

BRIEF NON-EXHAUSTIVE SUMMARY OF FEDERAL, STATE EXPENDITURES AND INVESTMENTS ON ST. PAUL ISLAND SINCE PHASEOUT IN 1983

1. St. Paul Island Trust		
*	federal appropriation 1984	\$12.0 million
*	federal appropriation 1988	1.6 "
2. St. Paul Harbor Funding		
	1983 State	\$12.0
	1985 State	5.0
	1985 EDA (dock)	3.2
	1988-9 Army Corps	15.7
	1988 State	4.0
*	Bond Bank Finance	10.0
3. Other Projects		
	1984 Infrastructure fund	\$ 1.2
	1985 EDA Warehouse, East landing	.5
*	1986 HUD housing	2.8
	State DCRA	.4
	Senior Housing	2.2
*	CEIP loan (fuel)	6.5
	HUD Block Grant	.5
	Municipal Assistance	.7
	Federal Revenue Sharing	.3
	Power Cost Assistance	1.5
	CZM Planning	.4
	RDA	.3
	Airport Maintenance	1.0
	Weatherization	.7
4. Private Investment		
	IRA Corn Beef Fund	1.5
*	Tanadgusix Corp.	8.4
	Hokuten	.5
*	Delta Western	.3
	PASCO	.2
	SUBTOTAL	\$94.6

Not included: welfare, food stamps, unemployment, social programs, retirement contributions, etc.

* Denotes obligations for which repayment must be made.
 See schedule attached.

Loan Obligations on St. Paul (Non-Exhaustive)*

	<u>Million</u>
Loans to City from St. Paul Island Trust	\$ 9.5
Bond Bank Finance (1989)	10.0
1981 +1986 HUD Housing	4.6
CEIP Oil Tank Farm & Pipeline Loan	6.5
Tanadgusix Corp. (Pribilof Island Processors, Inc.)	5.0
Delta Western	<u>.3</u>
	\$35.9

*** Based on Harbor revenues to be paid back**

BRIEF NON-EXHAUSTIVE SUMMARY OF FEDERAL, STATE EXPENDITURES AND INVESTMENTS ON ST. GEORGE ISLAND SINCE PHASEOUT IN 1983

St. George Tanaq Corporation

1983	\$ 456,467
1984	1,101,619
1985	1,009,512
1986	857,780
1987	534,815
1988	<u>473,676</u>
	4,433,869 <u>3/</u>

City of St. George 1/

St. George Breakwater Funding by State	19,000,000 <u>2/</u>
1983	36,000
1984 and 1985	2,023,000
1986 and 1987	2,169,000
1988 and 1989	<u>5,450,000</u>
	28,678,000

St. George Traditional Council 3/

1983	6,000
1984	807,000
1985	103,000
1986	706,917
1987	144,200
1988	<u>169,200</u>
	1,936,317

St. George Island Trust

1983 - federal appropriation	<u>8,000,000 4/</u>
	<u>\$43,048,186</u>

-
- 1/ These expenditures, \$2.5 million represents loans from the Farm Home Administration
- 2/ Estimated amount necessary to complete Boat Harbor - \$8.4 million.
- 3/ Does not include two \$350,000 loans to the City each from Tanaq Corporation and St. George Traditional Council (IRA).
- 4/ Substantial amounts "loaned" to the City of St. George.

DON YOUNG
CONGRESSMAN FOR ALL ALASKA

AGENDA D-3(e)(4)
JUNE 1990

WASHINGTON OFFICE
2331 RAYBURN BUILDING
TELEPHONE 202/225-5765



ANCHORAGE, ALASKA 99513
TELEPHONE 907 271-5978

BOX 10, 101 12TH AVENUE
FAIRBANKS, ALASKA 99701
TELEPHONE 907 456-0210

401 FEDERAL BUILDING
P.O. BOX 1247
JUNEAU, ALASKA 99802
TELEPHONE 907 586-7400

501 FEDERAL BUILDING
KETCHIKAN, ALASKA 99902
TELEPHONE 907 225-6880

RT 1, BOX 1605
KENAI, ALASKA 99611

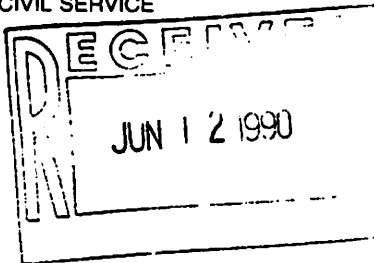
COMMITTEES:
INTERIOR AND INSULAR
AFFAIRS
MERCHANT MARINE AND
FISHERIES

POST OFFICE AND
CIVIL SERVICE

Congress of the United States

House of Representatives

Washington, D.C. 20515



June 7, 1990

ACTION	ROUTE TO	ADDRESS
	Sec. Dir.	Box 17 KODIAK, ALASKA 99515
	Dep. Dir.	P.O. Box 1860 NOME, ALASKA 99762
	Admin. Off.	
	Exec. Sec.	
	Sec. 2051	
	Sec. 2052	
	Sec. 2053	
	Sec. 2054	
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	Sec. 2066	
	Sec. 2067	
	Sec. 2068	
	Sec. 2069	
	Sec. 2070	

Dr. Don Collinsworth
Chairman
North Pacific Fishery Management Council
Box 103136
Anchorage, AK 99510

Dear Don:

It has come my attention that the residents of the Pribilof Islands have requested special consideration from the Council in regard to access to fisheries resources in the Bering Sea. I am writing to strongly urge the Council to consider this request.

