

GROUND FISH MANAGEMENT TEAM RECOMMENDATIONS ON CLASSIFICATION OF STOCKS IN THE FMP AND THE OTHER FISH STOCK COMPLEX ALTERNATIVES

We presented alternatives for the classification of stocks in the fishery management plan (FMP) and the Other Fish stock complex alternatives in two earlier Groundfish Management Team (GMT) reports under this agenda item ([Agenda Item H.4.b, GMT Report](#) and [Agenda Item H.4.b, GMT Report 2](#)). This report addresses the connections between the two sets of alternatives and provides additional guidance on how to approach the decisions. The Northwest Fisheries Science Center (NWFS) was also able to provide the analysis we mentioned in Report 2, which we present and discuss here. These analyses produced overfishing limit (OFL) estimates, which the Scientific and Statistical Committee (SSC) approved at this meeting, for most if not all of the “in the fishery” candidates.¹

To help organize the Council’s policy deliberations on the “in the fishery classification” and stock complex decisions, we recommend working through them in three basic steps:

1. Make recommendations on the “in the fishery” classification (see Report 2).
2. Looking to the stocks recommended as “in the fishery”, consider the Other Fish stock complex alternatives (see Report 1).
3. Consider classifying remaining stocks as ecosystem component species (EC) or removing stocks from the FMP.

We illustrate these steps below. We expect that the policy choices involved with the “in the fishery classification” will largely shape the Council’s decision on the proposed Other Fish reorganization. With the number of stocks in play, there are many theoretical combinations. Yet we see the policy decisions grouping together in a way that makes the task manageable.

The NMFS Alternative on Slope Rockfish

The National Marine Fisheries Service (NMFS) West Coast Region GMT representatives presented a draft of their report on the Council’s September slope rockfish recommendation. In September, the Council limited the GMT’s consideration to the Other Fish and so we limit our discussion here accordingly. However, if further analysis goes forward for the slope rockfish complex, we would recommend consideration of the GMT alternatives presented in September ([Agenda Item G.8.b Supplemental GMT Report 5 September 2013](#)), especially what we called Alternative 1. That alternative could be modified based on which stocks are to be considered for individual management, such as keeping aurora rockfish within a complex or separating blackgill rockfish from bank rockfish (an inflator species). We proposed the new structure as an alternative to apportioning small amounts of harvest across the 40°10' N. latitude management line and instead grouping species by co-occurrence.

Also, if the Council had gone ahead with consideration of the slope rockfish complex, then much of the remaining analysis, in our view, would have moved into the management measures process anyway. The Council is considering management measures that could address catch of the slope rockfish without any reorganization of the complex. Following the NMFS approach

¹ We do have questions about certain OFL estimates, particularly the OFL for Aleutian Skate because of the limited occurrences of the stock in the trawl survey.

would allow individual management of certain species to be compared and contrasted on the efficacy and costs of management with the status quo complex structure. Again, this was what we had envisioned the Council would do had it moved the slope rockfish forward in September.

New Analysis in this Report

The NWFSC trawl survey data is presented below, in Appendix 1. We had hoped to have had this information at our October GMT meeting yet the federal government shutdown intervened. We thank the NWFSC GMT representative and his colleagues for the efforts to produce the analysis in time for this meeting. The OFL calculations and survey biomass estimates were very helpful and are included in Table 1 and the Figures 1 and 2 in Appendix 1.

As we stated in Report 2, we do not think the fact that an OFL is calculable should determine whether a species is classified as “in the fishery” or not. California Slickhead is a good example. The 2007-2011 average catch for a stock is less than 30 mt and its OFL is over 6,000 mt. This is a strong indication of the stock’s low vulnerability to the fisheries. Such comparisons of average catch to the estimated OFLs can inform the Council’s deliberations on the FMP’s classification of stocks, although we see no clear line where vulnerability is enough to push a stock to “in the fishery” classification.

Also in Appendix 1 are survey biomass trends for stocks where no OFL was calculated. The biomass estimates can help judge the impact a given amount of catch might have on a stock. For example, we see less than 50 metric tons (mt) of eelpouts caught, on average, per year (Table 1). While this is more than for some FMP stocks, the thousands of metric tons seen in the survey suggest that the eelpouts are not very vulnerable to the groundfish fisheries (Figure 2). The survey does not sample some species as well (e.g., ragfish) and so did not add to our understanding of the significance of catch magnitude for all species. In such cases, we continued to rely on the Productivity-Susceptibility Analysis (PSA) scores as described in Report 2 and our September reports.

