



New England Fishery Management Council

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 John Pappalardo, *Chairman* | Paul J. Howard, *Executive Director*

MEMORANDUM

DATE: September 3, 2010
TO: Groundfish Oversight Committee
FROM: Groundfish Plan Development Team (PDT)
SUBJECT: **PDT Conference Call, September 1, 2010**

1. The PDT held a conference call to develop recommendations for the Whaleback Framework 45 spawning cod protection closure, review an updated draft of the accumulation limits white paper, and work on pollock Annual Catch Limits (ACLs), and. PDT participants were Tom Nies and Anne Hawkins (NEFMC), Doug Christel and Tom Warren (NERO), Eric Thunberg and Paul Nitschke (NEFSC), Steve Correia (Mass. DMF), and Kohl Kanwit (Maine DMR). Mark Grant (NERO), Jackie Odell (Northeast Seafood Coalition), and Libby Etrie (GMRI) listened to the call.

Whaleback Spawning Cod Protection

2. The PDT developed a recommendation in response to this motion from the June 2010 Council meeting:

“to include in Framework Adjustment 45, measures to protect spawning cod aggregations: 1) currently targeted by the recreational fishery in the Ipswich Bay/Whaleback area and 2) vulnerable to sector vessels fishing in the Amendment 16 June sector rolling closure exempted area. These measures will include a May and June prohibition of cod possession and/or closure to recreational fishermen fishing in defined Areas of 132 and 133 and removal of the June rolling closure exemption for sector fishing in defined Areas of 132 and 133.”

3. In order to identify an appropriate area for protection spawning cod, the PDT reviewed the results of a tagging study conducted by Dr. Hunt Howell¹. Howell’s acoustic tagging

¹ Howell, Hunt. 2009. Activity and distribution of cod in the Ipswich Bay spawning area. Final Report to the Northeast Consortium. Award #: 111A22.

study in the Ipswich Bay area of the Gulf of Maine reports on specific activity associated with cod spawning and identifies relatively small areas that contained aggregations of spawning cod. Figures from this paper were georeferenced with a GIS chart of the area to allow comparing candidate closure areas to the result of the study. Candidate closures were evaluated for their protection of the cod aggregations identified by Howell. Reported party/charter (P/C) vessel locations were then plotted over the candidate closure areas to see if they aligned with fishing activity (see Appendix 1 for an overview of the analyses). Commercial fishing in the area has been prohibited in recent years during the times proposed for a closure. There are some caveats with this approach that should be considered:

- (1) Minor spatial errors may be introduced by referencing a figure to a chart.
- (2) P/C fishing locations reported on VTRs may not accurately represent actual fishing locations, since VTR positions are only required to represent “the general area of fishing activity.”
- (3) There is no data source for private recreational fishing locations and private vessel activity may not match P/C activity.
- (4) The fish distributions reported by Howell are influenced by the location of fixed sensors and the search patterns of mobile sensors.

4. Four candidate protection/closure areas were examined (Figure 1). Three were evaluated as less effective and the PDT recommends that the Committee include Version 4 as the option for Framework 45 for the following reasons:

- (1) Version 4 covers almost the entire area where 90 percent of the cod detections occurred as well as an area to the southeast that may be the route used as cod depart the area.
- (2) Version 4 covers all of the P/C concentrations in the area.
- (3) The use of north-south/east-west lines will ease enforcement and also compliance by recreational fishermen who are less likely to have the ability to plot closures oriented off these axes.

The proposed coordinates for version 4 are:

42 - 55.5 N	70 - 34 W
42 - 50 N	70 - 34 W
42 - 50 N	70 - 42 W
42 - 55.5 N	70 - 42 W

5. The PDT looked for evidence that in recent years P/C effort and kept catch in the vicinity of the proposed protection area has changed differently than in surrounding areas. This was done by creating a grid of quarter-degree squares over the area and evaluating the number of P/C trips, cod kept, and number of anglers over time. The most noticeable changes seem to have occurred around the years when the commercial closures were implemented in the area. There is little evidence to suggest that there have been unusual changes in quarter degree square that contains the Whaleback area when compared to immediately surrounding areas. This analysis, however, may not detect changes at a smaller spatial scale and may be confounded by the changes in

recreational measures that have occurred in recent years. Plots of reported fishing locations do seem to indicate that there is a concentration of P/C trips in the same area as the spawning aggregations identified in Howell’s paper (see Appendix 1).

6. The Council motion indicates that recreational fishing will either be prohibited in the area or possession of cod will be prohibited. The following two tables summarize the advantages and disadvantages of the two approaches.

