

M E M O R A N D U M

TO: Council, SSC, and AP Members
FROM: Jim H. Branson
Executive Director
DATE: May 23, 1983
SUBJECT: Status of Contracts and Proposed Projects

ACTION REQUIRED

- (a) *Contract 82-3 - Salmon Economic Profile: Concurrence to extend the contract to July 31, 1983.*
- (b) *Contract 82-4 - Halibut Limited Entry Study: Extend contract and review economic analysis and staff synopsis (see Agenda Item C-1).*
- (c) *Contract 83-1 - Social and Cultural Aspects of Pacific Halibut Fishery: Postpone due date of draft final report until July 1, 1983.*

BACKGROUND

Current Council contracts are listed below with contract information on the contractor, funding amount, percent expended to date, duration, objective, and status. Those contracts requiring Council action at this meeting are indicated with an asterisk.

Current Council Contracts

81-5: Incidental Salmon Catch Study
(FRI/UW, \$100,000, 78%, October 1, 1981 to September 30, 1983)

Objective: To determine the feasibility of using scale analysis to identify the stream or area of origin of chinook salmon caught incidentally in the foreign trawl fisheries off Alaska.

Status: A quarterly report for January - March 1983 has been received and distributed to the SSC for review.

82-2: Crab Observer Program
(ADF&G, \$69,489, 70%, April, 1982 to October 31, 1983)

Objective: To gather in-season catch data on species and sex composition, size frequency, fecundity, and discards.

Status: This contract was recently extended to October 31, 1983 to allow remaining funds to be used for more observer time.

*82-3: An Economic Profile of the Southeast Alaska Salmon Industry
(UA, \$10,000, 70%, April 1, 1982 to March 31, 1983)

Objective: To provide current data on effort, costs and earnings in the Southeast Alaska salmon fisheries.

Status: This contract should be extended through July to allow additional time for the final report to be reviewed by the SSC. The report was distributed to the SSC at this meeting.

*82-4: Halibut Limited Entry Study
(NW Res. Analysis, \$80,000, 70%, June 1, 1982 to February 28, 1983)

Objective: To fully evaluate a share-type halibut limited entry system for Alaska, from design of the system to analysis of its impact on income, prices, geographic distribution and product quality in the harvesting, processing, and marketing sectors; and to generally evaluate other types of limited entry systems.

Status: In March, the Council requested that the contractor submit an appendix to the economic analysis section of the report before it could be approved for public distribution. The Council staff was instructed to prepare a summarized edition of the report to facilitate review by the public. The economic analysis and the staff synopsis will be available at this meeting for review. The contract will need to be extended to cover the informational presentations scheduled for this fall. (See Agenda Item C-1.)

*83-1: Social and Cultural Aspects of the Pacific Halibut Fishery
(Langdon, \$26,500, 55%, January 1 to July 31, 1983)

Objective: To gather social, cultural, and demographic information descriptive of the contemporary Pacific halibut fishery important to management decisions.

Status: Field work is now underway. An additional \$1500 was approved by the Executive Director to enable the contractor to treat Anchorage as a primary community similar to Seattle, Petersburg and Kodiak. Apparently, a major number of fishermen from the Anchorage area made landings in 1982. The contractor has requested an extension to July 1 (from the current May 5, 1983) on the due date for the draft final report. Item E-1(a) is a progress report on this study.



UNIVERSITY OF ALASKA, ANCHORAGE

AGENDA E-1(a)
MAY 1983

3221 Providence Drive
Anchorage, Alaska 99508

April 14, 1983

COLLEGE OF ARTS AND SCIENCES
DEPARTMENT OF ANTHROPOLOGY

To: Clarence Pautzke, North Pacific Fishery Management Council
Fr: Steve Langdon and Marc Miller
Re: Progress report on Social and Cultural Aspects of the Pacific Halibut Fishery
(SC - 1)

This is the first report on the progress of the Social and Cultural Aspects of the Pacific Halibut fishery research presently underway. We will briefly summarize contract modifications that have taken place since the proposal was approved at the December Council meeting, discuss research efforts that have taken place or are presently in progress, and request an extension of the date for submission of the draft report.

Contract Modifications

1. Attitudinal Component - The original proposal called for collection of information on attitudes toward halibut limited entry from the sample selected to survey for social and cultural data. At the contract finalization meeting, a discussion of the merits of collecting attitudinal data at this time was held and it was determined by the Executive Director that since no specific proposal was before the public for consideration at the time, that collection of attitudinal data was likely to be confusing to the fishermen and the results of limited value to the decisionmaking process. Consequently attitudinal data were eliminated from the survey.
2. Additional Communities - One of our first tasks was to conclude our preliminary determination of communities for fishermen surveys. To aid in this task we requested an identification of 1982 halibut fishermen who made landings by community of residence (attachment). Two adjustments to our research design occurred as a result of this new data. First Kenai-Soldotna, initially not included for surveying, were added because of the substantial number of halibut fishermen resident in those communities. The two communities were combined and treated as a secondary community for data collection purposes. This was done without additional cost to the contract. Second, Anchorage (including Mountain View, Chugiak, and Eagle River) was startlingly revealed as the major community of residence for 1982 halibut fishermen who made landings. Consequently it was recommended to the Executive Director and agreed to by him that data be collected from Anchorage halibut fishermen. Because of the large number of such fishermen, we have determined to treat Anchorage as a primary community similar to Seattle, Petersburg, and Kodiak. An increment of \$1500 was requested and approved by the Executive Director for the additional Anchorage work.

Research Progress

1. Census Data - The following data have been requested by community for Alaskan communities on the coast south of 56° and are in the process of being collected from the Institute of Social and Economic Research of the University of Alaska. Prof. Miller is pursuing similar data on Washington communities in which halibut fishermen reside.

Census Variables

Demographic

Total population
Population by race
Age by sex, total population
Age by sex, Native population
Median age by sex
Residence five years ago
Population living as families
Mean no. of persons per household, total
Mean no. persons per household, Native
No. household with children under 18
No. households owner occupied

Education and Employment

Education: total, Native
Labor force status by sex, total
Labor force status by sex, Native
Labor force status of women with children
Weeks worked by sex
Class of workers
Occupation
Industry

Income

Household income
Aggregate household income
Median family income
Median household income
Source of income
Aggregate income by source
Family income, Native
No. persons by percent of poverty level

Other

Heating fuel
Cooking fuel

These data will all be obtained for 1980 and are being organized to provide regional, rural-urban as well as community level summaries of the information. Unfortunately, as should be well-known, census data is not constructed to provide a good picture of fisheries employment and income, but it is useful in providing comparative information on community characteristics.

We are attempting to obtain similar data on communities from 1970 so that some evidence of change and direction can be identified. ISER data appear to be limited to demographic variables from 1970 and it is going to take sometime to make them congruent with the 1980 data set.

2. Field research - Fieldwork has been undertaken in the following communities to survey fishermen and identify patterns of halibut fishing occurring in those communities. The only communities in which field research remains to be completed are Anchorage, Sand Point, and King Cove.

Communities in which Surveys Have Been
Collected by Region

<u>Puget Sound</u>	<u>Prince William Sound</u>	<u>Kodiak</u>
Seattle	Cordova Valdez	Kodiak Port Lions Ouzinkie Old Harbor
<u>Southeast</u>	<u>Cook Inlet</u>	
Petersburg Sitka Ketchikan Craig Kake	Homer Kenai Soldotna Seldovia	Alaska Peninsula- <u>Aleutian Islands</u> None

In the primary communities of Kodiak, Petersburg, and Seattle descriptive information on patterns of halibut fishing, movement into and out of the halibut fishery, fishermen's organizations and their role, and relationships of the halibut fishery to other fisheries have been obtained. This was made possible by extended time in these communities. In secondary and tertiary communities significantly less descriptive information has been obtained due to the shortness of the field time which has been focussed on finding and surveying sampled fishermen.

3. Surveys - In general interviewing of the fishermen in the different communities has gone well in that most have been cooperative with us. Several problems have appeared. In Kodiak (city), approximately 25% of the contacted fishermen refused to answer the questions or fill out the form so additional efforts by phone, mail, or local contact persons will be necessary to get a more complete sample. Elsewhere the rate of refusal has been 10% or less. A second and unavoidable yet more serious problem has been the difficulty in tracking down crewmen for interviews. Consequently the information we will be able to present about crewmen will be limited by the small number of actual crewmen we have been able to interview.

At present data is being collected from Anchorage fishermen and data on Sand Point and King Cove fishermen will be collected between now and May 6th.

A listing of communities with their proposed and actual number of surveys for captains and crew is attached.

4. Data analysis - Completed surveys are in the process of being coded and entered into the computer for analysis at the University of Washington. Several additional requests for data from the ADFG-IPHC file which will compare our sample of fishermen when completed to the universe of halibut fishermen will be undertaken to determine the degree of representativeness of our sample.

Pautzke
Progress Report, p. 4

Extension of Draft Due Date

We would like to request an extension on submission of the draft report until July 1. This extension will ensure adequate time for getting all data in, analyzed, and integrated in the drafting of the report.

Number of Halibut Fishermen with Catch Greater
Than 0 in 1982 by Community of Residence¹

<u>City</u>	<u>ST</u>	<u>Number</u>	<u>City</u>	<u>ST</u>	<u>Number</u>
Anchorage	AK	374	Wasilla	AK	10
Kodiak	AK	250	Kasilof	AK	10
Petersburg	AK	162	Unalaska	AK	10
Homer	AK	141	Edmonds	WA	8
Juneau	AK	138	Tenakee Springs	AK	8
Sitka	AK	133	Marysville	WA	7
Kenai	AK	106	Elfin Cove	AK	7
Ketchikan	AK	97	Ward Cove	AK	7
Soldotna	AK	84	Sterling	AK	6
Wrangell	AK	70	Halibut Cove	AK	5
Seattle	WA	57	Dutch Harbor	AK	5
Cordova	AK	56	Anacortes	WA	5
Hoonah	AK	51	Blaine	WA	5
Kake	AK	48			
Yakutat	AK	47			
Sand Point	AK	47			
Port Lions(?)	AK	44			
Angoon	AK	42			
Haines	AK	40			
Pelican	AK	39			
Seward	AK	38			
Craig	AK	36			
Ninilchik	AK	30			
Valdez	AK	27			
Eagle River	AK	25			
Port Townsend	WA	24			
Douglas	AK	24			
Auke Bay	AK	21			
Point Baker	AK	21			
Ouzinkie	AK	19			
Metlakatla	AK	18			
Hydaburg	AK	17			
Seldovia	AK	17			
Astoria	OR	16			
Bellingham	WA	16			
Mountain View	AK	15			
Larsen Bay	AK	14			
Chugiak	AK	13			
Palmer	AK	13			
Gustavus	AK	12			
King Salmon	AK	12			
Clam Gulch	AK	12			
Fairbanks	AK	11			
Everett	WA	10			

¹Communities with 5 or more resident halibut fishermen; complete listing available.