The Three Decision Steps

1. Make recommendations on the “in the fishery” classification

Our Report 2 lays out four alternatives for the Council to consider for reclassifying the FMP’s list of stocks. We reproduce those below with some modifications and additions. First, we moved California skate into the sharks and skates set of alternatives. Second, we removed some alternatives that are no longer necessary because of the way OFLs were calculated based on the trawl survey instead of historical catch based methods like DB-SRA. Third, thornback skate was removed from the candidate list (Table 1) because it should have been filtered out in previous reports for being a nearshore species. Lastly we raise some specific considerations for Aleutian skate given what we learned from the NWSFC trawl survey analyses.

In our discussions, the grenadiers and the sharks and skates present the main policy choices for the Council on this issue. The other two sets of alternatives in this step are more related to the second and third steps, which we describe below.

In this first step, the recommendation is for the Council to focus on which reclassification candidate stocks should be classified as “in the fishery.” We do not restate the criteria that we used to identify these candidate stocks or the factors for deciding whether a stock should be “in

the fishery” or not. We described these in Report 2 and in our September reports. NMFS and NOAA General Counsel can aid the Council in the interpretation of the National Standard 1 Guidelines. Over the course of our analyses, the main guiding principle is the need for conservation and management, with the risk of overfishing being the primary factor to consider. Our aim has been to help the Council identify stocks that are facing similar such risks so that they can be classified similar in the FMP. It is the apparent inconsistency in the treatment of stocks that is in need of attention from the Council.

In the following sections, we discuss the four categories of species individually.

A. The Grenadier Alternatives

Classification	No Action	Classification	Alternative 1	Alternative 2	Alternative 3
“in the fishery”	Pacific Grenadier	“in the fishery”	Pacific Grenadier Giant Grenadier	Pacific Grenadier	---
not in the FMP	Giant Grenadier Other Grenadiers	EC Species <i>or</i> not in the FMP	Other Grenadiers	Giant Grenadier Other Grenadiers	Pacific Grenadier Giant Grenadier Other Grenadiers

The Council’s policy choice remains as described in Report 2 and turns largely on views about the marketability and relatively low vulnerability of these species. In further discussions, however, the GMT has identified Alternative 2 as somewhat problematic in that it treats Pacific and giant grenadier differently. The reason for treating them differently is based on the fact that Pacific grenadier is more marketable. Yet looking to their OFLs, giant grenadier’s average catch is higher as a portion of its OFL than is Pacific grenadier’s (we assume that 90 percent of the unidentified catch is Pacific grenadier and the remainder giant grenadier). Of note, these OFLs are likely conservative because the survey data used to inform them does not cover the full range of the populations and the OFL calculations assume that it does (i.e., that the survey “q” equals one). The SSC may speak to this matter under this agenda item or Agenda Item H.6.

One topic raised in team discussion involved the potential catch accounting improvements of including all grenadiers in the FMP. Our conclusion is that catch accounting could be improved whether the Council classifies them as “in the fishery” or EC species. As explained in Report 2, the unidentified catch comes from the landed portion of the catch. The task of better reporting and sampling of the grenadiers would be best considered as part of the management measures discussion under Agenda Item H.10. This is because reporting and sampling of landings is led by the three states and considerations of the various costs and implications to the state fish ticket and sampling programs would need to be considered. Again, the team sees this as true regardless of EC species or “in the fishery” classification.

B. The Sharks and Skates Alternatives

Classification	No Action		Classification	Alternative 1	Alternative 2
"in the fishery"	Big Skate California Skate Spotted Ratfish		"in the fishery"	Aleutian Skate? Brown Cat Shark Bering/Sandpaper Skate Black/Roughtail Skate Big Skate California Skate Spotted Ratfish	---
not in the FMP	Brown Cat Shark Bering/Sandpaper Skate Black/Roughtail Skate		EC Species <i>or</i> not in the FMP	---	Aleutian Skate Brown Cat Shark Bering/Sandpaper Skate Black/Roughtail Skate Big Skate California Skate Spotted Ratfish

The OFLs reported in Table 1 bring new understanding to the relative vulnerability of the stocks to overfishing. However, this new information does not appear to change the nature of the Council’s decision in that we still see no clear line for calling a species vulnerable enough to be in the fishery.

