

Capacity Reduction Alternative 1 Overview

Alternative 1: “Successful bidders are required to surrender their Federal Multispecies A, B, and C Days-at-sea permits only. Unlimited future use for the vessel attached to those permits is allowed. In addition to the successful bid, a payment of \$100 per C-DAS held will may be added to the final payout. Monkfish Category ‘C’ permits held by bidders are converted to Category ‘A’ permits, and monkfish Category ‘D’ permits will be converted to Category ‘B’ permits.”

Potential impacts:

As we discussed in the “Methods” document, Alternative 1 was simulated using the Permit-only Buyback bid estimation model. In addition to total capacity removed, we tracked the following metrics:

- (1) Number of groundfish permits and percent-of-total retired
- (2) Number of allocated A-DAS and percent-of-total retired¹
- (3) Number of active A-DAS and percent-of-total retired¹
- (4) Number of latent A-DAS and percent-of-total retired¹
- (5) Number of leasee A-DAS and percent-of-total retired¹
- (6) Pounds of groundfish history and percent-of-total retired²
- (7) Number of loligo moratorium permits retained (Alt1 and Alt3-BTT) or retired (Alt2 and Alt3-ATT)
- (8) Number of illex moratorium permits retained (Alt1 and Alt3-BTT) or retired (Alt2 and Alt3-ATT)
- (9) Number of monkfish category C moratorium permits retained (Alt1 and Alt3-BTT) or retired (Alt2 and Alt3-ATT)
- (10) Number of monkfish category D moratorium permits retained (Alt1 and Alt3-BTT) or retired (Alt2 and Alt3-ATT)

The results are included in the following tables and figures.

Figure 1 – Results of Alternative 1 simulation with varying numbers of bids submitted and \$100 million dollars allocated