Halibut Fishermen Survey by Community:
Proposed and Collected

<u>Region/Community</u>	<u>Proposed</u>		<u>Collected</u>	
	<u>Captain</u>	<u>Crew</u>	<u>Captain</u>	<u>Crew</u>
<u>Puget Sound</u>				
Seattle	30	30	30	20*
<u>Southeast</u>				
Petersburg	20	20	20	20
Ketchikan	10	10	9	6
Sitka	20	20	20	
Craig-Klawock	5	5	0*	0*
Kake	10	10	0*	0*
<u>Prince William Sound</u>				
Cordova	10	10	12	7
Valdez	5	5	7	4
<u>Kodiak</u>				
Kodiak	30	30	16	5
Port Lions/Ouzinkie/ Old Harbor	15	15	9	5
<u>Cook Inlet</u>				
Anchorage	20	20	0*	0*
Homer	20	20	22	8
Kenai-Soldotna	10	10	13	2
Seldovia	5	5	4	2
<u>Alaska Peninsula</u>				
<u>Aleutian Islands</u>				
Sand Point/King Cove	10	10	0*	0*

*In process

Willing to be re-contacted? yes ___ no ___

HALIBUT STUDY 1983

Are you:

Number of years in halibut fishery:

A vessel owner _____

In present capacity _____

A crew member _____

Other _____

A skipper _____

Vessel characteristics:

What is your:

Length _____

Age _____

Net tonnage _____

Marital status _____

Education _____ (highest grade completed)

Residence _____ (town, state)

of dependents _____ (not including self)

Ethnicity _____ (category)

_____ (grandparents' languages)

Sex _____

FOR SKIPPERS:

No. of crew on vessel _____

No. of crew related _____

Sole owner of vessel _____

Partnership _____ Neither _____

Loans: bank _____ state _____ processor _____ other _____

FOR CREW:

No. of crew on vessel _____

No. of relatives on board _____

1982 % of total gross income	Fisheries Participate In	
	Species	Gear type
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Other Non Fishing Sources of Income

% of total personal income

Type of work

Fisherman Organizations You Belong To:

North Pacific Fishery Management Council

Clement V. Tillion, Chairman
Jim H. Branson, Executive Director

605 West 4th Avenue
Anchorage, Alaska 99510



Mailing Address: P.O. Box 3136DT
Anchorage, Alaska 99510

Telephone: (907) 274-4563
FTS 271-4064

FINANCE COMMITTEE AGENDA May 26, 1983

I. FY84 Administrative Budget

The "call" for budgets has been sent to all Councils. We are supposed to have them to the Regional Director no later than July 25th, so we should review and approve our FY84 Administrative Budget at this meeting.

We have been requested to submit at the same level we were funded in FY83, which was \$982,200. The attached budget is for \$1,037,452, or \$55,252 over this amount. There is a list of suggested reductions which the Finance Committee may consider.

II. Programmatic Funding

The SSC is reviewing proposals submitted to the Council. Dr. Rosenberg will report their recommendations and other research projects they considered.

III. Other Business



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Washington, D.C. 20235

MAY 23 1983

F/MB:EE

TO: Executive Directors, Regional Fishery Management Councils
FROM: *William G. Gordon*
SUBJECT: Regional Council Funding for FY 1984

Attached are the forms necessary for requesting FY 1984 funding for your cooperative agreements. The chapter entitled "Budget and Financial Management," in the Operations Handbook provides instructions for preparing, obtaining, and managing administrative and programmatic funds.

We anticipate that the grants will be administered at the three regional administrative support centers. Thus, the New England and Mid Atlantic Councils will be handled by the appropriate official in the Norfolk, Virginia Administrative Service Center and the South Atlantic, Caribbean and Gulf Councils by the Kansas City Administrative Support Center. We will advise you when we know more about the staffing and the procedures to be followed by the new administrative service centers. John Hinman (Western Administrative Service Center) will continue to manage the cooperative agreements of the Pacific, Western Pacific, and North Pacific Councils. You should rely on the directors of the administrative service centers for grants management and for fund distribution.

While the Council funding level for FY 1984 is uncertain, you should use your FY 1983 base funding level for planning purposes. The funding level is not expected to increase and could be lower based on our FY 1984 budget. The House Appropriations Subcommittee recently rejected the proposed reduction in Council funding for FY 1984; the Senate has not yet acted on our budget request. If the funding level is subsequently reduced, I will advise you immediately.

To achieve a smooth fiscal transition to FY 1984, we request that your completed applications be submitted to the appropriate NMFS Regional Directors no later than July 25. We must have the Regional Directors' approvals by August 5, so that funds can reach the Councils by October 1, 1983.

Please refer questions on this process to Howie Hochman of my staff on 634-7444.

Attachments

Hochman



BUDGET REDUCTION SUGGESTIONS

	<u>Reduction</u>
1. Only one out-of-town meeting (cancel Juneau or Sitka)	11,500
2. Reduce by 50% staff and Council attendance at Halibut public hearings	25,000
3. Reduce Halibut special travel for Staff by 50%	4,000
4. Reimburse A.P. members travel only for travel day and A.P. meeting day	15,000

FINANCE COMMITTEE MINUTES

May 26, 1983

The Finance Committee met in the Council offices this morning at 7 a.m. to review and approve the FY84 Administrative and Programmatic funding.

The following people were in attendance: James Campbell, Chairman, Donald Collinsworth, John Harville, Admiral Knapp, Donald Rosenberg, Robert McVey, Clarence Pautzke, Harold Lokken, Keith Specking, Jim Branson and Judy Willoughby.

I. FY84 Administrative Budget

The staff reviewed changes between the FY83 funding and the proposed FY84 budget by line item with an explanation of any changes.

The Committee approved the total of \$1,037,452 which is a 5.4% increase over the FY83 funding level of \$982,000.

II. Programmatic Research Proposals for FY/1983 and FY/1984

The Finance Committee reviewed research proposals submitted for funding from FY/1983 and FY/1984 programmatic funds.

For FY/1983, the Committee recommends immediate funding for the following two studies:

	<u>Amount</u>
(1) Steller Sea Lion Pup Counts Adjacent to Shelikof Strait	\$ 16,548
(2) Additional Analysis of Salmon Troll Data	<u>22,600</u>
TOTAL	\$ 39,148

The Finance Committee recommends that the Executive Director contact the Marine Mammal Commission to help with funding for the Steller Sea Lion Study.

For FY/1984, the Committee recommends that funding be requested for the following six proposals:

<u>Proposal</u>	<u>Amount</u>
Rapid Response	\$ 80,000
FMP Development - ADF&G	60,000
Bering Sea Herring Scale Analysis (2nd year)	60,000
Growth and Size at Maturity of Golden King Crab	150,000
Stock Assessment Methodology for Sablefish	100,000
Limited Entry and Economics Study	<u>50,000</u>
TOTAL	\$500,000

These FY/1984 proposals may be briefly described as follows:

Rapid Response: Unidentified research necessary to carry out Council management responsibilities.

FMP Development ADF&G: Support State activities relating to fishery management plan maintenance and development.

Bering Sea Herring Scale Analysis: Second year of funding to determine the consistency of the herring scale analysis methodology and sampling.

Growth and Size at Maturity of Golden King Crab: Collect and analyze growth and size at maturity data to allow design of appropriate management strategies.

Stock Assessment Methodology for Sablefish: To carry out identified priority research in the area of sablefish assessment techniques.

Limited Entry and Economics Study: To carry out identified priority research in the area of limited entry approaches and economic impacts.

FY 84 BUDGET AND BACKUP
NORTH PACIFIC FISHERY MANAGEMENT COUNCIL

<u>PERSONNEL</u>	<u>FY83 Grant</u>	<u>FY84 Budget</u>	<u>Difference</u>
<u>Staff Salaries and Benefits</u>			
Staff Salaries	431,300	485,364	+54,064
Staff Benefits (25%)	103,400	121,341	+17,941
Special Consultants	<u>15,000</u>	<u>5,000</u>	<u>-10,000</u>
TOTAL STAFF SALARIES AND BENEFITS	549,700	611,705	+62,005
<u>Council Member Salaries</u> (306.73 daily)			
4 Council meetings x 6 members x 3 days	21,600	22,085	+ 485
2 Council meetings x 6 members x 5 days	27,000	18,404	- 8,596
6 plans x 2 hearings each x 2 days x 1 member	7,200	7,362	+ 162
Other assigned meetings 12 days x 7 members	25,200	25,765	+ 565
Halibut P.H. - 8 hearings x 4 members x 2 days	<u>19,200</u>	<u>19,631</u>	<u>+ 431</u>
TOTAL COUNCIL MEMBER SALARIES	100,200	93,247	- 6,953
TOTAL SALARIES AND BENEFITS	<u>649,900</u>	<u>704,952</u>	<u>+55,052</u>

Remarks

COLA estimated 4% increase; 11th staff member for full year (funded only 7 months FY83); Economist funded for 10 months (funded only 6 months in FY83)

Was 24% - increase in Aetna

7 meetings in FY83, 6 meetings planned in FY84

Increase in compensation

Increase in compensation

	<u>FY83 Grant</u>	<u>FY84 Budget</u>	<u>Difference</u>
<u>TRAVEL</u>			
<u>Council Members</u>			
Council Meetings			
Anchorage:			
4 day mtg x 2 mtgs x 10 members x 600	12,000	12,000	
2 day mtg x 2 mtgs x 10 members x 500	20,000	10,000	-10,000
Out of Anchorage:			
Juneau, 4 day mtg x 1 mtg x 10 members x 700	7,000	7,000	
Sitka, 2 day mtg x 1 mtg x 11 members x 600	-0-	6,600	+ 6,600
Public Hearings			
2 each plan - 500 x 6 plans x 2 members	6,000	6,000	
Halibut public hearings			
500 x 8 mtgs x 4 members	16,000	16,000	
Operational Travel			
D.C., Chairmen's mtg	<u>8,000</u>	<u>5,000</u>	<u>- 3,000</u>
TOTAL COUNCIL TRAVEL	69,000	62,600	- 6,400
<u>Staff Members</u>			
Operational Travel			
26 PDT mtgs x 400 each	10,400	10,400	
Symposiums, mtg conf, D.C. etc.	15,000	15,000	
Council Meetings (2)			
Juneau, 5 days - 9 members x 800	7,200	7,200	
Sitka, 5 days - 9 members x 700	-0-	6,300	+ 6,300
Public Hearings			
6 plans x 2 P.H. x 2 Staff x 500	12,000	12,000	
Halibut L.E. - 8 P.H. x 2 Staff x 500	8,000	8,000	
Halibut Special Travel	8,000	8,000	
Foreign Travel	<u>4,000</u>	<u>-0-</u>	<u>- 4,000</u>
TOTAL STAFF TRAVEL	64,600	70,900	+ 6,300

