

GROUND FISH MANAGEMENT TEAM REPORT ON TRAWL RATIONALIZATION  
TRAILING ACTIONS AND UPDATES

The Groundfish Management Team (GMT) recognizes that as the TIQ program unfolds, unintended consequences (both positive and negative) have emerged. This is not unexpected; we are all learning and adapting as this program evolves. These issues are complex and require a lot more discussion than the GMT has had time for at this meeting, or has had time for at previous meetings. However, the team recognizes the importance of these trawl trailing actions, particularly as they relate to economic and social (i.e. fishing community-related) outcomes of the TIQ program. **Some guidance from the Council would be helpful regarding whether the team should focus more time on these trawl trailing actions.**

The GMT understands the workload, complexities, and difficulties involved with carrying out trailing actions to the point of implementation in regulation. Even those trailing actions that are ready for selection of the Final Preferred Alternative, the amount of additional work and time required to create the final regulation is still extensive. Nonetheless, it is important to point out that many of these trailing actions fit within many of our National Standards (see [http://www.nmfs.noaa.gov/sfa/domes\\_fish/national\\_standard.htm](http://www.nmfs.noaa.gov/sfa/domes_fish/national_standard.htm)). We are reminded that National Standard guidelines are intended as aids to decision making.

Prioritizing trailing actions is a difficult task. If the Council desires, the GMT could develop a method for ranking each trailing action discussed under [Agenda Item I.5](#). The GMT discussed methods of prioritizing the list of trailing actions using objective criteria, such as the National Standards (NS) guidelines or objectives of the TIQ program. **The GMT would like guidance on whether development of such tools would be useful for the Council for prioritizing trailing actions.**

### *Long-term Carryover*

The GMT would like the Council to be aware that we have made progress on certain analyses we have had in mind for evaluating concerns about the carryover. These analyses may help the Council gauge the workload and analysis requirements involved in considering a long-term solution to the carryover program.

When concerns over the conservation performance of the IFQ carryover arose, we began exploring how we might evaluate the program quantitatively. In doing so, we've explored a few simple simulation models of the carryover program. The most recent version is structured to look at carryover over a five year period and 1,000 iterations. We can vary assumptions about how much quota pound (QP) is targeted for full use (and deficit harvest), and how much QP targeted for under-harvest and surplus carryover. Varying these assumptions and allowing for random variation in the levels of QP use allows examination of a number of scenarios. The simulations do not tell us which scenarios are most likely to happen in the fishery but they do allow some evaluation of what results we could expect under a specific scenarios.

The main results we looked at were annual overages, where QP used in the year is greater than the QP allocated for the year; and a multi-year average, where QP used over a multi-year period is greater than the sum of the QP allocated for each year in the period (i.e. cumulative average). A multi-year average approach has been discussed as one option for addressing concerns about the IFQ carryover program. As we have heard from the SSC, if cumulative catch over a multi-year period remains below the cumulative allocation for that period then biological objectives that were set at the beginning of the period are maintained.

In conducting the simulations over a limited number of scenarios, we noticed that annual overages were common. Some scenarios saw overages in three out of five years, even occurring three years in a row. At the same time, none of these annual overages resulted in a multi-year overage. Even in scenarios where annual overages occurred in 60 percent of the years, no year saw a cumulative overage. An example of one iteration from a simulation is shown in Table 1.

In exploring whether these results would hold across a wider range of scenarios, we concluded that the problem was much simpler. In brief, we expect cumulative overages will happen only when deficit outweighs surplus carryover and other under-harvest ("net deficit"). The basic reason this is true is because deficit borrows from the future allocations whereas surplus arises from under harvest of past allocations. Assuming deficit harvest remains within reasonable bounds, all QP must come from some year's allocation. Having explored this logic, we were then able to create simulation scenarios where cumulative overages did occur (Table 2).

Our read of these findings is that the carryover could be run, under a multi-year approach, with little inseason oversight. The red flag would be net deficit carryover years. **We can prepare formal analysis for review by the Scientific and Statistical Committee (SSC) early next year if the Council is interested.** The analysis is pretty straightforward.

