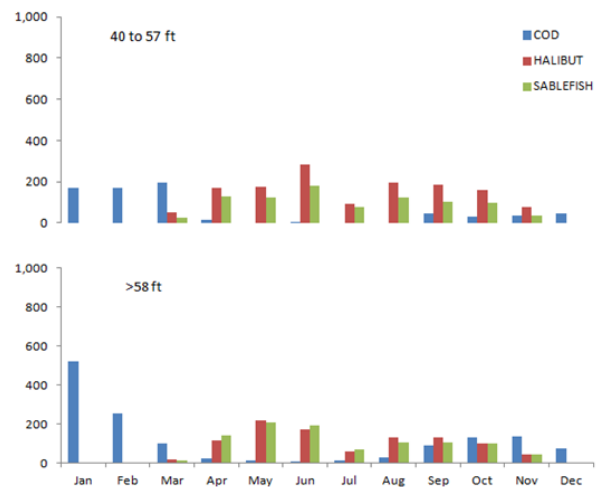
Hoonnah	5	0	0	5
Hyder	5	0	0	5
Meroryuk	5	0	0	5
Mount Vernon	0	0	5	5
Naknek	5	0	0	5
Newtok	5	0	0	5
Nightmute	5	0	0	5
Ninilchik	5	0	0	5
Point Baker	5	0	0	5
Port Lions	5	0	0	5
Pt Baker	5	0	0	5
Quinhagak	5	0	0	5
Reedspport	0	0	5	5
Saint Paul	5	0	0	5
San Francisco	0	0	5	5
Security Bay	5	0	0	5
St George Island	5	0	0	5
Tuunak	5	0	0	5
Warrendale	0	0	5	5
Wasilla	5	0	0	5
Wauna	5	0	0	5
Hooper Bay	4	0	0	4
Kenai	4	0	0	4
Clam Gulch	3	0	0	3
Goodnews Bay	3	0	0	3
Metlakatla	3	0	0	3
<b>Grand Total</b>	<b>710</b>	<b>729</b>	<b>546</b>	<b>1985</b>

**Figure 1. Number of landings per month in 2013 in the Pacific cod, halibut, and sablefish fisheries by vessel size category.** Source: Landings data provided AKFIN, summarized by Archipelago Marine Research.

All Boats	Cod	Halibut	Sablefish	Total
Jan	706			706
Feb	463			463
Mar	360	109	46	515
Apr	41	370	287	698
May	26	524	336	886
Jun	18	886	392	1,296
Jul	13	890	162	1,065
Aug	31	842	294	1,167
Sep	138	571	240	949
Oct	176	393	211	780
Nov	174	162	78	414
Dec	152			152
<b>Total</b>	<b>2,298</b>	<b>4,747</b>	<b>2,046</b>	<b>9,091</b>
<40ft	Cod	Halibut	Sablefish	Total
Jan	14			14
Feb	38			38
Mar	65	40	4	109
Apr	2	80	19	101
May	11	131	8	150
Jun	6	429	20	455
Jul	2	739	19	760
Aug	2	516	65	583
Sep	3	258	30	291
Oct	12	129	11	152
Nov	2	38	2	42
Dec	29			29
<b>&lt;40 Total</b>	<b>186</b>	<b>2,360</b>	<b>178</b>	<b>2,724</b>