Remarks

Different meeting schedule (planned 7 meetings in FY83 & 6 meetings in FY84)

No foreign travel

Different meeting schedule (Sitka)

FAO

30B/EE

	<u>FY83 Grant</u>	<u>FY84 Budget</u>	<u>Difference</u>
<u>SSC Members</u>			
Council Meetings			
Anchorage:			
2 days x 5 mtgs x 8 members x 500	20,000	16,000	- 4,000
Out of Anchorage:			
2 days x 2 mtgs x 8 members x 500	4,000	8,000	+ 4,000
Public Hearings etc.			
500 x 5 trips	<u>2,500</u>	<u>2,500</u>	<u> </u>
TOTAL SSC TRAVEL	26,500	26,500	-0-
<u>AP Travel</u>			
Council Meetings			
Anchorage:			
4 days x 3 mtgs x 18 members x 600	26,100	21,600	- 4,500
2 days x 2 mtgs x 18 members x 500	15,000	18,000	+ 3,000
Out of Anchorage:			
Juneau, 4 days x 1 mtg x 18 members x 700	8,400	12,600	+ 4,200
Sitka, 2 days x 1 mtg x 18 members x 600	-0-	10,800	+10,800
Public Hearings etc.			
500 x 5 mtgs	<u>2,500</u>	<u>2,500</u>	<u>-0-</u>
TOTAL AP TRAVEL	52,000	65,500	+13,500
<u>Miscellaneous Travel</u> (for PDT, Consultants, etc.)			
	<u>5,000</u>	<u>5,000</u>	<u>-0-</u>
TOTAL TRAVEL	<u>217,100</u>	<u>230,500</u>	<u>+13,400</u>

Remarks

Different schedule

2 out-of-town meetings

AP attendance has increased from 15 to 18

Different schedule

	<u>FY83</u> <u>Grant</u>	<u>FY84</u> <u>Budget</u>	<u>Difference</u>
<u>CONTRACTS - OPERATIONS ONLY</u>			
<u>Recording/PA</u>			
6 Council meetings	7,000	7,000	
Travel for contractor	1,000	2,000	+ 1,000
<u>Audit</u>	<u>-0-</u>	<u>7,000</u>	<u>+ 7,000</u>
TOTAL OPERATIONAL CONTRACTS	8,000	16,000	+ 8,000
<u>SUPPLIES</u>	10,000	10,000	
<u>EQUIPMENT</u>	1,000	1,000	
<u>OTHER</u>			
Transportation of things	500	500	
Employee moving expense	5,000	-0-	- 5,000
<u>Rents</u>			
Meeting Rooms	4,000	500	- 3,500
Equipment Rental (copier, telecopier, etc.)	43,200	40,000	- 3,200
<u>Telephone</u>	12,000	12,000	
<u>Postage</u>	13,000	13,000	
<u>Miscellaneous</u>	1,500	2,000	+ 500
<u>Printing</u>			
General Office	2,000	2,000	
Management Plans & Amendment Packages - 6 plans (Herring, GOA GF, Salmon, BS/AI GF, Tanner Crab, King Crab)	<u>15,000</u>	<u>5,000</u>	<u>-10,000</u>
TOTAL OTHER	<u>96,200</u>	<u>75,000</u>	<u>-21,200</u>
TOTAL BUDGET	<u>982,200</u>	<u>1,037,452</u>	<u>+55,252</u>

Remarks

Sitka meeting
Required audit

North Pacific Fishery Management Council

Clement V. Tillion, Chairman
Jim H. Branson, Executive Director

605 West 4th Avenue
Anchorage, Alaska 99510



Mailing Address: P.O. Box 3136DT
Anchorage, Alaska 99510

*Council
& only
Finance
Committee*

FINANCIAL STATUS REPORT April 1983

<u>DESCRIPTION</u>	<u>NA80-ABH-00008</u>	<u>83-ABH-00027</u>	<u>82-ABH-22</u>	<u>81-ABH-76</u>	<u>83-ABH-00002</u>	<u>TOTAL</u>
Grants Rec. as of 4/30/83:	\$ 25,664.89	\$ 60,000.00	\$ 91,649.00	\$ 37,000.00	\$486,800.00	\$ 701,113.89
Cash in Bank as of 4/30/83:	-0-	-0-	307.08	(14,106.98)	30,772.49	16,972.59

Total Grants Budgeted:	585,938.00	60,000.00	243,449.00	145,000.00	982,200.00	2,016,587.00
Amount Expend. to Date:	(557,775.44)	-0-	(151,492.92)	(122,106.98)	(464,627.51)	(1,296,002.85)
Total Funds available as of 4/30/83:	<u>\$ 28,162.56</u>	<u>\$ 60,000.00</u>	<u>\$ 91,956.08</u>	<u>\$ 22,893.02</u>	<u>\$517,572.49</u>	<u>\$ 720,584.15</u>

MONTHLY FINANCIAL STATUS REPORT - APRIL 1983

Cooperative Agreement #NA80-ABH-00008
NORTH PACIFIC FISHERY MANAGEMENT COUNCIL

	<u>Budgeted</u>	<u>Amount Expended to Date</u>	<u>Percent Expended to Date</u>	<u>Balance</u>	<u>Monthly Expenditures</u>
80-1 Management Plan Writing and Development	\$ 60,000.00	\$ 60,000.00	100%	\$ -0-	closed
80-2 Key punch & Analysis Halibut Fish Tickets	10,000.00	10,000.00	100%	-0-	closed
80-3 Feeding Habits of Walrus/Bristol Bay Clams	97,220.00	97,220.00	100%	-0-	closed
80-4 ADF&G Computer Program Phase II	135,300.00	134,635.31	100%	664.69	closed
80-5 Offshore Salmon Study- Alaska	58,000.00	58,000.00	100%	-0-	closed
80-6 Halibut Limited Entry Study	41,494.00	41,494.00	100%	-0-	closed
81-1 Management Plan Writing and Development	70,000.00	63,700.20	91%	6,299.80	closed
81-2 ADF&G Fisheries Data	55,000.00	34,125.93	62%	20,874.07	closed
81-3 Halibut/Crab Pot Study	48,924.00	48,600.00	99%	324.00	closed
P.O. 82-16 Marine Mammal Workshop	<u>10,000.00</u>	<u>10,000.00</u>	<u>100%</u>	<u>-0-</u>	<u>closed</u>
TOTALS	<u><u>\$585,938.00</u></u>	<u><u>\$557,775.44</u></u>	<u><u>96%</u></u>	<u><u>\$ 28,162.56</u></u>	<u><u>\$ closed</u></u>

GRANTS RECEIVABLE

Balance as of April 1, 1983	\$25,664.89
Drawdowns for April	-0-
Increases for April	-0-
Balance as of April 30, 1983	<u><u>\$25,664.89</u></u>

CASH IN BANK

Balance as of April 1, 1983	\$ 2,497.67
Receipts for April	-0-
Disbursements for April	(2,497.67)*
Balance as of April 30, 1983	<u><u>\$ -0-</u></u>

*The check was made payable to NOAA to return unused cash drawn down.
This grant is closed. Final Report
35A/B

MONTHLY FINANCIAL STATUS REPORT - APRIL 1983

Cooperative Agreement #82-ABH-2
NORTH PACIFIC FISHERY MANAGEMENT COUNCIL

	<u>Budgeted</u>	<u>Amount Expended to Date</u>	<u>Percent Expended to Date</u>	<u>Balance</u>	<u>Monthly Expenditures</u>
Personnel	\$438,000.00	\$406,236.41	93%	\$ 31,763.59	\$ -0-
Special Consultants	8,000.00	12,459.42	156%	(4,459.42)	-0-
Fringe Benefits	84,000.00	77,471.40	93%	6,528.60	-0-
Travel	226,000.00	191,506.09	85%	34,493.91	-0-
Equipment	3,000.00	19,568.85	653%	(16,568.85)	-0-
Supplies	11,000.00	9,830.68	90%	1,169.32	-0-
Contractual	17,000.00	19,812.93	117%	(2,812.93)	-0-
Other	<u>136,000.00</u>	<u>116,926.48</u>	<u>86%</u>	<u>19,073.52</u>	<u>-0-</u>
TOTALS	<u>\$923,000.00</u>	<u>\$853,812.26</u>	<u>93%</u>	<u>\$ 69,187.74</u>	<u>\$ -0-</u>

GRANTS RECEIVABLE

Balance as of April 1, 1983	\$ 7,738.63
Drawdown for April	-0-
Decrease for April	(7,738.63)
Balance as of April 30, 1983	<u>\$ -0-</u>

CASH IN BANK

Balance as of April 1, 1983	\$ -0-
Receipts for April	-0-
Disbursements for April	-0-
Balance as of April 30, 1983	<u>\$ -0-</u>

This grant is closed. Final Report

MONTHLY FINANCIAL STATUS REPORT - APRIL 1983

Cooperative Agreement #82-ABH-22
NORTH PACIFIC FISHERY MANAGEMENT COUNCIL

	<u>Budgeted</u>	<u>Amount Expended to Date</u>	<u>Percent Expended to Date</u>	<u>Balance</u>	<u>Monthly Expenditure:</u>
82-1 Management Plan Writing and Development	\$ 53,960.00	\$ 39,239.86	73%	\$ 14,720.14	\$ 6,609.65
82-2 Tanner & King Crab Observer Program	69,489.00	37,405.93	54%	32,083.07	6,180.78
82-3 An Economic Profile of the SE AK Salmon Industry	10,000.00	7,008.27	70%	2,991.73	-0-
82-4 Halibut Limited Entry Program	85,000.00	55,404.00	66%	29,596.00	-0-
83-1 Halibut Limited Entry Socio-Cultural Study	<u>25,000.00</u>	<u>12,434.86</u>	<u>50%</u>	<u>12,565.14</u>	<u>7,731.08</u>
TOTALS	<u><u>\$243,449.00</u></u>	<u><u>\$151,492.92</u></u>	<u><u>63%</u></u>	<u><u>\$ 91,956.08</u></u>	<u><u>\$20,521.51</u></u>

GRANTS RECEIVABLE

Balance as of April 1, 1983	\$111,649.00
Drawdown for April	(20,000.00)
Increases for April	-0-
Balance as of April 30, 1983	<u><u>\$ 91,649.00</u></u>

CASH IN BANK

Balance as of April 1, 1983	\$ 828.59
Receipts for April	20,000.00
Disbursements for April	(20,521.51)
Balance as of April 30, 1983	<u><u>\$ 307.08</u></u>

This grant will close December 31, 1983.