As you know, the residents of the Pribilofs reluctantly but voluntarily agreed to terminate their relationship with the Federal government in 1983. In exchange, a trust fund was established that was to be used to promote the development of a stable, self-sufficient, enduring and diversified economy not dependent on sealing. It was the clear expectation of the Congress, as reflected in the House and Senate Committee Reports accompanying the Fur Seal Act Amendments of 1983, that such an economy would be based on the abundant fishery resources located in and around the Pribilof Islands.

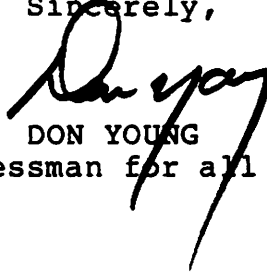
Unfortunately, for a variety of reasons the commercial fishing based economy on the Pribilof Islands has not yet developed fully. At the same time, the domestic fishery in the Bering Sea has grown tremendously. This makes it much more difficult for residents of the Pribilofs to compete with other American fishermen and utilize the resources lying off their shores.

I recognize that other communities are in the same difficult situation. I am therefore sympathetic to the concerns of residents of western Alaska that they also be accorded some sort of preferential access. However, the Pribilofs are a special case and there is a clear obligation by the Federal government to assist the Pribilof Islands. This obligation is a moral one based on the years of mistreatment suffered by the residents of

the Pribilofs at the hands of the United States government and a legal one based on the amendments to the Fur Seal Act. In my view, the Council, as co-manager of the resources in Federal waters, shares this obligation. I therefore hope that the Council will give serious consideration to proposals which will fulfill the purposes of the Fur Seal Act Amendments of 1983.

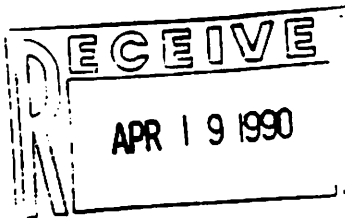
I look forward to working with you and the other Council members in the future on matters affecting our fisheries.

Sincerely,



DON YOUNG
Congressman for all Alaska

DY:rmg



AGENDA D-3(e)(5)
JUNE 1990

CENTRAL BERING SEA FISHERMEN'S ASSOCIATION
PO BOX 88
ST. PAUL ISLAND, ALASKA 99660
APRIL 18, 1990

Clarence Pautzke, Executive Director
North Pacific Fishery Management Council
605 West Fourth Avenue
Anchorage, Alaska 99501

Dear Mr. Pautzke,

These are the comments and recommendations of the Central Bering Sea Fishermen's Association on the proposed IFQ management regime for blackcod.

Please recall that in April, 1989, CBSFA proposed the Council allocate not less than 5% of Bering Sea groundfish TAC to vessels, facilities and entities based on the Pribilof Islands. This proposal has received no review or analysis, nor any regulatory review. Instead, we find a "conceptual program allocating to "Coastal Communities" 4% of BSAI and GOA fixed gear TAC, and a qualified program of fisheries entry to be split among eligible communities. For the Pribilofs, this is unacceptable.

It has been stated on occasion that the proposed IFQ system for sablefish will become a model for limiting access to other fisheries. We oppose an IFQ system which bars new entrants like ourselves to any fishery, especially in fisheries for which there is ample resources in the proximity of the Pribilof Islands. Our request for an allocation did not extend to the salmon fisheries, nor did we seek herring for our islands. Our communities were promised under the Fur Seal Act Amendments of 1983 the opportunity to develop fisheries based economies. These economies were to be based on Bering Sea resources. Major government investments and major investments from our own resources have been directed to accomplishing this objective. What we must have is access to those resources.

We do not hold anyone in particular responsible for an overcapitalized fishery. It is unfair and in contradiction to federal promises made to Pribilovians that we must stand by and watch resources around the Pribilof Islands disappear because our progress in developing fisheries capabilities has not kept up with other developments in the fishery at large. Our request for an allocation was made in recognition of this fact, and was meant to provide a means to assure our own rational development, at a pace that our communities can handle.

