Orientation: Existing Analyses – Extracts

November 2017

F.2, Attachment 6, November 2018 (also includes analytical information provided in September 2017))		
Southern Sablefish Issues		
What is the nature of the S of 36 gear conflict problem	p. 18 *(pg. 4)*	References to Catch Share Review – Gear switching starts on 3-132 Southern allocation and utilization on 3-134 Conflicts with other fisheries on 3-183
How active have northern vessels been in the south?	p. 18-19 *(pg. 4-5)*	2011 – 2016 – 11 vessels with activity in the north accounted for 50-60% of southern trawl sector sablefish. No more than 4 in any one year.
Where is trawl sector southern sablefish landed?	p. 19 *(pg. 5)*	Ninety percent in Morrow Bay
How significant is the unused southern allocation relative to the northern allocation?	p. 19 *(pg. 5)*	Unused southern allocation equal to about 25 percent of northern allocation. If there were a single coastwide allocation, vessels that have been travelling south might stay north (see 50% to 60% value above). (Table 2)
If north and south were combined, how might accumulation limits be adjusted?	p. 19-20 *(pg. 5-7)*	Recalculation of limits based on neutral result (using 2016 trawl allocations) (Table 3) QS Control / QP Vessel North: 3% / 4.5% South: 10% / 15.0% Neutral Coastwide: 4.7% / 7.1%
Gear Switching		
Analysis requests	p. 21 *(pg. 7)*	Four bullets from June 2017 Council meeting
Caveats • In the following, data for 2017 is partial, allowing only limited conclusions for 2017 results. • Permit counts for **gear switching** should considered **lower bounds** (There are IFQ landings without an associated LE Permit code—mainly south of 36º N. lat.—that might or might not affect the total counts) • In some cases, southern sablefish landing totals are also lower bounds due to missing LE permit codes and omitted permit records. See March 2018 analysis for complete data.		
How many vessels have been involved in gear switching	p. 21 *(pg. 7)*	Cumulative total number of permits with at least one year (over 50) (Figure 2) **(may be a lower bound count)**
Information useful for developing a gear switching endorsement qualifying requirement.	p. 22 *(pg. 8)*	Number of years in which a vessel made one gear switched deliveries. Thirty out of the over 50 vessels gear switching have participated in not more than 2 of 7 years. (Figure 3) **(may be a lower bound count)**
How many vessels gear switch each year and how much is landed?	p. 22 *(pg. 8)*	After the first few years of the program, on average, just over 15 vessels gear switched in each year. (Figure 4) **(may be a lower bound).**

As a proportion of allocations, how much sablefish is landed through gear switching?	p. 23 *(pg. 9)*	In the north, an average of 29%, not including 2017. (Figure 5 and Table 3). **Sablefish south data is off. See instead** Agenda Item H2, Att 1, March 2018 p 2, Table 2.
At what levels have gear switching vessels participated?	p. 24 *(pg. 10)*	Example: 30 permits have at least 5,000 pounds in each of at least two years **(first column of counts is one too high in each row)** (Table 5).
What levels vessels using nonwhiting trawl gear participate at on an annual basis?	p. 24-25 *(pg. 10-11)*	On a Vessel x Year basis, between about 5,000 and 2.5 million pounds of nonwhiting landings (Figures 6 and 7). There do not appear to be any strong breaks in the distributions. Groups of three vessel years are distributed from smallest to largest in Figures 6 and 7.
How much activity is there by vessels using both trawl and fixed gear.	p. 25 *(pg. 11)*	An average of about 4 vessels a year **(may be a lower bound count)** (Table 5).
IFQ Accumulation Limits and Allocation Attainment		
Is sector attainment constrained because vessels are unable to reach the optimum production levels? Optimally efficient nonwhiting vessel: $0.7M revenue QS control limit (2.7%) target: allow $1.4M revenue Vessel QP limit (3.2%): allow $1.7M revenue The expected profit level for an optimal vessel was projected to be $0.5 M per vessel. **[Reprise under way for the Lian et al. analysis which was the basis for optimal vessel assumptions used to develop aggregate accumulation limits.]**	p.27-30 *(pg. 13-16)*	From Westport to Fort Bragg, nonwhiting vessels are topping out at over a million dollars. Lower in areas north and south (Table 5). In OR at least half of nonwhiting are reaching the $0.7M mark and about half are reaching $0.5M in WA and CA (Figure 2). In Washington and Oregon 25% or so of the vessels may be reaching $0.5M in profit, not taking into account fixed costs. A much lesser number in California (Figure 3). **[It may be worthwhile redoing the original analysis after the reprise of Lian et al. is completed.]**
Are aggregate limits constraining efficiency and attainment.	p. 30-32 *(pg. 16-18)*	Discussion of market power vs. market share analyses of impacts of aggregation limits.
Are individual species limits constraining vessels because there too few vessels in some areas?	p. 33 *(pg. 19)*	Possibly in some species in southern areas. Table 7 provides a mathematical exercise – comparing number of vessels active in an area to the minimum number required to fully attain the allocation (given the vessel QP limit).

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Analysis request from Agenda Item H.1 CAB Report September 2017: "As part of the analysis of the 36° N. line for trawl sablefish, the CAB recommends that analysts evaluate the likely mix of catch between trawl and fixed gear for the quota that becomes available to the north, and the degree to which sablefish might be constraining harvest of other species."

