

Control Limit for Aggregate Nonwhiting QS Holdings

This document describes the calculation used by the National Marine Fisheries Service (NMFS) to determine the control limit for aggregate nonwhiting quota share (QS) holdings for the shorebased individual fishing quota (IFQ) program.

Regulations at 50 CFR § 660.140 (d)(4)(i)(B) describe the process of determining the control limit for aggregate nonwhiting QS holdings as follows:

To determine how much aggregate nonwhiting QS a person holds, NMFS will convert the person's QS to pounds. This conversion will always be conducted using the trawl allocations applied to the 2010 OYs [optimum yields], until such time as the Council recommends otherwise. Specifically, NMFS will multiply each person's QS for each species by the shoreside trawl allocation for that species. The person's pounds for all nonwhiting species will be summed and divided by the shoreside trawl allocation of all nonwhiting species to calculate the person's share of the aggregate nonwhiting trawl quota. To determine the shoreside trawl allocation for the purpose of determining compliance with the aggregate nonwhiting QS control limit, for species that have specific trawl allocation percentages in Amendment 21, NMFS will apply the Amendment 21 trawl allocation percentages to (set forth at §660.55) the 2010 OYs, and where applicable, will deduct the preliminary set-asides for the at-sea sectors from Amendment 21. For species that do not have specific trawl allocation percentages in Amendment 21, NMFS will apply a percentage based on the Northwest Fishery Science Center final report on 2010 estimated total fishing mortality of groundfish by sector, or, if the final report for 2010 is not available, based on the most recent report available.

NMFS used the following steps in order to calculate the 2010 shoreside trawl allocations, which correspond to the step numbers in the attached aggregate nonwhiting QS control limit calculation table. The control limit for aggregate nonwhiting QS holdings applies to all non-whiting and non-halibut IFQ species. Whenever calculations were made within a step, NMFS used the full value (rather than rounding). Only on the very last step, where metric tons (mt) were converted to pounds did NMFS round to the nearest pound using normal rounding rules.

Step 1. 2010 Optimum Yields

The final 2010 OYs were set through a May 4, 2010 final rule, published at [75 FR 23620](#). The 2010 OYs in Step 1 of the attached aggregate nonwhiting QS control limit calculation table were drawn directly from [75 FR 23620](#) (pp. 23627-23629) and [75 FR 38030](#) (updates to canary, darkblotched and

yelloweye, pp. 38034-38036), with the exception of Lingcod North of 40°10' N. and Lingcod South of 40°10' N.

In 2010, lingcod was managed as a coastwide species, with a total OY of 4,829 mt. To convert this coastwide OY, NMFS applied the biomass ratio for a 40°10' N. lat. split of 73.21% North of 40°10' N. and 26.79% South of 40°10' N., as adopted by the Council for calculation of surplus carryover in June 2013 ([Agenda Item F.9.b, NMFS Report](#)). Using this biomass ratio, NMFS calculated a 2010 OY of 3,535.3109 mt for Lingcod North of 40°10' N. ($4,829 \text{ mt} \times 73.21\% = 3,535.3109 \text{ mt}$), and 1,293.6891 mt for Lingcod South of 40°10' N. ($4,829 \text{ mt} \times 26.79\% = 1,293.6891 \text{ mt}$).

Step 2. Amendment 21 Trawl Allocation Percentages

Amendment 21 was implemented through an October 1, 2010 final rule, published at [75 FR 60868](#). The Amendment 21 trawl allocation percentages in Step 2 of the attached aggregate nonwhiting QS control limit calculation table were drawn directly from [75 FR 60868](#) (pp. 60921-60922), with several exceptions noted below.

Any species for which there is no value in this column indicates no specific trawl allocation percentage in Amendment 21. As the regulation states, for species that do not have specific trawl allocation percentages in Amendment 21, NMFS will apply a percentage based on the NWFSC final report on 2010 estimated total fishing mortality of groundfish by sector (later step).

