MEMORANDUM

TO: Council, AP, and SSC Members

FROM: Clarence G. Pautzke
Executive Director

DATE: January 14, 1993

SUBJECT: Groundfish Plan Amendments

ACTION REQUIRED

(a) Initial review of the BSAI Chinook salmon bycatch analysis (Amendment 21b).

(b) Consider final action on the proposed subdivision of the Aleutian Islands management area analysis.

BACKGROUND

Chinook Salmon Bycatch Analysis

This item originally was part of Amendment 21 to the BSAI FMP. However, after a preliminary review of the document in April, 1992 by the Council, AP and SSC, additional analysis was requested. Specifically, the SSC suggested using 1990 and 1991 data separately for runs on the Bering Sea Bycatch Simulation Model, and including information on Chinook salmon escapement estimates for western Alaska stocks in the analysis. The Council requested expanding the alternatives to include analysis of time/area closures. Staff from ADF&G, the primary authors of the analysis, has incorporated these suggestions into the current draft analysis.

The Draft EA/RIR/IRFA for Amendment 21b to the BSAI FMP was sent to you on December 22, 1992. Due to the number of alternatives and sub-options, I have attached as Item D-3(a) an Executive Summary of this analysis, which includes the alternatives considered, maps showing the areas proposed for closure, and a summary table of the potential impacts of the various alternatives. The Council can review the amendment package for adequacy, hear public comment, and release it for public review prior to final action at the April meeting.

Proposed Subdivision of the Aleutian Islands Management Area

In September, 1992 the Council requested that a plan amendment be developed to subdivide the Aleutian Islands management area into two or more smaller management areas. The primary purpose is to more appropriately assign TACs for groundfish species according to their biological distribution within the overall Aleutian Islands management area. Specific concerns exist regarding the setting of TACs for rockfish, sablefish, and Atka mackerel. For example, the 1993 TAC for Atka mackerel is constrained to 32,100 mt, the amount that can safely be taken from the eastern portion of the Aleutians. Both the Plan Team and the SSC believe that an additional quota of Atka mackerel could be harvested if taken from the western portion of the Aleutians. The analysis before you provides a mechanism for assigning TACs to

more finite areas, reflecting their actual biomass distributions, to reduce the chances of local overharvest within the existing Aleutians management area. Alternatives examined are as follows:

Alternative 1.	Status quo, no action.
Alternative 2.	Separate Aleutian Islands subarea into two districts by dividing the region at 177° E longitude for the purpose of spatially allocating TACs.
Alternative 3.	Separate Aleutian Islands subarea into three districts by dividing the region at 177° E and 177° W longitude for the purpose of spatially allocating TACs.

To ensure implementation of a preferred alternative in time to affect the 1993 fisheries, the Council needs to take final action on this amendment at this meeting. The industry was noticed in the December newsletter that the Council may be taking such action in January. If effective, a considerable amount of Atka mackerel could be released from the reserves in June or July, for harvest in the newly developed Aleutian Island districts.

EXECUTIVE SUMMARY
AMENDMENT 21b

Alternative

The various alternatives considered in the present analysis are as follows with alternative reference numbers corresponding to the sections in the text:

3.1.1. Alternative 1. Status Quo. No chinook PSC caps or time/area closures. Each of the four VIP assumptions is presented under Status Quo.

3.1.2. Alternative 2. Chinook Prohibited Species Caps. Chinook PSC caps in place, both with and without time/area closures.

3.1.2.1. Option 1. Close the entire BS/AI to a specific fishery upon attainment of the chinook PSC cap by that fishery, or group of fisheries.

3.1.2.2. Option 2. Close specific federal statistical areas to a specific fishery upon attainment of the chinook PSC cap by that fishery, or group of fisheries.

Area sub-options:

1) Close areas 511, 517 and 519 as one zone; Close all other areas as a second zone. Caps are apportioned to zones by historic bycatch values.

2) Close 5 independent zones:
a) area 511

b) areas 517 and 519

c) area 540

d) area 518

e) all other areas.

Caps are apportioned to zones based on historic bycatch values.

Time closure sub-option:

Divide all closures listed above into 2 time periods: January-April; and May-December. The cap is evenly divided between the two time periods. The closed areas are reopened on May 1 for the remainder of the cap.

3.1.2.3. Option 3. Close areas which do not conform to federal statistical areas but which have been shown historically to have high chinook bycatch. Closures of these areas would be triggered by attainment of a chinook PSC cap in specific fisheries. Closed areas are reopened during May, June, July and August. The closures would apply to a buffer strip on either side of the 200 m contour, and to a few blocks in the vicinity of Unimak Island.

3.1.3. Alternative 3. Time and Area Closures - No Chinook PSC.

Close areas which do not conform to federal statistical areas but which have been shown to have high chinook bycatch during certain periods of the year. These areas are in proximity to the "horseshoe", Unimak Island, and the 200 m contour. The closure would be in effect during periods of high chinook bycatch, January - April and September - December.

Attached to this summary are three figures from the EA/RIR that geographically present the various alternatives.

Vessel Incentive Program

The Vessel Incentive Program (VIP) is currently in effect for halibut and red king crab. The Bering Sea bycatch simulation model mimics an effective VIP program by reducing high bycatch rates to acceptable program levels. In the April 1992 draft of Amendment 21, the status of the salmon VIP program was unknown, and various VIP assumptions were analyzed to cover the various outcomes of a salmon VIP decision. Salmon has since been dropped from the VIP program. The original VIP assumptions were retained in this analysis in order to conform with previous analyses, to allow for eventual inclusion of salmon into the VIP program, and in order to gauge the effects of an active avoidance of high bycatch rates by groundfish vessels.

Four VIP assumptions used throughout this analysis were as follows:

1. No VIP for any species. Within the model, all bycatch rates are included as observed in the 1990 and 1991 fisheries.

2. VIP in effect for halibut and red king crab. Within the model, the bycatch rates for these species which are greater than double the VIP approved rate are not included in calculations. Salmon is not included in the VIP program (all salmon bycatch rates included in the model).

3. VIP in effect for halibut and red king crab as above. Salmon bycatch rates which are greater than five times a previously accepted VIP rate are not included in the calculations (salmon bycatch rate standard is "relaxed").

4. VIP is in effect for halibut, red king crab and salmon. Within the model, the bycatch rates for these species which are greater than double the VIP approved rates are not included in calculations.

Assumption #2 most closely reflects current groundfish management.

Summary of Findings

The Bering Sea bycatch simulation model was used to estimate the net benefits to the nation under the various alternatives. The data was from the 1990 and 1991 domestic fisheries in the Bering Sea, and model runs were made using the average of the two years and each of the two years separately.

3.1.1. Alternative 1. Status Quo. No chinook PSC caps or time/area closures.

Runs of the Bering Sea bycatch simulation model under this alternative served as the baseline by which to compare the various alternatives. In general, net benefits to the nation tended to increase as the bycatch rates came into the bounds expected under an effective VIP program.

3.1.2. Alternative 2. Chinook Prohibited Species Caps.

Based on bycatch simulation model runs, the implementation of PSC caps for chinook salmon reduced the bycatch of chinook salmon to within the range of the caps. However, the loss of groundfish due to chinook PSC closures resulted in sometimes very significant costs to the groundfish fisheries. Based on the rates encountered in 1990 and 1991, the chinook PSC caps resulted in the early closure of most fisheries. If chinook salmon bycatch rates are maintained within the levels originally suggested in the VIP program, fewer chinook are encountered, and the higher caps are not reached, and therefore there are no decreases in benefits due to closures. The model was unable to fully evaluate the effect of the higher PSC caps (24,000 and 48,000 chinook) because the number of chinook bycaught in 1990 was approximately 19,500 chinook, and in 1991 was approximately 30,900 chinook. The effects of a higher cap on net benefits during a year of extremely high chinook bycatch are unknown.

3.1.2.1. Option 1. Close the entire BS/AI upon attainment of the chinook PSC cap.

Generally the net benefits were lower when the entire Bering Sea was closed than when more well defined areas were closed. High decrease in net benefits from baseline cases.

3.1.2.2. Option 2. Close specific statistical areas upon attainment of the PSC cap.

Area Suboptions:
Close 2 zones; and close 5 different zones:

Generally, the net benefits increased as the number of separately managed zones increased. Overall substantial decrease in net benefits from baseline cases.

Time closure sub-option:
Divide all closures listed above into 2 time periods:

The separation of the chinook PSC cap into 2 specific time periods dramatically decreased the loss in net benefits due to chinook PSC cap closures. Fisheries which were halted early

in the year due to high chinook bycatch were able to fish during periods of lower bycatch, and increase total groundfish catch. Division of the cap in this manner, however, did reduce the amount of PSC cap available in the first third of the year, and fisheries not affected by the higher cap levels (e.g. 24,000) were halted by the PSC cap in the first third of the year because the overall cap available for January - April was cut in half.

3.1.2.3. Option 3. Close areas which do not conform to federal statistical areas but which have been shown historically to have high chinook bycatch:

Analysis of historical data showed that the majority of chinook salmon are bycaught during the months of January-April and September-December. Chinook salmon are primarily bycaught in the region of the "horseshoe", in the vicinity of Unimak Island, and along the 200 m contour, especially within 15 miles of the contour.

In order to use the bycatch simulation model which has blocks as the finest scale of resolution, blocks which roughly conform to the 200 m contour buffer strip and the two blocks above Unimak Island were closed upon chinook PSC cap attainment. Since fisheries were still prosecuted outside of this area, and within this area during the months of May - August, the closure of this area when a cap of 8,000 chinook was reached resulted an estimated chinook bycatch of approximately 14,000 chinook. The decrease in net benefits under an 8,000 chinook trigger was approximately $7.2 million dollars which was substantially less than the decreases from statistical area closures ($60 - $400 million). The 16,000 chinook cap resulted in an estimated chinook bycatch of approximately 17,000 chinook, and an estimated increase in benefits of $1.0 million dollars. It should be noted that because the total number of chinook salmon generated by the model under the baseline used for comparison was only 18,000, the effects of this cap and closure may not be fully accurate.

3.1.3. Alternative 3. Time and Area Closures - No Chinook PSC.

In order to use the bycatch simulation model which has blocks as the finest scale of resolution, two areas approximating the geographical areas described above were defined as follows:

1) The three blocks in the "horseshoe", and two blocks above Unimak Island were closed for the bycatch simulation during January-April and September-December. The simulation resulted in a reduction in chinook salmon bycatch of only 800 fish. This is because although the rates in these blocks were high, there were also high rates in other portions of, for instance, area 517 along the 200 m contour.

2) The blocks which roughly conform to the 200 m contour buffer strip and the two blocks above Unimak Island were closed for the bycatch simulation during January-April and September-December. Under this simulation, a total of 8,180 chinook were caught outside of this area, and during this area in the summer months. The estimated groundfish catch did not vary greatly from the baseline data, however, because of slightly higher halibut and crab bycatch, and because of the changes in value of the catch during the year, the closure resulted in a net decrement in benefits of approximately $20.6 million.

Executive Summary - Amendment 21b Alternatives. Chinook salmon not included in the VIP program.

Alternative	Chinook Bycatch Cap	Closure	Time/Area	BASELINE (X 1,000)	Net Benefits (X 1,000)	Net Benefits minus BASELINE (X 1,000)	Number of Chinook	Total Catch (X 1,000)
3.1.1. Baseline	None	None	None	$482,353	$482,353	$0	20,768	1,756
3.1.2.1.	8,000	Entire BSAI	Area only	$482,353	$95,921	($386,432)	8,718	290
3.1.2.1.	16,000	Entire BSAI	Area only	$482,353	$174,877	($307,476)	16,281	528
3.1.2.1.	24,000	Entire BSAI	Area only	$482,353	$482,353	$0	20,768	1,756
3.1.2.1.	48,000	Entire BSAI	Area only	$482,353	$482,353	$0	20,768	1,756
3.1.2.2.(1)	8,000	2 Zones	Area only	$482,353	$117,406	($364,947)	10,651	373
3.1.2.2.(1)	16,000	2 Zones	Area only	$482,353	$178,472	($303,881)	17,972	570
3.1.2.2.(1)	24,000	2 Zones	Area only	$482,353	$482,402	$49	20,768	1,756
3.1.2.2.(1)	48,000	2 Zones	Area only	$482,353	$482,402	$49	20,768	1,756
3.1.2.2.(2)	8,000	5 Zones	Area only	$482,353	$144,052	($338,301)	10,967	473
3.1.2.2.(2)	16,000	5 Zones	Area only	$482,353	$208,087	($274,266)	18,131	687
3.1.2.2.(2)	24,000	5 Zones	Area only	$482,353	$482,374	$21	20,769	1,756
3.1.2.2.(2)	48,000	5 Zones	Area only	$482,353	$482,402	$49	20,768	1,756
3.1.2.2.(TIME)	8,000	Entire BSAI	Time and Area	$482,353	$347,584	($134,769)	7,704	1,292
3.1.2.2.(TIME)	16,000	Entire BSAI	Time and Area	$482,353	$372,201	($110,152)	11,963	1,412
3.1.2.2.(TIME)	24,000	Entire BSAI	Time and Area	$482,353	$405,224	($77,129)	15,864	1,527
3.1.2.2.(TIME)	48,000	Entire BSAI	Time and Area	$482,353	$482,353	$0	20,768	1,756
3.1.2.2.(TIME)	8,000	2 Zones	Time and Area	$482,353	$351,443	($130,910)	7,960	1,332
3.1.2.2.(TIME)	16,000	2 Zones	Time and Area	$482,353	$395,002	($87,351)	14,298	1,475
3.1.2.2.(TIME)	24,000	2 Zones	Time and Area	$482,353	$414,599	($67,754)	18,061	1,550
3.1.2.2.(TIME)	48,000	2 Zones	Time and Area	$482,353	$482,402	$49	20,768	1,756
3.1.2.2.(TIME)	8,000	5 Zones	Time and Area	$482,353	$369,393	($112,960)	8,511	1,266
3.1.2.2.(TIME)	16,000	5 Zones	Time and Area	$482,353	$414,092	($68,261)	14,306	1,513
3.1.2.2.(TIME)	24,000	5 Zones	Time and Area	$482,353	$444,870	($37,483)	18,426	1,626
3.1.2.2.(TIME)	48,000	5 Zones	Time and Area	$482,353	$482,402	$49	20,768	1,756
3.1.2.3. Baseline	None	None	None	$500,234	$500,234	$0	18,074	1,752
3.1.2.3.	8,000	Contour/Unimak	Time and Area	$500,234	$493,065	($7,169)	14,043	1,751
3.1.2.3.	16,000	Contour/Unimak	Time and Area	$500,234	$501,273	$1,039	17,175	1,751
3.1.2.3.	24,000	Contour/Unimak	Time and Area	$500,234	$500,234	$0	18,074	1,752
3.1.2.3.	48,000	Contour/Unimak	Time and Area	$500,234	$500,234	$0	18,074	1,752
3.1.3.	None	Horseshoe/Unimak	Time and Area	$487,880	$491,856	$3,976	19,509	1,751
3.1.3.	None	Contour/Unimak	Time and Area	$500,234	$479,607	($20,627)	8,180	1,739

