



## New England Fishery Management Council

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John F. Quinn, J.D., Ph.D., *Chairman* | Thomas A. Nies, *Executive Director*

### MEMORANDUM

**DATE:** September 12, 2018  
**TO:** Council  
**FROM:** Tom Nies, Executive Director  
**SUBJECT:** **Amendment 22 discrepancy**

During the course of the August 29, 2018 Small-Mesh Multispecies Committee meeting, we discovered an inconsistency between the number of estimated qualifying vessels listed in the public hearing document, Section 4 (description of alternatives), and Section 6 (Impact analysis, DEIS) of the amendment. The public hearing document and Section 4 had higher estimates of the number of qualifiers from an earlier analysis than the estimates in Section 6 of the amendment. The correct estimates from the DEIS were included in the decision document used at the committee meeting.

To recommend a final alternative, the Committee focused on the qualification criteria that would qualify the largest number of vessels. The alternatives section and the public hearing document listed this as 316 vessels, rather than the 179 vessels that were analyzed in the Section 6 (impact analyses) and listed in the decision document. The inconsistency between the public hearing and decision documents created confusion and uncertainty, which caused the committee to approve a recommendation of No Action, rather than Alternative 4 with status quo possession limits for Category I and II vessels.

Upon further review, we find that the correct estimate of the number of qualifying vessels is the one in the impact analyses in the draft amendment (DEIS). Staff has made the necessary corrections to the amendment and public hearing document. The corrected pages are attached to this memo.

This mistake was the result of an evolving analysis as the amendment document was being drafted last year. A preliminary qualification analysis was conducted to assist developing the Amendment 22 alternatives. A final, corrected analysis was completed to prepare for analyzing potential impacts in the spring of 2017, but the qualification summary for the alternatives did not get updated. Additional details are provided in the attachment.

## Public Hearing Document Errata:

### SUMMARY OF ACTION 1 ALTERNATIVES

There are five sets of alternatives for limited access qualification (see table below). One of four qualification periods may apply to qualify for a Category I (high-level) or Category II (low-level) permit. Alternatives 1 and 2 would use the small-mesh multispecies landings history from 2008 to the November 28, 2012 control date to establish whether a vessel would qualify for a Category I or II permit. Alternative 2 has a high qualification threshold for Category I, potentially qualifying only 20 vessels (these vessels qualify for Category I in all five alternatives. Alternative 2 has the lowest threshold of the five alternatives (averaging only 4,000 lbs. per year), but it would exclude entrants to the fishery since the 2012 control date as well as vessels that fished for whiting only before 2008.

Alternatives 3 and 4 would potentially qualify some newer entrants to the fishery since the 2012 control date, provided that they have sufficient landings history. Alternative 4 covers a longer period (2000-

2016), thus potentially qualifying more vessels than Alternative 3. In contrast, Alternative 5 also covers a 17 year qualification period, but ending at the control date. It has a high qualification threshold for both Category I and II, potentially qualifying more currently inactive vessels.

Whiting and red hake landings from any area could be used to qualify and would allow a vessel to use the limited access to target small-mesh multispecies in any open fishing area. In Action 2, different possession limits may

#### Limited Access Qualification Criteria

\* November 28, 2012 control date

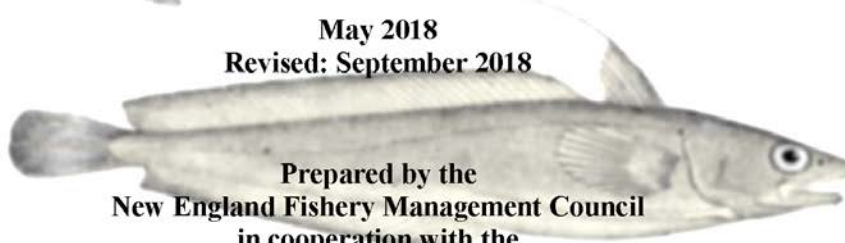
Alternative	Qualifying period	Qualification Criteria (Pounds of small-mesh multispecies & number of qualifiers)	
		Category I	Category II
1	2008-2012* 5 years	500,000 lbs. 40 vessels	100,000 lbs. 74 vessels
2	2008-2012* 5 years	1,000,000 lbs. 20 vessels	20,000 lbs. 203 vessels
3	2008-2016 9 years	500,000 lbs. 51 vessels	100,000 lbs. 90 vessels
4	2000-2016 17 years	500,000 lbs. 55 vessels	100,000 lbs. 124 vessels
5	1996-2012* 17 years	1,000,000 lbs. 84 vessels	200,000 lbs. 159 vessels