On St. Paul Island, which now has completed breakwater facilities, we have been successful in obtaining onshore investments in processing capacity. St. George Island may be a

year or so behind St. Paul. Now, even in its first year of limited operations, former joint venture vessels fishing for the community processing plant will be halted soon in fishing efforts due to bycatch closures brought on by an outside fleet fishing largely to the east of the Pribilofs, leaving nothing available for use in a local economy. While we are supportive of strict bycatch measures and clean fishing for purposes of conservation and preservation of longline and crab fisheries, the impact on our communities from large outside fishing vessels is obvious. We believe that a fair solution to the bycatch problem could be achieved by area preregistrations, and apportionment of bycatch limits to each vessel. This would encourage clean fishing, and those who are unable to do so would and should be required to cease fishing.

Our investments are just as substantial as those who own large factory vessels and claim a right to resource harvest by virtue of their investment. The fact that our investments have been made onshore, and that we choose sustained economic use of the resource, as opposed to a mass harvest derby approach, is based on the need for a year round long term economy for our islands. Our economies will not survive a management system that encourages short term exploitation and wasteful fishing and utilization practices.

The fact that early closures and shorter fishing seasons will negatively impact investments made on the Pribilofs, is exactly why we requested a separate allocation for Pribilof communities in the first place, as a means of obtaining the sustained access to the resources we must have for the economic development promised by the Fur Seal Act. To date, the NPFMC has not seriously considered our April, 1989 allocation proposal. To my knowledge it is not even writing about our proposal in its ongoing EIS effort on the broader allocation debate scheduled for discussion later this year. We would like to know why.

Aside from our own long term economic needs for resources to feed island based economies, the impacts of major factory trawl fisheries is coming into focus in a conservation light as well. We have a need on our islands for fishery resources that extends beyond 1995. Where will all the large vessels move after Bering Sea resources are depleted? Trading off long term management of renewable resources for short term profits is not in the best interests of serious fishermen, and certainly not in Pribilof long term interests. The situation developing in the Bering Sea is not unlike that in the Gulf of Alaska (Kodiak) as far as our islands are concerned. Perhaps we also should go to quarterly allocations of TAC in the Bering Sea. The Council should not wait until an emergency situation occurs before it takes action.

Concepts of coastal community quotas, or disadvantaged communities appear to us as hard to define and confusing concepts because they tend to isolate a part of the fishery resource and make it something entirely different and distinguishable from the

main debate over the resource, which all agree must be managed as a whole. These efforts tend to blur the real issue, which is finding some means of allocating use of a Bering Sea resource that has too many claimants, and preserving it over the long term. Our view is that, if anyone has a valid claim, we have one. That is why we seek a Pribilof allocation for our communities, or an onshore zone that ties resources to our communities in a similiarly effective manner.

Things are happening quickly in the Bering Sea fishery. We have strained our resources to stay abreast of Council activities in hopes that solutions will be found, which include in them our concerns for resource access by Pribilof communities. We formally request the NPFMC to review and take action on our proposal, or at least advise us why no action can be taken.

As always your cooperation is appreciated. We understand that staff resources are strained to the limit, and that you must deal with complex issues between every meeting. We, nevertheless, must know where we stand for the purpose of planning our future. Thank you for any assistance you can give us.

Sincerely,



Perfenia Pletnikoff, Jr.
President, CBSFA



Canadian Embassy

Ambassade du Canada

Note No. 89

The Embassy of Canada presents its compliments to the Department of State and wishes to draw to the attention of the United States Government Canada's continued concern over the slow pace of action on the part of the United States to curb existing practices in the U.S. groundfish fisheries which are causing a serious decline in halibut stocks. The International Pacific Halibut Commission has also appealed to the United States to take effective measures to implement effective bycatch controls to halt the widespread losses of catch that are occurring in the halibut fishery. The Commission has made some concrete proposals for bycatch reduction in the Alaskan groundfish fisheries. These proposals are noted in appendix II of the February 23, 1990 Commission report titled "Assessment of Pacific Halibut Bycatch: Implications on Yield and Management".

At the 1990 annual meeting of the International Pacific Halibut Commission, the Commission was prevented from adopting proposed 1990 halibut quotas and fishing periods as a result of Canadian commissioners abstaining on

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- 3 -

Canada is encouraged by some of the positive actions taken by the United States to date, in particular the implementation of a comprehensive domestic observer program to monitor and obtain more accurate estimates of halibut bycatch levels, and the active consideration within the North Pacific Fisheries Management Council of regulatory amendments to deal with halibut bycatches. However, Canada is seriously concerned by the slow pace of United States actions to actually reduce the bycatch in 1990 and 1991. The halibut resource is currently in a natural downturn and has been for the past several years. Therefore the current level of United States bycatch limits will have an increasingly negative impact on future recruitment to the adult fishery. While such fixed bycatch caps may give the impression of holding the line, the reality is that the halibut resource is rapidly being depleted.