MONTHLY FINANCIAL STATUS REPORT - APRIL 1983
Cooperative Agreement #81-ABH-76
NORTH PACIFIC FISHERY MANAGEMENT COUNCIL

	<u>Budgeted</u>	<u>Amount Expended to Date</u>	<u>Percent Expended to Date</u>	<u>Balance</u>	<u>Monthly Expenditures</u>
81-4 Marine Mammals Study	\$ 45,000.00*	\$ 44,497.00	99%	\$ 503.00	\$ -0-
81-5 Incidental Salmon Catch Study	<u>100,000.00</u>	<u>77,609.98</u>	<u>78%</u>	<u>22,390.02</u>	<u>14,220.50</u>
TOTAL	<u>\$145,000.00</u>	<u>\$122,106.98</u>	<u>85%</u>	<u>\$ 22,893.02</u>	<u>\$14,220.50</u>

GRANTS RECEIVABLE

Balance as of April 1, 1983	\$ 37,000.00
Drawdown for April	-0-
Increases for April	-0-
Balance as of April 30, 1983	<u>\$ 37,000.00</u>

CASH IN BANK

Balance as of April 1, 1983	\$ 113.52
Receipts for April	-0-
Disbursements for April	(14,220.50)
Balance as of April 30, 1983	<u>\$ (14,106.98)</u>

* \$12,500 - Funding from Marine Mammal Commission
32,500 - Funding from NOAA/NMFS Grant
45,000
41,397 - Amount of Contract
3,100 - Special consultant: G. Swartzman
503 - Unobligated Balance

This grant will close December 31, 1983.

MONTHLY FINANCIAL STATUS REPORT - APRIL 1983

Cooperative Agreement #83-ABH-00002
NORTH PACIFIC FISHERY MANAGEMENT COUNCIL

	<u>Budgeted</u>	<u>Amount Expended to Date</u>	<u>Percent Expended to Date</u>	<u>Balance</u>	<u>Monthly Expenditures</u>
Personnel	\$531,500.00	\$255,874.40	49%	\$275,625.60	\$42,291.96
Special Consultants	15,000.00	572.80	4%	14,427.20	32.00
Fringe Benefits	103,400.00	49,676.43	48%	53,723.57	8,384.94
Travel	217,100.00	111,814.76	52%	105,285.24	23,406.59
Equipment	1,000.00	-0-	0%	1,000.00	-0-
Supplies	10,000.00	4,116.86	42%	5,883.14	727.64
Contractual	8,000.00	5,587.30	70%	2,412.70	1,555.00
Other	<u>96,200.00</u>	<u>36,984.96</u>	<u>39%</u>	<u>59,215.04</u>	<u>10,092.37</u>
TOTALS	<u>\$982,200.00</u>	<u>\$464,627.51</u>	<u>48%</u>	<u>\$517,572.49</u>	<u>\$86,490.50</u>

GRANTS RECEIVABLE

Balance as of April 1, 1983	\$ -0-
Drawdown for April	(80,000.00)
Increase for April	<u>566,800.00</u>
Balance as of April 30, 1983	<u>\$486,800.00</u>

CASH IN BANK

Balance as of April 1, 1983	\$ 37,262.99
Receipts for April	80,724.61
Disbursements for April	<u>(87,215.11)</u>
Balance as of April 30, 1983	<u>\$ 30,772.49</u>

This grant will close December 31, 1983.

MONTHLY FINANCIAL STATUS REPORT - APRIL 1983

Cooperative Agreement #83-ABH-00027
NORTH PACIFIC FISHERY MANAGEMENT COUNCIL

1

	<u>Budgeted</u>	<u>Amount Expended to Date</u>	<u>Percent Expended to Date</u>	<u>Balance</u>	<u>Monthly Expenditures</u>
83-2 Management Plan Writing & Development	\$ 60,000.00	\$ -0-	0%	\$ 60,000.00	\$ -0-

GRANTS RECEIVABLE

Balance as of April 1, 1983	\$ -0-
Drawdown for April	-0-
Increases for April	60,000.00
Balance as of April 30, 1983	<u>\$ 60,000.00</u>

CASH IN BANK

Balance as of April 1, 1983	\$ -0-
Receipts for April	-0-
Disbursements for April	-0-
Balance as of April 30, 1983	<u>\$ -0-</u>

This grant will close September 30, 1983.

M E M O R A N D U M

TO: Council, SSC and AP Members
FROM: Jim H. Branson
Executive Director
DATE: May 23, 1983
SUBJECT: Programmatic Research Proposals

ACTION REQUIRED

Recommend funding of programmatic research proposals.

BACKGROUND

Seven proposals have been submitted for support from Council programmatic funds. All but the salmon troll data analysis were sent out for agency review; agency recommendations are summarized in E-3(a). The salmon troll data analysis was submitted at the request of the SSC but not in time for a full agency review. The SSC in March recommended FY/83 funding for the salmon data study and the Steller sea lion pup count, and FY/84 funding for the other projects. One more proposal, "A Lowell Wakefield Symposium on Non-fishing Induced Changes in Populations of Crustaceans," may be available for review.

The proposals will be reviewed by the SSC and Finance Committee whose recommendations will be made available to the Council. If approved, the proposals will be submitted to NMFS for support from programmatic funds.

E-3(b) has the responses of ADF&G, NWAFC and NMFS--Alaska Region. E-3(c) has the proposals. E-3(d) is a summary of actions on previous FY/83 programmatic requests.

Agency Recommendations on Programmatic Research Proposals

Proposal	Amount	Agency Recommendation		
		ADF&G	NWAFc	REGION
<u>FY/83 Funding:</u>				
(1) Steller Sea Lion Pup Counts in Shelikof Strait	16,548	Yes	Yes	No
(2) Additional Analysis of Salmon Troll Data	<u>22,600</u>	---	---	---
FY/83 Total	39,148			
<u>FY/84 Funding:</u>				
(1) Handling-Induced Mortality in Pre-recruit and Female Red King Crabs	55,856	No	No	Yes
(2) Growth and Size at Maturity of Golden (Brown) King Crab <u>Lithodes Aequispina</u>	66,534	Yes	Yes	Yes
(3) Stock Assessment Methodology for Sablefish	30,000 (Total for 2 years)	No	Revise	Yes
(4) Effects of Various System-wide Limited Entry Options on Fish Stocks, Fishermen and Processors	30,000	No	No	No
(5) Economic Impacts of Fishing Activities on the Central and Western Regions of Alaska	<u>100,000</u>	No	Revise	Yes
FY/84 Total	282,390			



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest and Alaska Fisheries Center
2725 Montlake Boulevard East
Seattle, WA 98112

MAY 16 1983

F/NWC2:RJM

MAY 19 1983

TO: Jim H. Branson, Director
North Pacific Fishery Management Council

FROM: William Aron *WA*
Center Director

SUBJECT: Requested Research Proposal Reviews

Enclosed are the reviews requested.

Enclosures

ACTION	ROUTE TO	INITIAL
	Exec. Dir.	<i>J</i>
	Deputy Dir.	<i>Y</i>
	Admin. Off.	
	Exec. Sec.	
	Staff Assn. 1	
	Staff Assn. 2	
	Staff Assn. 3	
	Supervisor	
	Sec. / ASAC	
	Sec. / Asst	



memorandum

DATE: May 11, 1983
REPLY TO ATTN OF: Jerry Reeves
SUBJECT: Handling mortality study on king crab
TO: Rich Marasco

Northwest and Alaska Fisheries Center
Resource Ecology and Fisheries Management

After review, I conclude that money would be better spent on some type of gear escapement study to determine if pots can be modified to reduce the catch of smaller crabs.

I wonder whether the proposed study can accurately simulate actual "on deck" conditions (e.g. no mention is made of measuring the effects of time out of water, varying temperature conditions, etc.). Further, if the proposed treatment effects are non-significant, we still know nothing about mortality associated with multiple catch and release, apart from handling. (Incidentally, any statements I have made in connection with this problem were not intended to distinguish between hypotheses three and four of this proposal--I simply think that the observed increase in mortality of pre-recruit males is related to increases in fishing effort.) There is also the problem of possible interaction between handling/multiple catch and predation, which is not addressed.

Thus, I think a more direct approach to the problem would be a study to determine the usefulness of gear modification. The problem with mounting such a study is that other factors (i.e. hypotheses 1 and 2) may be the cause of the problem. We hope to get some insight into this problem for the Bristol Bay stock when we examine the 1983 survey data for sub-legal male mortality. Fishing effort in 1982 was down by some 70%, and we expect to see lower mortality between 1982 and 1983.

memorandum

Northwest and Alaska Fisheries Center
Resource Ecology and Fisheries Management

DATE: May 11, 1983
REPLY TO ATTN OF: Jerry Reeves
SUBJECT: Growth and maturity of brown crab
TO: Rich Marasco

This type of study needs to be done. I would recommend expanding it to cover the Aleutians and the Bering Sea. In fact, judging from NMFS Observer Program data, most of the Alaskan stock(s) are located in these areas, and I would give them priority. Further, I believe Dave Clausen (NMFS, Auke Bay) and Bob Otto (NMFS, Kodiak) have a different method of measuring male maturity which they like better than chela allometry. The authors of this proposal should consult them on this.

memorandum

DATE: May 13, 1983

Northwest and Alaska Fisheries Center
Resource Ecology and Fisheries ManagementREPLY TO
ATTN OF:Joe Terry *Joe Terry*

F/NWC2:JT

SUBJECT: NPFMC proposal "Economic Impacts of Fishing Activities on the Central and Western Regions of Alaska."

TO: Rich Marasco

The objective of this proposal is to provide information that can be used to estimate employment and income multipliers for Alaskan fishing communities/areas. Such information can be used in estimating the community/area impacts of alternative management regimes. The usefulness of such information is greatly increased if it is available in machine readable form and if it can be readily updated. Therefore, the design and implementation of a system to provide and update such information should be part of this proposal. Such a system should include data for all of Alaska. Since the data to be maintained in such a system are available from a small number of state and federal agencies, the budget estimate of \$100,000 is probably excessive. It should be noted that much of the historical information requested in this proposal is available in reports prepared by the BLM OCS Socioeconomic Studies Program.

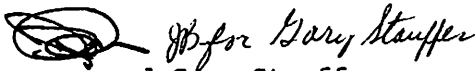
Northwest and Alaska Fisheries Center
2725 Montlake Boulevard East
Seattle, WA 98112

May 13, 1983

F/NWC2:RJM

MEMORANDUM

TO: F/NWC - William Aron

FROM:  F/NWC2 - Rich Marasco and Gary Stauffer

SUBJECT: Review of NPFMC Research Proposal, "Stock Assessment Methodology for Sablefish."

