Background

In the Northeast Multispecies FMP, consistent with the National Standard Guidelines the difference between the Acceptable Biological Catch (ABC) and the Annual Catch Limit (ACL) is designed to account for management uncertainty. Appendix II to Framework Adjustment 44 describes management uncertainty as accounting for the uncertainty over the ability of the management program to constrain catch so that the ACL is not exceeded. There are five principal factors identified as leading to management uncertainty:

- Enforceability: can management measures be adequately enforced?
- Monitoring adequacy: can relevant data be collected in a timely, complete, and accurate manner?
- Precision: can management tools be used in a manner to result in the desired catch?
- Latent effort: is latent effort eliminated or controlled?
- Other fishery catch: can the FMP regulate or limit catch by other fisheries, including state, exempted, or recreational fisheries?

The difference between the ABC and the ACL is often referred to as the management uncertainty buffer, though this term was not used in Amendment 16. FW 44 set this buffer at relatively low levels that ranged from 3 to 7 percent, with 5 percent used for most stocks and components of the fishery[1]. The logic was that since most TTACs had not been exceeded in recent years it appeared that management controls were generally effective. No attempt was made to partition the buffer into its different elements (as an example, x% accounts for enforceability concerns, y% accounts for monitoring issues, etc.). Both Amendment 16 and FW 44 recognized that the size of this buffer might need to be increased or decreased as experience was gained with the ACL system, and provision was made to allow for changes when ABCs and ACLs are established.

During the review for FW 47, the Groundfish PDT considered modifying the management uncertainty buffers. Given only one year of experience with sectors and evidence that there was a learning curve involved with the program, as well as concerns that ABCs and ACLs may have been over-estimated, the PDT did not recommend changes to theses buffers, but acknowledged that changes might be possible in the future. The PDT did recommend, and the Council did accept, several changes to the distribution of the ABC to various sub-components.

The management uncertainty buffer is thus **an amount if fish that is planned not to be caught** so that if the management uncertainty leads to excessive catch there is less likelihood that the ABC will be exceeded and mortality targets will be missed.

[1] The Scallop FMP sets ABC=ACL, but for the limited access fleet uses an ACT that has a 25 percent probability of exceeding the sub-ACL fishing mortality rate. The Monkfish FMP also sets ABC=ACL but uses an ACT that was set at 86.5 pct of the ACL for the northern management area (i.e. a 13.5 pct uncertainty buffer).

Discussion

The Groundfish Committee is considering auctioning off part of the management uncertainty buffer to help defray at-sea monitoring costs. It is not clear if this is intended to increase the amount of at-sea monitoring or is merely intended to reduce the costs to the industry of at-sea monitoring.

- Auctioning off part of the management uncertainty buffer conflicts with the logic behind the buffer. It converts an amount of fish that is set-aside and not expected to be caught to an amount of fish that are likely to be caught. As such, this is a reduction in the size of the buffer between the ABC and the ACL.

- If the proceeds from the auction are used to fund additional at-sea monitoring effort beyond that which will occur without the auction, then it might be argued that reducing the size of the buffer is justified because it will also reduce management uncertainty and thus reduce the need for the buffer. But if the proceeds of the auction are only used to defray industry costs for monitoring that will occur anyway then it cannot be logically argued that management uncertainty will be reduced if the buffer is used to defray cost of the existing program.

- If the management uncertainty buffer is larger than needed, then auctioning off part of the buffer could be viewed as justifiable use of this fish. The problem with this approach is that it is not known until after the fishing year whether the buffer is too large or not. The auction anticipates a result (unused fish in the buffer) that may not be realized.

- The management uncertainty buffer may be smaller than needed. Expected reductions in several ABCs over the next few years will highlight this issue. While sector catches may be well controlled, it is not clear that the same is true for other components of the ABC. If buffers prove to be too small then reducing the size of the buffer would exacerbate the lack of rebuilding progress.

- It is possible that an auction may not attract participants if the costs are viewed as too high, the species available are not desired, or species are sold individually rather than as a package. Many ACE transfers that take place are exchanges of one stock for another – this option is not likely to be available within an auction. These factors could reduce the revenues realized form the auction.

- It is not clear who will run the auction, or how the administrative costs of the auction an will be funded. If costs are taken from the auction proceeds it will reduce the amount available for monitoring programs.

- An estimate of the amount of revenue that could be generated from an auction is shown in Table 1. This table was generated using leasing prices from the FY 2010

Year End report (insert reference). It reflects the range of auction prices observed in FY 2010 as well as a range of available amounts for the leasing. At approximately $650 per sea day, using 1 to 5 pct of the FY 2012 ABCs could fund 670 – 4,700 monitoring sea-days. Lower ABCs or prices would reduce expected revenues.

- An advantage to an auction is that it would provide additional information on the value of leased fish.

Once more experience is gained with the ABC/ACL system we may learn that reducing the buffer is justified. At that point a decision could be made that rather than reduce the buffer and redistribute the available fish to all participants, a portion could be auctioned off to defray monitoring costs.