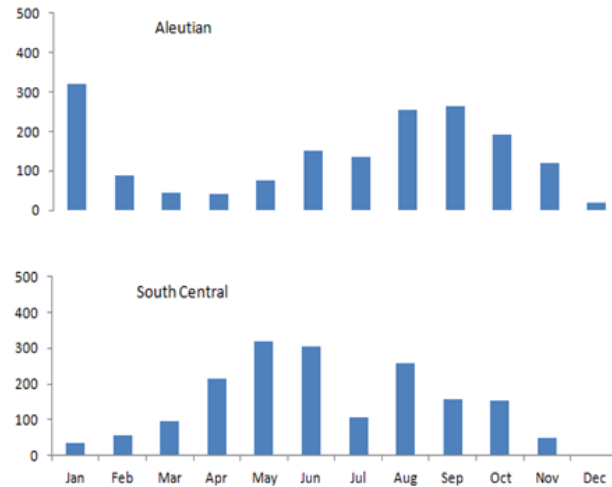


40-57 Ft	Cod	Halibut	Sablefish	Total
Jan	169			169
Feb	171			171
Mar	196	51	27	274
Apr	15	172	128	315
May		174	121	295
Jun	3	285	180	468
Jul		94	75	169
Aug		197	124	321
Sep	44	183	103	330
Oct	31	162	100	293
Nov	38	78	34	150
Dec	46			46
<b>40-57 Total</b>	<b>713</b>	<b>1,396</b>	<b>892</b>	<b>3,001</b>
58+ Ft	Cod	Halibut	Sablefish	Total
Jan	523			523
Feb	254			254
Mar	99	18	15	132
Apr	24	118	140	282
May	15	219	207	441
Jun	9	172	192	373
Jul	11	57	68	136
Aug	29	129	105	263
Sep	91	130	107	328
Oct	133	102	100	335
Nov	134	46	42	222
Dec	77			77
<b>58+ Total</b>	<b>1,399</b>	<b>991</b>	<b>976</b>	<b>3,366</b>

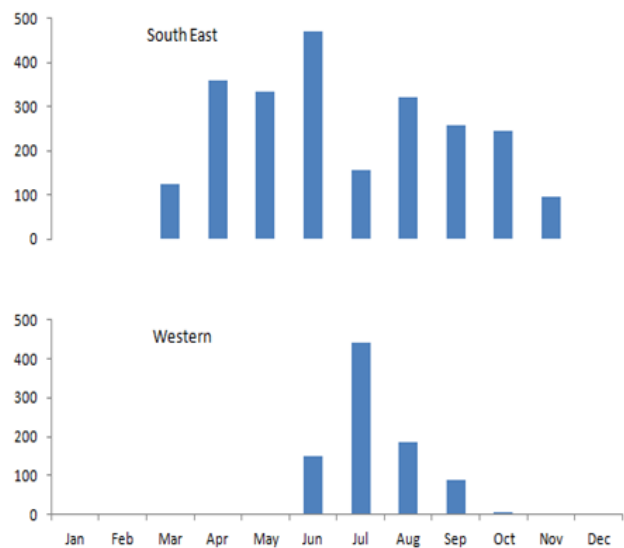


**Figure 2. Number of landings per month in 2013 for all vessels in the Pacific cod, halibut, and sablefish fisheries by vessel size category and region.** Source: Landings data provided AKFIN, summarized by Archipelago Marine Research.

Aleutian	<40	40-57	>=58	Total
Jan	2	88	232	322
Feb	1	34	54	89
Mar		31	14	45
Apr	2	17	21	40
May	2	17	56	75
Jun	33	38	80	151
Jul	32	57	46	135
Aug	70	86	99	255
Sep	38	109	118	265
Oct	6	66	120	192
Nov	1	38	80	119
Dec		1	18	19
<b>Aleutian Total</b>	<b>187</b>	<b>582</b>	<b>938</b>	<b>1,707</b>
South Central	<40	40-57	>=58	Total
Jan	1	10	23	34
Feb	2	39	16	57
Mar	14	72	10	96
Apr	18	97	99	214
May	25	101	194	320
Jun	44	138	123	305
Jul	57	20	31	108
Aug	112	95	51	258
Sep	33	76	47	156
Oct	34	80	38	152
Nov	7	35	8	50
Dec	1	1	1	3
<b>South Central Total</b>	<b>348</b>	<b>764</b>	<b>641</b>	<b>1,753</b>