March Analysis Related to Gear Switching and Sablefish Management Area Issues

H.2, Attachment 1, March 2018		
How significant is the unused southern sablefish allocation relative to the northern allocation?	p. 1 *(pg. 20)*	Unused southern allocation is around 25% of total northern allocation, equivalent to an exvessel value of $2 to $3 million. Reprises and augments September analysis (Table 1).
How much sablefish is landed through gear switching?	p. 2 *(pg. 21)*	In the north an average of 68% of the landings and 64% of the allocations. In the south an average of 96% of the landings and 31% of the allocation (lower due to the unused sablefish) (Table 2).
What is the difference in profitability between north and south?	p. 3-4 *(pg.22-23)*	Note that while there is only a small differential in exvessel prices (Table 3, p. 3) there is a large differential in the price for QP and possibly QS (Table 4 and Table 5). This indicates a likelihood that there are higher harvest costs or other barriers to participation in the south making it less profitable to fish there.
Are vessel QP limits constraining harvest?	p. 4-6 *(pg. 23-25)*	For sablefish north, the average number of vessels reaching more than 90% of the QP limit is 2.7, of which 2.0 are using fixed gear. For sablefish south the average number is 0.4, of which all are using fixed gear (Table 7).
Might reducing the vessel QP limit for sablefish make more sablefish available for vessels using trawl gear.	p. 6 *(pg. 25)*	The amount of QP potentially feed up by reducing the limits, for example, from 4.5% to 3.0% would cause a redistribution of about 5.1% of the catch (roughly 75% of it from fixed gear vessels, on average). Whether those QP would then be acquired by vessels using trawl gear is uncertain (Table 8).

March Analysis Related to Attainment

H.6, Attachment 1, March 2018		
What are indicators that annual vessel QP limits for individual species are or are not limiting total attainment?		
What are the annual vessel QP and control limits?	p. 21 *(pg. 29)*	Table 9 lists the annual vessel QP limits.
For which species is the shoreside fishery following well short on attaining its allocations?	p. 22 *(pg. 30)*	All except petrale sole and northern sablefish, and in many years, Pacific whiting. (Table 10).
For which species might recent ACL increases be contributing to under-attainment in more recent years?	p. 24 *(pg. 32)*	In particular, widow, Pacific whiting, POP, minor shelf (RCAs more an issue), Dover sole, darkblotched, chilipepper (south) , canary, bocaccio rockfish (south), arrowtooth flounder (Figure 1).
How close are vessels coming to the QP limit?	p. 25-26 *(pg. 33-34)*	Data shows vast majority of vessels do not come close to the vessel QP limit. There are an average of 10.6 instances each year of a vessel approaching within 10% of the limit (Table 12).
SSC Caveat	p. 25 *(pg. 33)*	The SSC notes this does not necessarily mean that vessels would not take more if vessel QP limits were higher. Fishermen may not move to larger vessels because of the QP limits. Thus QP limits might constrain efficiency (if larger capacity vessels are more efficient). Notes: How vessel efficiency impacts attainment depends on the cause of under attainment. If attainment is market limited, larger more efficient vessels might allow lower exvessel prices, allowing a reduced ex-processor price and expansion of shares in wholesale markets. If attainment is constraining species limited, increased efficiency would not be expected to change attainment.
For which species do the annual vessel limits appear to be most constraining?	p. 27 *(pg. 35)*	Sablefish (2.7 vessels per year within 10% of the limit) and Petrale (3.3 vessels per year within 10% of the limit). For 10 species, the average is less than 1 vessel per year. For 17 species, no vessel comes within 10% of the limit. (Table 13)
For which species might there not be enough vessels operating to attain the allocation (given the annual vessel QP limit)	p. 28 *(pg. 36)*	There are eight species/species groups where this might be the case, all in the south (see bolded rows in Table 14, ignore bolding for yelloweye). Reprise of the Sept/Nov analysis..
How much might attainment increase over the short-term with an increase in the vessel QP limit.	p. 29 *(pg. 37)*	For a 30% increase in the limit, one methodology shows increases in attainment of the allocation of 6% or less for 10 species. As a percent of catch, the increases were greater. (Table 15).
How would a 30% increase in limits change the number of vessels required to take the full trawl allocation?	p. 30 *(pg. 38)*	For most species, it would decrease the minimum number of vessels required by 1 or 2 (for slope rockfish, it would decrease by 3). (Table 16)[a/]
What might limit vessel QP limit increases mean for individual vessels, in terms of vessel income.	p. 31 *(pg. 39)*	Hypothetical 30% increases of vessel QP limits could mean up to $200,000 dollars of additional income for a species such as widow rockfish, less for other species, assuming a vessel is able to fully utilize the increase (Table 17)[a/]

a/ Shortspine thornyheads and splitnose should be added to Tables 16 and 17.

March Analyses Related to Other Policies Impacting Attainment

Post-season Trading to Cover Previous Year Deficits

Table 20 (p. 40, *pg. 42*). Shows that being able to cover post-season deficits through trading of previous years QP will contribute only a small amount to the QP available in the subsequent year. The species where the provision would be most significant are canary, Pacific ocean perch, Pacific whiting. Table 25 (p. 45, *pg. 43*) shows that there would be adequate amounts of surplus carryover available to cover those deficits.

Eliminate September 1 Expiration of QP in QS Accounts

Table 26 (p. 47, *pg. 44*) shows that some relatively large amounts of Dover sole and whiting have expired on September 1, because they had not been transferred from a vessel account. For constraining species, such as petrale sole and sablefish north the amount of expiring QP is quite small.