The decision not to redistribute all the fish available is an allocation decision. In the case of limiting stocks, there may be some permit holders that could leverage the fish (if redistributed) into larger revenues than will be realized by the auction. The auction eliminates that possibility. These same permit holders may not be able to participate in the auction due to a lack of capital. It is not clear the economic benefits from the auction would be larger than the benefits from redistributing the fish.

- If the auction is used to defray monitoring costs of an existing program, and not to provide supplemental coverage, the auction is a transfer of part of the monitoring costs from all vessels to a smaller group of auction participants that are willing to pay the costs to lease the auctioned fish. The auction participants will use the revenues from the leased fish to reduce the leasing costs. The reduced monitoring costs for permit holders that do not participate in the auction only accrue to those permit holders that actually fish and incur monitoring costs. Since leasing prices are usually lower than ex-vessel prices for the same stock, the reduction in monitoring costs for each vessel is likely to be less than the revenues that would be generated if the same fish was redistributed and caught. In addition, permit holders that choose not to fish are unlikely to receive any benefits from the reduced monitoring costs. This approach, as noted earlier, would reduce the management uncertainty buffer, and conflicts with the logic for establishing the buffer.
- If the auction proceeds are used to supplement the monitoring program, the benefits are even less clear for the fishery as a whole. Auction participants will benefit from access to additional fish available for leasing and presumably will not participate unless it is profitable to do so. As a result the auction should increase total fishery revenues. But other permit holders will only benefit if the increased monitoring coverage reduces management uncertainty enough that it leads to a future reduction in the scientific or management uncertainty buffers. It is difficult to predict if this will occur and how long it will take to lead to changes in the distribution of the ABC. In contrast, redistributing the fish that would be made available for the auction would immediately benefit most permit holders

(either through increased landings or increased allcoations to lease to other permit holders).

Table 1 – Estimated potential auction revenues based on FY 2012 ABCs. Auction prices are from Table 26 of NMFS Year End report (GOM winter flounder prices are from Table 27). Pollock, redfish, and GB haddock are italicized to indicate that proceeds may be more uncertain than for other stocks because of large ACE that is available for these stocks.

			Available for Auction (mt)			Auction Price Per Pound		Potential Auction Proceeds					
								5%		3%		1%	
Stock	Year	2012 Commercial Groundfish ABC	5%	3%	1%	Low	High	Low	High	Low	High	Low	High
GB Cod	2012	4,848	242	145	48	0.71	0.75	$ 379,409	$ 400,784	$ 227,645	$ 240,470	$ 75,882	$ 80,157
GOM Cod	2012	2,743	137	82	27	1.2	1.26	$ 362,833	$ 380,975	$ 217,700	$ 228,585	$ 72,567	$ 76,195
GB Haddock	*2012*	*28,882*	*144* *4*	*866*	*289*			*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*
GOM Haddock	2012	734	37	22	7	0.88	0.98	$ 71,241	$ 79,337	$ 42,745	$ 47,602	$ 14,248	$ 15,867
GB Yellowtail Flounder	2012	224	11	7	2	0.12	0.32	$ 2,969	$ 7,917	$ 1,781	$ 4,750	$ 594	$ 1,583
SNE/MA Yellowtail Flounder	2012	817	41	25	8	0.54	0.88	$ 48,622	$ 79,236	$ 29,173	$ 47,542	$ 9,724	$ 15,847
CC/GOM Yellowtail Flounder	2012	1,101	55	33	11	0.19	0.48	$ 23,060	$ 58,257	$ 13,836	$ 34,954	$ 4,612	$ 11,651
Plaice	2012	3,450	173	104	35	0.29	0.54	$ 110,298	$ 205,382	$ 66,179	$ 123,229	$ 22,060	$ 41,076
Witch Flounder	2012	1,524	76	46	15	0.8	1.12	$ 134,416	$ 188,183	$ 80,650	$ 112,910	$ 26,883	$ 37,637
GB Winter Flounder	2012	3,565	178	107	36	0.86	1.2	$ 337,987	$ 471,610	$ 202,792	$ 282,966	$ 67,597	$ 94,322
GOM Winter Flounder	2012	752	38	23	8	0.32	1.14	$ 26,538	$ 94,540	$ 15,923	$ 56,724	$ 5,308	$ 18,908
Redfish	*2012*	*8,763*	*438*	*263*	*88*	*0.49*	*0.89*	*$ 473,302*	*$ 859,672*	*$ 283,981*	*$ 515,803*	*$ 94,660*	*$ 171,934*
White Hake	2012	3,456	173	104	35	0.36	0.4	$ 137,148	$ 152,386	$ 82,289	$ 91,432	$ 27,430	$ 30,477
Pollock	*2012*	*13,276*	*664*	*398*	*133*	*0.05*	*0.08*	*$ 73,171*	*$ 117,073*	*$ 43,902*	*$ 70,244*	*$ 14,634*	*$ 23,415*
							Total	$ 2,180,994	$ 3,095,352	$ 1,308,596	$ 1,857,211	$ 436,199	$ 619,070
						Sea Days	$650 /day	3,355	4,762	2,013	2,857	671	952