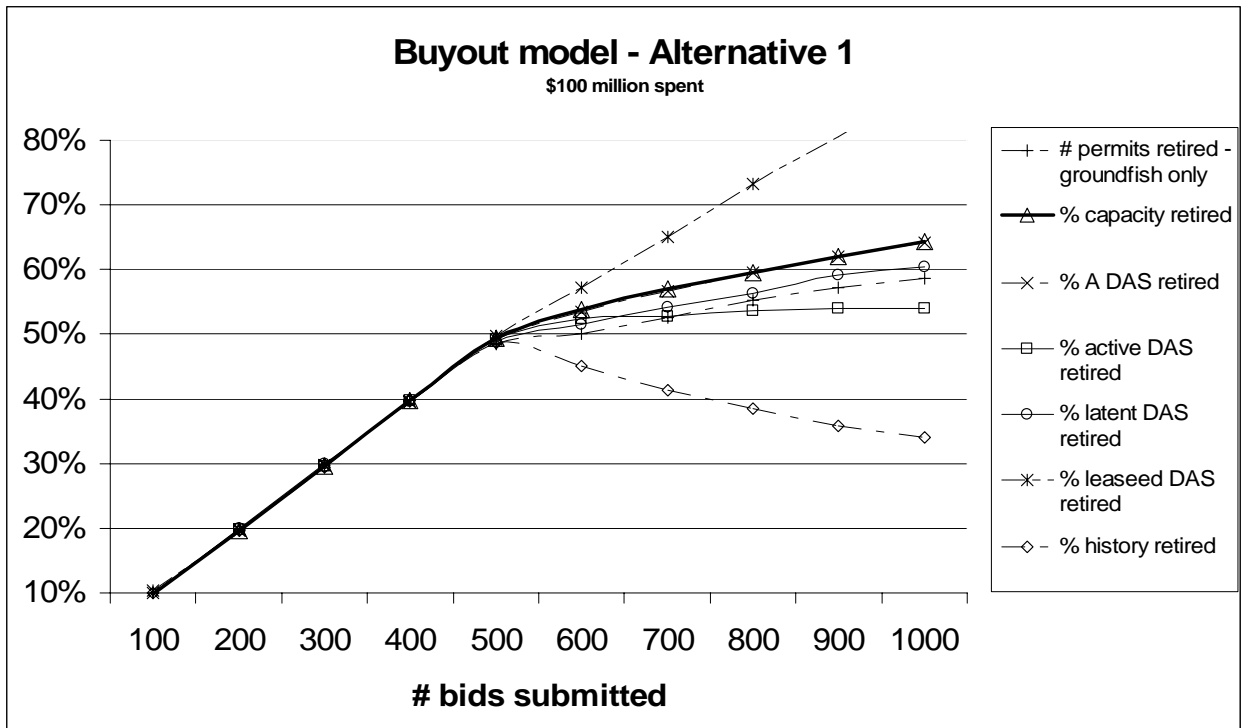


Figure 2 - Results of Alternative 1 simulation with varying numbers of bids submitted and \$80 million dollars allocated

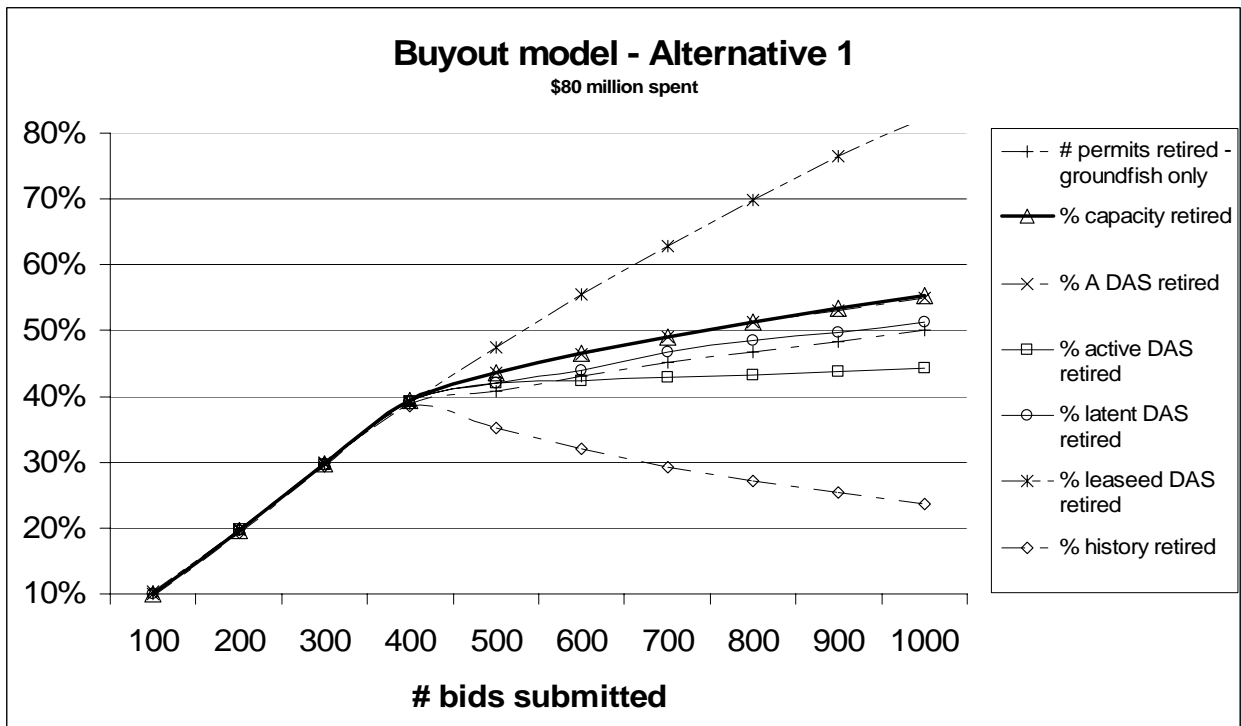


Table 1 - Results of Alternative 1 simulation with varying numbers of bids submitted and \$100 million dollars allocated

