



New England Fishery Management Council

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MEMORANDUM

DATE: July 30, 2014
TO: Groundfish Oversight Committee (Committee)
FROM: Groundfish Plan Development Team (PDT)
SUBJECT: Progress on Amendment 18

To inform your meeting on August 4, this memo summarizes the work that the PDT has done on Amendment 18 since the June Council meeting. The PDT had a conference call on July 1 and an in-person meeting on July 24. PDT members present (most for both meetings) were: Jamie Cournane, Rachel Feeney, Fiona Hogan (NEFMC staff); Chad Demarest, Anna Henry, Paul Nitchke (NEFSC); Dan Caless, Tim Cardiasmenos, Sarah Heil, Michael Ruccio, William Whitmore (GARFO); Steve Correia (MADMF); and Sally Sherman (MEDMR). Four members of the public were present on July 24. The PDT primarily discussed measures for accumulation limits and the inshore/offshore Gulf of Maine. This memo was finalized via subsequent emails and phone calls.

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Amendment 18 Action Timeline

The current Amendment 18 action timeline has the Council approving the Range of Alternatives for the DEIS at their meeting Sept. 30 ó Oct. 2, 2014. Several updates to the Discussion Document have been made to reflect the Council motions in June. The document will be sent to the Council on September 12. Additional Committee motions made on August 4 and September 18-19 will go to the Council for approval at the September 30 ó October 2 Council meeting.

Table 1 - Amendment 18 timeline

2014	
Jun. 17-19	NEFMC partially approves Range of Alternatives
July 23	CIE review reports finalized
Aug. 4	Committee meeting (accumulation limits and inshore GOM measures)
Sept. 16	Recreational Advisory Panel meeting
Sept. 16	Groundfish Advisory Panel meeting
Sept. 17-18	Committee meeting (accumulation limits and inshore GOM measures)
Sept. 30-Oct.2	NEFMC approves remaining Range of Alternatives.
Oct.-Dec.	Notice of Intent revised, PDT develops DEIS (analyze probable effects)
2015	
Jan. 27-29	NEFMC approves DEIS with Range of Alternatives, selects preferred alternatives
Mar. 1	DEIS accepted by NMFS
Apr. 1	EPA approves DEIS and issues NOA that DEIS is available
Apr.-May.	DEIS 45-day public comment period
June 16-18	NEFMC votes on final action
Aug. 1	FEIS submitted to NERO
Aug.-Dec.	EIS review, revisions, final submission, and deeming of proposed regulations. GARFO publishes NOA. 60-day public comment period.
2016	
January	Continue review/comment period
May 1	Possible implementation of measures

HA Fishery Measures

The A18 Discussion Document has been updated to include tables showing the recent catch, landings, and discards by HA permits for the stocks for which a sub-ACL is being considered. See Section 6.5.8. The PDT is now working on analyzing the alternatives for the HA fishery measures.

Inshore/Offshore Gulf of Maine (Section 4.6)

In June, the Council passed the following motion (14/1/0):

- 1. That the PDT develop a range of alternatives in establishing an inshore/offshore Gulf of Maine boundary line including among those alternatives, 70 degrees west longitude line extended north and south, and 70 degrees 15 minutes west longitude line extended north and south.*
- 2. The following be included in Amendment 18, which would apply to the commercial and recreational groundfish fisheries:*
 - A. An alternative to create an inshore Gulf of Maine sub-ACL, which would divide the existing ACL into inshore and offshore sub-ACLs, based either on historical catch patterns or stock distribution (up to 20 years prior), and a sub-option which would prohibit vessels from fishing in both the inshore and offshore Gulf of Maine areas on a single trip without an observer or electronic monitoring technology which can correctly attribute catch to each area;*
 - B. An alternative that attempts to address concentrated inshore effort with the development of an expanded gear restricted area in inshore Gulf of Maine; and*
 - C. To provide a range of alternatives as to how long you would declare in and out of area (time periods).*

Relevance to Amendment 18

The Committee and the Council indicated in June that the primary intent of these measures is to preserve and rebuild the Gulf of Maine cod stock. The PDT does not disagree with the importance of doing so. While the PDT earlier stated that these measures may have a place in A18, if the primary purpose to protect cod, the PDT recommends moving Section 4.5 to Considered but Rejected (Section 5.0) and developing measures through a subsequent action with a purpose and need focused on the issue. As is, these alternatives do not fit the purpose and need for Amendment 18. Indicating that if cod are rebuilt, then fleet diversity (i.e., range of vessel sizes, ports used, and gear types) has a chance of being promoted is an insufficient link to the goals of Amendment 18. Amendment 18 is not the appropriate action for these measures, unless and until the goals of Amendment 18 get revised to include language specific to Gulf of Maine cod and a Revised Notice of Intent is issued. Additionally, adding measures relevant to the recreational fishery would also require revising the goals of this action.