Lingcod North of 40°10' N. and Lingcod South of 40°10' N.: Lingcod was listed as a coastwide species under Amendment 21 at a trawl allocation percentage of 45% and is now split north and south of 40°10' N. Consistent with regulations at §660.140(c)(3)(vii)(A)(1) on QS reallocation with an area subdivision, NMFS has used the 45% trawl allocation percentage for both Lingcod North of 40°10' N. and Lingcod South of 40°10' N. This is also consistent with what was done to reallocate lingcod for QS permit owners beginning in 2013 where individual QS amounts were subdivided for each area in an amount equivalent to the QS held for the area before it was subdivided (see 2013-2014 harvest specifications final rule, 78 FR 580, January 3, 2013).

Sablefish North of 36° N.: Amendment 6 to the groundfish fishery management plan (FMP) provides a formal allocation of Sablefish North of 36° N. to the non-tribal limited entry trawl fishery. Sablefish North of 36° N. was not explicitly allocated under Amendment 21, however, because the regulations at § 660.140 (d)(4)(i)(B) state "...NMFS will apply the Amendment 21 trawl allocation percentages to (set forth at §660.55) the 2010 OYs ...," it is reasonable to interpret the control limit for aggregate nonwhiting QS holdings regulations to mean that any formal allocations in 2010 would be applicable for the calculation. Formal allocations are those specified in the FMP at section 6.3.2. The sablefish

North of 36° N. allocation is also specified at § 660.55 (h). Therefore, for sablefish North of 36° N., NMFS applied the Amendment 6 allocations to the 2010 OY, including the deduction of recreational and research set-asides that were part of the Council’s recommendations for the 2010 harvest specifications. This results in a limited entry trawl allocation of 3,047 mt, using the calculation in the table below (all in mt).

2010 OY (A)	Tribal Allocation (B) = (A) x 10%	Non-Tribal Total Catch (HG) (C) = (A) - (B)	Recreational, EFP, Research Allocation (D)	Commercial Total Catch (HG) (E) = (C) - (D)	LE Total Allocation (Trawl and Non- Trawl) (F) = (E) x 90.6%	LE Trawl (All Trawl = Bottom and Midwater) (G) = (F) x 58%
6,471	647	5,824	25.83	5,798.17	5,253.14202	3,046.8223716

Step 3. Amendment 21 Trawl Allocation in Metric Tons

In this step on the attached aggregate nonwhiting QS control limit calculation table, NMFS simply converted the Amendment 21 trawl allocation from a percentage (Step 2) to metric tons.

Step 4. Preliminary At-Sea Set-Asides

Where an Amendment 21 percentage or allocation was set from Step 3 above, NMFS deducted the preliminary set-asides for the at-sea sectors from Amendment 21. NMFS has interpreted this to mean the at-sea set-asides that were published in late 2010 through [75 FR 60868](#) (Table 1d – pp. 60934-60935), and finalized through the 2011-2012 harvest specifications process. The Amendment 21 at-sea set-asides in Step 3 of the attached aggregate nonwhiting QS control limit calculation table were drawn directly from [75 FR 60868](#) (Table 1d – pp. 60934-60935), with several exceptions noted below.

For coastwide lingcod, [75 FR 60868](#) set aside 6 mt for the at-sea sector. This coastwide species is now split into Lingcod North of 40°10' N. and Lingcod South of 40°10' N., and because very little whiting effort occurs south of 40°10' N., for the purposes of this aggregate nonwhiting QS control limit calculation only, NMFS subtracted the 6 mt set-aside solely from the Lingcod North of 40°10' N. trawl allocation, and did not consider Lingcod South of 40°10' N. to have an at-sea set-aside. This is consistent with the approach taken for at-sea whiting set-asides in 2013, the first year lingcod management was split north and south of 40°10' N. for the trawl fishery.

Additionally, [Amendment 21](#) (at Section 6.3.2.3 of the FMP) laid out calculations as follows for the three trawl-dominant overfished species:

Darkblotched Rockfish: Allocate 9% or 25 mt, whichever is greater, of the total LE trawl allocation of darkblotched rockfish to the whiting fisheries (at-sea and shoreside combined). The distribution of the

whiting trawl allocation of darkblotched to individual whiting sectors will be done pro rata relative to the sectors' whiting allocation.

- Total LE trawl allocation = 330 mt OY x 95% = 313.5 mt
- Of the total LE trawl allocation (313.5 mt), allocate 9% (28.215 mt) or 25 mt, whichever is greater (28.215 mt) to the whiting fisheries (at-sea and shoreside combined).
- Sectors' whiting allocation: 42% shorebased, 34% catcher processor (C/P), 24% mothership (MS).
- To find the at-sea set-aside value for darkblotched rockfish, NMFS multiplied the at-sea sectors' allocation of 58% (34% C/P + 24% MS) by the total at-sea and shoreside combined set-aside of 28.215 mt to get an at-sea set-aside value of 16.3647 mt.