Further, Canada is seriously concerned at media reports indicating that the Alaska Factory Trawlers Association (AFTA) plans to ask the North Pacific Fisheries Management Council (NPFMC) to consider at its meeting in Anchorage, June 25-29, a proposal to increase the existing cap of 17.8 million pounds of allowable halibut bycatch by almost 2 million pounds. In Canada's view, the existing cap is already much too high. An increase of the magnitude

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- 2 -

their votes. Canada took this action with reluctance because of the long and cooperative history of our countries in this forum, but regarded it as warranted in view of the continued high levels of halibut bycatch in the Bering Sea and Gulf of Alaska trawl fisheries, the lack of adequate control and the adverse impact of this situation on Canada's halibut fisheries.

The Canadian halibut fishery is critically dependent on the migration of fish from the Gulf of Alaska and the Bering Sea. The Commission estimates that a range of 70 to 100 percent of the halibut in the Canadian fishery migrate from these areas. While a great number of Canadian halibut migrate into the waters off Southeast Alaska, their eggs and larvae drift westward. The resulting juveniles are then subject to mortality in the United States trawl fisheries.

These developments are having a negative biological impact on Canadian efforts to rebuild stock in area 2B. The 1989 bycatch estimates indicate that areas 3 and 4 accounted for 85 percent of the total bycatch mortality. This has serious implications for all of area 2 which is heavily dependent on the migration of juveniles from the Gulf of Alaska and the Bering Sea.

.../3

reportedly contemplated by the AFTA would have a highly detrimental and severe impact on the health of the halibut resource. Canada hopes that if such a proposal is made the NPFMC will not grant any increase at all but will instead begin the urgent task of substantially reducing this year the halibut bycatch limit.

The United States and Canada share the resource in area 2 under an arrangement set out in the 1979 Protocol to the Pacific Halibut Convention which provides 60 percent to Canada and 40 percent to the United States. This split is based on an average Canadian catch since the 1920s and recognizes the biological necessity of managing the fishery as one stock in order to avoid the overall depletion of the resource. As provision has been made in the 1979 Protocol (paragraph 3 of the Annex) for annual temporary deviations from this formula based on biological shifts in the distribution of the stocks, Canada has accepted a decreased share in area 2 since 1985. However, if the United States is unable to curb the high incidental catches in non-halibut fisheries, Canada may be forced to insist, as noted in our Aide Memoire of March 1989, on reversion to the 60-40 split set out in the Protocol.

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- 5 -

The Government of Canada endorses the appeal made by the International Pacific Halibut Commission for more effective ceilings to be placed on Alaskan halibut bycatches and urges the United States to take emergency measures under the Magnuson Act to control fishing effort, limit entry, enforce time and area closures and implement incentive programs for the trawl fisheries during 1990, so as to minimize the increasingly negative impacts of the high fixed caps on the halibut resource. In this regard, Canada would consider that a reduction in 1990 by the United States in the current levels of halibut bycatches to a range of 8 to 10 million pounds would represent significant progress.

In view of the seriousness of the bycatch problem, its deleterious effect on the halibut fisheries, and its potential negative effects on the operation of the Pacific Halibut Convention, the Canadian authorities would also appreciate the opportunity to meet with United States officials, including scientific advisors, to discuss this matter further. In this regard, it is proposed that a one-day meeting be held in Washington, D.C. during the week of August 13, 1990.

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The Embassy of Canada avails itself of this opportunity to renew to the Department of State the assurances of its highest consideration.

Washington, June 20, 1990



COMMISSIONERS:

ANDA ALEXANDER
PARKSVILLE, B.C.
DENNIS N. BROCK
OTTAWA, ONT.
RICHARD ELIASON
SIKA, AK
PENNOYER
LEALL, AK
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SEATTLE, WA
GARY T. WILLIAMSON
SURREY, B.C.

INTERNATIONAL PACIFIC HALIBUT COMMISSION

ESTABLISHED BY A CONVENTION BETWEEN CANADA
AND THE UNITED STATES OF AMERICA

AGENDA D-3
JUNE 1990
SUPPLEMENTAL

PAN

XOB

TELEPHONE
(206) 634-1838

FAX:
(206) 632-2983

June 20, 1990

Dr. Clarence Pautzke
NPFMC
P.O. Box 103136
Anchorage, AK 99510

Dear Clarence:

The Staff of the International Pacific Halibut Commission has become aware that the trawl industry is planning at the June Council meeting to request an increase in the halibut bycatch limit in the Bering Sea-Aleutian Islands (BS-AI) area. We wish to provide scientific advice on the impact of an increased bycatch limit for halibut in the Bering Sea and our rationale for opposing increased bycatch limits for Pacific halibut in 1990. We continue to recommend that the prohibited species catch limit in the Gulf of Alaska and the BS-AI be evaluated in the upcoming fishery management plan amendment cycle.