In accord with the Council motion, the PDT proceeded with developing the alternatives, noting their incongruence with the goals of this action. The PDT reiterates its concern that there are conflicts with alternatives already in the Habitat Omnibus Amendment 2.

More broadly, the PDT noted that the Council is scheduled to approve the Range of Alternatives for Amendment 18 at its September-October meeting, and that there are very few measures in the document so far that may promote fleet diversity. The PDT encourages the Committee to consider how it wants to address each goal of this action, as set by unanimous vote of the Council in June 2013.

Potential Data Analysis

The Committee and the Council has requested additional PDT analysis of the distribution of cod and fishing effort in the Gulf of Maine, particularly within Area 514, to a finer scale than was provided in the April 16, 2014 PDT memo to the Committee. These requests were not made through motions, but through meeting discussions. The requests are included below with specific PDT feedback on their feasibility. This work would take a substantial amount of effort. To date, the PDT has been focused on preparing Framework 52 for submission, other aspects of Amendment 18, initiating Framework 53, and other tasks. In general, it is difficult to assess the feasibility of an analysis without understanding its purpose. If specific requests are made through motions, please be as explicit as possible.

- A. *Refine the Area 514 analysis to examine the number of fishing days or time spent fishing within 514, rather than the number of trips in 514.*

The PDT did examine the data by the number of days absent. However, there were some technical issues with the quality of the analysis. From the data, it is not clear how many days absent are actually spent fishing. Thus, it was not included in the memo provided on April 16. Examining the data by time spent fishing would not be possible, because these data are not collected. It is also not clear what information this would provide at the statistical area level that would be helpful. How would this help with drawing an inshore/offshore boundary line?

- B. *Within Area 514, create a map with effort contour lines, perhaps as a time series back 20 years.*
- C. *Identify the number of trips that occur exclusively west or east of the boundary lines identified in Section 4.5.1, perhaps broken down by vessel length, number of days fished, etc.*

Both of these requests would require an analysis to a finer scale than statistical area. This may be possible for the commercial fleet, parsing together Vessel Trip Report (VTR) and observer data, and partially possible for the recreational party/charter fleet using VTR data. It would not be possible to report data for the private angler fleet on a finer scale than statistical area. Positional data (lat./lon.) can be derived from VTRs, assuming that these data are accurately reported. The observer data have haul- and set-specific data. In this work, "effort" would need to be defined. Would it include all groundfish trips or trips that target cod? If the latter, a threshold would need to be determined for what is considered a cod trip. With a number of caveats and assumptions, these analyses may be possible for some segments of the fleet, but this would take a substantial amount of effort.

Prior Analyses

In the absence of new analyses, the PDT encourages the Committee to be informed by prior work. Below is a partial list of work to understand the distribution of cod and fishing effort within the GOM. These documents are available on the NEFMC webpage for the August 4 meeting, with the exception of the first two, which have copyright restrictions.

Dean MJ, WS Hoffman, DR Zemeckis, and MP Armstrong (2014). Fine-scale diel and gender-based patterns in behaviour of Atlantic cod (Gadus Morhua) on a spawning ground in the Western Gulf of Maine. ICES Journal of Marine Science

The article describes evidence of cod spawning ground site fidelity and gender-based diel patterns in space use and aggregation behaviour.

Richardson DE, MC Palmer, and BE Smith (2014). The influence of forage fish abundance on the aggregation of Gulf of Maine Atlantic cod (Gadus morhua) and their catchability in the fishery. Canadian Journal of Fisheries and Aquatic Sciences 71: 1-14.

The article contains maps of the distribution of cod, sand lance and herring in the Gulf of Maine since 1973, derived from NMFS survey data, as well as cod diet and feeding hot spots. The article describes how an increase in sand lance abundance on Stellwagen Bank between 2005-2010 led to a concentration of cod, and thus, concentration of fishing effort. Additionally, this article attributes cod catch to 10 minute squares within SA514.

NEFMC (2014). Groundfish PDT memo to OSC re GOM cod in SRA 514, April 16, 2014.