Table 1. Example of a single simulation run where annual overages of the IFQ sector allocation occurs but no cumulative allocations are seen.

	<i>Annual</i>							<i>Cumulative</i>		
	Allocation	QP pool	QP used	+/- (%)	Surplus	Deficit	Net	Allocation	QP used	+/- (%)
2013	5,613.7	5,613.7	5,246.8	93.5%	355.6	0.1	355.5	--	--	--
2014	5,438.8	5,794.3	5,449.3	100.2%	255.3	0.1	255.1	11,052.5	10,696.1	96.8%
2015	4,023.4	4,278.5	4,046.2	100.6%	232.5	0.2	232.3	15,075.9	14,742.3	97.8%
2016	4,376.2	4,608.5	4,382.3	100.1%	226.3	0.0	226.3	19,452.1	19,124.6	98.3%
2017	4,822.8	5,049.1	4,831.4	100.2%	217.7	0.0	217.6	24,274.9	23,956.0	98.7%

Table 2. Example of a single simulation run where cumulative overages do occur because of net deficit carryovers.

	<i>Annual</i>							<i>Cumulative</i>		
	Allocation	QP pool	QP used	+/- (%)	Surplus	Deficit	Net	Allocation	QP used	+/- (%)
2013	5,613.7	5,613.7	5,667.6	101.0%	24.9	79.6	-54.7	--	--	--
2014	5,438.8	5,384.1	5,401.7	99.3%	29.3	57.1	-27.9	11,052.5	11,069.3	100.2%
2015	4,023.4	3,995.5	4,040.5	100.4%	26.7	71.6	-44.9	15,075.9	15,109.7	100.2%
2016	4,376.2	4,331.3	4,326.9	98.9%	71.3	66.9	4.4	19,452.1	19,436.6	99.9%
2017	4,822.8	4,827.2	4,861.5	100.8%	58.5	92.8	-34.3	24,274.9	24,298.1	100.1%

### *Pacific Whiting Carryover*

On the Council’s consideration of IFQ carryover for Pacific whiting, we would expect very similar dynamics as those discussed above in terms of the possible effects of surplus and deficit carryover for IFQ whiting. There are a couple of major differences, however.

First the treaty-level carryover provisions raise issues about allocations between U.S. and Canada and allocations between sectors here, as discussed in [Agenda Item I.5.b, Supplemental Workshop Report](#). The GMT does not wish to comment on those dynamics.

The other difference is that whiting is assessed each year whereas the other stocks in the FMP are assessed less frequently. The stock assessment is a reset of sorts for carryover: any under- or over- harvest is factored into the updated estimates of stock biomass, the corresponding default TAC, and the forecasts of where the stock will be the next year under various catch scenarios. Those forecasts are what the Council, in advising the U.S. JMC members, and the JMC itself look to in weighing risk when setting the TAC. Allowing surplus carryover during an assessment year is another factor to consider in making that policy decision.

For instance, this year the JMC recommended total allowable catch (TAC) based on consideration of how much of the adjusted TAC might be harvested. The adjusted TAC was boosted from the unadjusted TAC based on fish not harvested in 2011. If a similar level of under harvest occurs in 2012, then actual harvest will be less. The JMC may have had a “target”

harvest level in mind based on some judgment of where catch would fall between the adjusted and unadjusted TAC levels.<sup>1</sup>

Our point is that the risk/policy call posed by carryover when assessments are updated may look different than they do in years between assessments. This makes whiting IFQ carryover somewhat different given the annual assessment process. At the same time, the whiting TAC setting policy--whether by allowing IFQ carryover only or taking into account adjustments for surplus and deficit at the TAC level for all sectors--involves a consideration of how surplus and deficit harvest may affect harvest objectives.

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<sup>1</sup> See the *JMC March 2012 meeting summary*: The JMC agreed to set a target catch of 230,000 mt, based on a decision table in the JTC report that projects a 50% chance (risk neutral) that at this level, the spawning biomass in 2013 would be greater than it is in 2012. <http://www.nwr.noaa.gov/Groundfish-Halibut/Groundfish-Fishery-Management/Whiting-Management/upload/Mar-2012-JMC.pdf>