Pacific Ocean Perch North of 40°10' N.: Allocate 17% or 30 mt, whichever is greater, of the total LE trawl allocation of Pacific ocean perch to the whiting fisheries (at-sea and shoreside combined). The distribution of the whiting trawl allocation of POP to individual whiting sectors will be done pro rata relative to the sectors' whiting allocation.

- Total LE trawl allocation = 200 mt OY x 95% = 190 mt
- Of the total LE trawl allocation (190 mt), allocate 17% (32.3 mt) or 30 mt, whichever is greater (32.3 mt) to the whiting fisheries (at-sea and shoreside combined).
- Sectors' whiting allocation: 42% shorebased, 34% C/P, 24% MS.
- To find the at-sea set-aside value for Pacific ocean perch, NMFS multiplied the at-sea sectors' allocation of 58% (34% C/P + 24% MS) by the total at-sea and shoreside combined set-aside of 32.3 mt to get an at-sea set-aside value of 18.734 mt.

Widow Rockfish: Initially allocate 52% of the total LE trawl allocation of widow rockfish to the whiting sectors if the stock is under rebuilding or 10% of the total LE trawl allocation or 500 mt of the trawl allocation to the whiting sectors, whichever is greater, if the stock is rebuilt. If the stock is overfished when the initial allocation is implemented, the latter allocation scheme automatically kicks in when it is declared rebuilt. The distribution of the whiting trawl allocation of widow to individual whiting sectors will be done pro rata relative to the sectors' whiting allocation.

Because widow rockfish was considered to be under rebuilding in 2010, the following approach was used in calculating the at-sea set-aside:

- Total LE trawl allocation = 509 mt OY x 91% = 463.19 mt
- Of the total LE trawl allocation (463.19 mt), initially allocate 52% (240.8588 mt) to the whiting sectors.

- Sectors' whiting allocation: 42% shorebased, 34% C/P, 24% MS.
- To find the at-sea set-aside value for widow under rebuilding, NMFS multiplied the at-sea sectors' allocation of 58% (34% C/P + 24% MS) by the total at-sea and shoreside combined set-aside of 240.8588 mt to get an at-sea set-aside value of 139.698104 mt.

Step 5. Amendment 21 Shorebased Trawl Allocation

In this step on the attached aggregate nonwhiting QS control limit calculation table, NMFS simply subtracted the at-sea set aside (Step 4) from the trawl allocation (Step 3) to find the shorebased trawl allocation in metric tons.

Steps 6-9. Northwest Fishery Science Center 2010 Total Mortality Report

For species that did not have specific trawl allocation percentages in Amendment 21, NMFS applied a percentage based on the Northwest Fishery Science Center (NWFSC) final [Estimated Discard and Catch of Groundfish Species in the 2010 US West Coast Fisheries](#) report, using values from Table 19 – Estimated Fishing Mortality of Major West Coast Groundfish Species in 2010 By Sector (pp. 52-54). Species for which NMFS calculated the mortality percentages were: Bocaccio rockfish South of 40°10' N., Canary rockfish, Cowcod South of 40°10' N., Minor shelf rockfish North of 40°10' N., Minor shelf rockfish South of 40°10' N., and Yelloweye rockfish North of 40°10' N..

NMFS added the estimated fishing mortality for LE bottom trawl and non-tribal shoreside hake to come up with a total fishing mortality value for the shorebased fishery (Step 6). Next, NMFS divided the shorebased mortality by the total estimated fishing mortality of all sectors (Step 7) to find the percentage of shorebased fishing mortality (Step 8). Then, NMFS multiplied this shorebased fishing mortality percentage by the 2010 OY to calculate a shorebased trawl allocation in metric tons (Step 9).

Minor shelf rockfish North of 40°10' N. and Minor shelf rockfish South of 40°10' N. were both broken out by individual species mortality within each complex. For each complex, NMFS added the species within the complex to come up with a total LE bottom trawl and non-tribal shoreside hake mortality weight and a total fishing mortality weight in metric tons. Then NMFS used those sums to calculate the shorebased percentage as compared to the total percentage.