Table 1 - Recreational Cod Possession Prohibition in Whaleback

Pros	Cons
Maintains recreational access to area where fishing has been occurring for several years	Less effective at reducing interference with, and protecting, spawning aggregations of cod
Could increase likelihood that recreational fishery will fully harvest available GOM haddock ACL if they can substitute haddock for cod in area	More difficult to enforce than a closure, possibly with a lower compliance rate because fishing can continue
Ability to substitute haddock catches in area could offset any reductions in trips/anglers and associated economic impacts	Will increase discards of GOM cod and, possibly, mortality
	Could be perceived to prolong seasonal cod prohibitions that could increase reductions in fishing mortality by recreational vessels beyond what is necessary to rebuild this stock and possibly create equity concerns

Table 2 - Recreational Fishery Closure in Whaleback

Pros	Cons
More effective at reducing interference with, and protecting, spawning aggregations of cod	Reduces recreational access to area where fishing has been occurring for several years
Easier to enforce and comply with	Could further reduce number of trips/anglers and impose adverse economic impacts
Increases perceived equity, as recreational closure reflects broader GOM rolling closures for commercial fishery	Could be perceived to increase reductions in fishing mortality by recreational vessels beyond what is necessary to rebuild this stock and possibly create equity concerns
Does not increase discards of GOM cod	

Accumulation Limits White Paper

6. The PDT reviewed an updated draft of the Accumulation Limits White Paper and suggested a number of improvements. A draft will be provided for Committee review at this meeting. Work will continue on describing an “inshore” and “offshore” fishery, permit ownership, elements and rationale for limits in other fisheries. The PDT seeks feedback on how the draft can be improved to better meet Committee needs.

7. Assuming the draft paper is on the right track – that is, it will provide an adequate basis for the Committee’s deliberations on ownership limits and fleet diversity – the PDT seeks guidance from the Committee on next steps. What issues does the Committee want addressed? Is there any

guidance the Committee wishes to provide the PDT beyond the Council's June 2010 motion on the issue?

Pollock ACLs

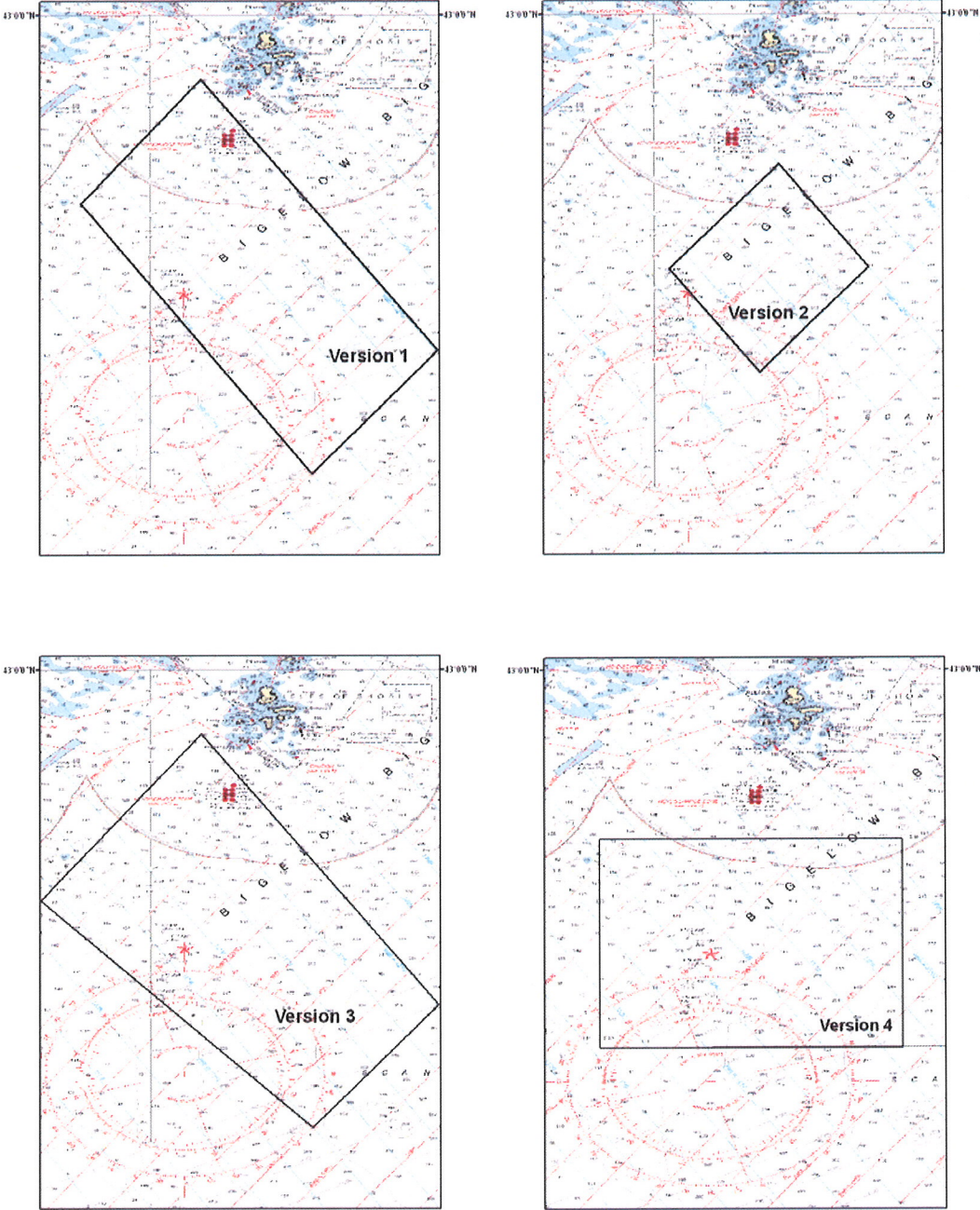
8. The SSC met in August 2010 to recommend pollock OFLS and ABCs for FY 2011 – 2014. The PDT has begun to develop ACLs associated with those ABCs. See Appendix II for details on those calculations. These values will be incorporated into FW 45 for Council approval.