The memo contains maps of cod survey data between 1968-2011 and landings and number of trips by vessel size class in SRA 514. It describes how cod has concentrated into the western Gulf of Maine, most of the cod catch has been taken by smaller vessels, though the number of trips by larger vessels increased in recent years.

NEFMC (2014). Omnibus EFH Amendment 2 DEIS Volume I. 425 p. [see Affected Environment, p. 59-67, 83-95, 226-308]

The DEIS contains maps showing the spatial distribution of realized adverse effects in 2000, 2005, 2009 from generic otter trawls (p. 59), demersal longlines (p. 66), and sink gillnets (p. 67); cod spawning areas identified by various authors (p. 88-93); cod survey data (p. 95); juvenile hotspots (p. 248); large cod hot spots (p. 284); and large-mesh groundfish species diversity (p. 308).

NEFMC (2013). Omnibus EFH Amendment 2 DEIS Appendix E: Synopsis of Closed Area Technical Team analysis of juvenile groundfish habitats and groundfish spawning areas. 67 p.

The DEIS appendix contains maps of spawning areas by various authors (p. 14-17), cod spawning hot spots in the NEFSC spring trawl surveys 2002-2012 (p.44-47), juvenile hot spots (p. 48-), and seasonal spawning areas derived from hotspot analysis (p.50-53).

NEFSC (2013). 55th Northeast Regional Stock Assessment Workshop (55th SAW) Assessment Report. NEFSC Reference Document 13-11, 845p.

The report contains all the data used in the latest GOM cod assessment. Pages 231-242 contain several maps and figures of commercial effort data within the GOM, by statistical area and 10ø square, as well as the contribution of landings by different ton classes over time. Pages 273-276 contain a map and figures of the spatial distribution of recreational effort from VTRs (charter/party vessels only). Page 294 contains maps of the spatial overlap or surveys catches with commercial and recreational effort. Data from the federal (p. 305-308) and state inshore surveys (p. 309-329) are included.

GMRI (2012). Report of the Workshop on Stock Structure of Atlantic Cod in the Gulf of Maine Region. Gulf of Maine Research Institute, 26p.

This report reviews existing analyses by several authors relevant to the structure of Atlantic cod.

NEFMC (2011). Omnibus EFH Amendment 2 DEIS Appendix D: The Swept Area Seabed Impact (SASI) approach: A tool for analyzing the effects of fishing on EFH. 257p.

The DEIS appendix contains a map (p. 187) of generic otter trawl realized swept area for CY2009, at the 10øsquare level, from the Gulf of Maine to Cape Hatteras.

GARFO. GOM cod spatial density maps.

These maps use NEFSC survey data, 2003-2007 and 2008-2012, to plot the spatial density of GOM cod.

Motion Part 1: Establishing an Inshore/Offshore boundary line in the Gulf of Maine

The PDT has developed Section 4.5.1 of the Discussion Document, including the two options specified for boundary lines (Section 4.5.1.2, Alternative 2 Options A and B). If these options are to be used to create a new sub-ACL for Gulf of Maine cod or other stocks, they would be very difficult to administer if implemented. They would create new strata for observer coverage during a time when there are less available funds for observers. It would be difficult to delineate catch between the inshore and offshore areas, because they are not contiguous with statistical areas. VTRs cannot be used alone, or would need to be modified, to monitor these sub-ACLs. This would create an exception, and thus a complication, to using VTRs to monitor which ACL to charge for a groundfish stock.

A catch monitoring approach akin to how the Atlantic herring fishery is monitored may be necessary, where management areas do not align with statistical area boundaries. Herring catch is tracked using data provided by daily Vessel Monitoring System reports (herring catch by management area and all fish kept by statistical area) and weekly VTR catch reports, in combination with federal/state dealer data. If VTR and dealer reports do not match a VMS catch report, herring management area is determined using the statistical area, latitude, and longitude provided on the VTR reports. Once all matching is complete, summed dealer data on kept catch by area for a given VTR serial number is used in the weekly herring report, unless VTR kept is greater than 90% of dealer kept, in which case VTR kept is used (assumes missing dealer reports). Framework 3 to the Herring FMP further describes the data auditing process.

There are many other options for boundary lines. To avoid changing the catch monitoring program for groundfish, Areas 513 and 514 could be considered the inshore area. Arguably, the size of this area is larger than what the Committee has been considering and is too far offshore to be considered a wholly inshore area, especially if this boundary has anything to do with dayboat vs. trip fishing behavior.