As seen in Table 1, looking at the average catch of individual stocks versus their OFLs, Bering/sandpaper skate seems most vulnerable with catch at just under 40 percent of its OFLs. The others are near 20 percent or less. Aleutian skate is an exception, yet as discussed below, it is infrequently encountered in the survey and so the OFL is of questionable accuracy.

The unidentified skate catch—which is mostly landed catch—somewhat complicates these considerations. The amount of unidentified skate catch has lowered from what is reported in Table 1 to an average of 305 mt over 2010-2012. The main reason for this, we believe, is that Longnose skate was removed from the Other Fish complex beginning in 2009 and sorting began to improve over 2009 and 2010. Considering the 305 mt of unidentified skate catch still occurring, we do not have data to inform what the species composition might be. Assuming that none is Longnose skate, then average catch of the all other skates combined would be about 50 percent of their combined OFLs for all other skates. This could argue for classifying all skates as “in the fishery,” although as discussed with the grenadiers, catch accounting could still be improved if the skates here were classified as EC species. Some may prefer the EC species route and learning more about species-specific landings for the next time the Council considers the FMP’s classification of stocks. Again, we see reasonable justification for either position.

If the Council sees the unidentified skate catch relative to the OFLs as a reason to designate the skates as “in the fishery,” then spotted ratfish and brown cat shark present different circumstances. They are easily identifiable and not marketed. Looking to average catch versus their OFLs, brown cat shark is just under 40 percent and spotted ratfish just over 10 percent.

All in all, the GMT cannot say what percentage of an OFL catch would reach to raise a high enough risk of overfishing for classification as “in the fishery.” We view it is a matter for the Council’s policy discretion to decide which non-target stocks are in need of conservation and management with annual catch limits.

C. The EC Species Candidates

In looking at the NWFSC analysis, we did not see reason to change the list of candidates here. These stocks would be classified as EC species or removed from/left out of the FMP depending on the Council’s preference under Step 3. We discuss the unique circumstance of Aleutian skate below.

Classification	No Action		Classification	Alternative 1
“in the fishery”	Finescale codling/Pacific Flatnose		“in the fishery”	---
not in the FMP	Aleutian Skate Duckbill Barracudina Deepsea Skate All Eelpouts Filetail Cat Shark King of the Salmon Longnose Cat Shark Longnose Lancetfish Pacific Black Dogfish Pacific Sleeper Shark Ragfish Salmon Shark All Slickheads and Tubeshoulders All Snailfish Walleye Pollock		EC Species or not in the FMP	<i>Aleutian Skate? (see above)</i> Duckbill Barracudina Deepsea Skate All Eelpouts Filetail Cat Shark Finescale codling/Pacific Flatnose King of the Salmon Longnose Cat Shark Longnose Lancetfish Pacific Black Dogfish Pacific Sleeper Shark Ragfish Salmon Shark All Slickheads and Tubeshoulders All Snailfish Walleye Pollock

D. The nearshore/state waters species

Classification	No Action	Alternative 1
“in the fishery”	Leopard Shark Cabezon (WA) Kelp Greenling Soupfin Shark	---
Species predominately caught in state waters or in fisheries not regulated by the Groundfish FMP	---	Leopard Shark Cabezon (WA) Kelp Greenling Soupfin Shark

These are species that are currently in the Other Fish complex but, practically speaking, are independently managed. The “individual management” designation for these stocks, however, might be somewhat unusual to some because they are not “Category 1” stocks in terms of how their OFLs are derived. Other stocks, like cabezon (OR) and cabezon (CA) are in similar circumstances. As noted, California skate is on this list in Report 2 but we moved it to the sharks and skates section because survey data showed it to extend into deeper waters than we had assumed.

The circumstances for soupfin shark are somewhat different from the rest. The stock may extend into deeper waters but is largely taken by gillnet gears in California that target species not managed in the Groundfish FMP. Based on the 2007-2011 averages, over 80 percent of the catch

comes from sectors managed elsewhere. The Council's ability to control catch through this FMP is therefore limited.

The reasons we saw the need to flag this list of species will, we hope, become more apparent under Step 2.