# bids placed	# permits retired - groundfish only	# capacity retired (capacity units)	# A DAS retired	# active DAS retired	# latent DAS retired	# leaseed DAS retired	# history retired (lbs groundfish)	# loligo permits retained	# illex permits retained	# monk C permits retained	# monk D permits retained
100	100	13,714,955	4,361	3,170	1,882	-771	22,554,591	27	4	19	30
200	200	27,300,395	8,693	6,326	3,822	-1,463	44,367,038	55	8	37	59
300	300	41,130,102	13,026	9,501	5,724	-2,216	66,850,660	81	12	55	89
400	400	55,003,788	17,380	12,746	7,583	-2,956	90,002,573	109	16	75	117
500	488	68,430,230	21,608	15,756	9,349	-3,706	110,103,650	131	19	92	145
600	505	74,583,713	23,451	16,755	9,867	-4,264	102,044,707	135	18	98	151
700	531	78,936,306	24,867	16,915	10,377	-4,847	93,903,784	140	19	101	156
800	557	82,538,110	26,096	17,185	10,786	-5,462	87,143,680	148	20	105	166
900	576	86,002,368	27,206	17,311	11,317	-6,003	81,297,757	151	22	104	178
1000	590	89,070,717	28,100	17,302	11,551	-6,587	77,224,698	149	21	106	179
FLEET TOTALS:											
	1008	138,633,560	43,864	32,015	19,134	-7,459	226,698,252	274	41	187	298

# bids placed	# permits retired - groundfish only	% capacity retired	% A DAS retired	% active DAS retired	% latent DAS retired	% leaseed DAS retired	% history retired
100	9.9%	9.9%	9.9%	9.9%	9.8%	10.3%	9.9%
200	19.8%	19.7%	19.8%	19.8%	20.0%	19.6%	19.6%
300	29.8%	29.7%	29.7%	29.7%	29.9%	29.7%	29.5%
400	39.7%	39.7%	39.6%	39.8%	39.6%	39.6%	39.7%
500	48.4%	49.4%	49.3%	49.2%	48.9%	49.7%	48.6%
600	50.1%	53.8%	53.5%	52.3%	51.6%	57.2%	45.0%
700	52.7%	56.9%	56.7%	52.8%	54.2%	65.0%	41.4%
800	55.2%	59.5%	59.5%	53.7%	56.4%	73.2%	38.4%
900	57.1%	62.0%	62.0%	54.1%	59.1%	80.5%	35.9%
1000	58.6%	64.2%	64.1%	54.0%	60.4%	88.3%	34.1%

Table 2 - Results of Alternative 1 simulation with varying numbers of bids submitted and \$80 million dollars allocated