Motion Part 2: Measures that would apply to the commercial and recreational fishery.

Establish sub-ACLs

The Council did not specify the stocks to which these alternatives would apply. Thus, the PDT is guided by the motion that the Council passed in April:

“Further analysis and development of measures to be included in Amendment 18 that would address potential concentrations of effort in the inshore Gulf of Maine and impacts on GOM cod and other depleted stocks without reestablishing trip limits.”

The measures could apply to the Gulf of Maine and unit stocks (that are allocated) that have an overfished status: GOM cod, Cape Cod/GOM yellowtail flounder, witch flounder, and GOM winter flounder (see Discussion Document Table 8). However, the PDT recommends proceeding with measures for just GOM cod at this time. Limiting the sub-ACL to just one stock would make quota setting, allocations, observer coverage, and catch monitoring easier and would have lower potential for error. However, there would still be complexities involved as this, in essence, creates a new special management program for this stock. There may need to be a special designation for GOM cod trips. The Committee might clarify whether any cod can be kept on trips that were not declared as an inshore or offshore GOM cod trip. The Committee should not underestimate the effort and degree of controversy involved with allocating the GOM catch within these areas.

The PDT has developed Section 4.5.2 of the Discussion Document, including alternatives for establishing a sub-ACL for GOM cod in the inshore and offshore areas, noting that these measures would be more appropriate in another action, unless the A18 goals get revised. There are options for how the sub-ACL would be specified. It could also be set using a specific ratio of fishery and survey data, or a ratio that changes over time. What time period would be used to calculate the proportion?

It would also need to be determined how the new commercial ACLs would be allocated. The PDT inserted an option that would be proportional to the current allocation system, recalling some discussion early in Amendment 18 development that allocations would not be revisited through this action. However, the PDT searched prior motions and meeting summaries, but could not find if this determination has formally been made.

The PDT is trying to determine what the Council intends to solve with these measures. Is there a concern that large vessels are catching too much Gulf of Maine cod at the expense of small vessels? If so, the PDT recommends considering a much less administratively burdensome solution than creating sub-areas; transfer some GOM cod PSC from large vessels or permits to small vessels or permits. This may also better fit with the A18 goals than establishing new sub-ACLs. Is the Council is concerned that the catch of GOM cod is too high? Another more simple solution that the PDT recommends considering is to lower the quota.

Expand the GOM Gear Restricted Area

Neither the Committee nor the Council provided specific guidance for how the Gulf of Maine Gear Restricted Area may be expanded. Is the intent to expand this area geographically and/or include additional gear that would be restricted? Importantly, what is the intent relative to the alternatives developed for the Habitat Omnibus Amendment 2? The PDT reiterates its recommendation to not conflict with the ongoing habitat amendment.

The PDT has developed Section 4.5.3 of the Discussion Document. The current gear restricted area (the No Action alternative) is larger than either boundary considered in Section 4.5.1, Alternative 2, Options A or B. The Alternate Roller Gear Restricted Area in the Habitat Amendment would be a contraction in size, rather than an expansion (Figure 2, Amendment 18 Discussion Document). The PDT drafted an alternative that would revise the Gulf of Maine Gear Restricted Area to be consistent with the inshore/offshore boundary identified in Section 4.5.1, noting however, that this may not result in an expansion.

The PDT did not develop alternatives for expanding the gears to which the GOM Gear Restricted Area would apply. The Committee should specify its vision for designing such measures and how exactly they would reduce concentrations of effort (for another action, unless A18 goals are revised) or promote fleet diversity (for A18). For gillnets, it may be difficult to create measures that actually reduce concentration of effort, as long as gillnet vessels in sectors can share gear.

Sub-area declaration time periods

Neither the Committee nor the Council provided specific guidance for developing alternatives for the length of time that a vessel could declare in and out of an area. The Committee should specify its vision for designing such measures and how exactly they would reduce concentrations of effort (for another action, unless A18 goals are revised) or promote fleet diversity (for A18). The PDT noted that these measures would be akin to bringing back several of the effort controls in place under Days-At-Sea.

The PDT has developed Section 4.5.3 of the Discussion Document with a few ideas for the Committee to consider. The PDT assumes that the intent was to apply these restrictions to just the inshore GOM area. Would these restrictions be for just when GOM cod is caught or for any trip with a groundfish permit? Perhaps there could be a threshold level of cod caught on a trip to require the declaration. The PDT developed alternatives that apply to all groundfish trips, rather than those that target GOM cod, unless the Committee specifies otherwise.