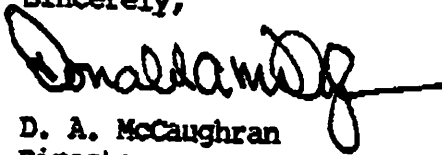
We have recommended in the past that bycatch limits remain at levels experienced during the early to late 1980s until a full analysis has been completed to justify changing them. We strongly oppose in-season adjustments when they are not based on sound conservation principles. Given the current assumption of 100 percent mortality for factory trawler halibut bycatch, the present 5,333 mt bycatch cap for the BS-AI is substantially above the 3,200 mt mortality average during 1978-1987, or the 2,800 mt average of 1983-1987, or the 4,000 mt mortality target previously used by the Council for the BS-AI. We believe that the present bycatch limit is too high, and should be lowered. The fact that foreign and joint venture fishermen have been able to catch groundfish with lower overall bycatch rates than experienced by the domestic fleet mandates that the domestic fleet move toward those cleaner practices. Increasing the 1990 BS-AI bycatch limit would move in the wrong direction.

We have identified four reasons why bycatch limits should not be changed in-season:

1. Insufficient evidence has been presented that demonstrates major changes in the biological factors that affect bycatch.
2. Behavior of fishermen is a major problem; incentives for cleaner fishing by individual fishermen, not higher bycatch, are needed.
3. Halibut stocks and halibut recruitment are declining, and increased bycatch will reduce yield to the directed halibut fishery, and may adversely affect the halibut stock.
4. Much of the remaining groundfish TAC may be harvested with clean gear, such as midwater trawl for pollock or groundfish pots (with halibut exclusion devices) for Pacific cod.

We have attached some technical information supporting our conclusions. Although we oppose any change in the bycatch limit for 1990, we would not object to providing exemptions for experimental operations which are carefully monitored and are not likely to take significant quantities of halibut as bycatch.

Sincerely,



D. A. McCaughran
Director

encl.

cc. Commissioners

TECHNICAL ADDENDUM
FACTORS AFFECTING BYCATCH
IPHC STAFF
JUNE 19, 1990

From discussions within the IPHC staff, and with representatives of management agencies and fishermen's organizations, we have identified two biological factors and one non-biological factor that influence bycatch: abundance of prohibited species, abundance of groundfish, and behavior of the fishermen.

Halibut abundance and bycatch

We do not currently have an estimate of abundance of halibut of the size most vulnerable to trawl bycatch, but we are working with the National Marine Fisheries Service (NMFS) to analyze NMFS trawl survey data for halibut abundance estimates. We anticipate completing this analysis in the fall of 1990. The 1989 Bering Sea survey appears to show a larger than average abundance of small halibut in the 2-yr old size range. We are awaiting results of the 1990 survey to confirm if this year class is indeed strong. However, this year class is unlikely to be the cause of high bycatch in 1990 because the small size of individuals means very little biomass is accrued even with large numbers of bycatch.

We have estimates of coast-wide recruitment (weight of 8-yr olds) derived from our stock assessment. To explore the possibility that availability of juvenile halibut contributes to magnitude of coast-wide bycatch, actual estimated bycatch mortality was compared with abundance of 8-yr old halibut, both lagged to represent year class (Figure 1). Bycatch was assumed to have an average age of 4-yrs and was lagged 4 years, while 8-yr old abundance was lagged 8 years. High bycatch mortality corresponded to weak year classes of the mid 1960s, and a generally declining bycatch trend coincided with the increasing pattern of recruitment of year classes of the 1970s. This relationship suggests that factors other than abundance of halibut have a major impact on bycatch quantity. Bycatch associated with the 1980 year class is a case in point: Bycatch of 9.7 million pounds (5,900 mt), which occurred in 1984, was the third lowest in recent years, yet the year class strength was the second largest on record. The bycatch taken in 1984 appears sufficient for harvesting the groundfish quotas at any level of halibut year class strength, and higher than necessary for average or weak year classes.

Abundance of groundfish

When high catch rates of groundfish occur and the trawl nets are on the bottom for a short amount of time, bycatch rates tend to decrease relative to periods of scratch fishing when groundfish catch rates are low. We do not have access to catch-per-unit-effort data, so have examined abundance of several groundfish species (data from the 1989 BS-AI SAFE document) as a proxy. Figure 2 documents slight declines occurred for the past several years. With groundfish abundance at such high levels, correspondingly low levels of bycatch seem appropriate.

Behavior of fishermen

Historical performance of the foreign and joint venture fisheries has demonstrated that fishermen can harvest groundfish at low bycatch levels (Table 1). In 1985, bycatch mortality by a largely foreign fleet was 7.2 million pounds (4,400 mt) coast-wide, and 4.2 million pounds (2,500 mt) in the BS-AI. For similar quantities of groundfish harvested almost solely by the DAP fleet, the 1989 bycatch increases to 13.6 million pounds (8,200 mt) coast-wide and 7.4 million pounds (4,500 mt) in the BS-AI (bycatch estimated without observers for the DAP fishery). Figure 3 shows that groundfish harvest and species composition in the BS-AI for 1985 and 1989 was nearly identical, yet bycatch increased 76 percent. With the experience gained from the 1990 observer program, the 1989 bycatch estimate appears to be low.