9. The recreational catch of pollock from the EEZ exceeded five percent of total removals in recent years. Should the ACL be harvested the Committee may want to consider an allocation between the recreational and commercial fisheries.

Scallop Fishery AMs for Yellowtail Flounder

10. Amendment 15 to the Scallop FMP proposes yellowtail flounder AMs for the scallop fishery. The Council will approve Amendment 15 in September. The Groundfish PDT suggests it may provide useful information for the Council's decision if it reviews the proposed AMs and provides comments from a groundfish perspective. With the Committee's concurrence, the PDT will provide a written report to the Council.

Figure 1 – Candidate Whaleback spawning cod protection areas reviewed by the PDT. The PDT recommends Version 4 be included in FW 45.

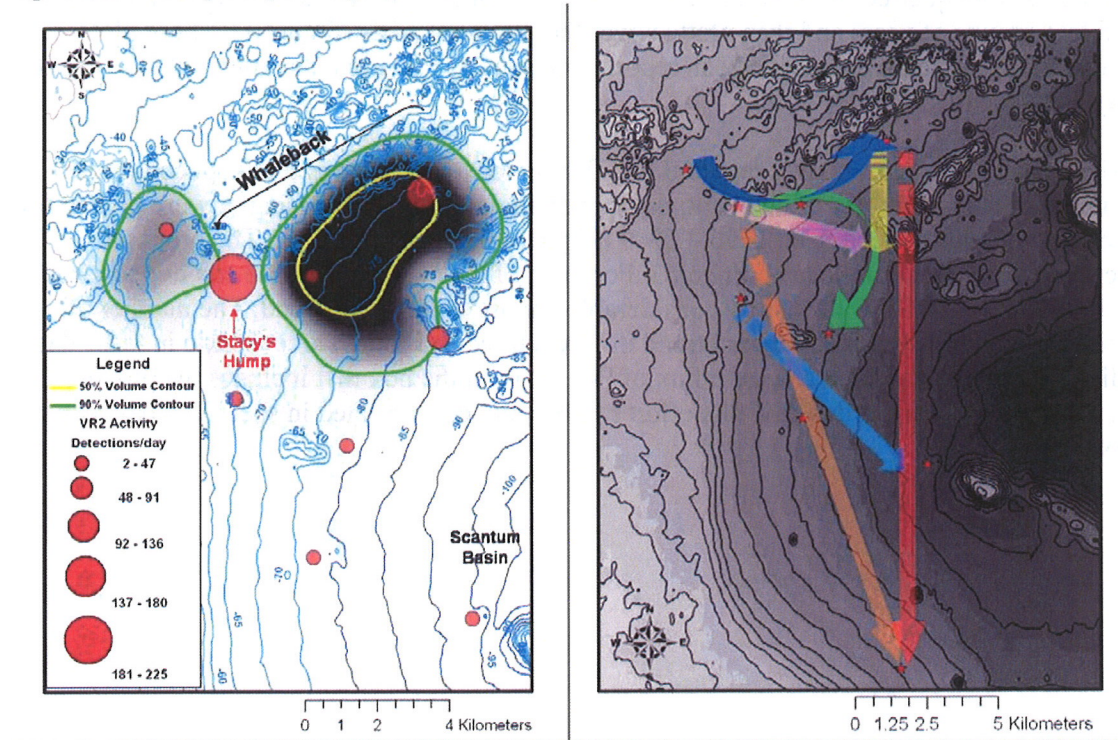


Appendix 1
Whaleback Spawning Cod Protection Area
Analysis Overview

1. Howell (2009) identified areas of spawning aggregations in the inshore GOM/Ipswich Bay. Cod were tagged with acoustic tags and tracked with fixed and mobile sensors. The final report includes a figure that plots contours for 50 and 90 percent of the detections by mobile gear as well as the number of detections by each fixed station (detection radius of 600m). A second figure shows the tracks of seven tagged cod as they exited the area post-spawning. These figures are reproduced below (Figure 2).