Notes: The baseline runs are with no chinook cap in place. All runs above are with the VIP program as currently defined: chinook salmon included.
2 zones are defined as follows: 1) Areas 511, 517 and 519; 2) all other areas.
5 zones are defined as follows: 1) Area 511; 2) Areas 517 and 519; 3) Area 540; 4) Area 518; 5) All other areas.
Time closures under 3.1.2.2. are January-April and May-December. Fisheries closed during the first period may reopen during the second period.
Time closures under 3.1.2.3. and 3.1.3. are January-April and September-December. There is no closure for the period May-August.

Figure 2-47. Federal statistical reporting areas in the Bering Sea. The 200 m contour indicated in bold.

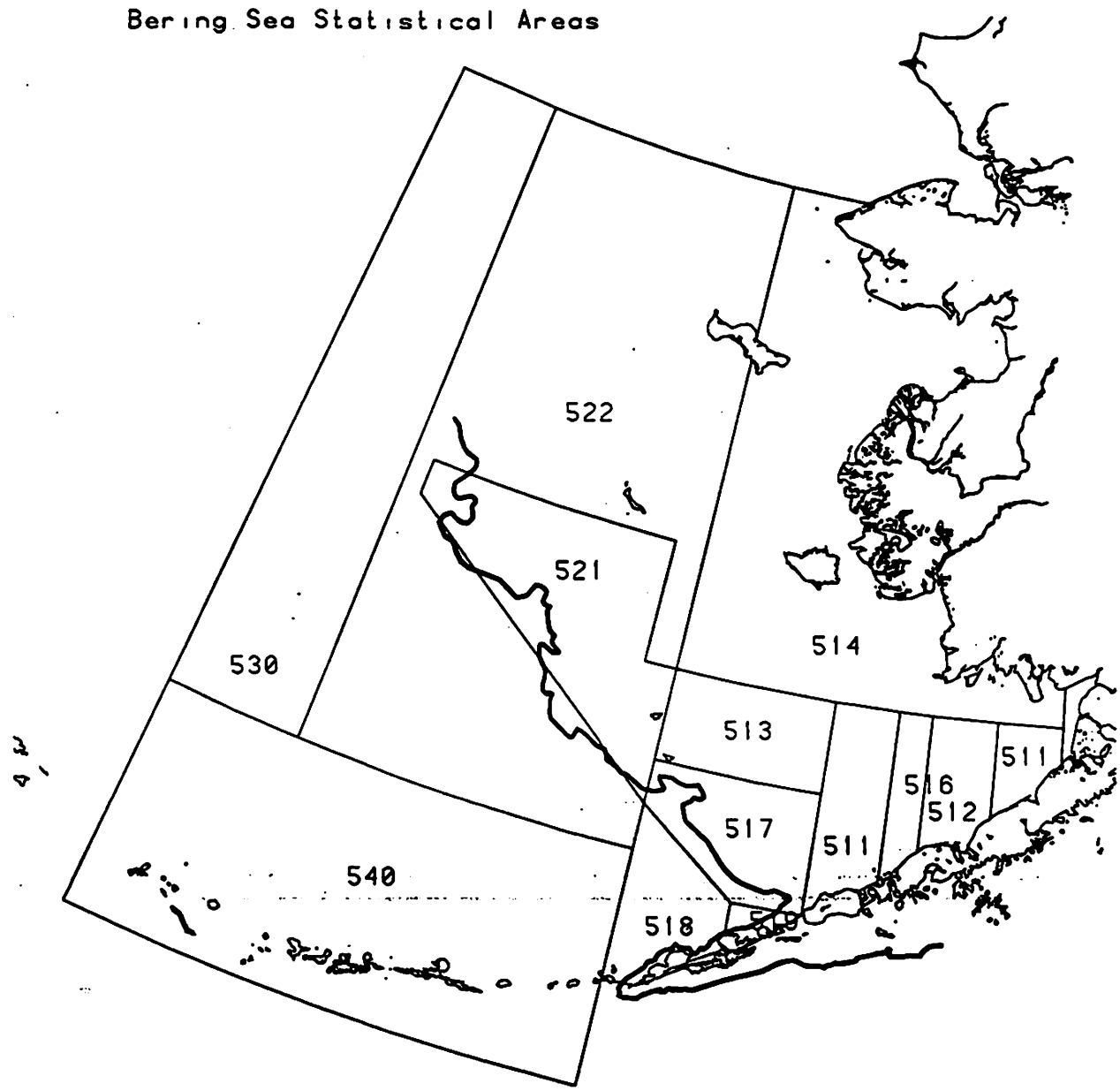


Figure 2-49. Close-up of the Alaskan Peninsula and Aleutian Islands including Unimak Island. The 200 m contour is indicated with a buffer extending for 15 miles on each side. Each block is 1/2° latitude by 1° longitude (30 miles square). The three blocks in the horseshoe are indicated, as is the corner block of the horseshoe and the two blocks north of Unimak Is.

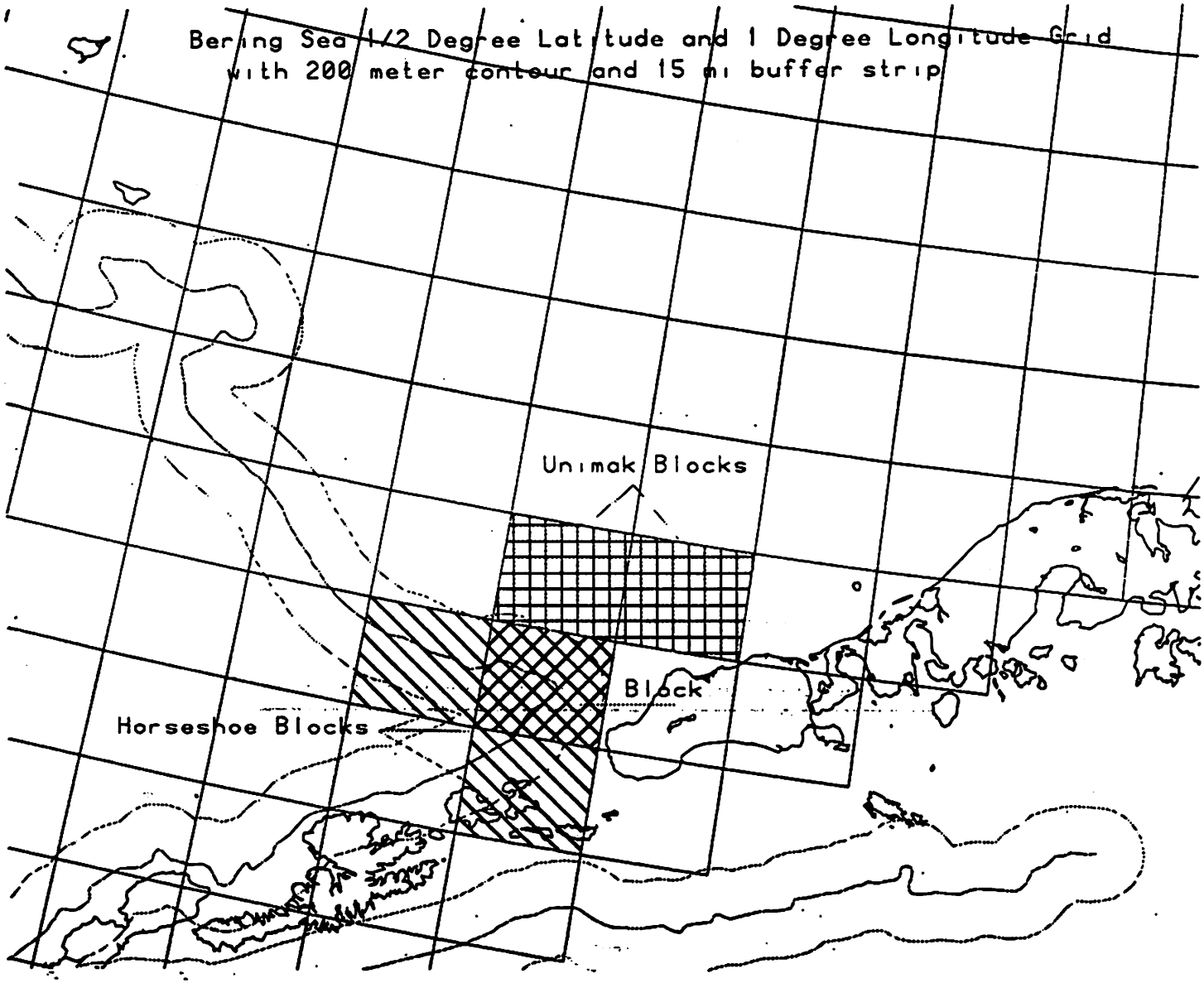
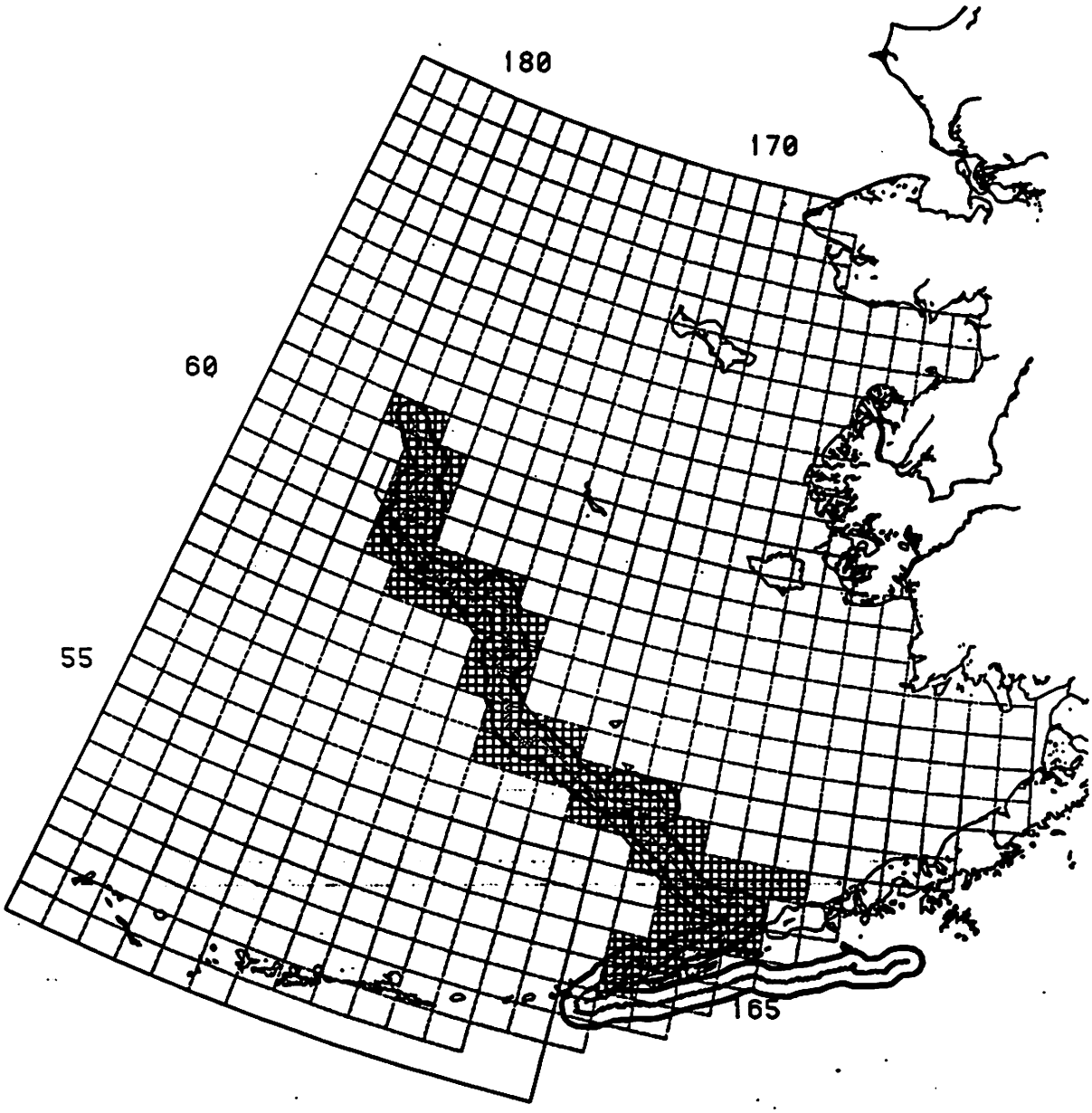


Figure 2-156. Location of blocks selected as approximating the spatial pattern of the 200 m contour. The 2 Unimak blocks were selected as well.