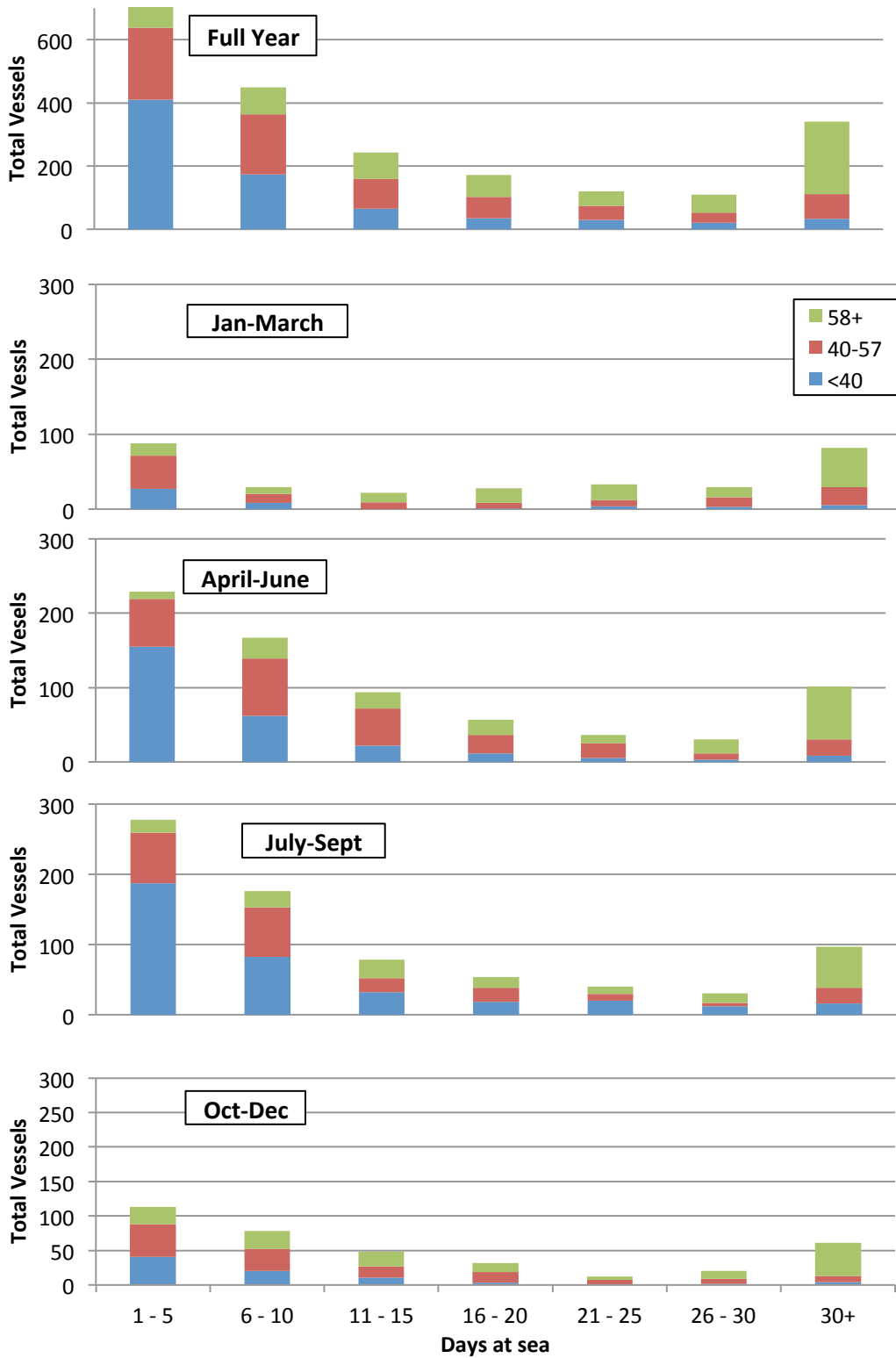


South East	<40	40-57	>=58	Total
Jan				
Feb				
Mar	49	59	18	126
Apr	72	189	98	359
May	103	140	90	333
Jun	141	245	85	471
Jul	79	69	7	155
Aug	158	126	37	321
Sep	87	98	73	258
Oct	63	105	78	246
Nov	23	31	41	95
Dec				
<b>South East Total</b>	<b>775</b>	<b>1,062</b>	<b>527</b>	<b>2,364</b>
Western	<40	40-57	>=58	Total
Jan				
Feb				
Mar				
Apr				
May				
Jun	144	2	4	150
Jul	431	2	9	442
Aug	185	1	1	187
Sep	87	1	2	90
Oct	1	4	1	6
Nov				
Dec				
<b>Western Total</b>	<b>848</b>	<b>10</b>	<b>17</b>	<b>875</b>





**Figure 3. Number of vessels per category of total days fished, in each vessel size category and quarter of 2013.** Source: Landings data provided AKFIN, summarized by Archipelago Marine Research.



**Figure 4. Number of vessels per category of total trips, in each vessel size category and quarter of 2013.** Source: Landings data provided AKFIN, summarized by Archipelago Marine Research.