Steps 10 and 11. 2010 Shorebased Trawl Allocation

Following the steps above, NMFS was able to calculate a 2010 shorebased trawl allocation in metric tons for each current IFQ species using information from either [Amendment 21](#) (with limited exceptions noted in Steps 2 and 4) or the [Estimated Discard and Catch of Groundfish Species in the](#)

[2010 US West Coast Fisheries](#) report (Step 10). NMFS then converted the calculated 2010 shorebased trawl allocation from metric tons to pounds, applying the standard IFQ 5-decimal conversion factor of 2204.62262 pounds to 1 metric ton.

Individual Calculation

To determine how much aggregate nonwhiting QS a person holds, NMFS will convert the person's QS to pounds. This conversion will always be conducted using the trawl allocations applied to the 2010 OYs as noted in this memo, until such time as the Council recommends otherwise. Specifically, NMFS will multiply each person's QS for each species by the 2010 shoreside trawl allocation in this memo for that species. The person's pounds for all nonwhiting species will be summed and divided by the 2010 shoreside trawl allocation of all nonwhiting species to calculate the person's share of the aggregate nonwhiting trawl quota.

As of the date on this memo, the accumulation limits table at 50 CFR § 660.140 (d)(4) establishes a 2.7% non-whiting groundfish species QS accumulation limit. NMFS has interpreted this to mean 2.700% - that is, someone with an aggregate nonwhiting trawl quota of 2.669% or 2.700% would fall under the limit, while someone with 2.701% would be in excess of the limit.

Additionally, please note that this document will need to be updated if there are any future splits of IFQ species groups, or additional QS species added.

Calculating the 2010 Shoreside Trawl Allocation for the Control Limit for Aggregate Nonwhiting QS Holdings

Step:	1	2	3	4	5	6	7	8	9	10	11
Source:	Amendment 21					NWFSC 2010 Total Mortality Report					
Calculation (Note Exceptions):	(A)	(B)	(C) = (A) x (B)	(D)	(E) = (C) - (D)	(F)	(G)	(H) = (F) / (G)	(I) = (A) x (H)	(J) = (E) or (I)	(K) = (J) x 2,204.62262
IFQ Species	2010 OYs (mt)	Amd 21 Trawl Allocation (% of OY)	Amd 21 Trawl Allocation (mt)	Amd 21 At-Sea Set Asides (mt)	Amd 21 Shorebased Trawl Allocation (mt)	LE Bottom Trawl + Non-Tribal Shoreside Hake (mt)	Total Est Fishing Mortality (mt)	Applied Percentage Est Shorebased Fishing Mortality	Total Mortality Shorebased Trawl Allocation (mt)	2010 Shorebased Trawl Allocation (mt)	2010 Shorebased Trawl Allocation (lbs)
Arrowtooth flounder	10,112	95%	9,606.4	10	9,596.4					9,596.4	21,156,441
Bocaccio rockfish South of 40°10' N.	288					12.9	72.3	17.8423236514523%	51.38589211618	51.38589211618	113,287
Canary rockfish	105					6.4	43.2	14.8148148148148%	15.5555555555556	15.5555555555556	34,294
Chilipepper rockfish South of 40°10' N.	2,447	75%	1,835.25	NA	1,835.25					1,835.25	4,046,034
Cowcod South of 40°10' N.	4					0.6	1.2	50%	2.0	2.0	4,409
Darkblotched rockfish	330	95%	313.5	16.3647	297.1353					297.1353	655,071
Dover sole	16,500	95%	15,675	5	15,670					15,670	34,546,436
English sole	9,745	95%	9,257.75	5	9,252.75					9,252.75	20,398,822
Lingcod North of 40°10' N.	3,535.3109	45%	1,590.889905	6	1,584.889905					1,584.889905	3,494,084
Lingcod South of 40°10' N.	1,293.6891	45%	582.160095	NA	582.160095					582.160095	1,283,443
Longspine thornyheads North of 34°27' N.	2,175	95%	2,066.25	5	2,061.25					2,061.25	4,544,278
Minor shelf rockfish North of 40°10' N.	968					19.6	76.9	25.4876462938882%	246.720416124837	246.720416124837	543,925
Minor shelf rockfish South of 40°10' N.	714					21.3	251	8.48267622461171%	60.5663082437276	60.5663082437276	133,526
Minor slope rockfish North of 40°10' N.	1,160	81%	939.6	55	884.6					884.6	1,950,209
Minor slope rockfish South of 40°10' N.	626	63%	394.38	NA	394.38					394.38	869,459
Other flatfish	4,884	90%	4,395.6	20	4,375.6					4,375.6	9,646,547
Pacific cod	1,600	95%	1,520	5	1,515					1,515	3,340,003
Pacific ocean perch North of 40°10' N.	200	95%	190	18.734	171.266					171.266	377,577
Petrale sole	1,200	95%	1,140	5	1,135					1,135	2,502,247
Sablefish North of 36° N.	6,471	3046.8223716 mt	3,046.8223716	50	2,996.8223716					2,996.8223716	6,606,862
Sablefish South of 36° N.	1,258	42%	528.36	NA	528.36					528.36	1,164,834
Shortspine thornyheads North of 34°27' N.	1,591	95%	1,511.45	20	1,491.45					1,491.45	3,288,084
Shortspine thornyheads South of 34°27' N.	410	50 mt	50	NA	50					50	110,231
Splitnose rockfish South of 40°10' N.	461	95%	437.95	NA	437.95					437.95	965,514
Starry flounder	1,077	50%	538.5	5	533.5					533.5	1,176,166
Widow rockfish	509	91%	463.19	139.698104	323.491896					323.491896	713,178
Yelloweye rockfish	14					0.1	7.6	1.31578947368421%	0.18421052631579	0.18421052631579	406
Yellowtail rockfish North of 40°10' N.	4,562	88%	4,014.56	300	3,714.56					3,714.56	8,189,203