JOHN ROOS
D-3a

Potential impacts of chinook bycatch in the Bering Sea trawl fisheries.

Bering Sea trawl bycatch	Available to in-shore runs (catchx.9)	Available to Western Alaska runs (x.6)	% of WA run	Available to W A commercial catch (x.4)	% of WA com. catch	Number lost to Nushagak comm. catch	Number lost per boat with 300 boats
10000	9000	5400	0.8	2160	0.8	300	1
20000	18000	10800	1.5	4320	1.5	600	2
30000	27000	16200	2.3	6480	2.3	1000	3
40000	36000	21600	3.0	8640	3.0	1300	4
50000	45000	27000	3.7	10800	3.7	1600	5

1) assumes a 10% mortality from trawl bycatch to inshore runs
2) assumes Western Alaska contributes 60% of chinook to Bering Sea
3) 1985-1989 WA average chinook run of 0.7 million, a commercial catch of .28 million and a harvest rate of .4
4) 1985-1989 average Nushagak commercial catch of 43,000

Amendment 21b
Salmon Bycatch Management

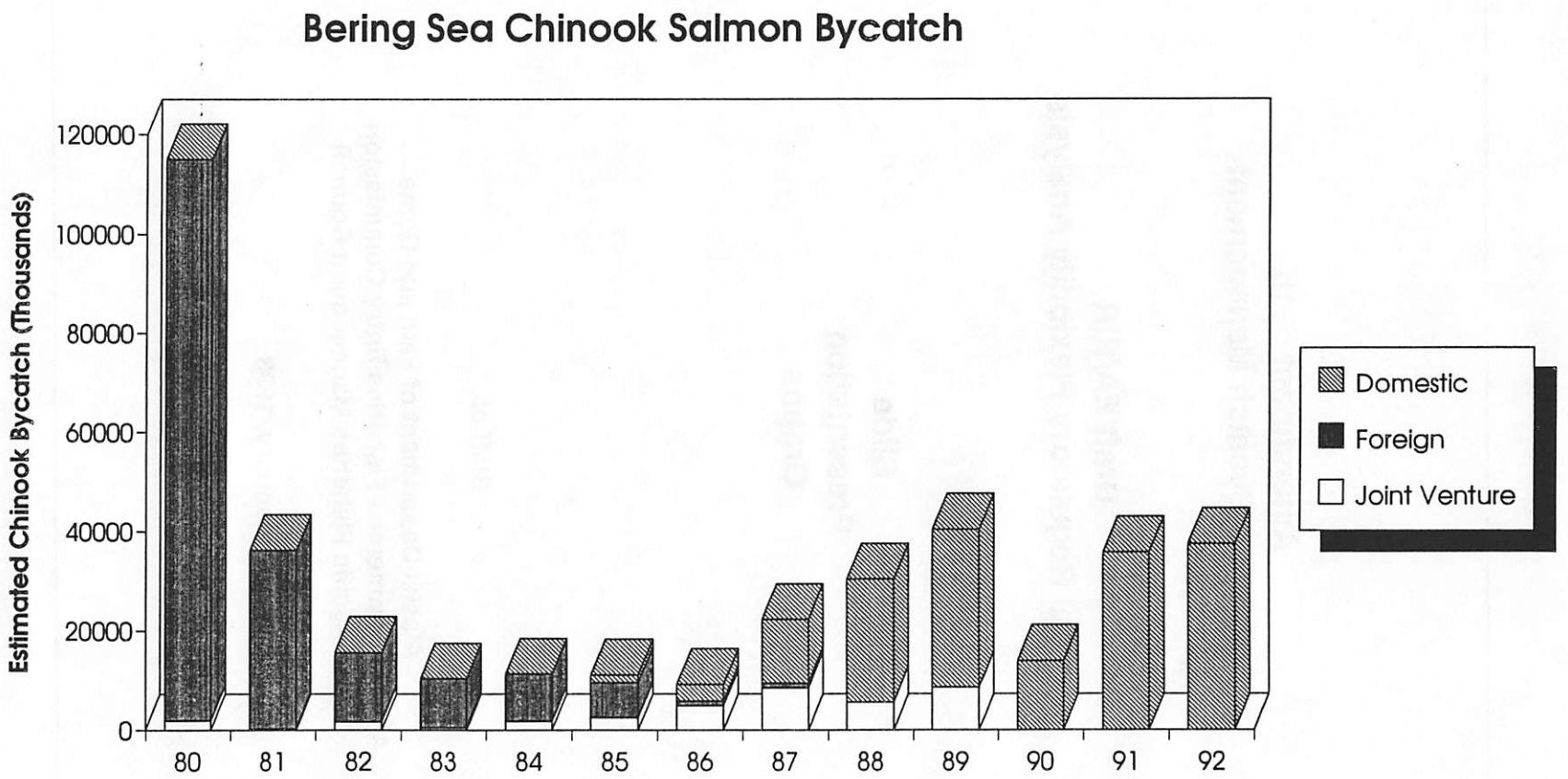
Draft EA/RIR
Initial Regulatory Flexibility Analysis

Slide
Presentation
Graphs

Staff of

Alaska Department of Fish and Game
Alaska Commercial Fisheries Entry Commission
North Pacific Fisheries Management Council

January, 1993


Bering Sea Chinook Salmon Bycatch
Estimated Chinook Bycatch (Thousands)
120000
100000
80000
60000
40000
20000
0
80
81
82
83
84
85
86
87
88
89
90
91
92
Domestic
Foreign
Joint Venture

Cumulative Chinook Bycatch in the Bering Sea
Number of Chinook (Thousands)
0
5000
10000
15000
20000
25000
30000
35000
40000
Jan
Feb
Mar
Apr
May
Jun
Aug
Sep
Oct
Nov
Dec
Month
1990
1991
1992

Amendment 21(b)
Salmon Bycatch Management

Initial Proposal:

- High chinook bycatch in Bering Sea trawl fisheries.
- Poor escapement in Western Alaskan systems.
- Place a Prohibited Species Cap on chinook salmon.
- Base cap on annual bycatch rate of .004 chinook/mt.

Initial Analysis:

- Employed Bering Sea Bycatch Model.
- Analyzed the effects of a range of caps: 8,000; 16,000; 24,000; and 48,000 chinook.

Additional Analysis:

- Use data from a single year to increase bycatch rates.
- Identify areas or blocks for closure prior to fishery.
- Include only "high bycatch" fisheries:
  - Pelagic and bottom trawl for pollock;
  - Bottom trawl for Pacific cod.

Alternatives

Alternative 1. Status Quo.

Alternative 2. Chinook Prohibited Species Caps.

Option 1. Close the entire BS/AI

Option 2. Close specific statistical areas.

Area sub-options:

1) Close 2 zones:
- **a) Areas 511, 517 and 519;**
- **b) all other areas.**

2) Close 5 different zones:
- **a) Area 511;**
- **b) Areas 517 and 519;**
- **c) Area 540;**
- **d) Area 518;**
- **e) all other areas.**

Time closure sub-option:

Close 2 separate time periods:
- **January-April;**
- **May-December.**

Option 3. Close geographical areas.

Main Points

I. Results of chinook Prohibited Species Caps.

Model Assumptions:

a) 3 week season delay;
b) Domestic data from 1990 and 1991;
   Average of 2 years.
   Two years separately.
c) 4 VIP alternatives;
d) 4 chinook bycatch caps;

Results:

a) Caps constrain chinook bycatch;
b) Because of high bycatch Jan-April cost to fisheries is high;
c) Finer spatial and temporal divisions reduced costs.

II. Time and area patterns in chinook bycatch.

Results:

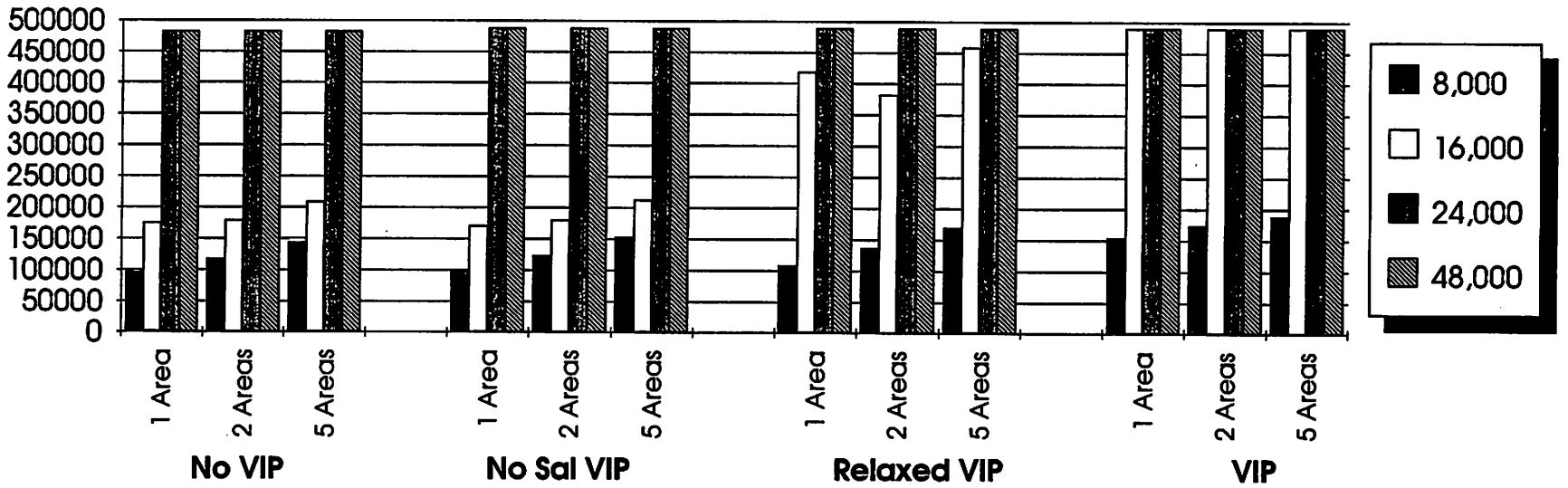
a) Chinook bycatch highest
   January - April
   September - December;
b) Chinook bycatch highest
   Near 200 m depth contour
   Near Unimak Island / Horseshoe

III. Geographic based closures potentially further reduce bycatch costs.

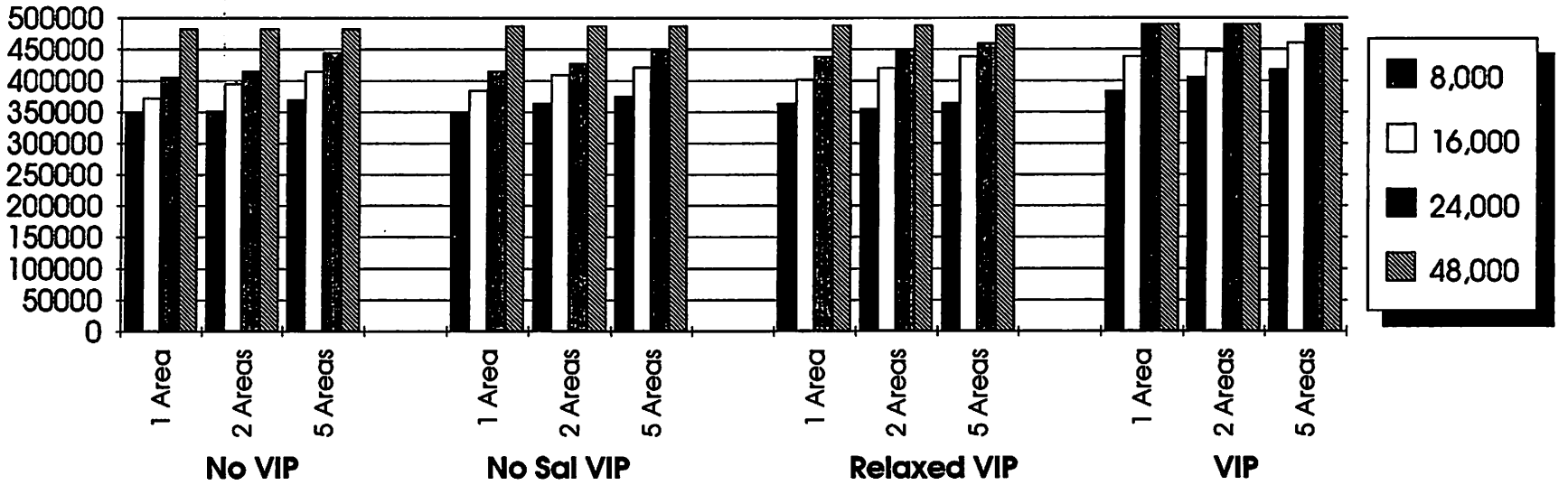
Options:

a) Vary size of buffer strip along contour;
b) Vary time period of closures.