**Draft Amendment 22 Errata:**

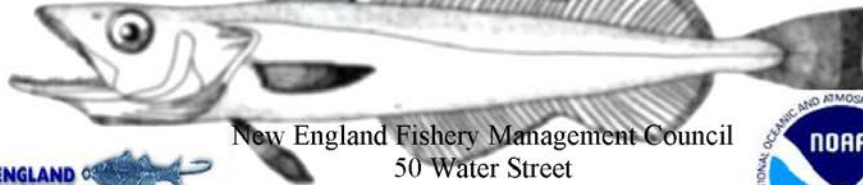
**Draft Amendment 22 to the Northeast  
Multispecies FMP  
(Small-mesh Multispecies)  
including an  
Environmental Impact Statement**



**May 2018  
Revised: September 2018**



**Prepared by the  
New England Fishery Management Council  
in cooperation with the  
National Marine Fisheries Service  
and the Mid-Atlantic Fishery Management Council**



**NEW ENGLAND  
FISHERY MANAGEMENT COUNCIL**

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#### 4.2.3 Alternative 3 – Lower the Whiting possession limit from 40,000 to 30,000 lbs., June 15 to December 31 in the Southern New England and Mid-Atlantic exemption areas

Unless the possession limit is reduced to an incidental level by an in-season accountability measure (see §648(d)(4), vessels fishing in the Southern New England and Mid-Atlantic exemption areas would be able to possess and land 30,000 lbs. of whiting from June 15 to December 31, and 40,000 lbs. from January 1 to June 14. Whiting possession limits in the northern exemption areas would not be changed. As they do now, the 30,000 lbs. whiting possession limit in the northern area and lower whiting possession limits for vessels using trawls with less than 3-inch mesh [see §648(d)(1)] would continue to apply.

**Rationale:** A lower possession limit is needed because the proposed 2018-2020 southern whiting ACL is 35 percent lower than the 2017 ACL. Lower specifications were predicted by the Plan Development Team in the 2015 Annual Monitoring Report, because the 2014 and 2015 survey biomass indices were much lower than before<sup>2</sup>. Reducing the possession limit during June 15 to December 31 would also reduce the negative effect on prices when the northern exemption areas are open, yet leave the possession limit at 40,000 lbs. in the Southern New England and Mid-Atlantic exemption areas during the important winter season.

### 4.3 Limited Access Alternatives

#### 4.3.1 Action 1 – Qualification Criteria

This action proposes a range of qualification criteria for vessels to continue targeting whiting and red hake with small-mesh trawls. Limited access would establish a maximum number of vessels in the small-mesh multispecies fishery, improving the effectiveness of regulations that reduce or cap catches of species with sub-ACL or choke species (i.e. species with catches that equal or exceed their annual catch limits).

If a limited access program is chosen as the final preferred alternative, the following five alternatives would allow various vessels to qualify for either a Category I (high level) or a Category II (lower level) limited access permit. Qualification would be based on total documented landings of red, silver, and offshore hakes (i.e. small-mesh multispecies) during the entire qualification period. While a fairly thorough analysis of vessel histories that carried through default permit transfers was conducted using dealer, vessel trip reports, and data matching imputation system records, vessel owners would be able to appeal preliminary qualifications used by NMFS probably based on dealer records. Thus, the number of qualifying limited access vessels estimated for analysis in this document could change (either up or down).

In the Rationale part of each of the alternatives below, there is a description of how many vessels are likely to qualify for a Category I or II permit. The description includes for each permit type how many qualifying vessels landed no more than 2000 lbs. whiting or 400 lbs. red hake on one or more trips during 2014-2016. It also includes a description of how many vessels would not qualify for limited access (according to the preliminary analysis), but had landings exceeding 2000 lbs. whiting or 400 lbs. red hake on one or more 2014-2016 trips. Landings data for 2017 were not available during the analysis phase of

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<sup>2</sup> Whiting specifications are set for a three-year period using a three-year moving average for the survey biomass index. Thus in 2018-2020 (the next specifications cycle), the ACL will be set using the 2014-2016 fall survey data in a separate specifications package.

this document and it would be a significant amount of work to update these analyses, but it would not change the number of qualifiers.