2. Four candidate protection/closure areas were charted with a GIS and the Howell figures were overlaid (There is little in these data to indicate that there has been a large influx of P/C effort in the box that includes the proposed areas. This analysis cannot detect if that effort has become concentrated in specific areas within the box).

Figure 2 – Two figures from Howell (2009). The left-hand figure shows fixed and mobile sensor detections of cod with acoustic tags. The right-hand figure shows the movement paths of seven tagged cod tracked as they departed the area post-spawning.



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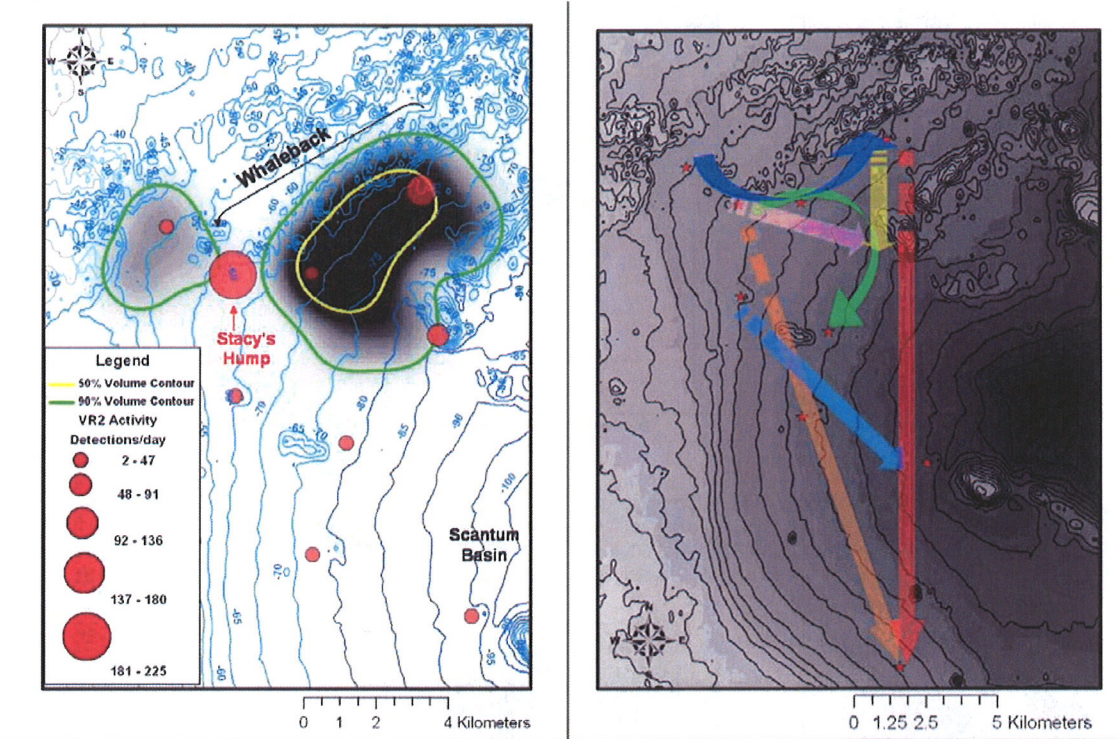
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Figure 3). Some minor distortions are introduced when the figure is overlaid. Two of the proposed areas do not cover the 90 percent volume contour to the west of Stacy's Hump.

3. P/C VTRs were queried for the reported location of fishing trips that kept cod. Locations were binned into groups of years and then plotted over the proposed areas (Figure 4). These plots show that in recent years there have been reported clusters of P/C trips that align with the high-density areas identified by Howell.