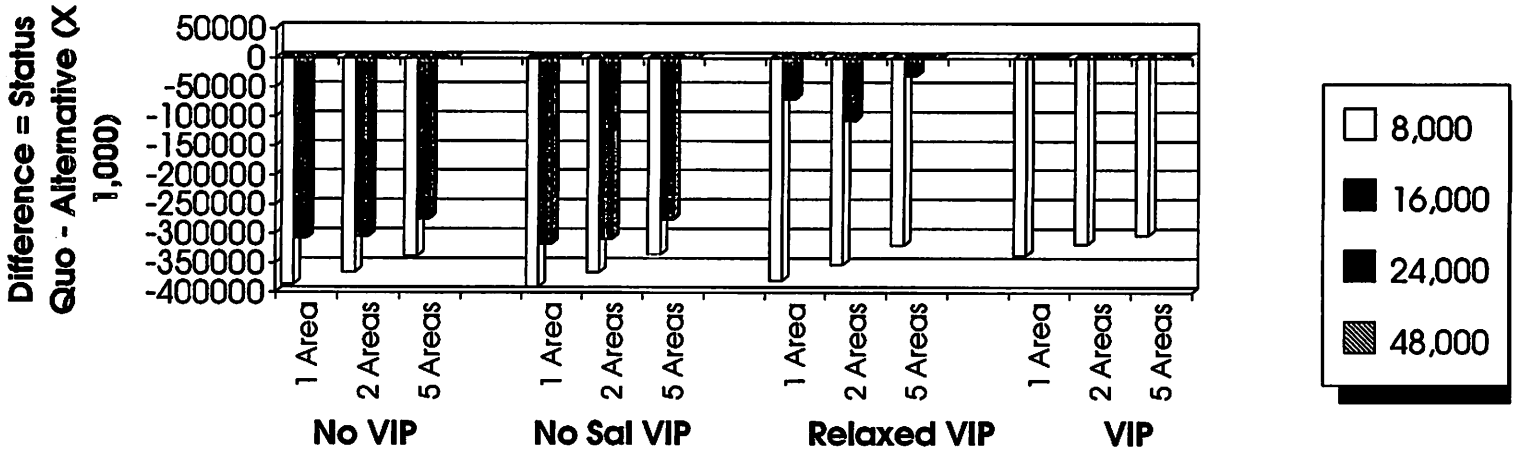
1993 - Area closures - Comparison of total net benefits under 4 caps



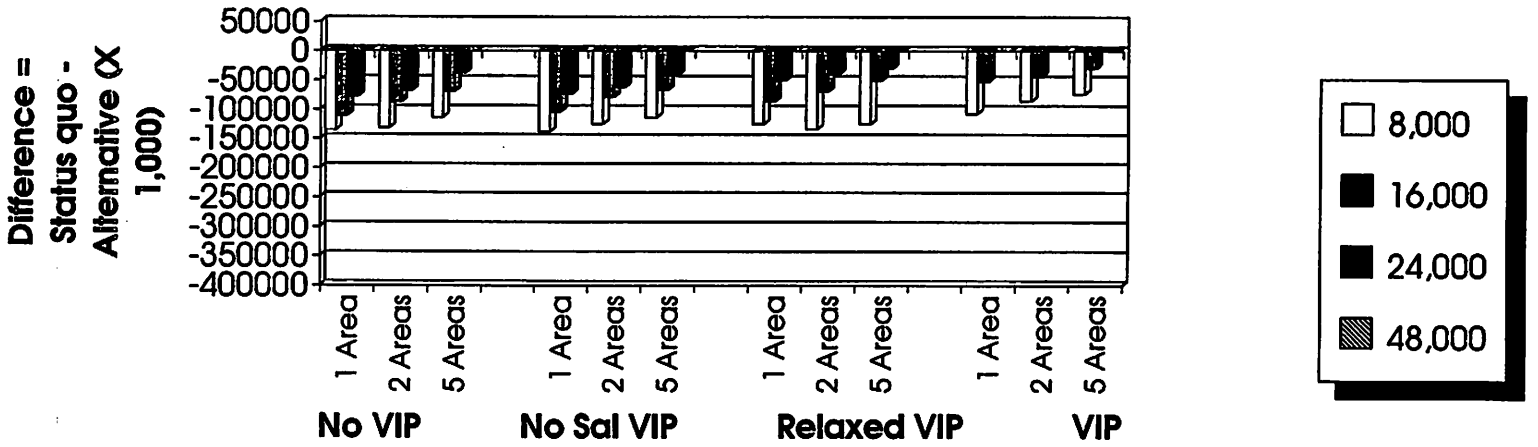
1993 - Time and Area - Comparison of total net benefits under 4 caps

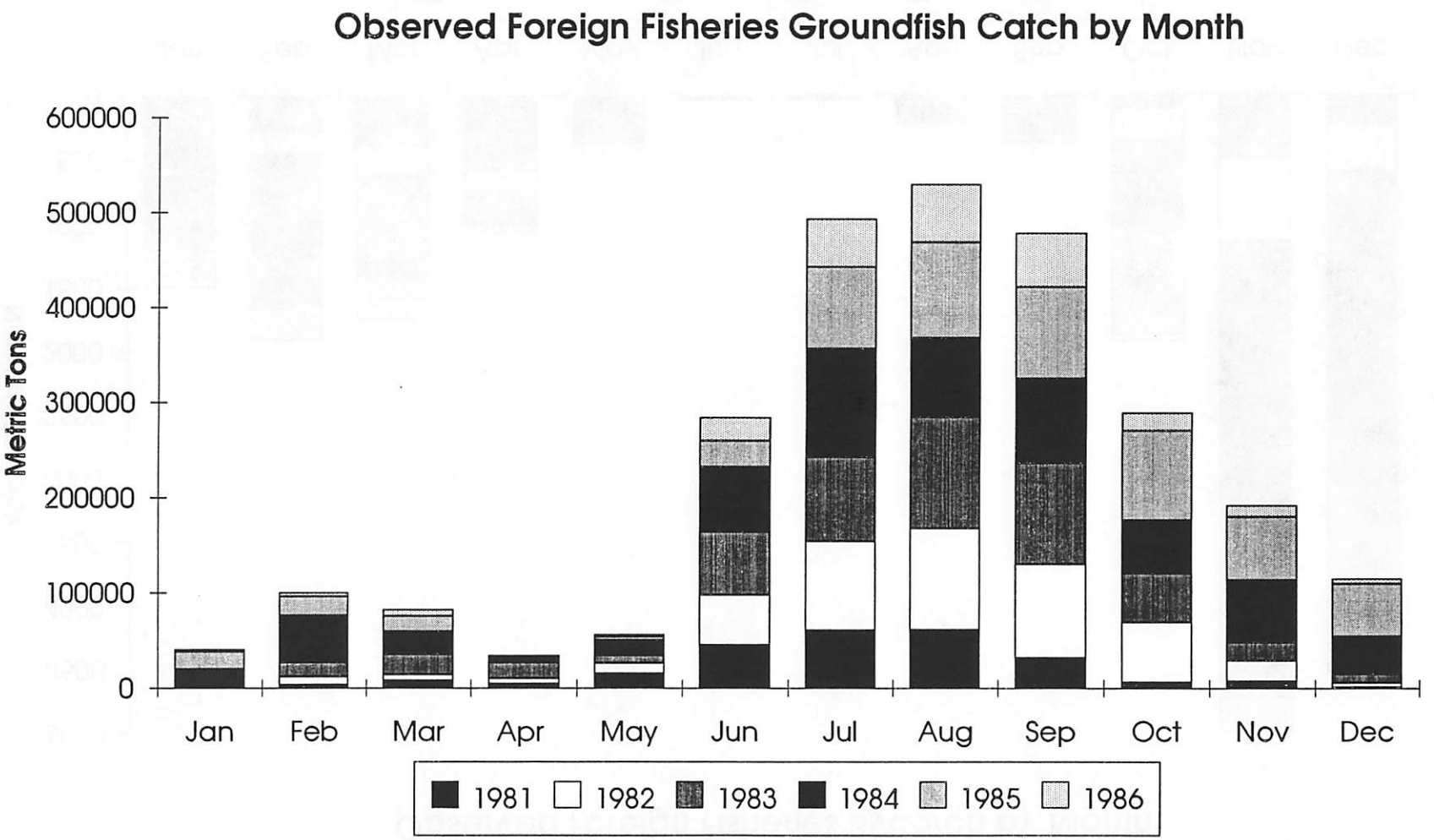


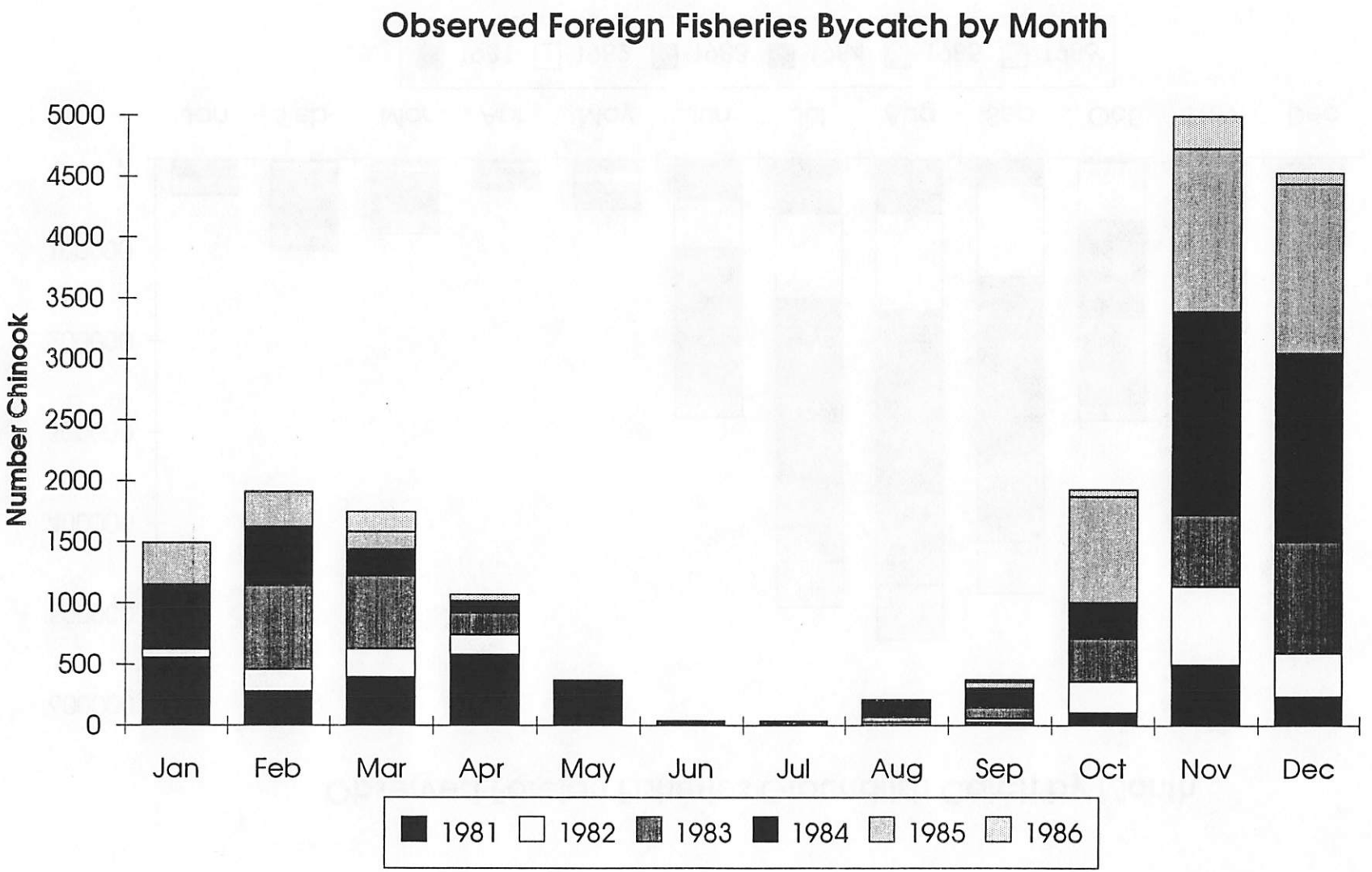
1993 - Area closures - Status quo minus the given alternative and cap level