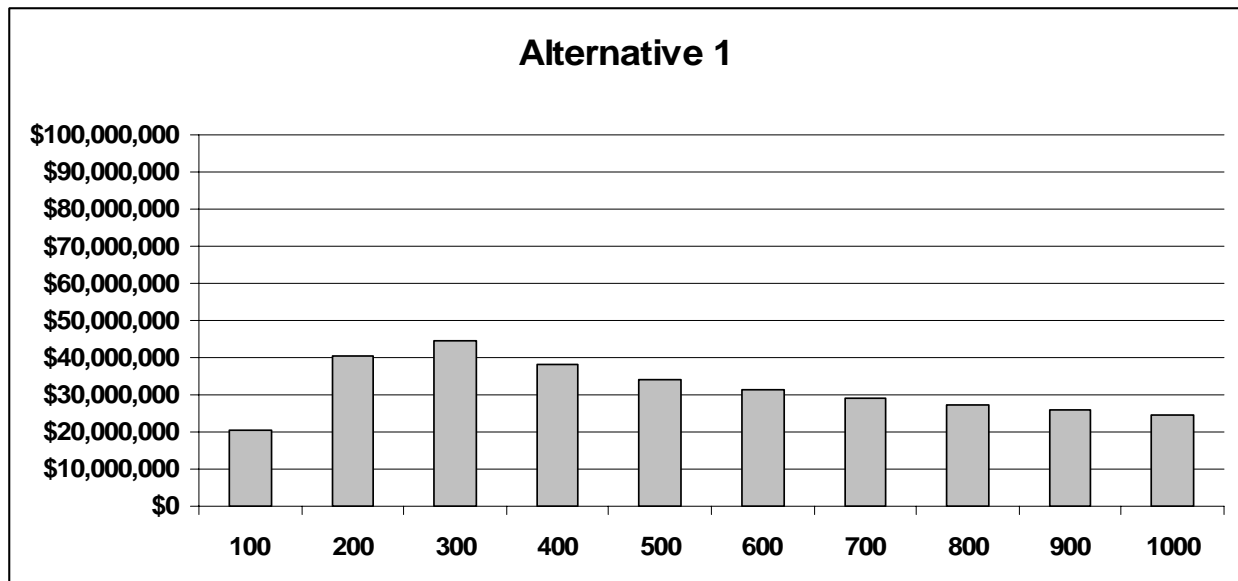
# bids placed	# permits retired - groundfish only	# capacity retired (capacity units)	# A DAS retired	# active DAS retired	# latent DAS retired	# leasee DAS retired	# history retired (lbs groundfish)	# loligo permits retained	# illex permits retained	# monk C permits retained	# monk D permits retained
100	100	13,767,704	4,358	3,147	1,900	-778	22,027,143	28	4	18	29
200	200	27,155,485	8,655	6,345	3,758	-1,480	43,687,668	54	8	36	59
300	300	41,295,249	13,034	9,498	5,668	-2,239	66,702,290	82	12	56	89
400	391	54,662,947	17,239	12,571	7,513	-2,917	87,351,393	105	15	73	116
500	411	60,462,330	19,098	13,455	8,038	-3,544	79,925,739	108	15	79	121
600	434	64,523,925	20,366	13,592	8,424	-4,134	72,585,381	115	15	82	128
700	456	68,026,177	21,520	13,757	8,953	-4,684	66,307,244	119	17	84	139
800	472	71,133,763	22,472	13,854	9,265	-5,210	61,713,053	120	17	85	144
900	487	73,988,367	23,244	14,004	9,504	-5,711	57,504,434	121	18	87	146
1000	505	76,613,821	24,118	14,184	9,807	-6,142	53,737,243	119	19	88	150
FLEET TOTALS:											
	1008	138,633,560	43,864	32,015	19,134	-7,459	226,698,252	274	41	187	298

# bids placed	# permits retired - groundfish only	% capacity retired	% A DAS retired	% active DAS retired	% latent DAS retired	% leasee DAS retired	% history retired
100	9.9%	9.9%	9.9%	9.8%	9.9%	10.4%	9.7%
200	19.8%	19.6%	19.7%	19.8%	19.6%	19.8%	19.3%
300	29.8%	29.8%	29.7%	29.7%	29.6%	30.0%	29.4%
400	38.8%	39.4%	39.3%	39.3%	39.3%	39.1%	38.5%
500	40.7%	43.6%	43.5%	42.0%	42.0%	47.5%	35.3%
600	43.0%	46.5%	46.4%	42.5%	44.0%	55.4%	32.0%
700	45.2%	49.1%	49.1%	43.0%	46.8%	62.8%	29.2%
800	46.8%	51.3%	51.2%	43.3%	48.4%	69.8%	27.2%
900	48.3%	53.4%	53.0%	43.7%	49.7%	76.6%	25.4%
1000	50.1%	55.3%	55.0%	44.3%	51.3%	82.3%	23.7%

As you can see, under an Alternative 1 scenario with \$100 million allocated, all of the bids placed are accepted until around 495 bids are placed. This points to the fact that 100 million bucks is a heck of a lot of money, and it might buy a lot of groundfish permits. It will also capture a fair amount of active DAS and permit history, but, notably, Alternative 1 appears to capture a disproportionately high percentage of DAS that were leased last year. The fallout from this may be expected to be felt in the DAS leasing market. Permit history (pounds of landings from 1996 – 2001) is not captured nearly as well under Alternative 1 as it is under other Alternatives.

At both \$100 and \$80 million allocated, Alternative 1 is highly likely to reach the Ctte’s objective of 25% of total capacity removed. In fact, an analysis (Figure 3) of how much money is required to reach the Ctte’s objective (25% capacity removal) at 100-bid-submission intervals shows that, between 300 and 600 bids submitted, between \$31 million and \$42 million may be required.