4. A six-cell grid was plotted over reported P/C fishing locations on trips that kept cod (Figure 5). Number of trips, numbers of cod kept, number of anglers, and cod per angler were plotted for the April – June time period from 1996 – 2009 (Figure 6 through Figure 9). The proposed protection/closure areas are located in box 3. For most of the data, an increase can be seen from 1999/1000 to 2002/2003, followed by considerable variation with little trend. The number of kept cod per angler shows a downward trend in boxes three and four. There is little in these data to indicate that there has been a large influx of P/C effort in the box that includes the proposed areas. This analysis cannot detect if that effort has become concentrated in specific areas within the box.

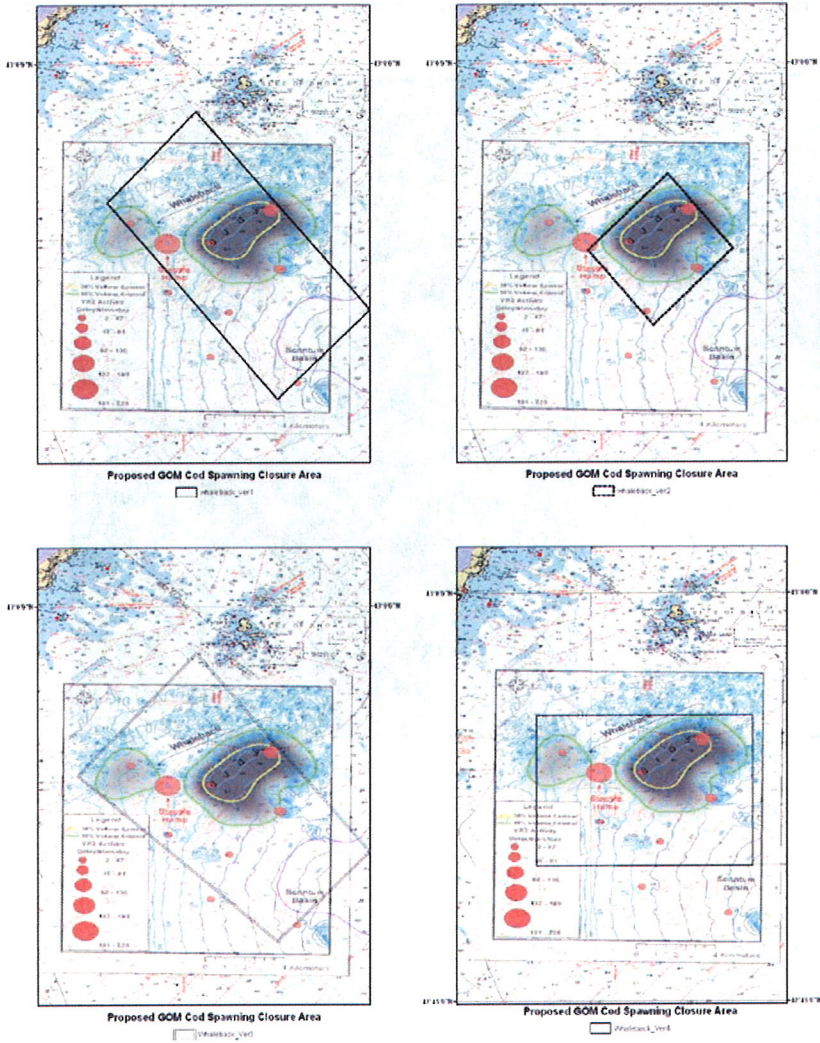
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Figure 3 – Candidate protection/closure areas overlaid with cod detections (from Howell, 2009)



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Figure 4 – Candidate protection/closure areas overlaid with reported P/C activity and cod detections (from Howell 2009).