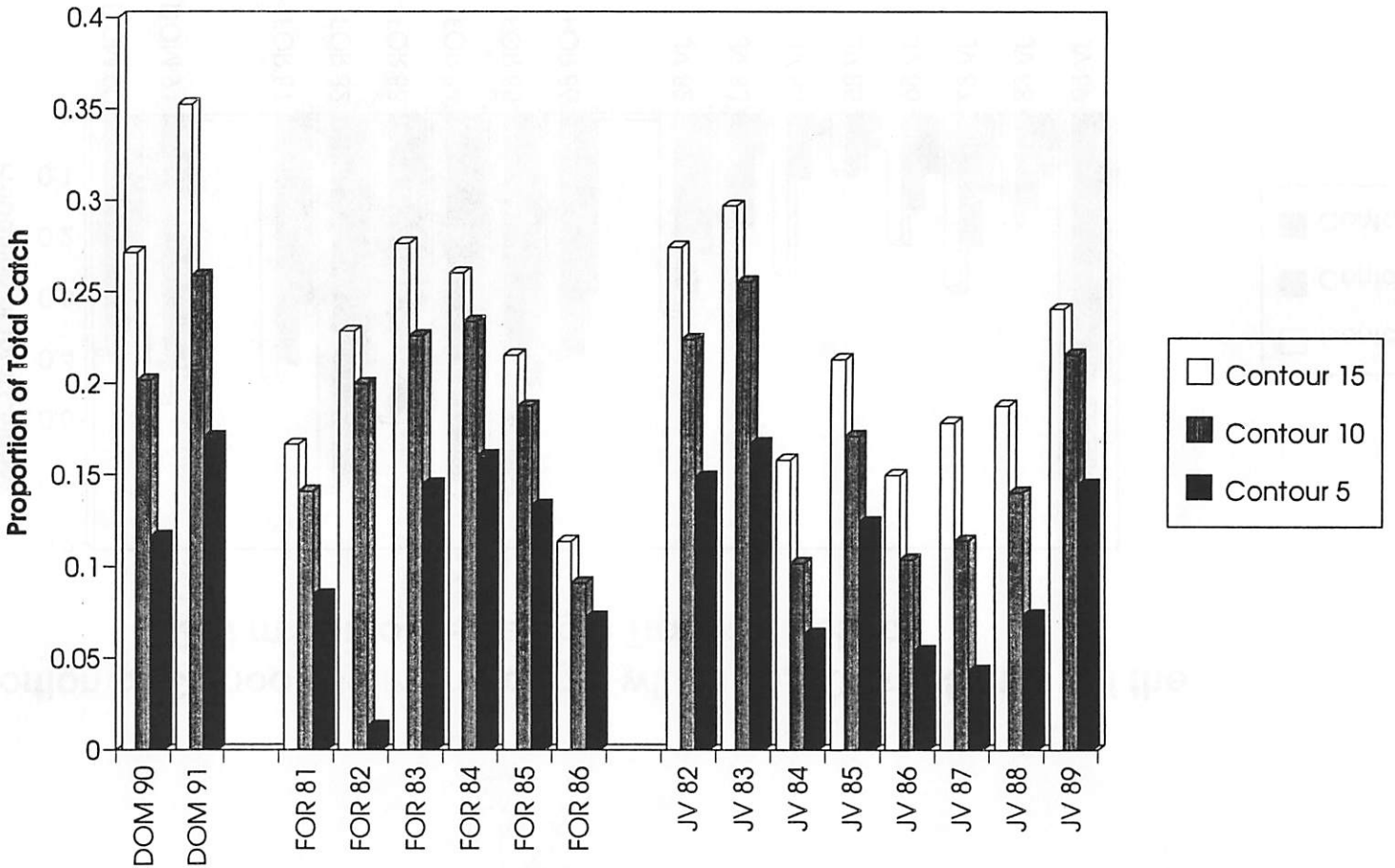
1993 - Time and Area - Status quo minus the given alternative and cap level



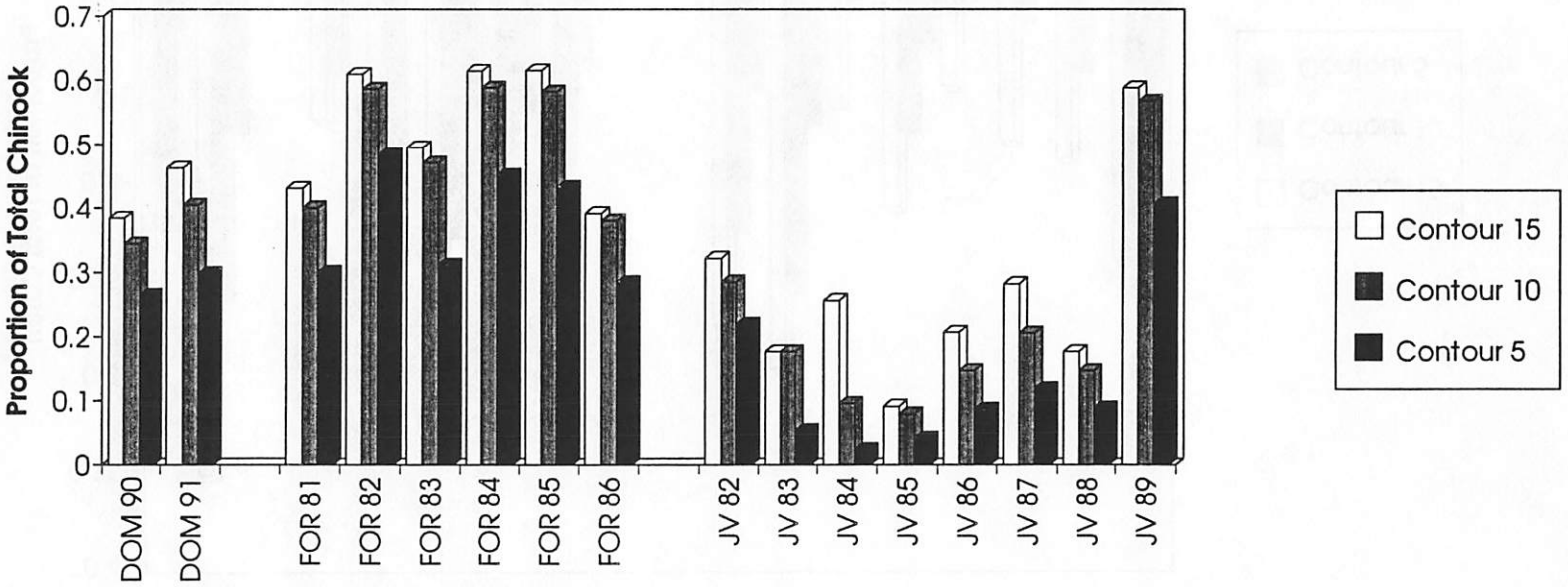

Observed Foreign Fisheries Groundfish Catch by Month
Metric Tons
600000
500000
400000
300000
200000
100000
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
1981
1982
1983
1984
1985
1986


Observed Foreign Fisheries Bycatch by Month
Number Chinook
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
1981
1982
1983
1984
1985
1986

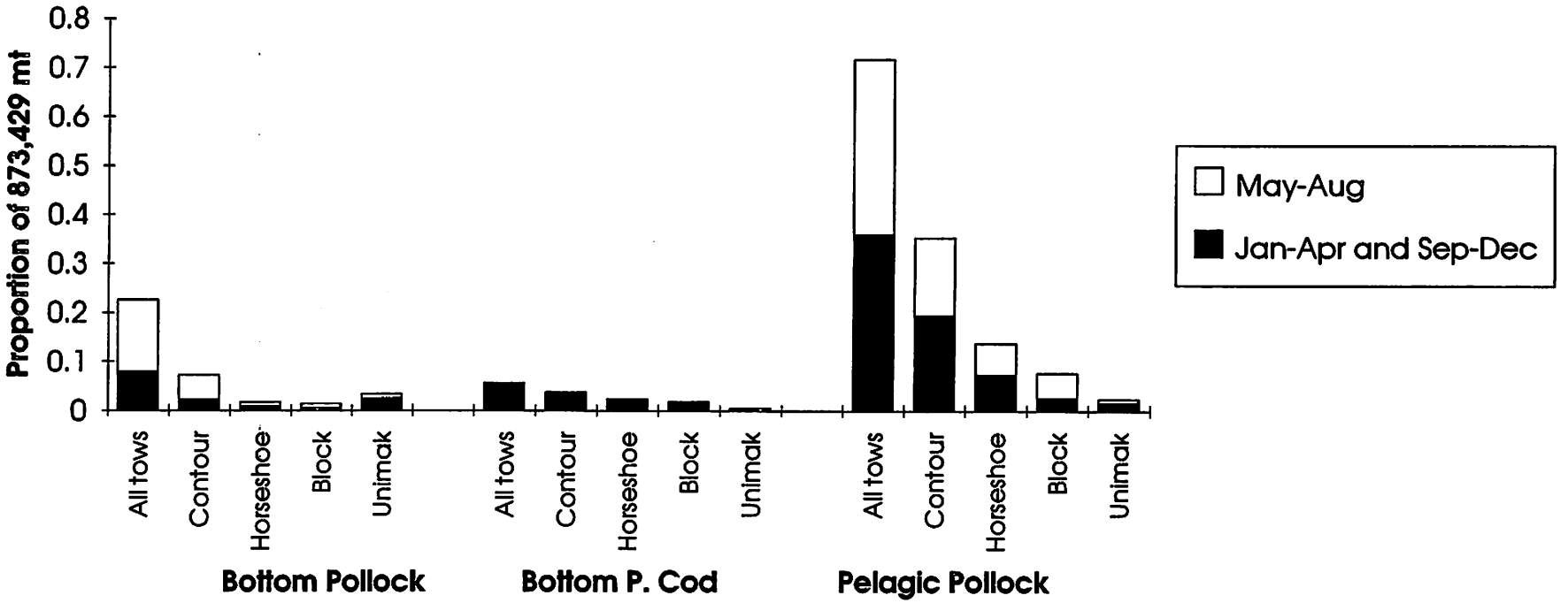
Proportion of Groundfish Catch within 15, 10 and 5 miles of 200 m contour - Pelagic Trawl for Pollock



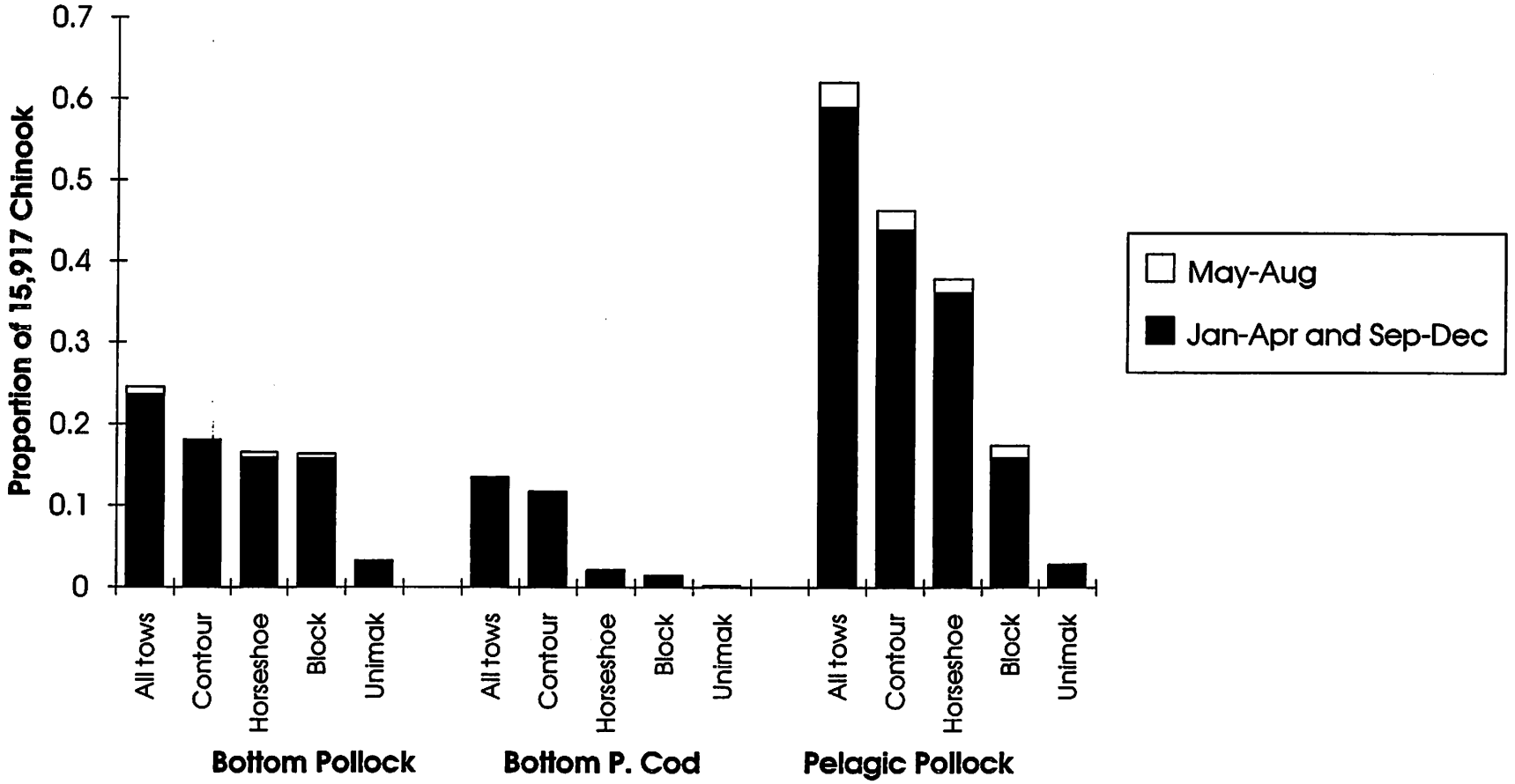
Proportion of Chinook Salmon caught within 15, 10 and 5 miles of the 200 m contour - Pelagic Trawl for Pollock