This proposal is quite general and, therefore, difficult to review. Among other things, the investigators propose to evaluate a large number of resource assessment techniques. What is lacking is a statement of how this is to be accomplished. We recognize that this topic is of importance in the assessment of sablefish along the entire West Coast from Alaska to California. Research priorities for this resource should first be established before allocating funds among the research problems. Currently, a planning meeting is scheduled for June to address sablefish priorities. We recommend that the Council set aside as much as \$200,000 to be allotted this summer to the priority problems identified at this meeting.


Northwest and Alaska Fisheries Center
2725 Montlake Boulevard East
Seattle, WA 98112

May 13, 1983

F/NWC2:RJM

MEMORANDUM

TO: F/NWC - William Aron

FROM:  *for Joe Terry*
F/NWC2 - Rich Marasco and Joe Terry

SUBJECT: Review of NPFMC Research Proposal 5, "Effects of Various System-wide Limited Entry Options on Fish Stocks, Fishermen and Processors"

The key issue here is how management of multispecies fisheries should be approached. Fishery management experiences in New England and more recently on the West Coast suggest that existing management strategies are flawed. The domestic groundfish fishery off Alaska is developing rapidly, and it is appropriate to begin developing management strategies that will circumvent similar problems.

If an RFP is structured around such a broadly defined problem, the probability of the effort generating useful information for management is low. By partitioning this broadly defined problem up into a number of smaller projects, the chances of success could be greatly enhanced. A logical starting point for this type of effort would be the identification of important biological and economic assemblages and determination of their behavioral characteristics. Work has been initiated in each of these areas. To complement these efforts, it is recommended that support be given to a research project that would have as its main objective the identification of management regimes that have been used, achievements associated with their implementation, and problems that they have created for both industry and management. Results of these studies will provide information required to evaluate the effects of limited entry.

memorandum

DATE: May 9, 1983

REPLY TO
ATTN OF:

F/NWC3 - R. V. Miller, Deputy Director

MAY 13 1983

SUBJECT: Review of NPFMC Research Proposal

TO: F/NWC - William Aron
Center Director

We have reviewed the research proposal by Mr. Donald Calkins, Alaska Department of Fish and Game, to census Steller sea lion pups in Shelikof Strait, Alaska. The proposed cost of the contract is reasonable, the objectives and methods are justified, and the proposed contractor is well qualified.

We have no plans to conduct a similar survey ourselves, due to limited funds, but Mr. Calkins did participate in our survey of sea lion haul-out locations in the Shelikof Strait area in early April 1983. The objective of that census was to estimate the number of sea lions in the area during the pollock joint venture fishery. In our view, the current proposal to obtain a count of sea lion pups in Shelikof Strait and northern Gulf of Alaska is complimentary to our April census, and is vital to determine the overall status of the population and thus the impact of the incidental take of sea lions during the joint venture fishery. Considering the low cost and the information to be gained, we believe that the proposal is sound and we recommend that the Council fund the work.

cc: F/NWC3 - T. Loughlin
R. DeLong

STATE OF ALASKA

Bill Sheffield, Governor

MAY 16 1983

DEPARTMENT OF FISH AND GAME

OFFICE OF THE COMMISSIONER

P.O. BOX 3-2000
JUNEAU, ALASKA 99802
PHONE: 465-4100

May 11, 1983

Jim Branson
Executive Director
NPFMC
P.O. Box 3136 DT
Anchorage, Alaska 99510

ACTION	ROUTE TO	INITIAL
	Exec. Dir.	J
	Deputy Dir.	
	Admin. Off.	J
	Exec. Sec.	
	Staff Asst. 1	
	Staff Asst. 2	
	Staff Asst. 3	
	Economist	
	Sec./Bkkr.	
	Sec./Typist	

Dear Jim:

Thanks for your memorandum of April 25, 1983 requesting evaluation of research projects submitted to the Council for funding. I'm keenly aware of the Council's limited research budget in these times of fiscal austerity. With this in mind, I offer the following comments:

1. Handling-Induced Mortality in Pre-recruit and Female Red King Crabs.

We do not recommend funding this project. While handling mortality in the king crab fishery is a significant concern, we question whether the experimental design embodied in this proposal will be adequate to determine what degree handling mortality plays in the fishery.

2. Growth and Size at Maturity of Brown King Crab.

We recommend this study be funded. With the precipitous decline of the red king crab fishery, significant effort has shifted to the brown king crab resource. Little information is available to describe adequately the basic biological parameters of growth and recruitment. The major short coming of this proposal is that all the research will be conducted in Southeastern Alaska. We would hope that this project could be continued to evaluate brown king crab stocks in the Bering Sea/Aleutian Islands area as well.

3. Steller Sea Lion Pup Counts in Shelikof Straits.

We recommend the funding of this proposal. With the rapid development of the Shelikof Strait Joint Venture fishery there has been a concomitant rise in the take of Steller sea lions. In 1982, 1,346 sea lions were estimated to have been killed as a result of this fishery. This figure represents about 1% of the total biomass which is well below the 7% harvest level established by the State. Additionally,

May 11, 1983

we are concerned about the effect of pollock removal upon the sea lion population, since pollock represents their major dietary component. Significant population impacts as a result of the pollock fishery should be first identifiable in declining seal pup counts.

4. Stock Assessment Methodology for Sablefish.

We do not support funding of this project. To my knowledge NMFS is currently conducting an evaluation of sablefish stock assessment techniques. My staff is involved in analyzing size and age composition of the commercial catches.

5. Effects of Various System-Wide Limited Entry Options on Fish Stocks, Fishermen and Processors.

We do not recommend funding this proposal. Our principal objection is that there are higher priority studies which more directly contribute to management planning.

6. Economic Impacts of Fishing Activities on the Central and Western regions of Alaska.

We recommend that this proposal not be funded. The proposal is unclear as to the benefits this project would make to practical management planning.

I hope these comments have been helpful. Should you need additional information, please contact Dr. John Clark at 465-4210.

Sincerely,


Don W. Collinsworth
Commissioner

cc: John Clark



**UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration**

National Marine Fisheries Service

P.O. Box 1668

Juneau, Alaska 99802

MAY 11 1983

May 10, 1983

Jim Branson, Executive Director
North Pacific Fisheries Management Council
P.O. Box 3136 DT
Anchorage, Alaska 99510

Dear Jim,

ACTION	ROUTE TO	INITIAL
	Exec. Dir.	J
	Deputy Dir.	J
	Admin. Off.	
	Exec. Sec.	
	Staff Asst. 1	
	Staff Asst. 2	
	Staff Asst. 3	
	Economist	
	Sec./Bkkr.	
	Sec./Typist	

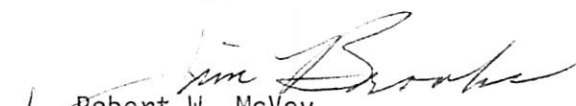
This is in response to your request for comments on the research proposals contained in your April 24, 1983 letter. The Northwest and Alaska Fisheries Center will comment on the possibility of overlap between the proposals and the ongoing NMFS research activities. The Region believes the proposals are needed and appropriate except for the two projects discussed below. We believe the two projects dealing with crab should receive top ranking and that the other projects, except those discussed below, should receive equal priority after the two crab proposals.

The Region concurs with the need for the sea lion pup counts but questions the use of fishery research funds for that purpose. There are many possible causes of marine mammal population decreases other than the joint venture fisheries, which substantially reduced their take of sea lions this year. We believe the proposed sea lion pup count project has considerable significance beyond fisheries interests and should be funded from another source.

We question the need for the proposal concerning the effects of various system-wide limited entry options on fish stocks, fishermen and processors. We believe the funds proposed for that project could be better spent on developing an economic profile of the various fisheries and communities along Alaska's coast. Such information is lacking for Council consideration.

The Region is not able to provide funds for any of the proposed projects.

Sincerely,


for Robert W. McVey
Director, Alaska Region



AGENDA E-3(c)
MAY 1983

Research Proposals for FY/1983 and FY/1984

Proposal to the North Pacific Fishery Management Council

for

Steller Sea lion Pup Counts in Shelikof Strait

Period of Contract: Oct. 1, 1983 to Sept. 30, 1984

Amount \$16,548.00

Principal Investigator: Donald G. Calkins
Marine Mammal BiologistAgency: Alaska Department of Fish and Game
333 Raspberry Road
Anchorage, Alaska 99502

Phone: 344-0541

Title: Steller sea lion pup counts in Shelikof Strait.

Relevant FMP: Gulf of Alaska Groundfish

Objectives and Need:

The joint venture, winter fishery in Shelikof Strait, targeted on pollock, has grown from a catch of 900 mt in 1980 to a projected catch of 100-120 thousand mt in 1982. Along with this increasing pollock catch has been an alarming increase in the numbers of Steller sea lions killed in trawls in Shelikof Strait. During the 1981-82 fishery, 1346 sea lions were estimated killed. This is likely to increase in proportion to the fishing effort, and the most likely case is that fishing in future years will involve high numbers of incidentally killed sea lions.

Our objective is to count the total number of sea lion pups produced at the major sea lion rookeries in and adjacent to Shelikof Strait. These counts will be accomplished in conjunction with total pup counts throughout the Gulf of Alaska, however, funding for counts outside of Shelikof Strait will be sought from other sources. The product of this work will be a total count of pups produced in the Shelikof Strait area which will then be used to compare to similar counts made in 1978 and 1979.

Pup counts are used as an index to the population size. These estimates have proven to be the most reliable possible for Steller sea lions as they take into account the entire population. Other methods of estimating sea lions involve counts of animals on shore and cannot reliably estimate those animals which are at sea at the time of the count. It is important that this count be made in 1984 because it will be five years since the last count was made during which time virtually no take of sea lions has been documented other than that incidental to fishing. If we are to monitor the population and determine the effect this incidental take is having, we must complete the pup counts at a maximum of five year intervals.

Expected Benefits

The expected benefits of counting sea lion pups in Shelikof Strait in 1984 are that we will derive an estimate of the number of pups produced which will be comparable to the population estimate made in 1979. From this we expect to detect the impact the incidental take is having on the sea lion population.

Work To Be Performed:

This project involves placing 5 man teams on the four major rookeries in the Shelikof Strait area. Methods of gaining access to the rookeries are as described by Calkins and Pitcher (1982). At Chirikof Island, access will be primarily by helicopter; at Chowiet Island in

the Semidi Islands, access will be by skiff off a larger vessel; at Marmot Island, access will be by a combination of skiff and helicopter and at Sugarloaf Island in the Barren Islands, access will be by skiff. Sea lion pups are born from May 15 through July 15 with the peak at approximately June 20. By June 25 the majority of pups have been born but are reluctant to enter the water. By approximately July 15, the majority of pups will readily enter the water. Therefore, pup counting must be done between June 25 and July 15.