Table 53 summarizes the qualification estimates given under each of the alternatives below.

Although the fishery history and the number of potentially qualifying vessels differs in the Northern Fishery Management Area from the Southern Fishery Management Area, a single set of qualification criteria would be simpler and less costly to administer. Regional differences in the small-mesh multispecies fisheries could be accommodated by adjusting the applicable possession limits for each limited access permit category (see Action 2).

No alternatives in Action 1 are designated as a “preferred alternative”, because the alternatives reduce opportunities for new participants in the fishery when a small fraction of the whiting ACL is being caught. In 2016, the fishery caught 15% of the northern silver hake ACL and 13% of the southern whiting ACL. The fishery however caught 86% of the northern red hake ACL and 67% of the southern red hake ACL, while the 2016 assessment update indicated that overfishing of southern red hake was occurring. Red hake are a secondary target species for the small-mesh multispecies fishery.

#### **4.3.1.1 Alternative 1 – Category I landings of 500,000 lbs. and Category II landings of 100,000 lbs. during 2008-2012**

Vessels with documented landings at least 500,000 lbs. of whiting and/or red hake from January 1, 2008 to the November 28, 2012 control date would qualify for a Category I permit. Vessels that landed at least 100,000 lbs. of whiting and/or red hake between these inclusive dates would qualify for a Category II permit. Vessel history would apply to the applicable permit history accounting for vessel transfers, bills of sale, or written agreements; including Moratorium Right ID history for vessels with an existing limited access permit in another Northeast Region fishery.

**Rationale:** This alternative would qualify more vessels at the Category I level than would Alternative 2, but fewer vessels at the Category II level. Analysis will show which alternative is a better fit to match the existing fishery footprint and be more effective at limiting effort increases.

Based on fishing history analysis using dealer and vessel trip report data, this alternative would qualify 40 vessels for a Category I limited access permit and 74 vessels for a Category II limited access permit. Thirty-three (33) Category I qualifiers and 44 Category II qualifiers were using small-mesh trawls and landing whiting and/or red hake during 2014-2016. Seven (7, 18%) of Category I qualifiers and 30 (41%) of Category II qualifiers were not active in the recent fishery. Thirty-five (35) vessels fishing with small-mesh trawls and landing more than 2,000 lbs. of whiting or 400 lbs. of red hake in 2014-2016 would not qualify for a limited access permit. Of these 35 vessels, three had no whiting fishery history during the qualification period.

#### **4.3.1.2 Alternative 2 – Category I landings of 1,000,000 lbs. and Category II landings of 20,000 lbs. during 2008-2012**

Vessels with documentation that show landings at least 1,000,000 lbs. of whiting and/or red hake from January 1, 2008 to the November 28, 2012 control date would qualify for a Category I permit. Vessels that landed at least 20,000 lbs. of whiting and/or red hake between these inclusive dates would qualify for a Category II permit. Vessel history would apply to the applicable permit history accounting for vessel transfers, bills of sale, or written agreements; including Moratorium Right ID history for vessels with an existing limited access permit in another Northeast Region fishery.

**Rationale:** This alternative would qualify fewer vessels at the Category I level than would Alternative 1, but more vessels at the Category II level. Analysis will show which alternative is a better fit to match the existing fishery footprint and be more effective at limiting effort increases.

Based on fishing history analysis using dealer and vessel trip report data, this alternative would qualify 20 vessels for a Category I limited access permit and 203 vessels for a Category II limited access permit. Nineteen (19) Category I qualifiers and 83 Category II qualifiers were using small-mesh trawls and landing whiting and/or red hake during 2014-2016. One (1, 5%) of Category I qualifiers and 160 (59%) of Category II qualifiers were not active in the recent fishery. Ten (10) vessels fishing with small-mesh trawls and landing more than 2,000 lbs. of whiting or 400 lbs. of red hake in 2014-2016 would not qualify for a limited access permit. Of these 10 vessels, three had no whiting fishery history during the qualification period.