One major difference between 1985 and 1989 (and 1990) is the loss of individual fisherman responsibility for bycatch. Foreign countries were allocated bycatch, and fishing ceased when they reached the bycatch limit. Each vessel was controlled to keep bycatch at an acceptable level. The DAP fleet, however, has been operating for maximum self-interest at the expense of the industry as a whole. The Olympic system and concomitant race for fish virtually guarantees increasing bycatch rates. We see no evidence that the DAP fishing industry has taken adequate steps to prepare for the low bycatch rates needed for the groundfish fishery to continue with the bycatch caps currently set by the Council, even though the impacts of high bycatch rates have been clear.

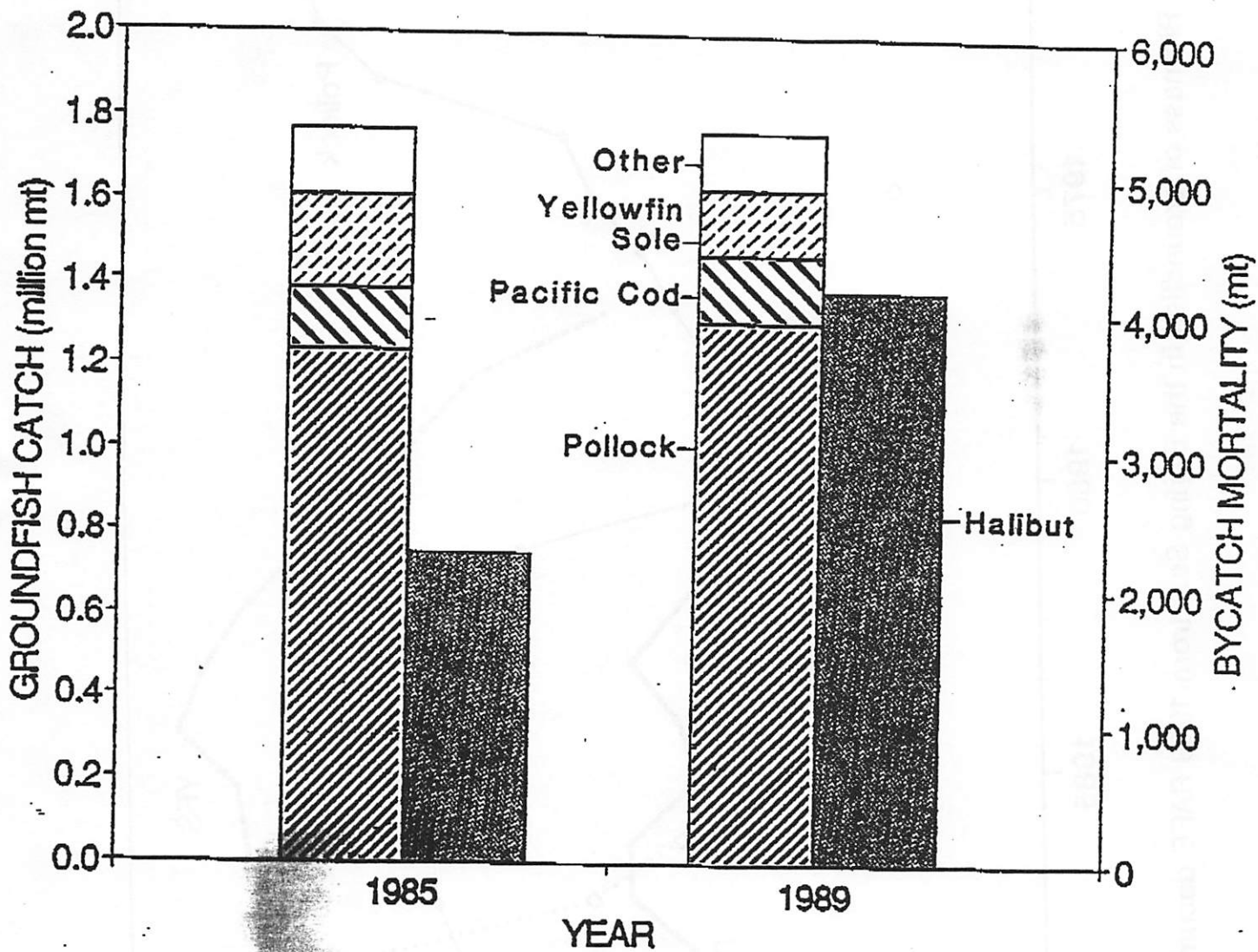


Figure 3. Groundfish harvest and halibut bycatch mortality in the Bering Sea-Aleutian Islands area, 1985 and 1989.