E. Considering Aleutian Skate

As mentioned above, we have questions about the validity of the OFL for Aleutian skate. As explained more in Appendix 1, the species was seen in fewer than 20 tows over the course of several years of the trawl survey. Aleutian skate is abundant in the waters off Alaska, with a biomass estimate for the Eastern Bering Sea and Aleutian Islands of 33,293 mt.² This is second only to Alaska skate in estimated abundance in that area. This suggests that the biomass estimate of 72 mt for the West Coast represents the tail of the stock's distribution. The GMT suggests that this may be reason to exclude Aleutian skate from a Skate Complex, or if Aleutian skate were to be included in a Skate Complex within the FMP, there would be reason for it to be combined with the Other Skates subset of the complex. This would allow the few occurrences in the trawl survey to contribute to the OFL calculation for the Other Skates, which is currently based only on observations of deepsea skate and starry skate.

2. Consider the Other Fish stock complex alternatives

The "in the fishery" decisions made under Step 1 will largely shape the decisions made for the reorganization of the Other Fish complex. We illustrate the possibilities using a few scenarios that we anticipate to be at focus in the Council's discussions.

A. The full EC Species scenario.

If the Council chooses Alternative 3 for the grenadiers, Alternative 2 for the sharks and skates on the "in the fishery" decision, and agrees with GMT's logic on soupfin shark, then the only cartilaginous "in the fishery" stocks would be leopard shark and dogfish. And these two stocks are independently managed without good reason for combining them into a complex. They do not co-occur and are not confusable in appearance.

A similar situation happens with the roundfish, with cabezon (WA) and kelp greenling being the only "in the fishery" stocks candidates remaining. As we describe below, the GMT does not see much reason to combine these stocks with one another.

B. The partial EC Species scenarios.

There are two major possibilities considered here. First, if the Council recommends Pacific and giant grenadier as "in the fishery" (Grenadier Alternative 1) but recommends the Skates and Sharks Alternative 2 (meaning they would be EC species), then the roundfish alternatives involve a grenadier complex made up of Pacific grenadier and giant grenadier. The situation

² Ormseth, O.A. 2012. Assessment of the skate stock complex in the Bering Sea and Aleutian Islands. *In*: 2012 North Pacific Groundfish Stock Assessment and Fishery Evaluation Reports for 2013. North Pacific Fishery Management Council, <http://www.afsc.noaa.gov/REFM/Docs/2012/BSAIskate.pdf>.

described above and below with kelp greenling and cabezon (WA) would be present for the cartilaginous species.

The other possibility is the opposite situation where the Council recommends Grenadier Alternative 3 and Shark and Skate Alternative 2 (i.e., the grenadiers are EC species and the skates and sharks are “in the fishery”). Under this situation, the cartilaginous species alternatives would involve the same kelp greenling and cabezon (WA) situation. All alternatives for the cartilaginous species in Report 1 would be viable. We discuss this same situation below.

C. The minimal EC Species Scenario

If the Council chooses Grenadiers Alternative 1 and the Sharks and Skates Alternative 1 above, then the full range of cartilaginous alternatives would be in play. The Roundfish Alternatives would still present the kelp greenling, cabezon (WA) situation, described in more detail in the next section.

To work through the cartilaginous species alternatives, we have included all the alternatives from Report 1 as Appendix 2 on the final page of this report.

D. Discussion on Cabezon (WA) and Kelp Greenling

As noted, the GMT has discussed grouping of cabezon (WA) with kelp greenling. The common factors that argue for grouping species (e.g., co-occurrence, similarity of appearance) are not present between the two. For these reasons and the fact that the stocks are largely managed individually by each of the states, the GMT recommends the Council consider classifying them as individually managed. A potential issue arises because cabezon (WA) does not have an OFL yet calculated, and the kelp greenling OFL is based on the California sub-stock only. As stated in the SSC statement, there may be a way to calculate OFLs for the remaining kelp greenling sub-stocks and cabezon (WA) over the winter. If they cannot be calculated this cycle, then several issues may need further consideration in March or April. To illustrate, at the extreme, we do not see how the harvest specifications for kelp greenling in California provide status determination criteria on overfishing for cabezon off of Washington. Likewise, there would likely be concerns with the deducting cabezon (WA) catch, and catch of kelp greenling in Washington and Oregon, from the harvest specifications that derive from kelp greenling in California.