#### **4.3.1.3 Alternative 3 – Category I landings of 500,000 lbs. and Category II landings of 100,000 lbs. during 2008-2016**

Vessels with documentation with landings at least 500,000 lbs. of whiting and/or red hake from January 1, 2008 to December 31, 2016 would qualify for a Category I permit. Vessels that landed at least 100,000 lbs. of whiting and/or red hake between these inclusive dates would qualify for a Category II permit. Vessel history would apply to the applicable permit history accounting for vessel transfers, bills of sale, or written agreements; including Moratorium Right ID history for vessels with an existing limited access permit in another Northeast Region fishery.

**Rationale:** These qualification criteria are the same as those in Alternative 1 (Section 4.3.1.1), but history from the control date to the end of 2016 would also be considered for the purposes of qualification. Some vessels have recently entered the small-mesh multispecies fishery in response to more restrictive Northeast Multispecies regulations and lower quotas. Some of these vessels participated in the whiting fishery before 1996, particularly in the Ipswich Bay area when whiting were as abundant as they are now.

Based on fishing history analysis using dealer and vessel trip report data, this alternative would qualify 51 vessels for a Category I limited access permit and 90 vessels for a Category II limited access permit. Forty-four (44) Category I qualifiers and 53 Category II qualifiers were using small-mesh trawls and landing whiting and/or red hake during 2014-2016. Seven (7, 14%) of Category I qualifiers and 37 (41%) of Category II qualifiers were not active in the recent fishery. Fifteen (15) vessels fishing with small-mesh trawls and landing more than 2,000 lbs. of whiting or 400 lbs. of red hake in 2014-2016 would not qualify for a limited access permit.

#### **4.3.1.4 Alternative 4 – Category I landings of 500,000 lbs. and Category II landings of 100,000 lbs. during 2000-2016**

Vessels with documentation with landings at least 500,000 lbs. of whiting and/or red hake from January 1, 2000 to December 31, 2016 would qualify for a Category I permit. Vessels that landed at least 100,000 lbs. of whiting and/or red hake between these inclusive dates would qualify for a Category II permit. Vessel history would apply to the applicable permit history accounting for vessel transfers, bills of sale, or written agreements; including Moratorium Right ID history for vessels with an existing limited access permit in another Northeast Region fishery.

**Rationale:** These qualification criteria are the same as those in Alternative 1 (Section 4.3.1.1), but history from the control date to the end of 2016 would also be considered for the purposes of qualification, as in Alternative 4 above. This alternative also would allow more time for a vessel to meet the qualification criteria, to compensate for changes in the official policy that associated fleet history to an MRI. As a result, some vessels did not retain prior fleet history before this policy went into effect.

Based on fishing history analysis using dealer and vessel trip report data, this alternative would qualify 55 vessels for a Category I limited access permit and 124 vessels for a Category II limited access permit. Forty-two (42) Category I qualifiers and 44 Category II qualifiers were using small-mesh trawls and landing whiting and/or red hake during 2014-2016. Thirteen (13, 24%) of Category I qualifiers and 80 (65%) of Category II qualifiers were not active in the recent fishery. Twenty-six (26) vessels fishing with small-mesh trawls and landing more than 2,000 lbs. of whiting or 400 lbs. of red hake in 2014-2016 would not qualify for a limited access permit.

#### **4.3.1.5 Alternative 5 – Category I landings of 1,000,000 lbs. and Category II landings of 200,000 lbs. during 1996-2012**

Vessels with documentation that show landings at least 1,000,000 lbs. of whiting and/or red hake from January 1, 1996 to the November 28, 2012 control date would qualify for a Category I permit. Vessels that landed at least 200,000 lbs. of whiting and/or red hake between these inclusive dates would qualify for a Category II permit. Vessel history would apply to the applicable permit history accounting for vessel transfers, bills of sale, or written agreements; including Moratorium Right ID history for vessels with an existing limited access permit in another Northeast Region fishery.

**Rationale:** Participating vessels in the small-mesh multispecies fishery before 2008 would qualify for a limited access permit. Some of these vessels were previously active in the fishery, but have not targeted whiting and red hake more recently because of regulations for other fisheries in which they participate, due to limited availability of whiting in the exemption programs, due to low prices for whiting and red hake, or all three. Some fishermen with these vessels have expressed an interest in remaining in the fishery and resuming fishing for whiting and red hake when conditions change. This alternative is likely to qualify more vessels than either Alternative 1 or 2 above, but more vessels currently are not active in the fishery which could enter the fishery when regulatory or market conditions change, providing flexibility for more fishermen.