Once access to the rookery is gained, the adults are driven off and the pups are counted individually. From this total count of pups a population estimate can then be calculated, based on age specific mortality and reproductive rates (Calkins and Pitcher 1982).

Urgency and Duration

It is desirable that this work be performed during 1984 in order to establish a five-year interval, however it is crucial that funds be committed to this project as soon as possible. Early commitment of funding for the Shelikof Strait work would facilitate our ability to secure funds for pup counts in the remainder of the Gulf of Alaska.

Budget Estimate

Salaries and Benefits:

Game Biol. III	1 month	\$ 4938.00
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Travel Perdiem:

5 Round trips Anchorage to Kodiak		\$ 760.00
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Perdiem 5 man-days at \$80/day		\$ 400.00
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Contractural Services:

Helicopter Charter - 5 hrs at \$ 350/hr		\$ 1,750.00
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Vessel Charter	6 days at \$1200/day	\$ 7,200.00
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Total Direct Costs		\$15,048.00
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Indirect costs		<u>\$ 1,500.00</u>
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Grand Total		\$16,548.00
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Date and Originator of Proposal:

Proposal date: April 17, 1983

Donald G. Calkins

Alaska Department of Fish and Game

333 Raspberry Road

Anchorage, Alaska 99502

Mr. Calkins has been involved in marine mammal research in Alaska since 1970, has worked for the Alaska Department of Fish and Game since 1973 and has conducted research projects on Steller sea lions since 1975. He was responsible for the original work of pup counts in the Gulf of Alaska in 1978 and 1979. Mr. Calkins will be the principal investigator in this project and will directly participate in and coordinate the counts. He will be assisted by several biologists and technicians from the Alaska Department of Fish and Game. Technical and word processing support will also be supplied by the Department of Fish and Game.

MAY 16 1983

Bill Sheffield, Governor
 P.O. Box 3-2000
 Juneau, AK 99802

DEPARTMENT OF FISH AND GAME
 Division of Commercial Fisheries

(907) 465-4210

May 11, 1983

Mr. Jim Branson
 Executive Director
 North Pacific Fishery
 Management Council
 P.O. Box 3136DT
 Anchorage, AK 99510

ACTION	ROUTE TO	INITIAL
	Exec. Dir.	J
	Deputy Dir.	
	Admin. Dir.	
	Exec. Sec.	
	Staff Asst. 1	
	Staff Asst. 2	
	Staff Asst. 3	
	Economist	
	Sec./Bkkr.	
	Sec./Typist	

Dear Mr. Branson:

Enclosed please find a proposal for FY83 programmatic fund support as discussed in your April 11, 1983 letter to John Clark. This proposal addresses three of the four issues raised in your letter through additional analysis of historic troll fishery data. The reports which result should enable a more complete review of the proposed change in the chinook salmon accounting year.

The fourth point, that of further evaluating the extent of chinook salmon hooking mortality in a coho-only fishery, is not addressed in this proposal. Such an analysis will be possible only if a coho-only fishery occurs during 1983; it is my understanding that the ADF&G Southeast regional staff will be making every effort to avoid that situation this year. It is also my understanding that in your recent telephone conversation with Guy Thornburgh, you mentioned the possibility of additional available funding to conduct an observer program in the event that there is a coho-only fishery. An observer program would only determine the hooking rate of legal sized chinook salmon during a coho-only fishery, however, and would not be able to answer the question of hooking mortality.

Thank you for your consideration of this proposal. I hope that it meets with your approval and that it can be submitted to the Council at the May meeting.

Sincerely,

Al J. Didler, Jr.
 Research Analyst

ADDITIONAL ANALYSIS OF SALMON TROLL DATA
HIGH SEAS SALMON MANAGEMENT PLAN

OBJECTIVE AND NEED

At a joint meeting in March 1982, the Alaska Board of Fisheries and the North Pacific Fishery Management Council established a 1982 season chinook salmon catch limit of 255,500 for all commercial fisheries in the Southeast Alaska region. The 1982 season catch limit was adjusted downward from the 1981 catch limit range of 272-288,000 in response to continuing coastwide chinook salmon conservation problems. The fishery during 1982 progressed as scheduled until an in-season catch projection indicated that the chinook salmon catch limit would be achieved by approximately July 28 and a closure was announced. The salmon troll fishery reopened on August 8 to the taking of all salmon species except chinook; fishermen were required to return to the water all chinook salmon caught incidentally. Considerable concern was expressed regarding the additional immediate and delayed mortalities of chinook salmon as a result of incidental hooking injury. The Board of Fisheries at its December 1982 meeting directed the Department of Fish and Game to address this issue by minimizing the extent of future single species closures in the troll fishery.

In response to this direction, the Department recommended a management option for the 1983 Southeast Alaska Salmon Troll fishing season which would redefine the chinook salmon catch counting period as July 1 through June 30. This plan would begin the chinook salmon catch counting period with the start of the main coho salmon fishery on July 1. The salmon troll fishery would be open to all species during July, August and early September, except for all-species closures required for coho salmon management or to reduce the chinook salmon catch rate. After accounting for the fall net harvest and a winter salmon troll fishery, fishing in the spring would begin approximately May 15 and would be allowed to progress toward the harvest ceiling during a period of nearly exclusive chinook salmon harvest. Closures during this period would not impact management of other species.

The Scientific and Statistical Committee of the North Pacific Fishery Management Council reviewed this proposal in March 1983 and recommended against its adoption pending a more comprehensive analysis and evaluation of the potential consequences. Questions raised by the Committee were as follows:

1. If harvest ceilings are further reduced or if chinook salmon catches in the fall and winter are exceptionally high, there is a high likelihood that the troll fishery during the spring will be severely curtailed. This effectively shifts the harvest burden to those stocks present during the late summer. It is necessary to document the impact of such a shift by determining the stock composition of chinook salmon taken at different seasons of the year.
2. In order to guarantee a winter fishery and some level of chinook salmon harvest after May 15 during the spring, it was suggested that selected time-area closures could be used to reduce chinook salmon catch rates during the coho salmon season. The feasibility of this proposal must be evaluated.
3. Under current management strategies, the winter salmon troll fishery has been subjected to no catch limit restrictions. Under the proposed counting period, this fishery would remain unrestricted and it is possible that effort in this fishery would increase. A more thorough description of this fishery is necessary to establish a history of participation, catch, and stock composition of the harvest.

To acquire this information, the Alaska Department of Fish and Game (ADF&G) proposes to implement an extended analysis of existing coded wire tag, chinook salmon harvest, and fishery participation data.

STATEMENT OF WORK

- Task 1: The contractor will evaluate available coded wire tag recovery data and will estimate the stock composition and age of chinook salmon taken during different seasons of the year. The fishing seasons addressed will be the early summer (May 15-June 30), late summer (July 1 - September 20), and winter (October 1-April 14).
- Task 2: The contractor will evaluate potential time-area closures and will evaluate their effectiveness in reducing chinook salmon catch rates during the coho salmon season while minimizing the impact on the overall coho salmon harvest.
- Task 3: The contractor will compile existing records for the period 1978-1983 for the winter salmon troll fishery and will describe catch, effort, and participation history in this fishery.

DURATION AND DOCUMENTATION

This contract will be in effect from July 1, 1983 until January

15, 1984. Progress and results will be reported in a progress report, due November 15, 1983, and in a final report, due January 2, 1984. Both reports will be in accord with the intent of supplying information to evaluate a management plan incorporating the July 1-June 30 chinook salmon counting period during a 1983-1984 season.

COST

The proposed budget for this additional analysis of troll fishery data is \$22,600. Most of the budget is accounted for by personal services and benefits (\$17,600), including a part-time staff member to serve as principle investigator for the project. The other major segment of the budget is for computer and programming services (\$5000).

ORIGINATOR: Al Didier
Alaska Department of Fish and Game
Division of Commercial Fisheries
P.O. Box 3-2000
Juneau, AK 99802

DATE: May 10, 1983

TECHNICAL PROPOSAL

TO: North Pacific Fishery Management Council
P.O. Box 3136 DT
Anchorage, Alaska 99510

FROM: Institute of Marine Science
University of Alaska
Fairbanks, Alaska 99701

TITLE: Handling-Induced Mortality in Pre-recruit and Female Red King Crabs

PRINCIPAL INVESTIGATORS:

W. E. Barber
Assistant Professor
of Fisheries Science

S. C. Jewett
Research Associate of
Marine Science

S. J. Harbo
Associate Professor of Biometrics
Department of Wildlife and Fisheries

G. C. Powell
Fisheries Biologist of
Alaska Department of Fish & Game

NEW/CONTINUING: New

PROPOSED STARTING DATE: October 1983

PROPOSED DURATION: FY 84

PROPOSED FUNDING: \$55,856

Stephen C. Jewett for W. E. Barber
W. E. Barber
Co-Principal Investigator
(907) 474-7177

S. J. Harbo
S. J. Harbo
Co-Principal Investigator
(907) 474-7671

S. C. Jewett
S. C. Jewett
Co-Principal Investigator
(907) 474-7841

A. B. Frol
A. B. Frol, Director
Administrative Services
(907) 474-7340

V. Alexander
V. Alexander, Director
Institute of Marine Science
(907) 474-7531

Anna F. Shelling
for Keith B. Mather, Vice Chancellor
for Research and Advanced Study
(907) 474-7314

Joan Osterkamp
Joan Osterkamp, Executive Officer
Institute of Marine Science
(907) 474-7824

March 1983

TITLE: Handling-Induced Mortality in Pre-recruit and Female Red King Crabs

RELEVANT FMP: King Crab

OBJECTIVES AND NEED:

A number of hypotheses have been put forward as to the reason for the recent precipitous decline in the red king crab (*Paralithodes camtschatica*) fishery. Some of these hypotheses, other than over-exploitation, are: (1) a change in oceanic environmental conditions; (2) predation on the planktonic, juvenile and adult stages; (3) handling-induced mortality in pre-recruits and females; and (4) mortality caused by multiple catch and release of pre-recruits and females in the commercial fishery. Each of these hypotheses should be addressed if a full understanding of the fishery is to be achieved and if wise management decisions are to be made. However, hypotheses (1) and (2) will be difficult and time consuming to address. Of the two hypotheses which can be addressed in a short time frame, improper handling of pre-recruits and females caught in the fishery (hypothesis 3), and subsequently returned to the waters, is probably the most important factor influencing pre-recruit female mortality (Dr. J. Reeves, King Crab Biologist, NMFS, personal communication, 1982; Mr. A. Davis, Shellfish Biologist, ADF&G, personal communication, 1983). Therefore, the objective of this proposed research is to determine how handling influences mortality and survival in pre-recruit and female red king crab.