Control Limit for Aggregate Nonwhiting QS Holdings Individual Account Level Example

IFQ Species	2010 Shorebased Trawl Allocation (lbs)	An Individual Entity's QS% (Example)	Conversion of Individual Entity's QS to Pounds (Example)
Arrowtooth flounder	21,156,441	0.500%	105,782
Bocaccio rockfish South of 40°10' N.	113,287	0.000%	0
Canary rockfish	34,294	0.416%	143
Chilipepper rockfish South of 40°10' N.	4,046,034	0.216%	8,739
Cowcod South of 40°10' N.	4,409	0.000%	0
Darkblotched rockfish	655,071	1.800%	11,791
Dover sole	34,546,436	0.691%	238,716
English sole	20,398,822	0.274%	55,893
Lingcod North of 40°10' N.	3,494,084	0.616%	21,524
Lingcod South of 40°10' N.	1,283,443	0.616%	7,906
Longspine thornyheads North of 34°27'	4,544,278	0.966%	43,898
Minor shelf rockfish North of 40°10' N.	543,925	0.503%	2,736
Minor shelf rockfish South of 40°10' N.	133,526	0.138%	184
Minor slope rockfish North of 40°10' N.	1,950,209	0.579%	11,292
Minor slope rockfish South of 40°10' N.	869,459	0.255%	2,217
Other flatfish	9,646,547	0.213%	20,547
Pacific cod	3,340,003	0.313%	10,454
Pacific ocean perch North of 40°10' N.	377,577	0.484%	1,827
Petrable sole	2,502,247	0.751%	18,792
Sablefish North of 36° N.	6,606,862	0.762%	50,344
Sablefish South of 36° N.	1,164,834	0.194%	2,260
Shortspine thornyheads North of 34°27'	3,288,084	0.514%	16,901
Shortspine thornyheads South of 34°27'	110,231	0.244%	269
Splitnose rockfish South of 40°10' N.	965,514	0.250%	2,414
Starry flounder	1,176,166	1.201%	14,126
Widow rockfish	713,178	0.787%	5,613
Yelloweye rockfish	406	0.075%	0
Yellowtail rockfish North of 40°10' N.	8,189,203	0.355%	29,072
Total Non-Whiting Non-Halibut QP Sum	131,854,570	Individual QP Sum (Example):	683,440
		Individual Percentage - Cannot Exceed 2.700% of Total Non-Whiting Non-Halibut Sum (Example):	0.518%
		Limit to Transfer In (Example):	2.182%