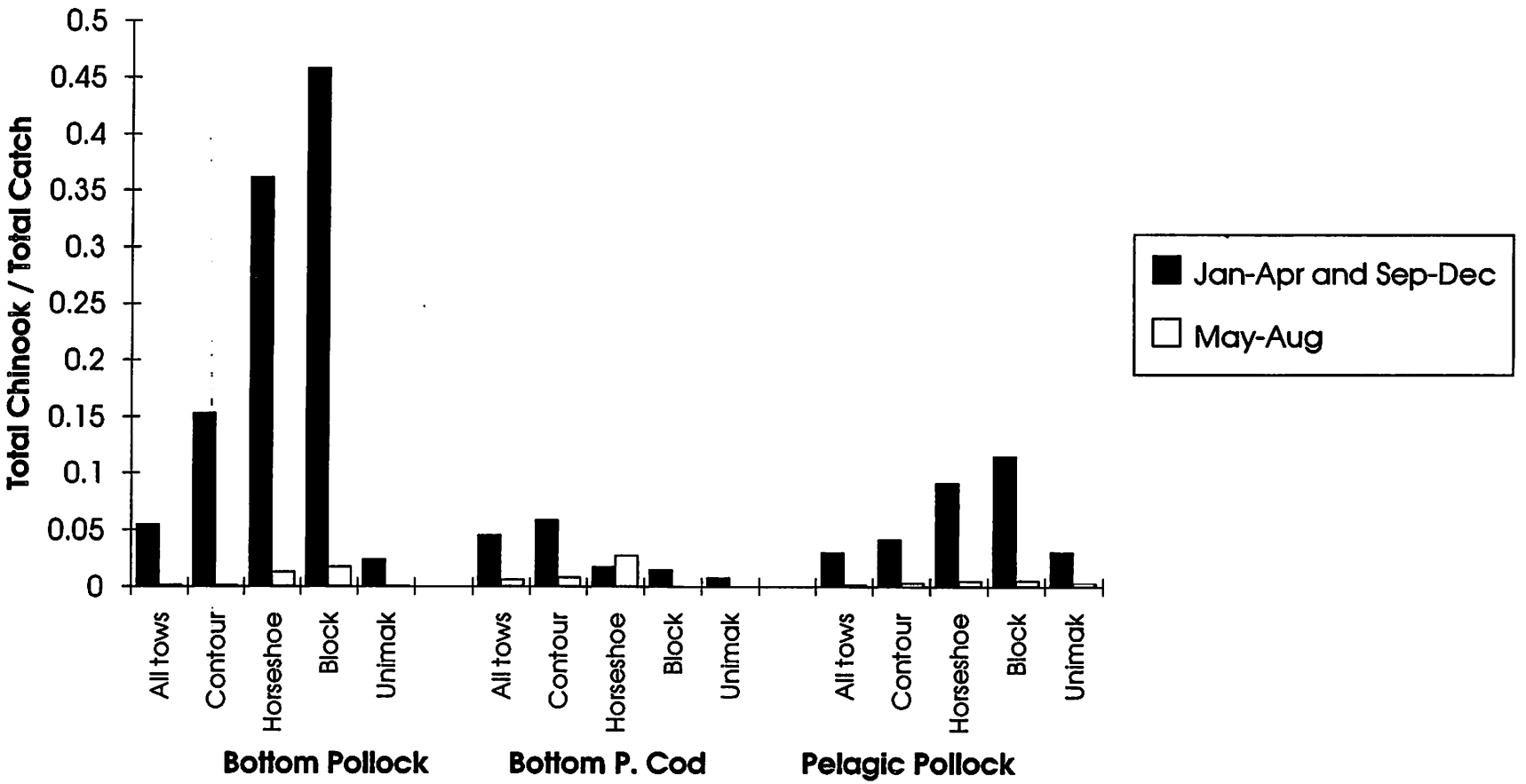
Total Catch - 1991 Domestic Observed Vessels



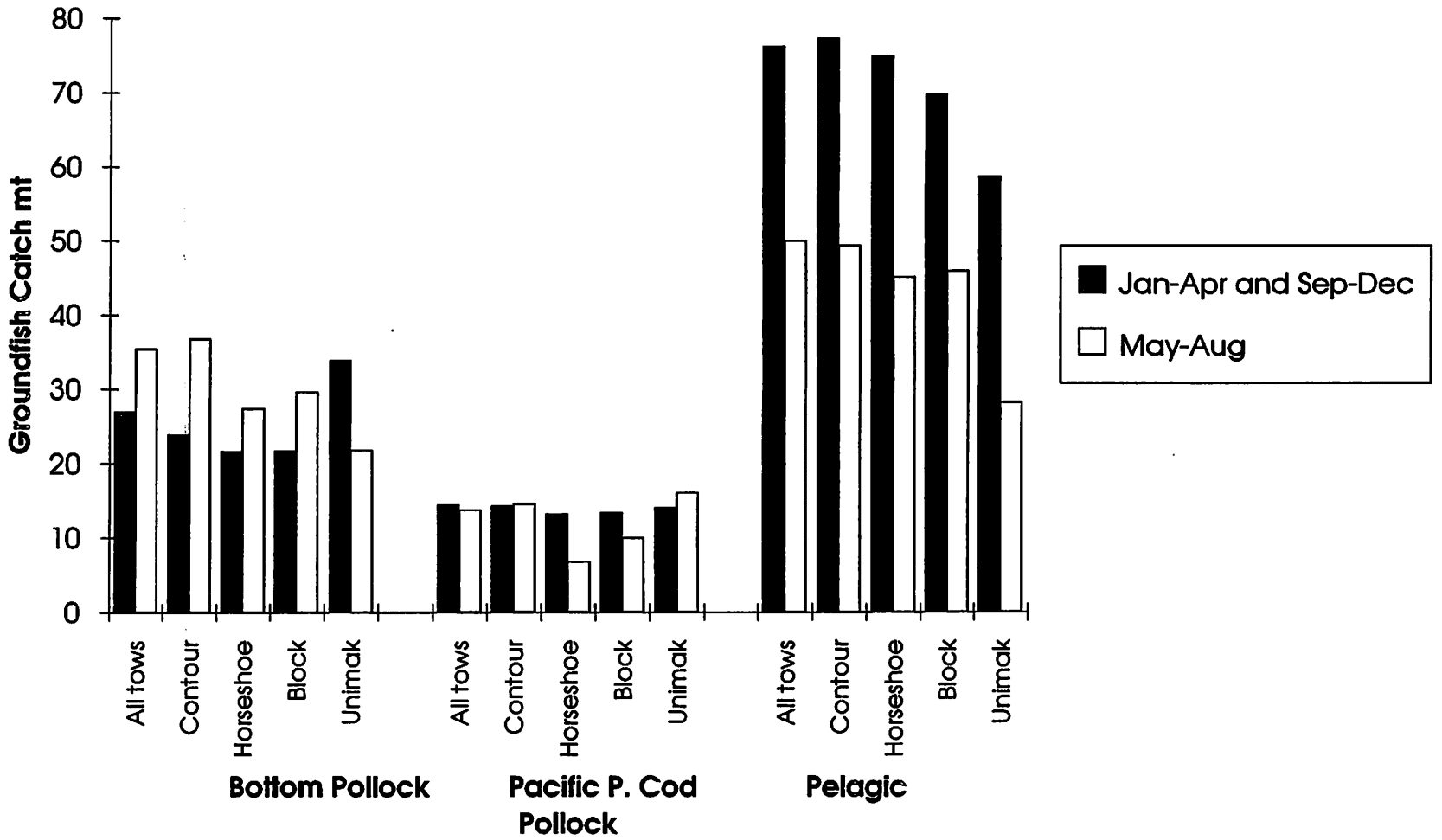
Total Chinook - 1991 Domestic Observed Vessels



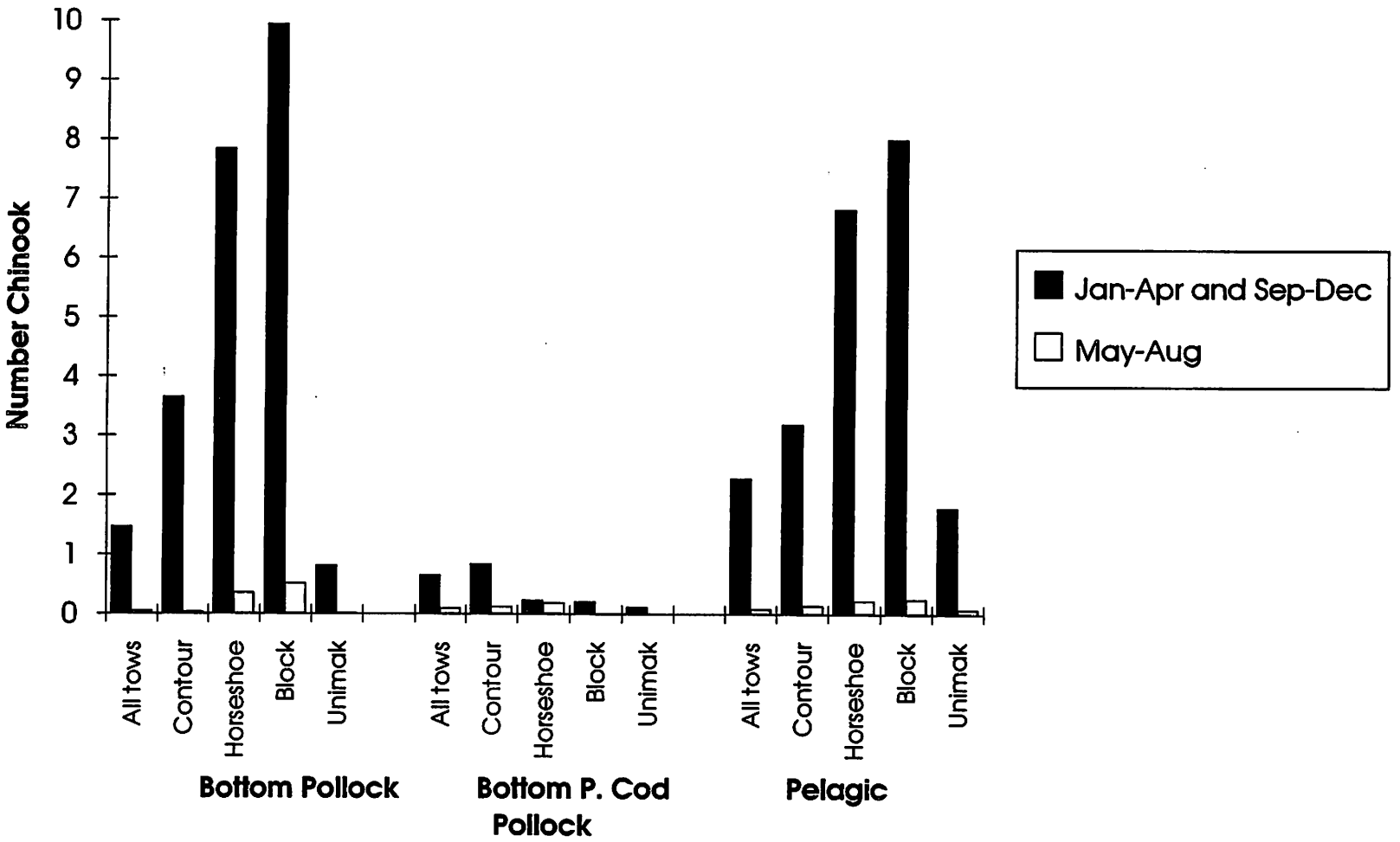
Bycatch Rates - 1991 Domestic Observed Vessels



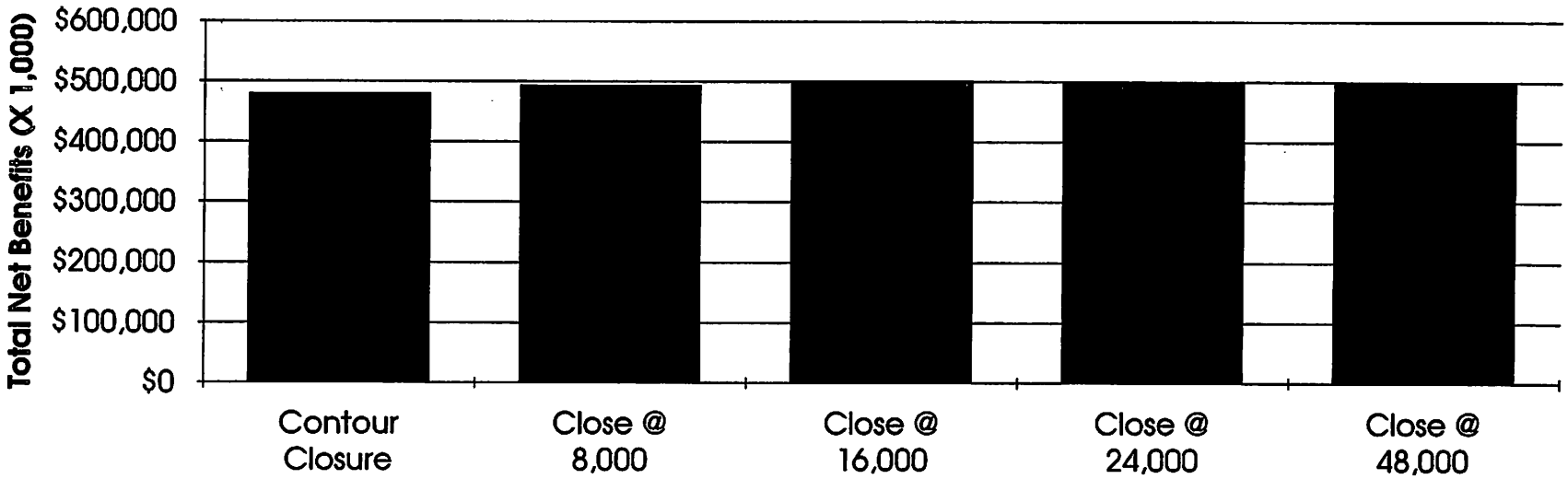
Mean Groundfish Catch - 1991 Domestic Observed Vessels