A final report will be prepared describing the research and mortality associated with different types of handling under experimental conditions.

EXPECTED BENEFITS:

Two objectives of the FMP are to maintain the resource base and minimize the socio-economic impacts. Recent declines in the resource base and fishery has precipitated severe problems in the industry. If significant mortalities are

occurring because of improper handling during sorting of catches, changing handling techniques can be recommended to industry in order to minimize this mortality factor.

WORK TO BE PERFORMED:

The proposed research is a field experiment. King crab will be collected with standard commercial fishing gear during October in the Kodiak area. Shell condition at this time will approximate that which occurs during the commercial harvest (September). Upon capture 180 pre-recruit male and 180 female crabs of approximately 10 cm to 15 cm (4"-6") carapace length will be sorted as carefully as possible and placed in live tanks for transportation to an area in the Near Island Basin (or a similar area) where they will be held in six 2.4 m X 2.4 m (8' X 8') holding pens. At this site, both males and females will be divided into three treatment groups of equal numbers. One group, the control, will be handled with caution. Another group will be dropped on their dorsal surface on the boat's deck, from a height of 1.2 m to 1.8 m (4 to 6 ft). The third group will be dropped on the deck as previously described and have one leg broken or removed. After subjecting the crabs to the various treatment levels, equal numbers of male and female crabs (10 per each sex for each of 3 treatments, 60 crabs per pen) will be placed in each of 6 holding pens. The crabs will be fed, as warranted, and examined for mortalities for approximately two months by Powell and/or Jewett.

URGENCY AND DURATION:

This project should be initiated as soon as possible. If significant mortality results from "improper" handling techniques, then appropriate mitigation measures would be suggested. The project can be executed in one fiscal year and no further funding requirements are anticipated.

MILESTONES:

	1984/1985						
	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Field Work	_____						
Data Analysis				_____			
Report Preparation						_____	
Final Report							_____

If further studies relative to this research is warranted, proposers of this project could carry out the research.

MANPOWER ALLOCATION:

FIELD WORK

Barber	2 wks
Jewett	3.5 wks
Powell	3 wks

DATA ANALYSIS

Harbo	1.5 wks
Barber	0.5 wks
Jewett	0.5 wks

REPORT PREPARATION

Barber	1.5 wks
Jewett	4 wks
Harbo	0.5 wks
Powell	1 wk

BUDGET ESTIMATE:

SALARY

Barber, W. E., 1 mo	\$4,661
Harbo, S. J., 2 wks	2,758
Jewett, S. C., 2 mo	6,341
Powell, G. C., 1 mo	<u>0¹</u>

Total Salary \$13,760

Salary Increment, 10% 1,376

BENEFITS

Annual, Sick, Holiday	\$2,591
Staff Benefits	<u>3,960</u>

Total Benefits 6,551

TRAVEL

5 Round Trip Fairbanks/Kodiak	\$1,850
Per diem, 30 days	<u>2,550</u>

Total Travel 4,400

SERVICES

Boat charter	\$6,000
Typing, 30 hrs	840
Drafting, 20 hrs	760
Data Processing, 25 hrs	750
Communications	<u>300</u>

Total Services 8,650

SUPPLIES

Crab food (herrings)	500
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EQUIPMENT

Holding pens	<u>3,000</u>
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Total Direct Costs \$38,237

Indirect Costs (50% modified total direct costs) 17,619

TOTAL REQUESTED \$55,856

¹ Mr. Powell's salary will be covered by ADF&G.

DATE AND ORIGINATORS OF PROPOSAL:

Proposal date 14 March 1983

Dr. Willard E. Barber
Institute of Marine Science
University of Alaska
Fairbanks, Alaska 99701
(907) 474-7671

Dr. Barber will mainly be involved in the setting up of the field experiments with the treatment groups, and in the preparation of the final report.

Dr. Samuel J. Harbo
Department of Wildlife and Fisheries
University of Alaska
Fairbanks, Alaska 99701
(907) 474-7671

Dr. Harbo will coordinate all data analysis. His experience as a statistician/biometritian for the Department of Wildlife and Fisheries greatly strenghtens the design of this project and the interpretation of the results.

Mr. Stephen C. Jewett
Institute of Marine Science
University of Alaska
Fairbanks, Alaska 99701
(907) 474-7841

Mr. Jewett will mainly be involved in the field work and preparation of the final report. His experience as a crab biologist and a SCUBA diver is valuable in conducting this research.

Mr. Guy C. Powell
Box 686
Alaska Department of Fish & Game
Kodiak, Alaska 99615
(907) 486-4791

Mr. Powell will mainly be involved in the field work of coordinating all diving activities. His 20+ years of experience as a SCUBA diver and king crab biologist will greatly aid in carrying out this research.

TECHNICAL PROPOSAL

TO: North Pacific Fisheries Management Council
P.O. Box 3136 DT
Anchorage, Alaska 99510

FROM: Institute of Marine Science
University of Alaska
Fairbanks, Alaska 99701

TITLE: Growth and Size at Maturity of Golden (Brown) King Crab,
Lithodes aequispina

PRINCIPAL INVESTIGATORS:

S. C. Jewett
Research Associate of
Marine Science

H. M. Feder
Professor of Marine Science

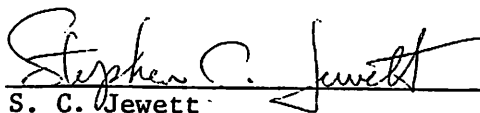
T. M. Koeneman
Fisheries Biologist of
Alaska Department of Fish & Game

NEW/CONTINUING: New

PROPOSED STARTING DATE: Winter 1984

PROPOSED DURATION: FY 84 & 85

PROPOSED FUNDING: \$66,534




S. C. Jewett
Co-Principal Investigator
(907) 474-7841



H. M. Feder
Co-Principal Investigator
(907) 474-7841



A. B. Frol, Director
Administrative Services
(907) 474-7340



K. B. Mather, Vice Chancellor
for Research and Advanced Study
(907) 474-7314



V. Alexander, Director
Institute of Marine Science
(907) 474-7531



J. Osterkamp, Executive Officer
Institute of Marine Science
(907) 474-7824

March 1983

TITLE: Growth and Size at Maturity of Golden (Brown) King Crab,
Lithodes aequispina

RELEVANT FISHERY MANAGEMENT PLAN: King crab

OBJECTIVES AND NEED:

Recent declines in red king crab (*Paralithodes camtschatica*) stocks have created greater interest and subsequent exploitation of stocks of golden king crab. Stocks are currently fished in southeastern Alaska and along the Aleutian Islands at depths of 200-400 meters, somewhat deeper than the depths at which red king crabs are fished. The landings in southeastern Alaska this winter (1983) approximate 272,160 kg (600,000 lbs). The objectives of this study are to examine the growth and size at maturity for golden king crabs. Since this crab is a deep-water species, its growth is presumably slower than that of red king crabs. Growth information is necessary in order to address recruitment to exploitable size. The commercial fishery for golden king crabs currently uses 178 mm carapace width as the minimum legal size, which is based on the same criteria as for red king crabs. However, the length-width relationships are different for the two species, reflecting dissimilar growth patterns (Jewett, 1983). Size at maturity for golden king crabs is not known. Harvesting golden king crabs using the red king crab legal size, and not knowing the size at maturity for golden king crabs, presents the danger of either harvesting them prior to maturity or under-harvesting if they are taken at a size well beyond maturity.

EXPECTED BENEFITS:

This research would benefit ADF&G golden king crab management by providing growth data and size at maturity which, in part, is the basis for Optimum Yield and Acceptable Biological Catch management strategies. This research is not scheduled to be undertaken by ADF&G due to budgetary constraints.

WORK TO BE PERFORMED:

This project includes field research to be conducted in southeastern Alaska. A commercial king crab vessel will be chartered for six days in late fall or early spring, and with the use of ADF&G fine-meshed king crab pots, golden king crabs will be caught, tagged and released. The tagging period is dependent upon the ADF&G management strategy of defining the 1984 golden king crab fishing season; tagging will occur subsequent to the closure of that fishing season. The fishing season is expected to be February or March. The location of the tagging operation will be in the vicinity of Gambier Bay, an embayment of Fredrick Sound. Commercial quantities of golden king crab, in addition to a wide range of crab sizes of both sexes, can be found in this region. Tagging will be accomplished with the permanent, numbered, isthmus spaghetti tag, which has been used successfully by ADF&G to obtain growth data on red king crab (Gray, 1965; Powell, 1967). One thousand (1000) juvenile and adult crabs of both sexes will be tagged. All crabs will be wet-weighted and measured (mm) using three measurements: 1) carapace length, 2) carapace width and 3) chela height. Maturity of females will be determined by the presence of eggs or egg remnants on the plepods. Maturity of males will be determined from the size of the chela relative to the size of the carapace using the method discussed in Somerton (1980). The released crabs will be at liberty for at least eight months, until the recovery operation begins with a charter vessel prior to the next fishing season. Tagged crabs are also expected to be recovered by the fishing fleet and subsequently returned to ADF&G under the auspices of a tag-recovery reward program (\$5.00 per tagged crab). This reward program has been used successfully in previous ADF&G crab-tagging ventures (G. C. Powell, personal communication, 1983). The charter vessel used

in the tag recovery operation will use fine-meshed pots in an effort to recapture smaller crabs. Furthermore, in order to maximize spatial coverage, the charter vessel may fish waters that the commercial fleet typically do not fish. The time the tagged crabs are at large should encompass the supposed molting period of spring 1984. Little is known about the molting period for this species. Spring is the anticipated molting period for adults; however, evidence of asynchronous molting exists (Jewett, 1983; Somerton, personal observation).

Tag recovery is expected to be high in the area chosen. Exploitation of red king crabs, as evidenced by tagging results in the Gambier Bay region, has been high in recent years, (e.g. in 1981, 92 recoveries from 166 tagged crab [55%] and in 1980 46 of 91 [51%] were recovered). Since this region is one that is heavily exploited for golden king crabs, as well as red king crabs (fished at different depths), we are assuming a relatively high exploitation and subsequent tag recovery can be expected for golden king crabs. A recovery of only 5-10% (50-100 crabs) (assuming molting has occurred) should yield sufficient information to address growth. Recaptured crabs will be measured similarly as in the tagging operation. Growth will be addressed by examining the relationship of premolt and postmolt sizes according to the methodology of McCaughran and Powell (1977). Some premolt and postmolt data exists within ADF&G; this data will be analyzed with data collected on this project.