3. Consider classifying remaining stocks as EC species classification or removing stocks from the FMP

As noted, there are two logical possibilities for stocks not classified as “in the fishery.” The Council could designate them as EC Species or leave them out of the FMP altogether. As noted in Report 2, we do not see much reason to designate some stocks as EC species while leaving others out of the FMP altogether.

A more thorough analysis of the EC species classification might be added to the management measures process. The Council may still have questions about what EC species classification might entail. One possibility for EC species is that we do no more than we were able to do now and simply consider annual catch estimates on an annual or some semi-annual basis. Improvements in catch accounting could be considered as well. As discussed above in the grenadiers section, given the potential impacts to sampling programs and the fishing industry,

such changes would be best considered as part of the management measures process under Agenda Item H.10. Lastly, we have heard some guidance that designation as EC species might involve less analysis than complete removal or omission of a species from the FMP.

Appendix 1 – NWFSC Bottom Trawl Data and Analysis to Support the “In the Fishery” Question

Survey biomass estimates and associated OFL estimates described in [Agenda Item H.6.a Supplemental Attachment 6 November 2013](#) are included in Table 1. Biomass estimates have also been calculated for all additional species that are encountered by the NWFSC Groundfish Trawl Survey. Biomass estimates are based on the most recent 3 years of survey abundance available at the time of this analysis (Appendix Figures 1 and 2) and are only calculated for species that were encountered in all 3 years. A small subset of these species that were encountered annually, were seen in so few tows that the survey biomass estimates are unlikely to provide reliable estimates of biomass or OFL contributions. These species are Aleutian skate, Pacific sleeper shark, other slickheads (including tubeshoulders), and snailfish, all of which have occurred in fewer than 100 tows total (and never more than 20 tows in any given year). Of these species, Aleutian Skate is the only one for which an OFL contribution was presented in [Agenda Item H.6.a Supplemental Attachment 6 November 2013](#).

The OFL contributions for Other Skates and Other Grenadiers should not be directly compared to the average catches listed in these categories in Table 1. Landings in both of these groups have often not been identified to the species level. For instance, for the years 2007–2011, the average catch of unidentified skates was 725 mt, but this average includes longnose skate in the years prior to the individual management of that species. For the years 2010–2012, when longnose skate was landed separately, the unidentified skate landings averaged 305 mt, but this number still likely included large amounts of big skate. In contrast, the estimated 24.9 mt OFL contribution for Other Skates is based on survey observations of only starry skate and deepsea skate. Likewise, in the case of grenadiers, the average catch of unidentified grenadiers has been 135 mt for the years 2007–2011, but this is likely to include large amounts of Pacific grenadier that was not identified by species in landings records. That number should therefore not be compared to the 40.1 mt estimated OFL contribution for Other Grenadiers which is based on survey observations of smooth grenadier, popeye grenadier, softhead grenadier and California grenadier. Regardless of the actions taken by the Council on revising stock complexes, the catch data could be improved in future years to allow comparisons of catch to the OFL estimates presented here for Other Skates and Other Grenadiers. However, it can be noted that if all species are combined then the sum of all skate catches have been below the sum of all skate OFL contributions and the sum of all grenadier catches has been below the sum of all grenadier OFL contributions.

Table 1. PSA scores, average catch, OFL estimates and biomass estimates for Other Fish related candidate stocks from [Agenda Item H.4.b GMT Report 2 November 2013](#). Biomass estimates with darker shading are those for which the survey has few encounters and is unlikely to provide reliable estimates. Catch / OFL column represents that ratio of average catch (2007–2011) to OFL estimate for those cases where these values are both available and reasonable to compare.