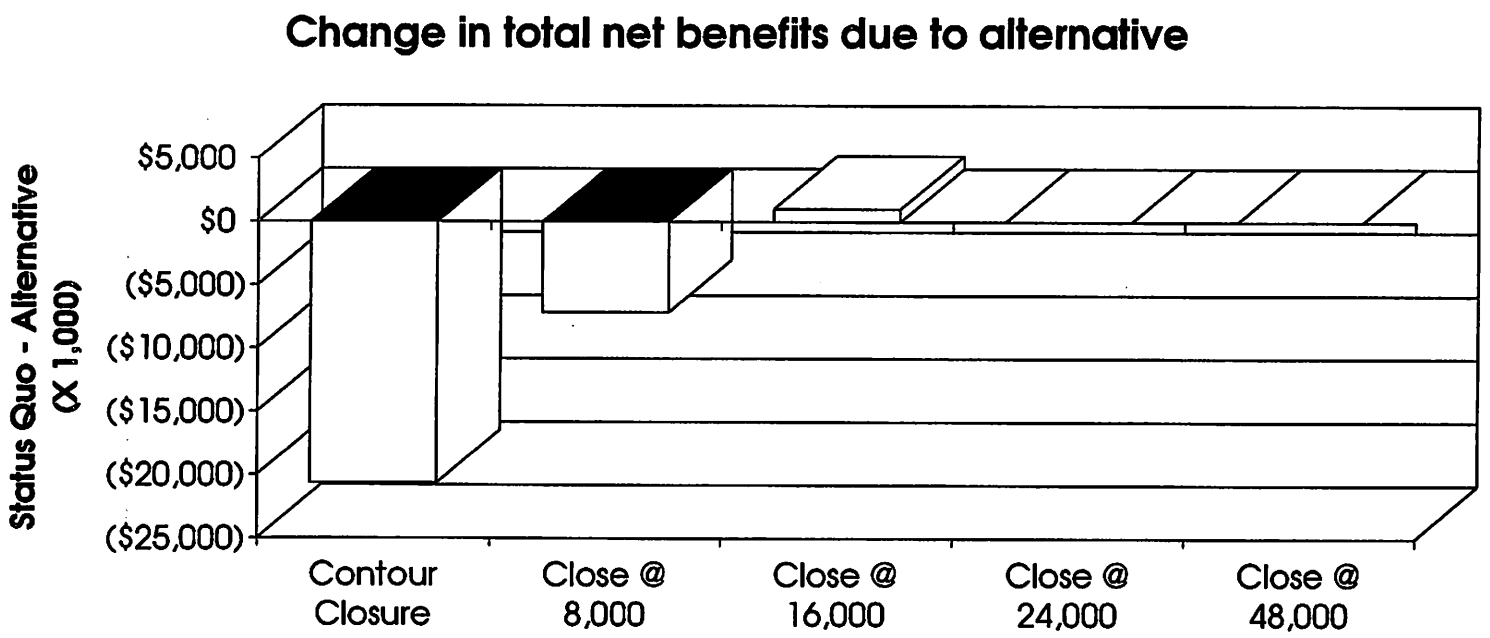


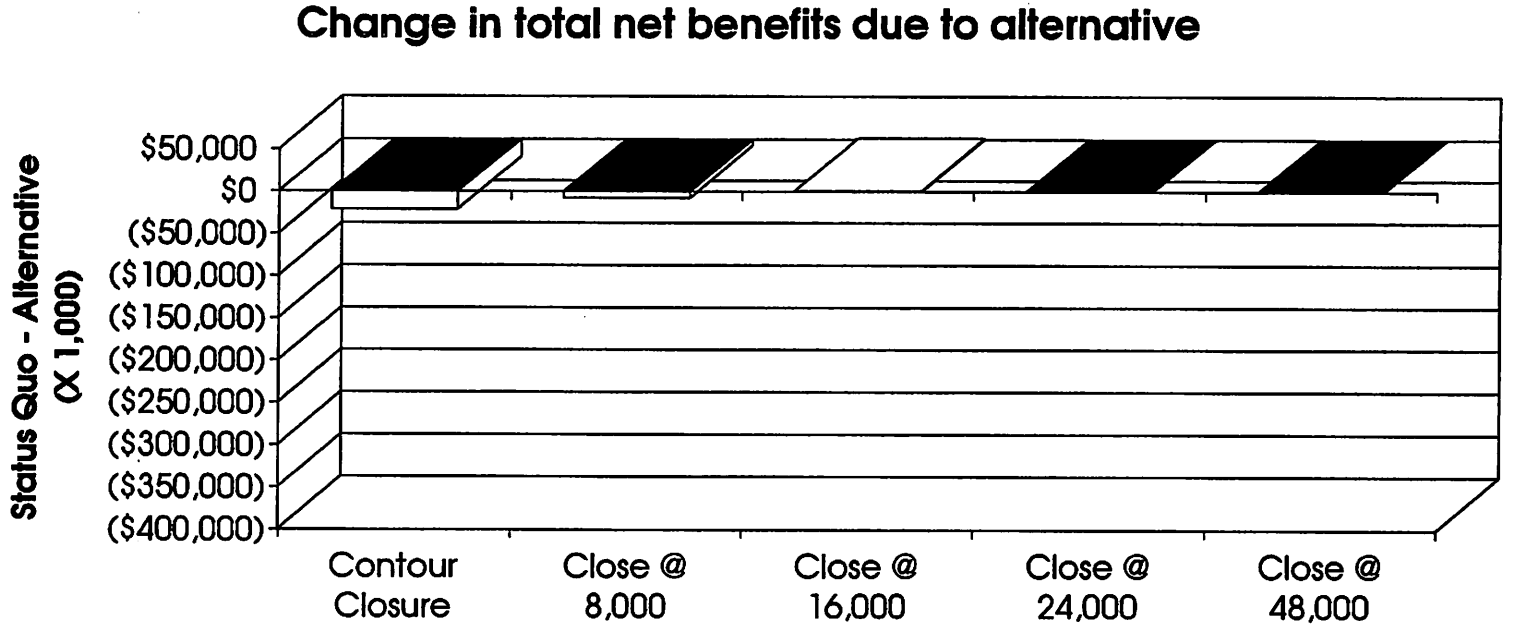
Mean Chinook Bycatch - 1991 Domestic Observed Vessels

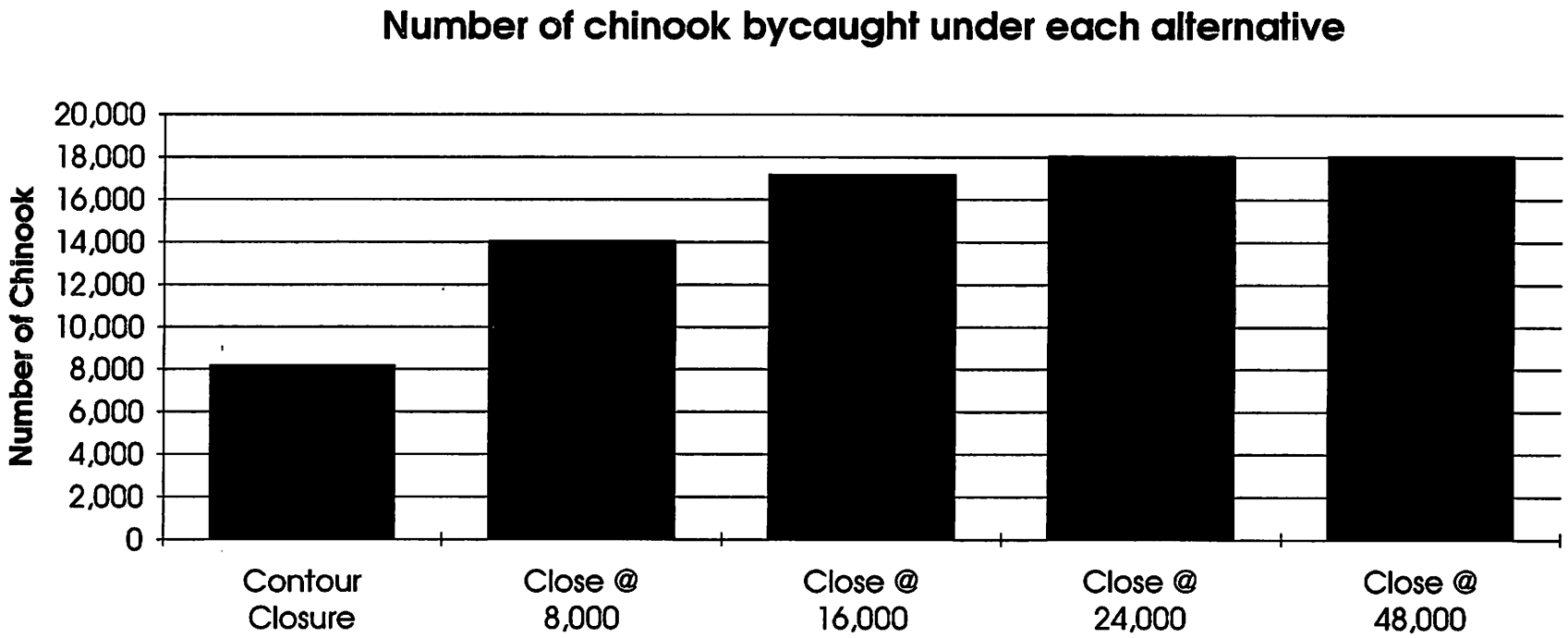


Total net benefits from closure of 200 m contour blocks during bycatch season




Change in total net benefits due to alternative
Status Quo - Alternative
(X 1,000)
$5,000
$0
($5,000)
($10,000)
($15,000)
($20,000)
($25,000)
Contour Closure
Close @ 8,000
Close @ 16,000
Close @ 24,000
Close @ 48,000


Change in total net benefits due to alternative
Status Quo - Alternative
(X 1,000)
$50,000
$0
($50,000)
($100,000)
($150,000)
($200,000)
($250,000)
($300,000)
($350,000)
($400,000)
Contour Closure
Close @ 8,000
Close @ 16,000
Close @ 24,000
Close @ 48,000


Number of chinook bycaught under each alternative
Number of Chinook
20,000
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
Contour Closure
Close @ 8,000
Close @ 16,000
Close @ 24,000
Close @ 48,000

Model Caveats

1) Actual fleet movement caused by closures is difficult to predict.

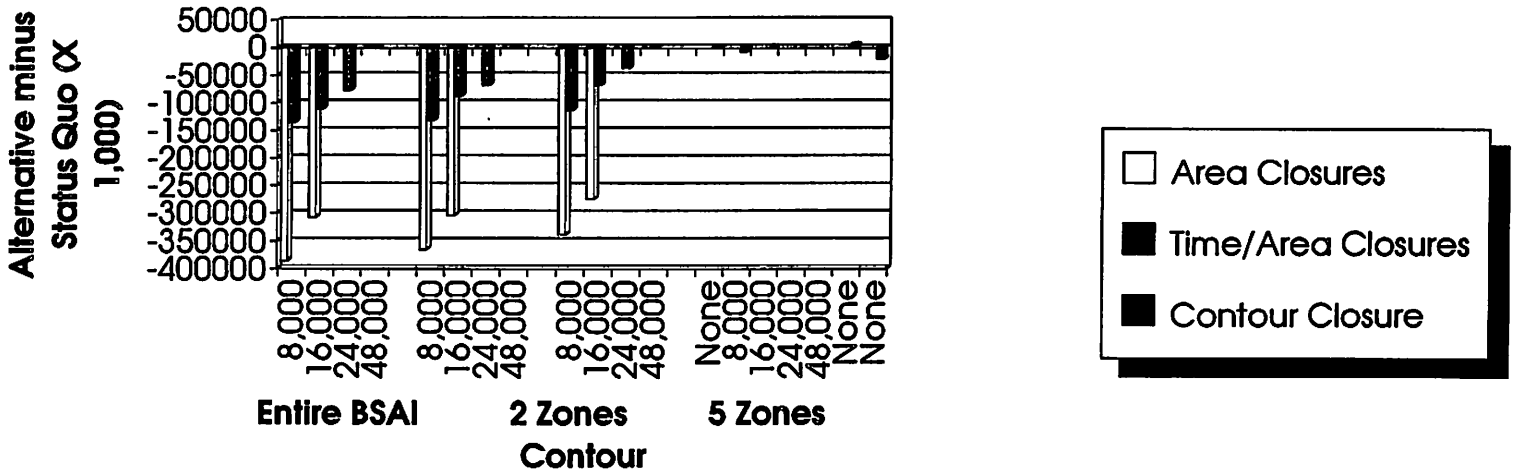
2) The management costs of alternatives is not included.