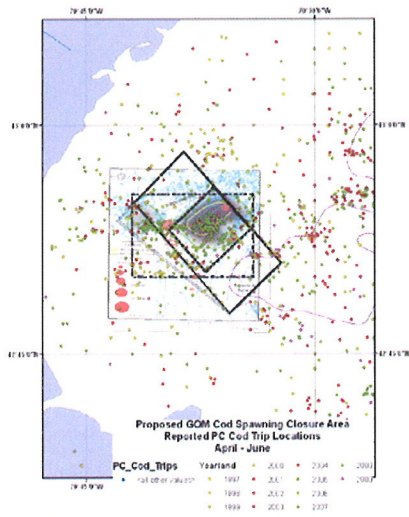


Figure 5 - Boxes used to analyze trends in P/C effort in the Whaleback Area

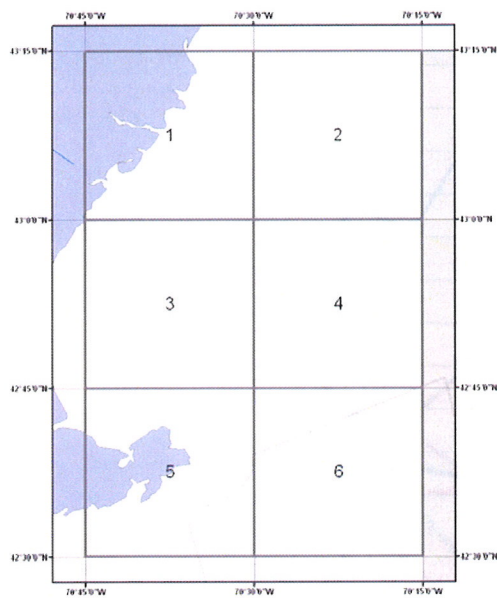


Figure 6 – P/C trips in Whaleback area

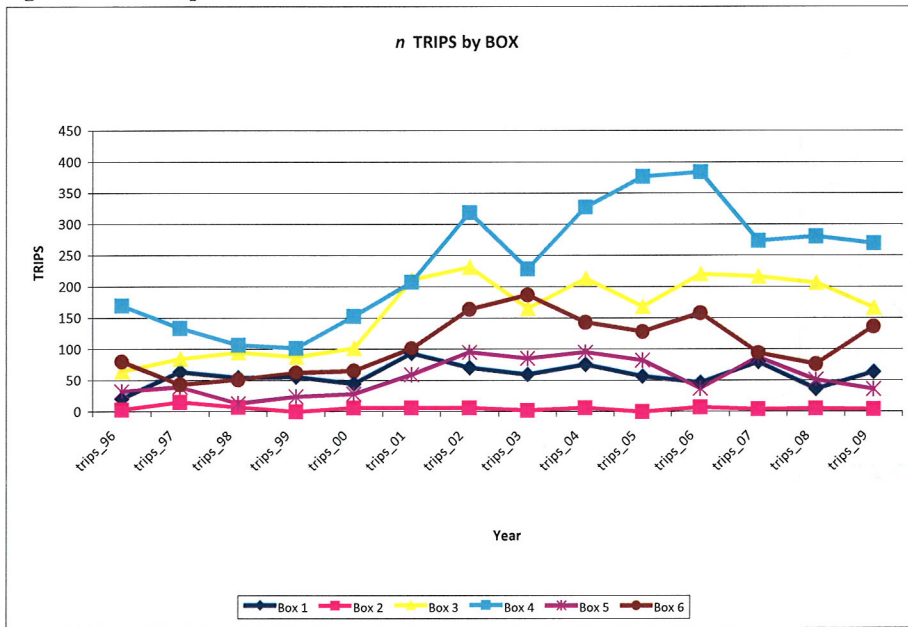
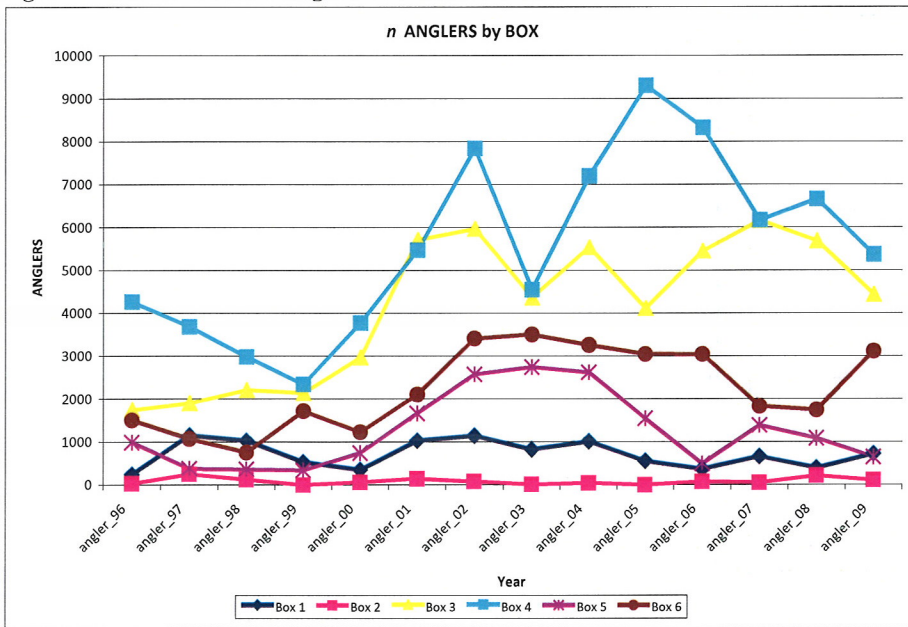