Based on fishing history analysis using dealer and vessel trip report data, this alternative would qualify 84 vessels for a Category I limited access permit and 159 vessels for a Category II limited access permit. Forty-three (43) Category I qualifiers and 36 Category II qualifiers were using small-mesh trawls and landing whiting and/or red hake during 2014-2016. Forty-one (41, 49%) of Category I qualifiers and 123 (77%) of Category II qualifiers were not active in the recent fishery. Thirty-three (33) vessels fishing with small-mesh trawls and landing more than 2,000 lbs. of whiting or 400 lbs. of red hake in 2014-2016 would not qualify for a limited access permit. Of these 33 vessels, one had no whiting fishery history during the qualification period.

#### **4.3.2 Action 2 – Possession Limits by Permit Type**

Although the Council chose No Action (and thus no limited access program) for the preferred alternative, the Action 2 alternatives would apply to vessels that qualify for a Category I or II limited access permit, or hold an Incidental Permit (by vessels that do not qualify or apply for a limited access permit). Furthermore, in case the public favors and the Council chooses a final alternative from the Action 1 qualification alternatives, the Council has designated a set of Action 2 alternatives as “preferred”. These preferred alternatives include Alternative 1 for Category I vessels that would retain current whiting and red hake possession limits, plus Alternative 3 for Category II vessels and Alternative 3 for vessels holding

### **Comparison of Qualification Analyses to 2012 to 2017 fishery data:**

The reason that the final analysis is different than the preliminary analysis used in the description of alternatives was that the preliminary analysis estimated the number of qualifiers, allowing more than one vessel to qualify based on a single history (at some time shared between two or more vessels). In the preliminary analysis, there were also cases where a single vessel qualified more than once, based on different histories. This error was corrected in April, during the analysis of impacts before the Council approved the final draft amendment document, but the summary in Section 4 had the estimated number of qualifiers based on the preliminary analysis.

Table 1. Comparison of estimated number of qualifying vessels and ranking (1=most,5=least) in preliminary analysis and in the Final Draft Environmental Impact Statement (DEIS) analyses (Section 6).

Alternative (Qualification period) • Average annual landings to achieve threshold	Preliminary analysis and public hearing document summary			Final DEIS (344 total vessel histories <sup>1</sup> )		
	Category I	Category II	Rank	Category I	Category II	Rank
<b>Alternative 1</b> (2008-2012*) • Cat I – 100k/yr avg • Cat II – 20k/yr avg	48	88	5	40	74	5
<b>Alternative 2</b> (2008-2012*) • Cat I – 200k/yr avg • Cat II – 4k/yr avg	25	237	3	20	203	2
<b>Alternative 3</b> (2008-2016) • Cat I – 56k/yr avg • Cat II – 11k/yr avg	58	113	4	51	90	4
<b>Alternative 4</b> (2000-2016) • Cat I – 29k/yr avg • Cat II – 6k/yr avg	115	201	1	55	124	3
<b>Alternative 5</b> (1996-2012*) • Cat I – 59 k/yr avg • Cat II – 12k/yr avg	97	180	2	84	159	1



\* Through the November 28, 2012 control date.

<sup>1</sup> Vessels having one or more trips landing at least 2000 lbs. whiting or 400 lbs. red hake during 1996-2016. The total number of histories landing more than one pound of whiting or red hake during 1996 to 2016 was 3,023.

We believe that the correct data in the DEIS are consistent with the total number (344) of vessels landing more than 2000 lbs. whiting or 400 lbs. red hake on one or more trips during 2014-2016 (Figure 53, page 6-2013 in the DEIS) and 2012-2017 vessel activity examined from a different perspective in the Annual Monitoring Report for Fishing Year 2017

(<https://s3.amazonaws.com/nefmc.org/Document-2.-PRELIMINARY-DRAFT-2017-Annual-Monitoring-Report.pdf>). The Annual Monitoring Report includes a section that provides detail and a summary of effort and economic trends. In it, the number of vessels targeting small-mesh multispecies (i.e. landing 2000 lbs whiting OR 400 lbs. red hake on one or more trips, ranged from 113 vessels in 2012 to 95 vessels in 2017 (see Table 15).