URGENCY AND DURATION:

The basic biological information to be addressed in this proposal is necessary for determination of the Acceptable Biological Catch and Optimum Yield required

by ADF&G. Implementation of the results of this study into the king crab management plan should proceed as soon as possible. This research could be postponed until regular agency budgeting can handle the funding. However, in view of the recent increased levels of exploitation, the basic biological questions asked in this proposal should be addressed immediately so that appropriate steps can be taken in managing this species before the repercussion of perhaps unwise management appears. This research will be conducted in FY 84 and FY 85. The data from the tag recovery operation will not be available until after the golden king crab fishing season of the winter of 1985 (see Milestones). Again, tagging will be conducted in the winter of 1984, subsequent to the fishing season, and recovery will be conducted in the winter of 1985, during and subsequent to the fishing season. The duration of the tagged crabs are at liberty (10-12 months) should encompass the molting period.

REFERENCES:

- Gray, G. W., Jr. 1965. Tags for marking king crabs. Prog. Fish. Culturist. 27:221-227.
- Jewett, S. C. 1983. Survey of the golden crab *Lithodes aequispina* in Alice Arm, British Columbia. Final Report to Amax of Canada Limited. 59p.
- McCaughran, D. A. and G. C. Powell. 1977. Growth model for Alaska king crab (*Paralithodes camtschatica*) J. Fish. Res. Bd. Canada 34:989-995.
- Powell, G. C. 1967. Growth of king crabs in the vicinity of Kodiak Island, Alaska. Alaska Department of Fish and Game, Inform. Leaf. No. 92, 106 p.
- Somerton, D. A. 1980. A computer technique for estimating the size of sexual maturity in crabs. Can. J. Fish. Aquat. Sci. 37:1488-1494.

MILESTONES:

	FY 84												FY 85											
	1983			1984									1985											
	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S
Tagging						<u>?</u>																		
Molting																								
Recovery																	<u>?</u>							
Data Analysis																								
Report Preparation																								
Final Report																								

MAN-POWER ALLOCATION:

FIELD WORK

Jewett	2 wks
Koeneman	2 wks
Somerton	1 wk

DATA ANALYSIS

Feder	1 wk
Jewett	2 wks
Koeneman	1 wk
Somerton	2 wks

REPORT PREPARATION

Feder	3 wks
Jewett	4 wks
Koeneman	1 wk
Somerton	1 wk

BUDGET ESTIMATE:

SALARY

Jewett, S. C., 2 mo	\$6,341	
Feder, H. M., 1 mo	6,338	
Koenemen, T. M., 1 mo	0 ¹	
Salary Increment, 10%	<u>1,268</u>	
Total Salary		\$13,947

BENEFITS

Annual, Sick, Holiday	2,400	
Staff Benefits	<u>3,674</u>	
Total Benefits		6,074

TRAVEL

2 Round trips Fairbanks/Petersburg	1,150	
1 Round trip Corvallis, OR/Petersburg	685	
Per diem, 20 days	<u>1,700</u>	
Total Travel		3,535

SERVICES

Dr. David A. Somerton, Subcontractor	2,500	
Boat charter, 12 days @ \$1200	14,400	
Typing, 30 hrs	840	
Drafting, 20 hrs	760	
Data processing, 40 hrs	1,200	
Communications	300	
Tag-recovery reward	<u>500</u>	
Total Services		20,500

SUPPLIES

Spaghetti tags (1,000 tags)		300
Total Direct Costs		<u>44,356</u>
Indirect Costs (50% modified total direct costs)		<u>22,178</u>
TOTAL		<u>\$66,534</u>

¹ Mr. Koenemen's salary will be covered by ADF&G.

DATE AND ORIGINATORS OF PROPOSAL:

Proposal date - 14 March 1983

Mr. Stephen C. Jewett
Institute of Marine Science
University of Alaska
Fairbanks, AK 99701
(907) 474-7841

Mr. Jewett will coordinate and participate in the tag and recovery operations. His previous experience in crab tagging includes working on red king crabs with Guy C. Powell of ADF&G, and golden king crabs in Alice Arm, British Columbia. Mr. Jewett's involvement in the data analysis will be under the direction of Dr. David Somerton. Mr. Jewett and Dr. Somerton will coordinate the data analysis through the Institute of Marine Science Data Processing Group. The preparation of a final report will be coordinated by Mr. Jewett and Dr. Howard Feder.

Dr. Howard M. Feder
Institute of Marine Science
University of Alaska
Fairbanks, AK 99701
(907) 474-7841

Dr. Feder will mainly be involved in the report preparation. His experience as an invertebrate zoologist in Alaska will be especially helpful in interpreting and presenting our findings.

Mr. Tim Koeneman
P.O. Box 667
Alaska Department of Fish & Game
Petersburg, AK 99833
(907) 772-3801

Mr. Koeneman is ADF&G's crab biologist for southeastern Alaska. His awareness of the need for this research is first hand. Mr. Koeneman will be mainly involved in the tagging and recovery operation, although lesser involvement will be given in data analysis and report preparation. Mr. Koeneman will coordinate the tag-recovery reward program. He has also previously conducted red king crab tagging.

Dr. David A. Somerton
Department of Wildlife & Fisheries
104 Nash Hall
Oregon State University
Corvallis, Oregon 97331-3803

Dr. Somerton has almost exclusively been involved in Alaskan crab research during the past seven years. His most recent work has involved blue king crab and deep sea king crab. All of Dr. Somerton's crab research are strengthened by rigorous statistics, which he performs. Dr. Somerton's main involvement will be in analyzing the data and applying computer techniques, which he has successfully used on other crab species.

TITLE: Stock Assessment Methodology for Sablefish

RELEVANT: Gulf of Alaska Groundfish

OBJECTIVE AND NEED:

Accurate estimates of biomass, maximum sustained yield (MSY) and acceptable biological catch (ABC) for West Coast and Alaska sablefish stocks have been difficult to obtain. Current biomass estimates are considered to be preliminary and of questionable accuracy. It is therefore proposed to (1) evaluate current stock assessment methodology for sablefish, (2) obtain several estimates of sablefish biomass using different techniques applied to existing data, and (3) make recommendations for future assessment methodology. This work will be coordinated with the groundfish management teams of the PFMC, NPFMC, state management agencies and NMFS to avoid duplications in effort.

EXPECTED BENEFITS:

Possible modification of current stock assessment techniques leading to a better estimate of the Equilibrium Yield.

WORK TO BE PERFORMED:

This investigation will include, but not be limited to, evaluation of deep-water trawl, longline, and trap surveys, ichthyoplankton surveys, catch-per-unit-effort methods, mark-recapture techniques, change-in-ratio estimates, stock reduction analysis and cohort analysis. Considerable effort will be directed to interviews and consultations with experienced sablefish fishermen to obtain more accurate and reliable logbook data and to improve the existing data base. Costs versus benefits will be evaluated for each methodology.

It is proposed to analyze trends in size and age composition data from logbooks, catch sampling, or market records. The potential and need will be assessed for accurately estimating pre-recruit abundance from such possible sources as: (1) records of discards, or use of as bait, of small blackcod from fisherman interviews; (2) incidental catches of small blackcod in other fisheries such as salmon troll, shrimp trawl, or midwater trawl; (3) directed assessment surveys in areas and depths containing juvenile blackcod, using suitable gear.

URGENCY AND DURATION:

This project should be initiated as soon as possible and in conjunction with funding of a similar project by the Pacific council. This project will take two years.

BUDGET ESTIMATE:

\$30,000 for two years.

DATE AND ORIGINATOR:

March 30, 1983
SSC-North Pacific Fishery Management Council

TITLE: Effects of Various System-Wide Limited Entry Options on Fish Stocks, Fishermen and Processors.

RELEVANT FMP: All

OBJECTIVE AND NEED:

Historically, application of limited entry has been considered only in the single species context. That is, attention has focused on creating a limited entry program for species X. It is generally recognized that a fishery takes place in a system that has biological, physical, economic and social components. Interaction occurs within as well as between these components. The fact that implementation of a limited entry program in fishery Y could have spin-off effects on fishery Z is widely recognized. Attempts have been made to quantify how implementations of a limited entry program for one fishery would affect fishermen participating in a closely related fishery.

The existence of spin-off effects and multispecies fisheries has stimulated interest in system wide limited entry programs. The primary objective of this study will be to determine the applicability of various limited entry mechanisms in the system wide context and evaluate how harvesters, processors and consumers would be affected by the various alternatives.

EXPECTED BENEFITS:

A better understanding of the interaction between various fisheries and the impact of limited entry systems.

URGENCY AND DURATION:

This project should be initiated as soon as possible. It is estimated to take one year.

BUDGET ESTIMATE:

\$30,000

DATE AND ORIGINATOR:

March 30, 1983
SSC-North Pacific Fishery Management Council

TITLE: Economic Impacts of Fishing activities on the Central and Western Regions of Alaska

RELEVANT FMP: A11

OBJECTIVE AND NEED:

The nature and extent of the economic contribution of fisheries to Alaskan communities and regions is poorly understood and needed. Research should be conducted on a regional basis to address this need. Possible regions include the Northern Gulf of Alaska (Prince William Sound and Cook Inlet), Kodiak and the Alaska Peninsula, Aleutian Islands and the Bering Sea. The topics covered should include species harvested, gear types, vessels, value, employment, quantities harvested and processed, and processing types, employment and value. The information should be organized at the community level and provide a trend analysis of changes over the last five to ten years. The reports should be organized similarly to that prepared recently by Dr. George Rogers about the fisheries of southeast Alaska for the Northwest Lab.

EXPECTED BENEFIT:

The results of this research will help the Council in the development and maintenance of fisheries management plans.

URGENCY AND DURATION:

This project should be funded as soon as possible. It is estimated to take two years.

BUDGET ESTIMATE:

\$100,000 (\$50,000 per region)

DATE AND ORIGINATOR:

March 30, 1983
SSC-North Pacific Fishery Management Council

Summary of Actions on FY/83 Requests Approved by the Council in July 1982:

<u>Title</u>	<u>Amount</u>	<u>Action</u>
Rapid Response	\$ 80,000	None
FMP Development ADF&G	60,000	Funded
Sablefish Symposium	4,000	Funded
Domestic Trawl Logbook Program	167,300	Funded at \$33,000 for JV logbooks
Bering Sea Herring Scale Analysis	60,000	Funded through NWAFC
High Seas Tagging of Salmon	60,000	None
Golden King Crab Study	20,000	None
Analysis of biology and management of herring and sablefish and economic analysis of fisheries in the Gulf of Alaska and Bering Sea	300,000	None
Marine Mammal Workshop	10,000	Funded with year- end FY82 monies
Halibut Limited Entry Socio-Cultural Study	<u>25,000</u>	Funded
TOTAL	\$786,300	(\$191,930 funded)