To whom should these alternatives apply? Again, there are challenges with how measures may effectively reduce effort for gillnets and how they would be enforceable. Thus, the PDT did not develop alternatives for the fixed gear fishery in this section.

Accumulation Limits (Section 4.1)

At the April and June Council meetings, there was much discussion about if a person's holdings can exceed the accumulation limit alternative adopted, upon implementation of the action and in the future if someone obtains additional permits or PSC that would put their holdings over the limit (e.g., through an estate settlement, permit buyback program, PSC redistribution).

Should NMFS determine that holdings above the accumulation limit selected through this action constitutes an excessive share under the Magnuson-Stevens Act (in compliance with NS4. See Discussion Document Section. 3.5.1.1), alternatives that allow for holdings in excess of the limit would not be considered viable.

The PDT reiterates that the implicit assumption in the accumulation limit alternatives as drafted is that the limit would apply to each individual permit holder, no matter how the permits are obtained. A clarifying statement has been added to the end of Section 4.1.1.

In June, the Council passed several motions to add options to the document relative to grandfathering and divestiture. Section 4.1.3 (PSC holdings in excess of the accumulation limit) has been added to house the new options. Identifying "options" implies that there would be choices between various approaches, but it is not clear what choices the Council would like to make in this section. The Committee should review this section carefully. Under Option A, Sub-Option B, is the intent that the grandfathered holdings can be used? The PDT assumed so.

The Council also directed the Committee to:

Motion: "...consider impacts of PSC caps and divestitures on underutilized species, future buybacks, subsequent sales of permits, and any other issues that may be raised in this section of the document. That the Groundfish Committee shall report back to full Council on these issues no later than the September Council meeting." (10/6/0)

To assist the Committee, the PDT has charted decision trees about divestiture and grandfathering relative to two primary questions:

1. Upon implementation of Amendment 18, can current PSC holdings above the limit be grandfathered? (Figure 1)
2. Subsequent to the implementation of Amendment 18, can PSC holdings ever increase above the limit (plus whatever may be grandfathered in Question #1)? (Figure 2)

Figure 1 includes an example (purple text) of an individual who had holdings above the limit both at the control date and on the implementation of A18. Figure 2 includes an example of an individual who has holdings at the limit, which may (or may not) subsequently increase. The options describe what the individual may hold, use (contribute to a sector for fishing or leasing), sell in the future, and what must be divested. The options currently in the Discussion Document (Section 4.1.3) are circled in orange.

PDT Question: Are there any additional scenarios in Figures 1 and 2 that should be options in Section 4.1.3 of the Discussion Document? Are there other revisions to this section? If the Council wants to allow future holdings to be able to increase above the limit, does it want to specify the allowable reasons (e.g., buying permits, PSC redistribution through permit buy-backs, inheritance, etc.)?

Figure 1 - Decision points for the key question: "Upon implementation of Amendment 18, can current PSC holdings above the limit be grandfathered?"