As a cross check, we applied the average annual landings to meet the least restrictive alternatives in the DEIS (Alternative 4 for Category I and Alternative 2 for Category II). During 2012-2017, the number of vessels exceeding 29,000 lbs. of small-mesh multispecies landings in each year ranged from 70 vessels in 2012 to 48 vessels in 2017 (Table 2). The number of vessels with small-mesh multispecies landings between ,4000 and 29,000 lbs. of small-mesh multispecies ranged from 45 vessels in 2012 and 70 vessels in 2016 (Table 3, Figure 1).

Table 2. Summary of number of vessels, effort, landings, and revenue during 2012 to 2017 for vessels having annual small-mesh multispecies landings of at least 29,000 lbs.

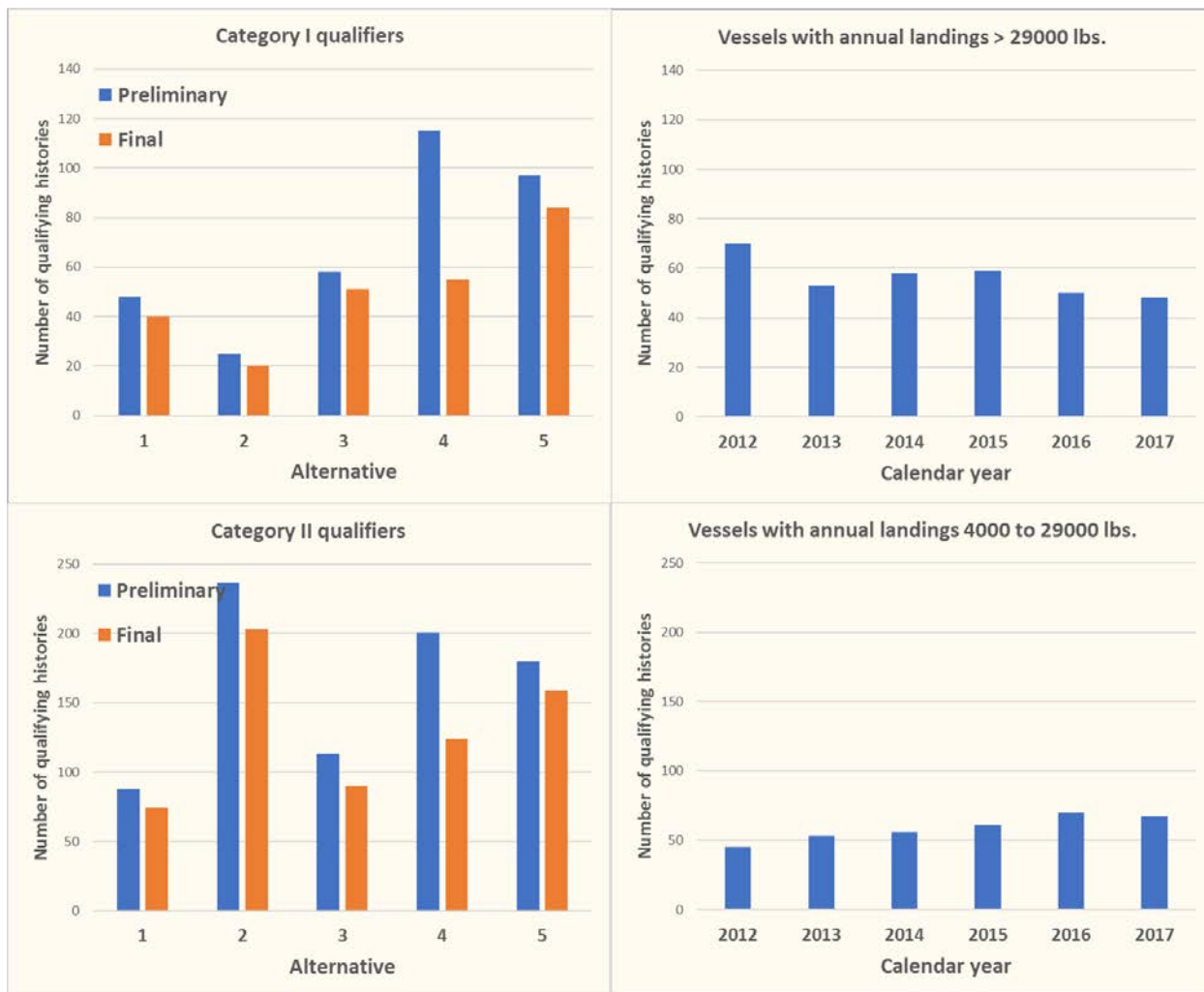
CYEAR	Years	2012	2013	2014	2015	2016	2017
BOATS	No. of Boats	70	53	58	59	50	48
FISHTRIPS	Fish trips	6376	4804	4607	4411	3865	3974
FISHTRIPS_PER_BOAT	Fish trips per boat	91	91	79	75	77	83
SMS\$	SMS Revenue \$	10,761,993	8,621,951	11,339,696	10,323,338	10,353,347	8,693,037
PERMIT\$	Permit Revenue \$	47,916,833	37,264,470	42,236,401	42,955,968	44,677,368	37,033,585
SMS_DLRBLS	SMS landing lbs (dealer)	16,679,817	13,793,746	16,428,073	14,182,819	13,984,528	11,570,180
SMS_VTRLBS	SMS landing lbs (VTR)	16,107,582	13,471,310	16,096,542	14,100,644	14,035,006	11,431,972
PERMIT_LBS	Permit landing lbs.	61,061,360	44,542,725	51,784,567	46,813,315	46,376,100	42,595,196
SMS_PRICE	Price_SMS \$/lb	0.6452	0.6251	0.6903	0.7279	0.7403	0.7513