	Species	PSA score	Catch (avg.)	OFL estimate	Catch / OFL	Biomass estimate	Notes
Skates & Rays	Aleutian Skate	1.71	3	3.6	83%	72*	*Biomass estimate based on few encounters
	Bering/Sandpaper Skate	1.80	70	177.4	39%	5,727	
	Big Skate	1.99	95	540.8	18%	10,376	
	Black/Roughtail Skate	1.68	44	184.8	24%	6,497	
	California Skate	2.12	14*	129.6	11%	2,487	*Only 29% from FMP sectors
	Deepsea Skate	--	1	--	--	*	*Biomass estimate included with "Other Skates"
	Other Skates	--	725*	24.9	--	785	*Unidentified catch, should not be compared to OFL estimate.
	Thornback Skate	--	2	--	--	--	
Cat Sharks	Brown Cat Shark	1.84	90	320.0	28%	9,918	
	Filetail Cat Shark	--	11	--	--	5,176	
	Longnose Cat Shark	--	3	--	--	1,808	
Other Chondrich.	Leopard Shark	2.00	35*	--	--	--	*Only 3% from FMP sectors (other than CA Recreational = 82%).
	Pacific Black Dogfish	--	1	--	--	--	
	Pacific Sleeper Shark	--	8	--	--	228*	*Biomass estimate based on few encounters
	Salmon Shark	--	1	--	--	--	
	Soupfin Shark	2.02	8*	--	--	--	*Only 16% from FMP sectors
	Spotted Ratfish	1.72	146	1,272.4	11%	19,846	
Slickheads	California Slickhead	1.10	28	6,248.8	0.4%	26,118	
	Threadfin Slickhead	--	1	--	--	369	
	Other (incl. Tubeshoulders)	--	1	--	--	10*	*Biomass estimate based on few encounters
Grenadiers	California Grenadiers	--	4	--	--	--	*Biomass estimate included with "Other Grenadiers"
	Giant Grenadiers	1.87	170	638.6	27%	17,634	
	Other Grenadiers	--	135*	40.1	--	1,108	*135 mt of unidentified catch. Other species in data all < 1 mt per year. Should not be compared to OFL estimate.
	Pacific Grenadier	1.82	131	1,386.0	9%	38,344	
Eelpouts	Bigfin Eelpout	--	3	--	--	3,965	
	Twoline Eelpout	--	3	--	--	4,830	
	Other Eelpouts	1.51	43	--	--	4,639	
Misc. Fish	Cabezon*	1.68	101	--	--	--	*Included b/c they're potentially distributed in state waters
	Duckbill Barracudina	--	1	--	--	--	
	Finescale Codling/Pacific Flatnose	1.48	13	316.0	4%	3,091	
	Kelp Greenling*	1.59	43	--	--	--	*Included b/c they're potentially distributed in state waters
	King-of-the-Salmon	--	6	--	--	--	
	Longnose Lancetfish	--	1	--	--	--	
	Ragfish	1.80	43	--	--	--	
	Snailfish spp.	--	5	--	--	3*	*Biomass estimate based on few encounters
Walleye Pollock	--	4	--	--	--	*Prior to 2007, catch has reached 1,000s of metric tons in some years	