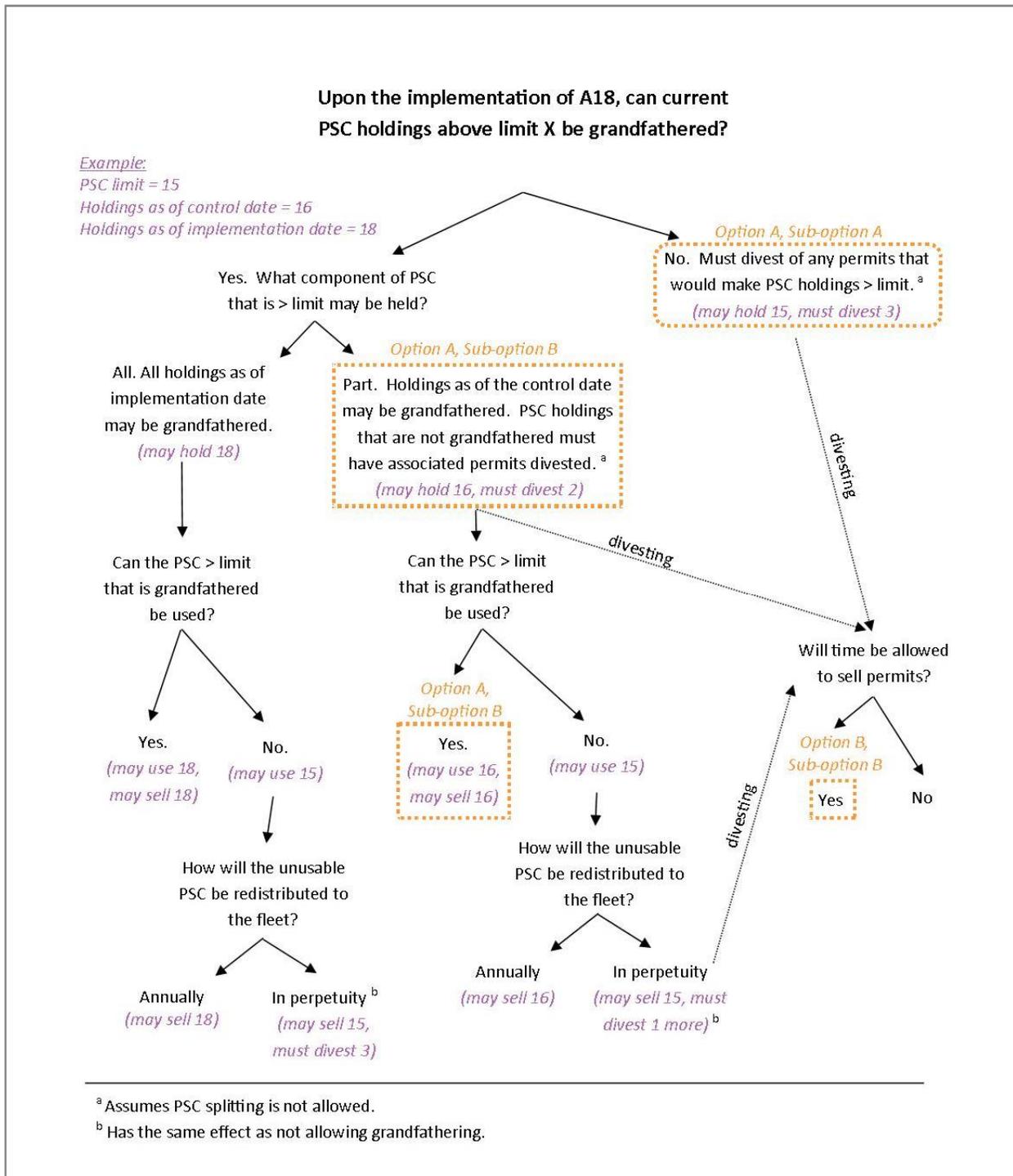
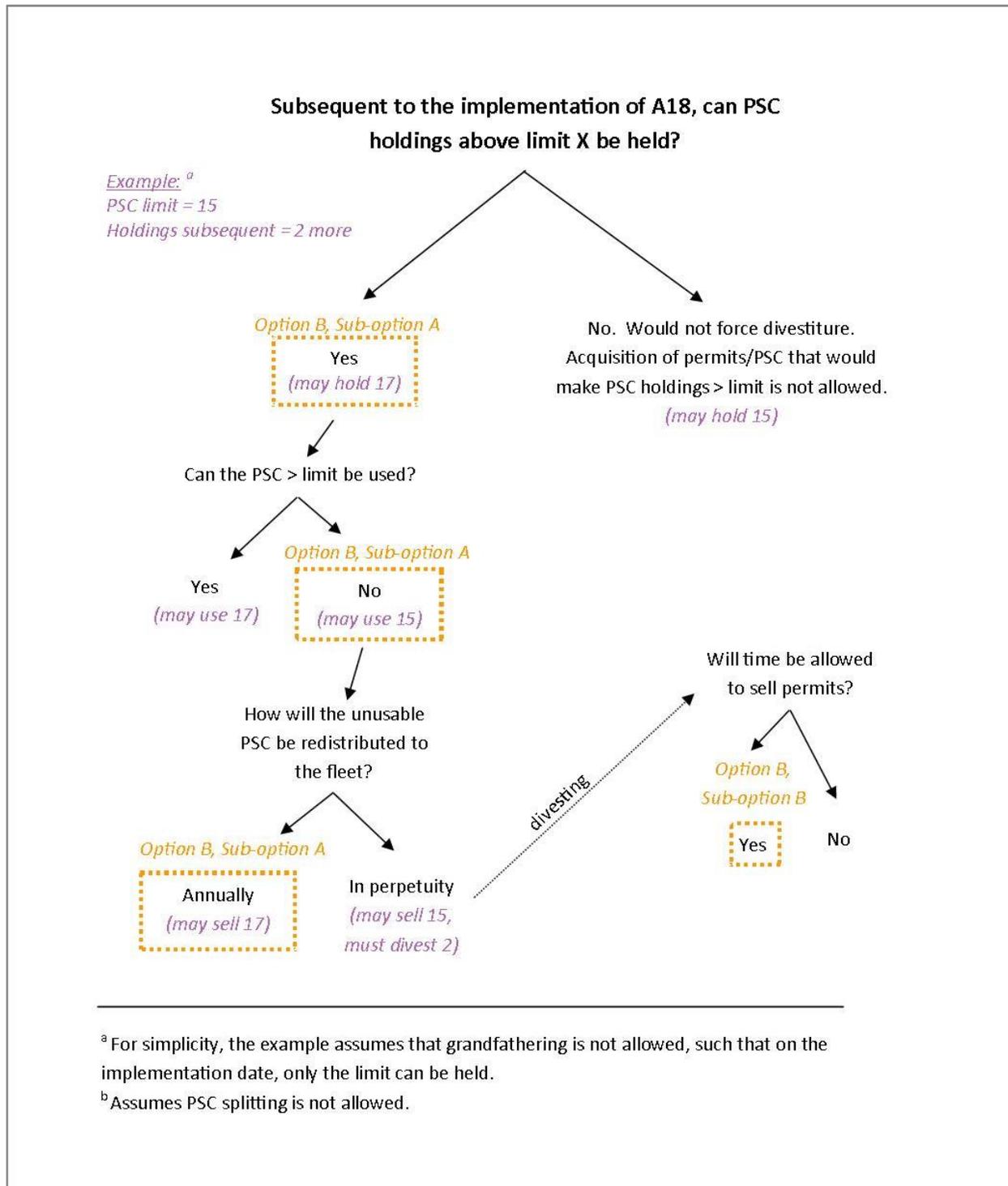