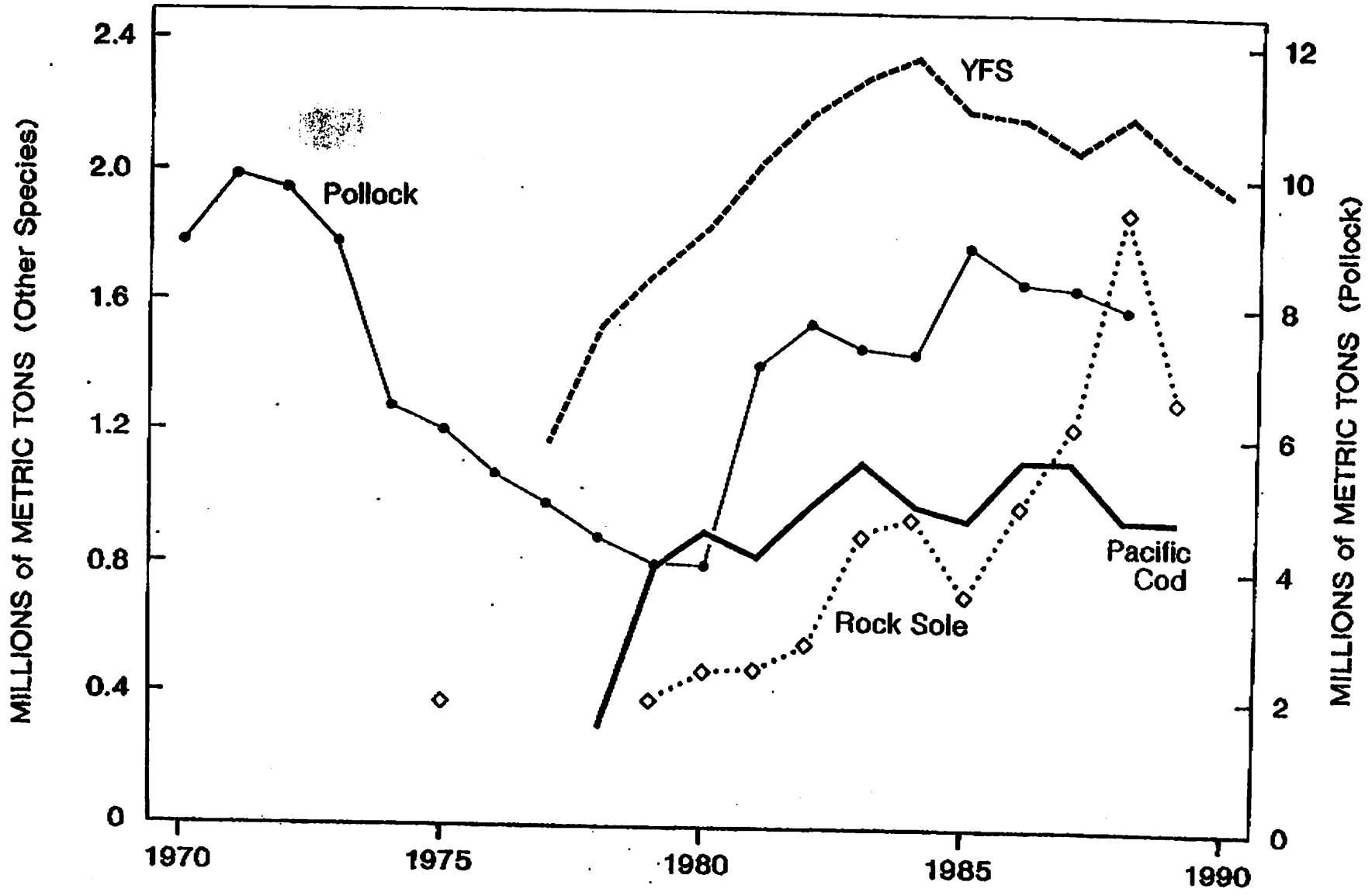


Figure 2. Biomass of groundfish in the Bering Sea, from 1989 SAFE document

Figure 1.