NON_SMS_PRICE	Price_NonSMS \$/lb	0.8372	0.9315	0.8739	1.0001	1.0597	0.9135
SMS\$ _TO_ PERMIT\$	Ratio of SMS\$ to Permit\$	0.2246	0.2314	0.2685	0.2403	0.2317	0.2347
SMS\$ _PER_ BOAT	Per Boat SMS Revenue \$	153,743	162,678	195,512	174,972	207,067	181,105
FISH\$ _PER_ BOAT	Per Boat FISH Revenue \$	684,526	703,103	728,214	728,067	893,547	771,533
WHITING\$	WHITING landings ng\$ (dealer)	9,882,427	8,100,323	10,831,438	9,868,425	9,918,086	8,297,857
WHITING_DLRBLS	WHITING landings lbs (dealer)	15,060,778	12,755,979	15,172,746	13,259,719	13,089,200	10,844,500
WHITING_VTRLBS	WHITING landings lbs (VTR)	14,765,022	12,502,855	14,944,332	13,161,738	13,108,515	10,723,731
WHITING_PRICE	Price_WHITING \$/lb	0.6562	0.635	0.7139	0.7442	0.7577	0.7652
WHITING\$ _TO_ PERMIT\$	Ratio of WHITING\$ to Permit Revenue\$	0.2062	0.2174	0.2564	0.2297	0.222	0.2241
REDHAKE\$	Red hake landings ng\$ (dealer)	879,567	521,629	508,259	454,913	435,261	395,180
REDHAKE_DLRBLS	Red hake landings lbs (dealer)	1,619,039	1,037,766	1,255,326	923,100	895,328	725,680
REDHAKE_VTRLBS	Red hake landings lbs (VTR)	1,342,560	968,455	1,152,210	938,906	926,490	708,241
REDHAKE_PRICE	Price_RedHake \$/lb	0.5433	0.5026	0.4049	0.4928	0.4861	0.5446
REDHAKE\$ _TO_ PERMIT\$	Ratio of RedHake\$ to Permit Revenue\$	0.0184	0.014	0.012	0.0106	0.0097	0.0107

Table 3. Summary of number of vessels, effort, landings, and revenue during 2012 to 2017 for vessels having annual small-mesh multispecies landings of at between 4,000 and 29,000 lbs.