Figure 2 - Decision points for the key question: "Subsequent to the implementation of Amendment 18, can PSC holdings ever increase above the limit?"



Data Confidentiality (Section 4.4)

In April, the Council passed the following motion (11/5/1):

That PSC-determined catch allocations of multispecies groundfish and any subsequent leasing of those allocations (amount and value) by individuals within and between sectors will not be considered confidential information as part of continued catch share management of groundfish through Amendment 18 dealing with groundfish fleet consolidation and diversity.

Viability of Section 4.4, Alternative 2

The PDT recommends moving this alternative to Considered but Rejected (Section 5.0).

An alternative that makes data on allocation and leasing at the individual level non-confidential does not have sufficient legal standing to be a viable alternative for Amendment 18, as indicated by General Counsel at the April Council meeting. ACE is allocated and trades occur at the sector level, not the individual level. The Council would need to make it more clear why making the individual level data public is necessary for the administration of the program, warranting an exception to the data confidentiality requirements of the Magnuson-Stevens Act.

To make Alternative 2 more viable, the PDT wrote it to require that the price data on the movement of ACE within and between sectors be non-confidential. However, the PDT has concerns with this alternative as written. Having accurate and complete price data would be very useful in understanding the economics of the fishery. However, requiring that all prices paid be submitted and posted may have the opposite effect than the Council intends. It could make the reporting of prices strategic (i.e., incentivize misreporting), and it would be very difficult to enforce. Because multiple stocks are often bundled in a trade, teasing out the price for each stock in a trade would be difficult.

There are several aspects of this motion and the alternatives in this section that the Committee should take note of:

1. The PSC-determined catch allocation of each sector is non-confidential already. Thus, an alternative in A18 is not necessary for this component of the motion.
2. The movement of ACE within a sector is not termed "leasing". Alternative 2 in Section 4.4 has been revised to be technically accurate.
3. Data on the movement of ACE between sectors are posted on the GARFO website already. However, price data are not currently posted.
4. NMFS does not receive data on ACE movement within a sector until after the end of the fishing year (in the sector annual reports), and those data are submitted voluntarily. It is not clear from the Council motion whether the intent is to have NMFS post whatever data are submitted voluntarily, or to take a step further and make the submission of these data mandatory.

Other websites posting catch share data

There are several other catch share programs in the US that have fishery data posted by NMFS to public websites. The information below was provided by staff of other Regional Councils. The NEFMC Groundfish PDT could not find a case where permit holder and price of transfer data are listed with each transfer.