Recruits and Bycatch Mortality, 1927-85

Recruitment unadjusted for bycatch

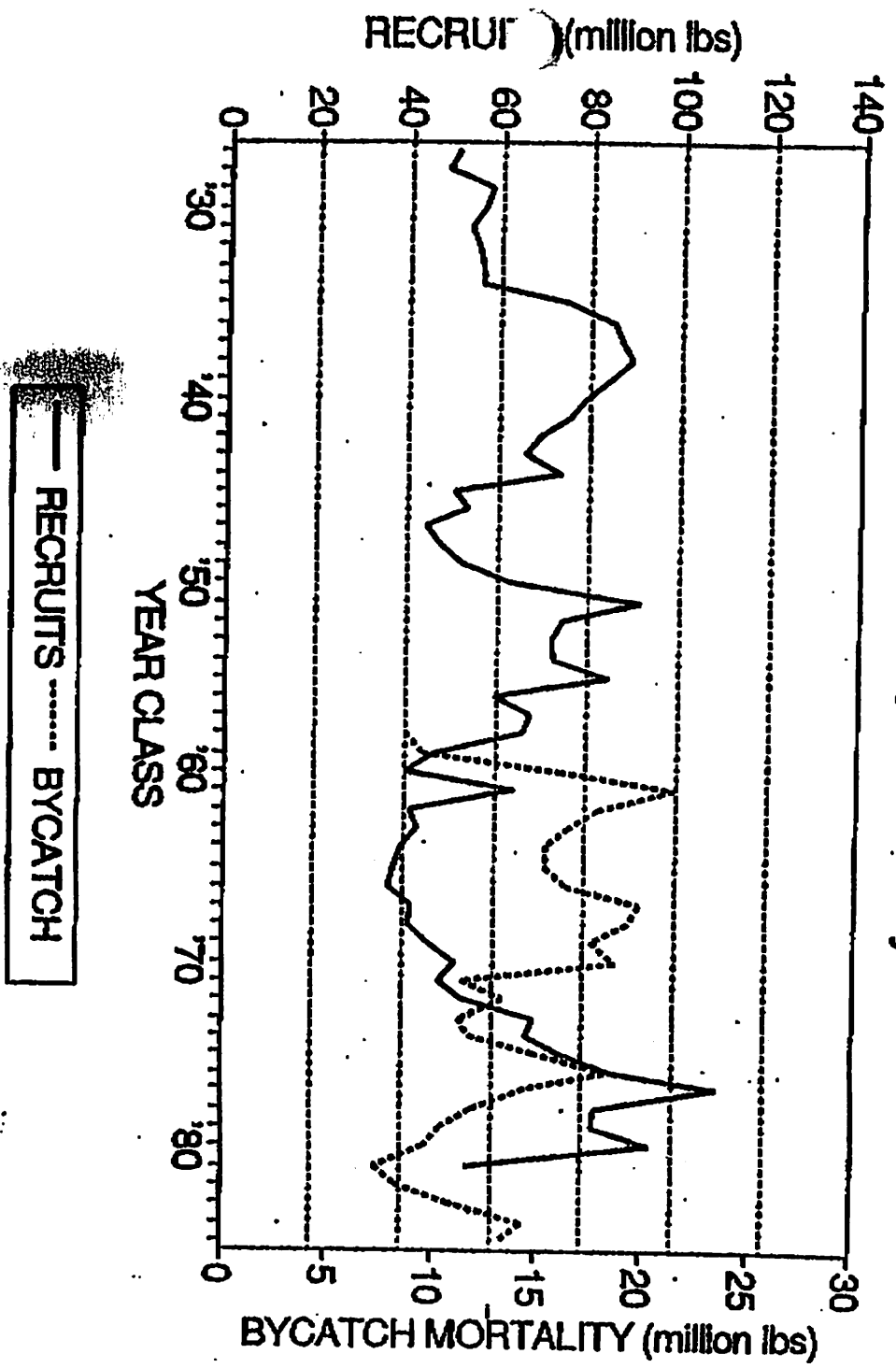


Table 1. Groundfish catch and Pacific halibut bycatch mortality in the Gulf of Alaska and Bering Sea/Aleutian Island regions, 1978-1989. Data for 1988 and 1989 are preliminary.

Year	Gulf of Ak. Groundfish Catch (mt)	Gulf Bycatch Mort. (mt) ¹	BS/AI Groundfish Catch (mt)	BS/AI Bycatch Mort. (mt) ¹	Total Groundfish Catch (mt)	Total Bycatch Mort. (mt) ¹
1978	171,000	3,180	1,386,000	3,029	1,557,000	6,209
1979	173,000	4,545	1,289,000	3,269	1,462,000	7,814
1980	215,000	4,595	1,334,000	5,570	1,549,000	10,166
1981	255,000	4,095	1,366,000	3,865	1,621,000	7,960
1982	236,000	3,784	1,322,000	2,869	1,558,000	6,653
1983	299,000	3,134	1,383,000	2,575	1,682,000	5,709
1984	357,000	2,382	1,609,000	2,830	1,966,000	5,211
1985	329,000	1,133	1,766,000	2,538	2,095,000	3,671
1986	142,000	934	1,742,000	3,363	1,884,000	4,297
1987	142,000	2,061	1,708,000	3,461	1,850,000	5,522
1988	151,000	2,245	1,982,000	5,343	2,133,000	7,588
1989	179,000	2,734	1,625,000	4,479	1,804,000	7,213
AVG 83-87		1,929		2,953		4,882
AVG 78-87		2,984		3,337		6,321

¹ Bycatch mortality estimates are from trawl, longline, and pot fisheries.

prepared: December 14, 1989