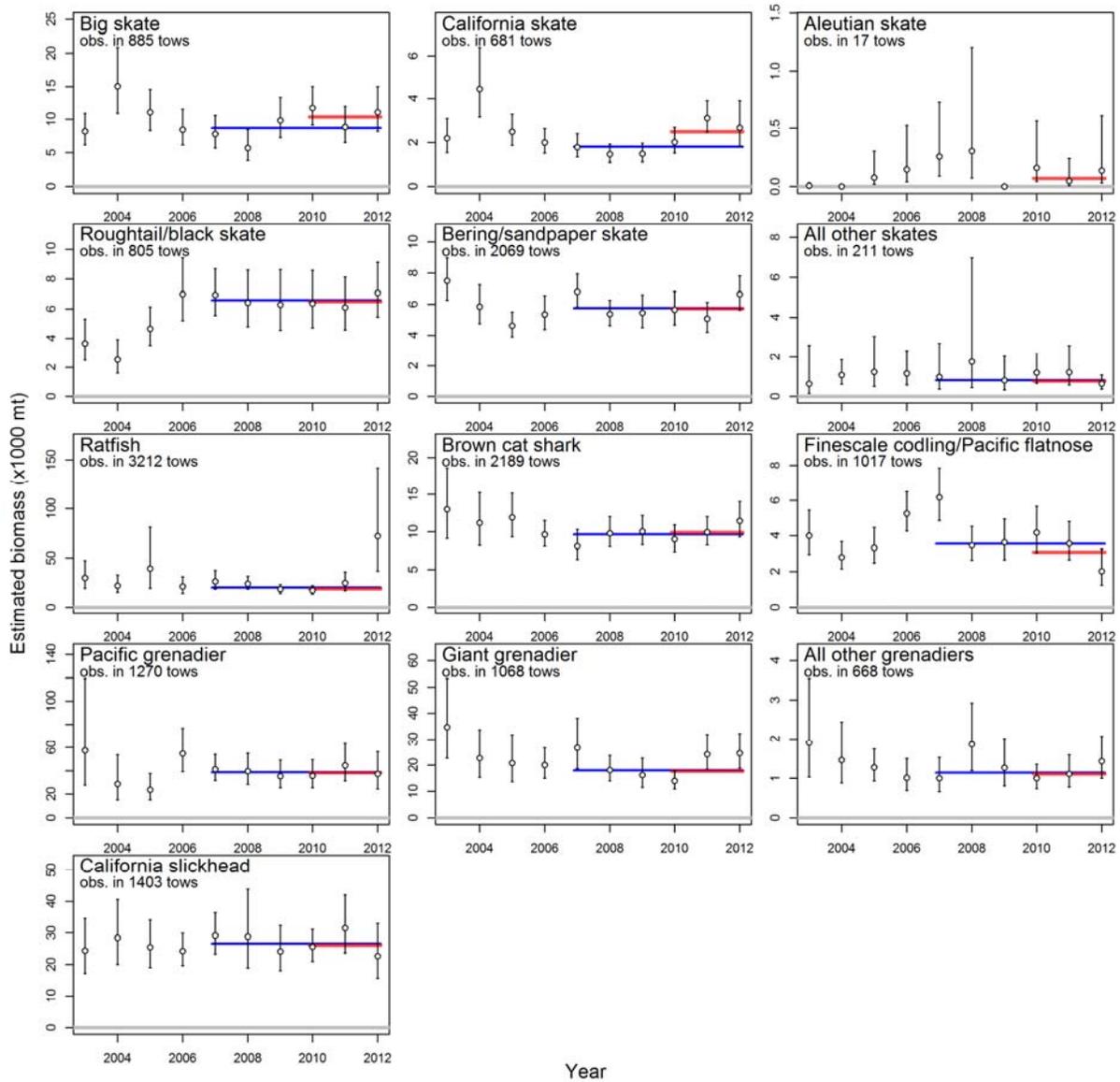


Figure 1. Time series of estimated survey biomass for species included in [Agenda Item H.6.a Supplemental Attachment 6 November 2013](#). Time period covers 2003–2012, with estimated 95% confidence intervals. Horizontal lines indicate weighted average value over most recent 6-year and 3-year periods. No 6-year average for Aleutian skate is reported because they were not encountered in the 2009 survey. Number of observations refers to total number of tows that included the species out of a total of 6453 tows for this 10-year period.