Figure 3 – Estimated cost of removing 25% of total capacity, Alternative 1 with various numbers of bids submitted



At \$100 million spent, the 50% maximum capacity removal threshold appears likely to be met if at least 500 bids are submitted. Note that this is also the threshold where bid acceptance becomes discriminatory—up to this point, all bids submitted are likely to be accepted. Under a situation where \$80 million is spent, it would require more than 750 bids submitted (an unlikely total, to be sure) before the Buyout appears likely to exceed the 50% maximum capacity removal threshold. It is important to note that if the Permit Buyback model is over-estimating bids, this threshold could be reached at a lower number of submitted bids.

Analysis:

Alternative 1 appears to be a cost-effective way to retire capacity in the groundfish fishery—in fact, as you’ll see reading through all of the analyses, it is the most cost-effective. Its Achilles heal is the potential for effort shifting into other fisheries to compensate for lost groundfish revenue. To that

end, we were able to take a hard look at the permits held by those groundfish permit holder's whose bids were most often accepted.

We looked at the other fishery permits held in conjunction with the groundfish permits that had their bids accepted greater than 90% of the time. We used the simulations when between 600 and 900 bids were submitted, so that we could filter out the bids that were most unlikely to be accepted. Remembering that model iterates 100 times at each of the four iterations between 600 and 900 bids submitted—so these are the permits selected most often after 400 simulations.

For Alternative 1, all accepted bids are counted because all accepted bids result in retiring only the groundfish permits--everyone who remains is assumed to be able to re-direct their efforts to other fisheries. For the purposes of highlighting the potential scope of the effort shift issue, we focused on vessels holding loligo, illex, fluke, scup and lobster moratorium permits in conjunction with their groundfish permits. Because monkfish is so intrinsically linked to the groundfish fishery, particularly in the northern management area, we chose not to examine this fishery in any detail at this time.

For vessels with accepted bids, we decided to focus on their ratio of groundfish revenues to total revenues, and in their average annual revenues from groundfish between 2003 and 2005. The groundfish : total revenue ratio is intended to show dependence on groundfish, while the average annual groundfish revenues may show magnitude of effort shift desired as vessels re-direct in an attempt to make up for lost groundfish revenues. Obviously, many boats hold multiple permits in these other fisheries, so the ratios cannot be averaged across the vessels holding these permits; nor should the total groundfish revenues be summed to predict effort shift. Rather, you should use your knowledge of the fisheries to determine, based on the numbers, how much effort shift you believe is likely to occur.

While we make no assumptions regarding which fisheries can or will sustain effort increases, the number of permits in each fishery held by vessels retiring their groundfish permit may be proportional to expected future effort increases resulting from this buyout.

Without further adieu, here's the numbers:

Table 3 – Potential for effort shift under Alternative 1

	# permits held in conjunction with retired groundfish permits	% of total revenues from groundfish landings	Average annual groundfish revenues btwn 2003 - 2005	Total 2005 fishery revenues
loligo	60	52.9%	\$7,366,801	\$28,546,364
illex	4	45.7%	\$19,688	\$8,362,037
fluke	143	51.4%	\$14,729,667	\$28,130,860
scup	131	51.9%	\$13,810,230	\$7,060,818
lobster	231	49.3%	\$16,808,495	\$393,263,805

The results show that groundfish permits retired under these simulations derived a good portion of their revenues from groundfish, and this increases the likelihood of effort shifting into other fisheries. While you cannot sum the totals in the third column of Table 3 because most vessels maintain permits in multiple fisheries, you might extrapolate that vessels divesting themselves of their groundfish permits under an Alternative 1 scenario might look to make up between \$10 and \$18 million of lost revenues. This could lead to significant increases in effort on fisheries that are worth, in 2005, between \$7 million (scup) and \$28 million (loligo and fluke).

Alternative 1 may result in the least disruption to the shoreside businesses, as it is most likely to keep vessels fishing, albeit with different levels of intensity in different fisheries. The downside of this is that there is no mechanism to prevent effort shifts into other fisheries, which may be thought of as transferring the overcapacity problems of the groundfish fishery onto other fisheries. The upside is that Alternative 1 captures the most groundfish fishing capacity for a given amount of money, and therefore is likely to produce the largest capacity reduction *for the groundfish fishery* of the three Alternatives.