Figure 7 – Number of P/C anglers in Whaleback area



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Figure 8 – Cod kept on P/C trips in Whaleback area

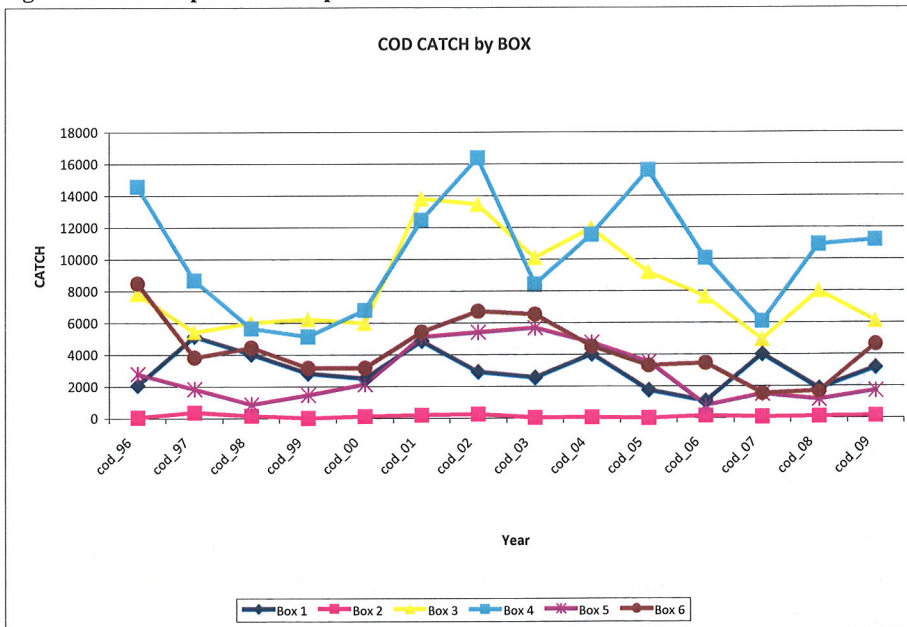
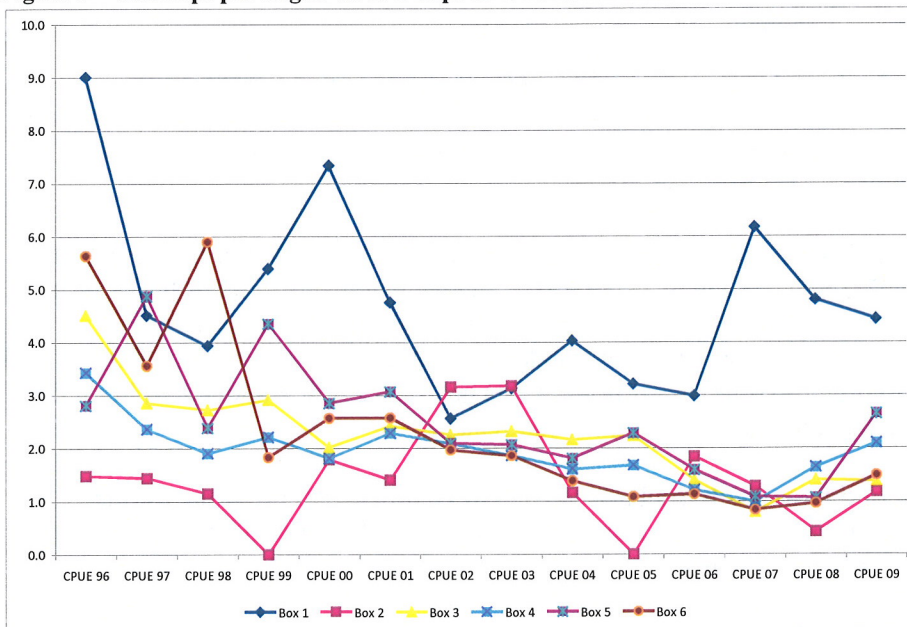


Figure 9 – Cod kept per angler on P/C trips in Whaleback area



Appendix II

Pollock ACL Calculations (2011 – 2014)

The 2009 ACL process for pollock described adjustments to the ABC as follows:

“h. Pollock: Recreational harvest increased to 912 mt in 2008, about 2.5 times the harvest from 2005 through 2007 and 24 percent of the ABC. Since 2001, about half of the recreational harvest has been from state waters. The PDT allowed 400 mt for recreational harvest, reflecting the approximate average amount harvested from 2003 through 2007. This value is split between state waters and the “other sub-components” category. Canadian catches in 2008 were 650 mt, but Canadian TACs are expected to decline on the order of 20 percent in 2010. The PDT allowed 520 mt for Canadian catches (80 percent of 2008).”