Alaska

NMFS has a website where various reports on quota use and transfer are posted:

<http://alaskafisheries.noaa.gov/ram/default.htm>. For example, the page for the halibut and sablefish IFQ program has a list of annual data sets about half way down on the page called "QS/IFQ Transfers and IFQ Crewmember Statistics"

<http://alaskafisheries.noaa.gov/ram/ifqreports.htm>. The transfer price data are caveated by noting that NMFS only learns the cash price paid, but does not necessarily know what other goods or services might have been included in the private exchange. The Transfer Report does look at the relationships between trading parties (e.g., business partner, family, other, none).

Gulf of Mexico

The NMFS website for Gulf of Mexico catch share programs is:

<https://ifq.sero.nmfs.noaa.gov/ifqgt/main.html#>. Under the "Additional Information" tab are copies of the annual reports on the programs, which include aggregated proportions of shares sold and allocation traded. All information on individual transfers and sales are considered confidential. This page also has a tab to see the dealers. The main Southeast Regional Office Freedom of Information Act page has a spreadsheet with all shareholders listed, and which type of shares they hold (e.g., gag, red snapper), but not the quantity of shares, which is considered confidential (bottom of the page, under "Catch Shares"):

(http://sero.nmfs.noaa.gov/operations_management_information_services/constituency_services_branch/freedom_of_information_act/common_foia/index.html).

Mid-Atlantic

The initial ITQ allocation holder report and transfers reported for the Mid-Atlantic surfclam ocean quahog ITQ program is at: <http://www.nero.noaa.gov/sustainable/species/clam/>. Price of transfers is not posted. The transfer prices for the SCOQ ITQ fishery are not collected. However, this is about to change as new reporting requirements are about to start for that fishery. For the tilefish IFQ system, transfer prices are collected by NMFS but not posted.

Pacific

The general website for the Pacific trawl rationalization program is:

http://www.westcoast.fisheries.noaa.gov/fisheries/groundfish_catch_shares/index.html.

The list of permits and quota holders is at:

https://www.webapps.nwfsc.noaa.gov/apex_ifq/f?p=112:31:0::NO.

Individual quota share account balances are at: <https://www.webapps.nwfsc.noaa.gov/ifq/>.

Vessel accounts (annually issued quota pounds are transferred to vessel accounts for use) are at: https://www.webapps.nwfsc.noaa.gov/apex_ifq/f?p=112:23:566572056717::NO::.

Individual vessel account balances are at: <https://www.webapps.nwfsc.noaa.gov/ifq/>.

Limited entry permits are at: https://www.webapps.nwfsc.noaa.gov/apex_ifq/f?p=112:23:0::NO.

References

- Legault CM, Alade L, Stone HH, Gross WE. 2012. Stock Assessment of Georges Bank Yellowtail Flounder for 2012. Woods Hole (MA) and St. Andrews (NB): Transboundary Resources Assessment Committee. Ref. Doc. 2012/02. 138 p.
- MSFCMA. Magnuson-Stevens Fishery Conservation and Management Reauthorization Act. 2007. Public Law 109-479, 16 USC 1801-1884.
- NEFSC. 2010. 50th Northeast Regional Stock Assessment Workshop (50th SAW) Assessment Summary Report. Woods Hole (MA): US Department of Commerce. Northeast Fisheries Science Center Ref. Doc. 10-09. 57 p.
- NEFSC. 2011. 52nd Northeast Regional Stock Assessment Workshop (52nd SAW) Assessment Summary Report.: US Department of Commerce. Northeast Fisheries Science Center Ref. Doc. 11-11. 51 p.
- NEFSC. 2012a. 54th Northeast Regional Stock Assessment Workshop (54th SAW) Assessment Summary Report. Woods Hole (MA): US Department of Commerce. Northeast Fisheries Science Center Ref. Doc. 12-14. 45 p.
- NEFSC. 2012b. Assessment or Data Updates of 13 Northeast Groundfish Stocks through 2010. Woods Hole (MA): US Department of Commerce. Northeast Fisheries Science Center Ref. Doc. 12-06. 789 p.
- NEFSC. 2013a. 55th Northeast Regional Stock Assessment Workshop (55th SAW) Assessment Summary Report. Woods Hole (MA): US Department of Commerce. Northeast Fisheries Science Center Ref. Doc. 13-01. 47 p.
- NEFSC. 2013b. 56th Northeast Regional Stock Assessment Workshop (56th SAW) Assessment Summary Report. Woods Hole (MA): U.S. Department of Commerce. Northeast Fisheries Science Center Ref. Doc. 13-04. 42 p.