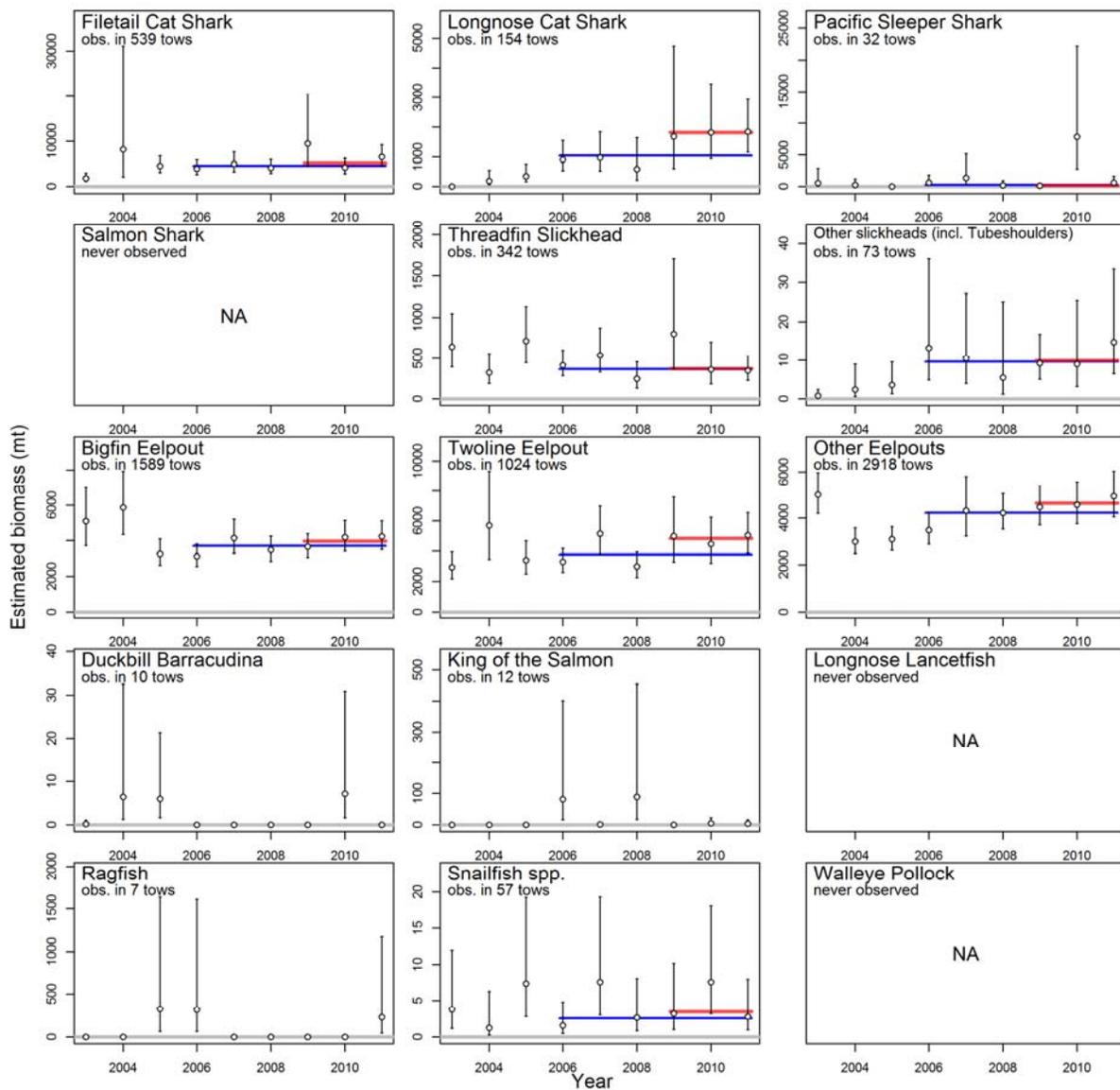


Figure 2. Time series of estimated survey biomass for additional species. Time period covers 2003–2011, with estimated 95% confidence intervals. Horizontal lines indicate weighted average value over most recent 6-year and 3-year periods. No averages are shown for periods that include no encounters. Number of observations refers to total number of tows that included the species out of a total of 5735 tows for this 9-year period. Note that the scale differs between Figures 1 and 2.

**Appendix 2 – Alternative Tables, modified from GMT Report 1
([Agenda Item H.4.b, GMT Report](#))**

Cartilaginous Species **Alternative 1**. The only differenced from status quo is moving spiny dogfish to individual management.

Cartilaginous Fish--Individually Managed Stocks	Cartilaginous Fish in the Other Fish Complex
Spiny Dogfish	Big Skate California Skate Leopard Shark Spotted Ratfish Soupfin Shark

Cartilaginous Species **Alternative 2**.

Cartilaginous Fish--Individually Managed Stocks	Cartilaginous Fish Complex	Cartilaginous Fish EC Species
Spiny Dogfish	Big Skate California Skate Leopard Shark Soupfin Shark	Spotted Ratfish

Cartilaginous Species **Alternative 3**. This alternative was provided by the GMT under Agenda Item G.8.b, Supplemental GMT Report 7, September 2013.

Cartilaginous Fish--Individually Managed Stocks	Shark-Ratfish Complex	Skate Complex
Spiny Dogfish	Soupfin Shark Brown Cat Shark Leopard Shark Spotted Ratfish	Big Skate California Skate Bering/Sandpaper Skate Aleutian Skate Roughtail/Black Skate All Other Skates

Cartilaginous Species **Alternative 4**. This alternative was presented by the Groundfish Advisory Panel (GAP)

Shark-Ratfish Complex	Skate Complex	EC Species
Spiny Dogfish Spotted Ratfish	Longnose Skate Big Skate California Skate Bering/Sandpaper Skate Aleutian Skate Roughtail/Black Skate All Other Skates	Soupfin Shark