CYEAR	Years	2012	2013	2014	2015	2016	2017
BOATS	No. of Boats	45	53	56	61	70	67
FISHTRIPS	Fish trips	4405	4602	4769	4188	5229	4960
FISHTRIPS_PER_BOAT	Fish trips per boat	98	87	85	69	75	74
SMS\$	SMS Revenue \$	363,441	442,848	465,098	509,406	627,608	551,043
PERMIT\$	Permit Revenue \$	18,441,528	27,037,145	24,811,064	36,355,775	44,796,216	47,956,914
SMS_DLRLBS	SMS landing lbs (dealer)	647,176	712,550	737,110	750,464	872,402	760,698
SMS_VTRLBS	SMS landing lbs (VTR)	596,220	647,221	702,239	698,682	842,768	723,466
PERMIT_LBS	Permit landing lbs.	24,980,534	38,442,517	51,542,149	38,300,974	69,485,604	51,405,147
SMS_PRICE	Price_SMS \$/lb	0.562	0.622	0.631	0.679	0.719	0.724
NON_SMS_PRICE	Price_NonSMS \$/lb	0.743	0.705	0.479	0.955	0.644	0.936
SMS\$ _TO_PERMIT\$	Ratio of SMS\$ to Permit\$	0.020	0.016	0.019	0.014	0.014	0.012
SMS\$ _PER_BOAT	Per Boat SMS Revenue \$	8076	8356	8305	8351	8966	8225
FISH\$ _PER_BOAT	Per Boat FISH Revenue \$	409,812	510,135	443,055	595,996	639,946	715,775
WHITING\$	WHITING landings ng\$ (dealer)	296,785	397,999	417,467	461,510	554,489	505,160
WHITING_DLRLBS	WHITING landings lbs (dealer)	497,587	625,082	630,654	647,073	697,121	664,763
WHITING_VTRLBS	WHITING landings lbs (VTR)	440,444	562,566	606,501	598,501	679,864	629,660
WHITING_PRICE	Price_WHITING \$/lb	0.596	0.637	0.662	0.713	0.795	0.760
WHITING\$ _TO_PERMIT\$	Ratio of WHITING\$ to Permit Revenue\$	0.016	0.015	0.017	0.013	0.012	0.011
REDHAKE\$	Red hake landings ng\$ (dealer)	66,656	44,849	47,631	47,896	73,119	45,883
REDHAKE_DLRLBS	Red hake landings lbs (dealer)	149,589	87,468	106,456	103,391	175,281	95,935
REDHAKE_VTRLBS	Red hake landings lbs (VTR)	155,776	84,655	95,738	100,181	162,904	93,806
REDHAKE_PRICE	Price_RedHake \$/lb	0.446	0.513	0.447	0.463	0.417	0.478
REDHAKE\$ _TO_PERMIT\$	Ratio of RedHake\$ to Permit Revenue\$	0.004	0.002	0.002	0.001	0.002	0.001

For these reasons, it appears that most limited access qualification alternatives which were identified during the development of Amendment 22 and correctly analyzed in the DEIS are consistent with Amendment 22's intent. Alternatives 1, 2, and 3 apply a more restrictive qualification period and thus a greater proportion of potentially qualifying vessels are currently active in the small-mesh multispecies fishery. Alternatives 4 and 5 extend the qualification period to earlier periods and would potentially qualify some vessels that have not participated in the small-mesh multispecies fishery since the control date. The total number of qualifiers (316) in Alternative 4 ranked highest in the preliminary analysis (Table 1), but third (179 vessels) in the final DEIS analysis. The difference appears to arise due to the lower thresholds compared to Alternative 5 and the longer qualification period compared to Alternatives 1 to 3. In the final DEIS analysis, Alternative 5 ranks highest in number of qualifiers despite the higher thresholds than Alternative 4, but more historic participants (i.e 1996 to 1999) and fewer current ones (i.e. 2013-2016).

Figure 1. Comparison of estimated qualifying histories and recent small-mesh multispecies fishing activity.



Finally, it is important to be mindful that the numbers presented are our current best estimate of the vessels that would qualify. The comparisons in the DEIS (Table 83 on page 6-291, for example) are valid, regardless of the final number of actual qualifiers. How many limited access vessels would qualify depends on several factors beyond our control. Owners of some vessels that qualify will not apply for limited access. After a pre-qualification phase based on dealer (and possibly vessel trip report) data, vessel owners will be able to submit additional records to support their qualification. Until then, the actual number of qualifiers will be unknown, but we do know that the more historic qualification period will include vessels that are no longer active in the small-mesh multispecies fishery and the alternatives with the more recent qualification period will include more vessels currently fishing. Alternative 4 seems to strike a balance between the two choices.