3) The the model does not include the cost to industry of moving to alternate areas.

4) Catch and bycatch rates reflect 1990 and 1991 patterns only.

5) Impacts on other bycatch species may vary from model results.

Net Benefits of Alternative minus Status Quo. Chinook Salmon not included in VIP program.



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Tillion: I'd like to move the AP recommendation with an additional caveat of how it impacts sportsmen and send it out for public review.

Lauber: An additional caveat on what?

Tillion: Well, you know the Kenai was mentioned. I'd like some impact on the value of it for the sports fishery. What we're having here is values that are based only on commercial values, not on the sports fish values, and I think we're leaving a tiger asleep that isn't all that asleep, it's just watching us. After the Kodiak meeting, I think to send it out and not mention the sports fishery which has a major interest in these chinooks, much more so that than the commercial, would be remiss. But, basically what the Advisory Panel came out with is a very good solution for this we're in. I think it would be a mistake to not send it forward for public review.

Lauber: O.K., so it recommends send document out for public comment, but to expand it to include an analysis of the current impacts of salmon bycatch on the domestic fisheries and escapement, and you wanted to specifically include the analysis of the Kenai River?

Tillion: Well, no, on the sports fishery, just say sports fishery.

Lauber: Sports fishery all over the . . .

Tillion: Yes, I think that we'd like to know if any of those wander off down to Oregon; who knows, we might find a Snake River fish in there. But I think we should pay attention to the sports fish impact and it should be specifically mentioned along with the rest of the stuff that we have here. The AP proposal is actually a very good proposal.

Lauber: Is there a second to that motion? [Behnken] Is there any discussion?

Pereyra: Unfortunately I can't support Mr. Tillion's motion; I think it goes way too far based upon the document as it presently stands. It's not a complete document. In fact, I think it gives an inappropriate picture as to what alternatives may or may not do and it's incomplete. Not that I don't necessarily have some sympathy for what Mr. Tillion is talking about with regard to impacts on sports fisheries, but I think that this document maybe could go out as an historical document without the alternatives at this time and have further analysis done on it and come back to us in final form, but in its present form I can't support the motion and I'll have a substitute motion that I offer if this one doesn't pass.

Krygier: Mr. Chairman, is the suggestion to increase the problem statement to cover the allocation issues of the . . . not only conservation but the allocation issues? Is that what you're saying?

Tillion: Yes, that's basically what I'm saying. . .sports fishery.

Lauber: Now, wait a minute. The AP report, and I specifically read this before because I wanted to understand it, that it would not go out for public comment before it is expanded to include an analysis of the impact of current levels. . .and so forth.

Pereyra: If we're going to go that far, it seems to me we're putting a whole new analysis section into the report that hasn't gone through the AP, hasn't gone through the scrutiny of the SSC, the Council has had no discussion on that. I think it's really going way beyond what the document presently is and I think it even further supports or strengthens my concerns.

Alverson: This AP request, it specifically states "to include an analysis of the impact of current levels on salmon bycatch." It's pretty broad, it's not really specific as to what we're asking to be added and within the minority statement there are several issues that I'd like to find out what type of time it's going to take to accommodate some of these, such as cost/benefit analysis, if that's required, or if that's easily done with the existing model. I'm not sure what is meant by "the model predicts 100,000 tons less pollock" unless that means that that's a cost and should be included in some sort of cost/benefit analysis. There's no assessment of what it costs to fish off the edge; I don't know if that can be pulled out the inshore-offshore analysis; and, of course, the B season, trying to forecast what would happen with the current regime we have with the delayed B season. If I could get an idea of what sort of time it would take to add those things to the current analysis it would help me in voting on this.

Pautzke: I talked earlier with Dave Ackley and with Earl Krygier and one suggested alternative procedure here is to let Dave Ackley continue his analysis, folding in some of the concerns that we've heard here today about the August 15th date, the delay, some of these other questions that have come out of the AP and bring back that analysis for the normal review that we would do on groundfish amendments at the April meeting, then send it out for public review and take a final decision in June. Seems to me that these types of regulations probably will impact the 1994 fishery, not the 1993 fishery, and possibly you would have a study that could give you the information you want, now that you identify for him. He's told me that he could do some of this analysis and expand it considerably between now and April and possibly you could shift your final decision since I think it's probably going to be a 1994 regulation anyway. That's just a suggestion.

Mitchell: Dave, would you be able to input the '92 fishing statistics?

Ackley: As I understand it, the observer data that I use in the GIS program, I would guess that at least a third to a half of that is input now in NMFS Center and I could probably get that and, maybe within a month or two I could have all of 1992. And, I think the model is mostly based and catcher processor reports and I think that all of 1992 should be available within the next month, so I think I would have another year's worth of data, at least half of '92.

Berg: One thing that really impressed me, looking at Dave Ackley's presentation before was the consistency of the data from the foreign fishery all the way through joint ventures through DAP and I recognize we always want to have the best information, but the way I review the document now, it does contain the historical data and as the AP recommendation here is written, it would be updated then to reflect what Dave might be able to get from the data from 1992, but I suspect the 1992 data would actually be consistent with what's gone over for over more than a decade here among these fisheries, so I can see where the AP recommendation with respect to 1992 data would be useful, but I would have no objection to Dave completing that report and then sending the document out, because I don't think there's going to be a different trend in the data. I think there's not going to be any new surprises; I think it's probably going to repeat what's gone for the last decade in these fisheries.

Alverson: Dave, . . . can you respond to what sort of time frame it would take you to add some of this?

Ackley: I think Clarence gave a good overview of that. I think. . .basically the data that the State has for origins of chinook salmon and stock ID and returns to specific systems is somewhat limited, so when the AP says, "an analysis to look at where bycaught chinook salmon would end up," I told them and they realized that we'd work on the best information available and it would be sort of a

thumbnail sketch. We'd do the best job we can, but the data just really isn't there to break out specific returns into areas. No one knows the biomass in the Bering Sea or the stock composition in the Bering Sea, but we can get at it by published reports. So, that's definitely doable within a few weeks if this went out for public review. But to re-run the model with the 1992 data and to add 1992 to the geographical information system database would take probably at least until April to complete.

Mace: If this can be gathered together for review in April, and the final decision in June, I would think that might be appropriate and Mr. Tillion would like to withdraw his motion and proceed in that direction. There's a lot of uneasiness with the . . . lack of 1990, 91, and 92 data and the validity of the alternatives based upon what we have before us, so I think it would be better to delay this thing and come back in April with a final decision in June, if it can be accomplished.

Tillion: The problem I'm having is I really don't think we'd be very wise to delay what we have going out for review. We do need the additional data, which he has said he could do in a couple of weeks, and then it would continue on out. We'd like to face up to the salmon allocation problem between other fisheries that would include the sports fishery, but it would also include other commercial. . .to delay it that long or to look like this Council was unwilling to send something out for the protection of chinook is painting the wrong picture to the general public. It's a hot issue, I don't doubt that we'll be making the final decision in June; this is to send what we now have out to public comment. I think we would be very wise as a Council to ignore it. We just watched the Alaska Board of Fish . . .[regarding sports representation and Council]. . .I just think you're sending a bad political message as well as delaying what should go out. Send it out for review with the caveats that the AP put in and I think you'll be ahead.

Millikan: How long would it take you to develop any sort of a forecast model with the 1992 data, using the current management regime and whatever we know about salmon in the area, projecting that out a year or two so we can make some guesses as to what impacts are going to be under the current management regime?

Ackley: That would take quite a while; as far as I know nothing like that's been done. It would take, this is just guessing roughly, it would take til this same meeting next year.

Millikan: That's what I'd like to see; I'm not sure it's expedient to get there right now. My feeling is that this is not ready to go out; that although the information provided is superb and I would love to have the public have an opportunity to look at it, I think we, and the public, could draw some very inferences from the data as it is presented. I don't think it's complete. We've had both the SSC and the AP suggest some changes and until those changes are made, and until the Council and the SSC and AP get another chance to look at the new analyses and the new data, etc., I would not be prepared to vote for it going out to public review.

Pereyra: Now, I really do have some concerns. Because if we can't tell what the potential benefits form our management alternatives may be in the out years, based upon our current management regime because of the fact that the analysis didn't take those into consideration and we can't do that for a while; I don't see how we can go out with such a document. I mean, it's just a worthless piece of paper except for its historical value. It gives some precise projections with very inaccurate results and that gives me a lot of concern because I think it does a great disservice to Dave and the colleagues who worked on this document and I think it puts the Council in a very bad light from the scientific standpoint. If we know beforehand that in fact a document is not a credible document, dammit we just shouldn't send it out until it's correct.

Lauber: I have a question of Dave Ackley. The motion as it now stands is basically the AP majority and it says to send it out, but then it says but not before, and if this passes it would not be sent out before, "it is expanded to include an analysis of the impact current levels of salmon bycatch have on the domestic fisheries and escapement." Do you have an estimate of how long it would be for you to update the document to comply with that?

Ackley: Yes, Mr. Chairman. As I explained before, I think that based on the data that Fish & Game has on stock status in the western Bering Sea, we could, within a couple of weeks, project in general terms the bycatch that's foregone by the directed fisheries in westward Alaska, where those returns would end up and in what proportions and then compare that with escapement and total run size, and that's only doable really for the Nushigak that we have pretty detailed data on run strength and on year class returns, and on the Yukon where they've had some tagging studies and they have pretty good escapement estimates. But for the Kuskokwim that wouldn't be possible.

Lauber: Also, Mr. Krygier, would the State of Alaska, if we institute some savings, how would the State of Alaska implement regulations and so forth to ensure that the savings that we would put into effect would actually reach the streams and become escapement?

Krygier: Presently the systems out in western Alaska, as in most of the other places in the state, are managed under minimum escapement goals that we have within the streams to assure that escapement is the primary goal for those systems. When Mr. . . .was up . . [more not relevant to the question we're looking to resolve]

. . .

Mitchell: But, in order for the 1992 data to be in there, you wouldn't complete that until sometime in early April, is that correct?

Ackley: That's right.

Mitchell: Well, Mr. Chairman, I really want to have the '92 data. I have some suspicions about what the patterns of that fishery in this past is going to show and I think it's going to lead the Council to an increased ability to come up with an alternative that will be acceptable to a great number of the inshore fishermen and also the offshore fleet, so I would request that that be made part of the AP request.

Alverson: Is there ability to indicate what the costs of closing down certain squares, was that one option that I saw, when you had the latitude and longitude in those little squares beginning in and around Unimak Island? Will we have some sort of cost to industry of moving them out of there during time/area closures?

Ackley: I didn't present it in my analysis, but in the paper I did look at closing just the Horseshoe block and the Unimak block and allowing both to fish anywhere else, and it was the same closure where those blocks would be closed January through April and September through December and actually it only amounted in a savings of chinook salmon of only 800 fish because the model acted just as you would expect happens in real life: closure in that area, you still have high bycatch along the contours, so you moved people out of the horseshoe during those months, so [they just pick it up someplace else].

Hegge: I think when Mr. Berg asked you about '92 he mentioned that he thought it would be reflective of the patterns that you saw in earlier years. Did you agree with that?

Ackley: Yes, I do. I think it won't show much difference; I would be surprised if there were surprises in the '92 data.

Hegge: Is there a pattern. . .we had pretty consistent low catch from '82 to '86 and then the big increase; is there something that indicates what caused that big increase. Is it the time of fishing, the specific area, or . . .

Ackley: Well, I don't know if I can address that, but I know that the foreign fisheries in 1981, after the high bycatch, were put under a ratcheting down cap that they weren't supposed to exceed and they managed within mechanical means, I think as Harold Sparcks said, to reduce their bycatch below those levels. And, I'm not sure why the joint venture fisheries have had low bycatch but the domestic fisheries, as the fishery has grown, the bycatch has gone to the levels of about 30 to 40,000 chinooks pretty consistently.

Alverson: The foreign regs during that time did not allow the trawl fleet to fish in the Halibut Savings Area that went all the way up to the Pribilofs between January and April, so I'm sure that that's skewing that data base.

Lauber: Let's work our way out of this pretty quick; I don't want to cut anybody off. Tillion, you're next, then let's close it out.

Tillion: The idea that you're going to find a great deal of different data in '92 is just something that you're dreaming about. It's not going to happen. This data has run so consistently, so long, it's going to show just about the same thing and therefore to delay for the '92 data is just an excuse to delay; it's hooking on something that delays. I think that we should go out, the economic analysis exaggerates the costs because they're set by squares rather than the contour of the 100-fathom curve which would be considerably less. I think that to be afraid to go out to public review would be az mistake on the Council's part. I think we'd better go out to public review, the corrections that could be made in the next couple of weeks, both the SSC and AP have recommended we send it out for review. We're not going to find anything a great deal different; we're going to have to face this problem down the line and to go for the '92 data which postpones everything for a year is just going to get us in hot water. He said how long it would take to analyze the data . . .

Pautzke: April it would be, so it would still be in place for '94.

Motion voted on - passed; assume that means the '92 data is out.