The NERO emergency action followed a similar approach, but used the percentages that result from the 2009 adjustments and applied them to the new ABC.

There are two changes to the assessment that affect the ACL calculations. First, Canadian catches are not included so there should not be an adjustment for Canadian catch. Second, the assessment assumes 100 percent discard mortality of rec pollock, so catches are based on $A+B1+B2$, and not just harvest ($A+B1$) as in 2009.

Removing Canadian catches is simple.

Rec catch ($A+B1+B2$) of pollock has averaged 1,008 mt for the period 2004 – 2009 (using assessment values; st. dev = 425 mt). 2008 the catch was more than double this average, at 1867 mt, but this seems to have been an anomalous year. The rec catch, on average, was 11.8 percent of the removals (range 8 percent to 15.3 percent).

If the rec catch allowance is based on recent catches, a value of 1,200 mt would be consistent with recent catches (2007-2009 average of 1,174 mt). If the rec catch allowance is based on a percentage, 11.8 percent translates into 1,999 mt, a catch that has not been observed. An alternative might be to use the average plus one standard deviation, or 1,425 mt. The PDT agreed to use 1,200 mt. It is important to note that at present this is not an explicit allocation, but it does affect the amount of catch available to the commercial fishery.

On average, 50 percent of the rec catch has been outside three miles. 600 mt of the estimated recreational catch will be assumed to come from state waters and 600 mt will be included in the “other subcomponents” in federal waters.

A NMFS analysis of catches of pollock in state waters outside the FMP concluded that 2005 catches were less than one percent of the harvest. Total state waters pollock catch will be assumed to be 600 mt (rec catch) plus one percent of the ABC.

Amendment 16 allows for 5 percent for “other subcomponents” in federal waters. The total will be 5 percent of the ABC plus an additional 600 mt for recreational catches.

To summarize the adjustments:

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“The updated pollock assessment does not include Canadian catches so no adjustment is made to the ABC for Canadian catches. One percent of the ABC was allowed for commercial catches in state waters, and five percent was allowed for incidental catches by other fisheries in federal waters. The 2007-2009 average of recreational catch is 1,174 mt; this was rounded up to 1,200 mt. Half of this catch was added to the state waters sub-component and half was added to the federal waters other subcomponent.”

Table 3 Recent pollock catches (from SAW 50)

Year	US			Water		Commercial			Recreational		Total Catch (mt)
	Landings	Discards	Canadian Landings	Fleet Landings	Landings	Total mt	Landings	Discards	Total mt		
2004	5070	103	0	0	0	5173	669	241	910	6083	
2005	6509	100	0	0	0	6609	520	272	792	7401	
2006	6067	69	0	0	0	6136	571	252	823	6959	
2007	8372	147	0	0	0	8518	533	227	760	9278	
2008	9965	362	0	0	0	10327	941	926	1867	12194	
2009	7477	362	0	0	0	7839	468	428	896	8735	
Rec Avg											
Rec											
StDev											

Table 4 – Distance from shore for rec catches of pollock (from MRFSS; numbers of fish)

Rec Pct of Total	OCEAN (<= 3 MI)		OCEAN (> 3 MI)		Rec % EEZ
	INLAND	MI	PCT		
15.0%	9.53%	55.56%	34.92%		5%
10.7%	14.29%	15.52%	70.20%		8%
11.8%	32.19%	24.37%	43.43%		5%
8.2%	12.76%	32.75%	54.49%		4%
15.3%	6.36%	50.70%	42.94%		7%
10.3%	25.64%	19.92%	54.44%		6%

Table 5 - Pollock OFL, ABC, and ACL components for 2011- 2014. Sector/common pool shares are preliminary and will be adjusted when rosters are final.

Stock	Year	OFL	U.S. ABC	State Waters	Other Sub-Comp.	Scallops	Groundfish	Comm Ground-fish	Rec Ground-fish	Sectors	Non_Sector Groundfish	MWT	Total ACLs
Pollock	2011	21,853	16,914	769	1,446	0	13,964	0	0	13,363	601	0	16,179
	2012	19,887	15,393	754	1,370	0	12,606	0	0	12,063	543	0	14,730
	2013	20,060	15,554	756	1,378	0	12,750	0	0	12,201	549	0	14,883
	2014	20,554	15,970	760	1,399	0	13,121	0	0	12,556	565	0	15,279