

SOUTHEAST ALASKA AND YAKUTAT AREA
GROUND FISH INVESTIGATIONS

Final Report for the Period July 1, 1989 To June 30, 1990

By

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ABSTRACT

The Region I Groundfish Project manages all groundfish resources in state waters within the Southeast and Yakutat areas and manages demersal shelf rockfish in the adjacent Exclusive Economic Zone (EEZ). The project also cooperates with the National Marine Fisheries Service (NMFS) to regulate groundfish fisheries in the offshore waters of the eastern Gulf of Alaska.

The Project is divided into three primary functions (programs) and has staff personnel stationed in as many as six ports during peak fisheries and/or research activities. Information collected by the Groundfish Project staff is used to make management decisions regarding regional groundfish fisheries and to modify sampling design to obtain better data for future management.

This report describes the activities conducted by the Region I Groundfish Project between July 1, 1989 and June 30, 1990.

INTRODUCTION

The Region I Groundfish Project has research and management responsibility for all groundfish resources in the territorial waters of the state (0 to 3 miles) in the Southeast and Yakutat areas of the Gulf of Alaska. The region extends from the U.S./Canada border in Dixon Entrance to 147° W. Longitude (Figure 1). In addition, the project has primary management responsibility for demersal shelf rockfish in the adjacent Exclusive Economic Zone (EEZ) and cooperates with the National Marine Fisheries Service (NMFS) to manage all groundfish fisheries in the offshore waters of the eastern Gulf of Alaska. Principal species of concern include, sablefish, demersal shelf rockfish, other rockfish, lingcod, Pacific cod, and flatfish, primarily starry flounder.

The region is divided into seven areas for groundfish management, two in the Yakutat area and five in Southeast Alaska. All groundfish fisheries in the two Yakutat management areas are managed in cooperation with NMFS. The five Southeast Alaska management areas are shown in Figure 2. The two inside management areas include only territorial waters and all groundfish fisheries in these two areas are managed exclusively by the state. The three outside areas include both territorial and federal waters. In those three areas the state has principal management responsibility for the demersal shelf rockfish fisheries and cooperates with NMFS for management of sablefish and other groundfish fisheries.

The Groundfish Project is divided into three primary programs to monitor the eastern Gulf groundfish fisheries and to collect the biological data and other information needed for management. These are:

1. Fishery program management
2. Port sampling
3. Resource assessment

The primary functions of each of the programs, as well as specific activities conducted during the reporting period are presented in this report. Two other programs, on-board observers and logbooks/skipper interviews, were eliminated during the reporting period because of budget constraints. The critical elements of those programs were incorporated into the remaining three.

Groundfish staff personnel are stationed in up to six ports during peak fishery periods or when research activities require additional support personnel. Responsibilities of the project personnel overlap considerably throughout the year. For example, port samplers are also responsible for collecting, editing, and entering fish tickets from both state and federal managed fisheries; the biologist responsible for setting up our resource assessment surveys also collects biological data, collects and enters fish tickets, conducts port samples and interviews, and summarizes fisheries and survey data; the Project Assistant in Sitka and I both assume numerous responsibilities which transcend the specific program definitions. As a result, there is often no clear distinction between activities specifically funded by Federal Aid money and those activities funded from other sources. Therefore, it is impractical, if not impossible, to report only those programs funded by the Federal Aid contract exclusive of other activities performed by the Groundfish Project.

Project funding is received from several sources with the base budget made up primarily of Federal Aid matching funds. Other funding sources include the state general fund; test fish funding for stock assessment work; a state-wide data collection cooperative agreement with NMFS to collect and enter harvest information from fisheries in the EEZ; funding from the North Pacific Fisheries Management Council (NPFMC) to offset the costs associated with the project leader's participation on the Gulf of

Alaska Groundfish Plan Team; and an annual travel grant from the Pacific States Marine Fisheries Commission (PSMFC) to offset the cost of the project leader's participation on the Technical Subcommittee of the Canada/US Groundfish Committee (TSC). During the period included in this report, travel expenses were also received from PSMFC to partially fund staff participation in a series of public meetings to discuss limited access options for the demersal shelf rockfish fishery in Southeast Alaska.

Detailed catch and effort information from the Regional groundfish fisheries is compiled at the end of each calendar year and is included in the annual Report to the Board of Fisheries. Therefore that information is not included in this report. The 1989 Board Report (Bracken 1990), should be referenced for catch and effort information and specific regulatory action taken as a result of funding provided by this contract.

This report includes a review of the Groundfish Project activities from July 1, 1989 through June 30, 1990. The report concentrates on activities funded through the Federal Aid matching fund contract and serves as the annual progress report required as a result of that funding.

PROJECT PERSONNEL

A staff of seven was funded by the groundfish project during all or part of the contract period. Of these, five persons were included in the annual project operations and directly participated in groundfish investigations. The other two were support personnel who were at least partially funded by this project during the reporting period.

Two positions, the Project Leader in Petersburg, and the Port Biologist/Project Assistant in Sitka are full-time personnel. All other project personnel are either seasonal employees or are only partially funded by the Groundfish Project. An organizational chart which includes groundfish staff, their titles, and duty stations is presented as Figure 3. Table 1 displays the distribution of personnel by port and function during the contract period.

REGION I GROUND FISH PROGRAMS

This section of the report provides an overview of the specific programs undertaken by the Groundfish Project during the contract period. All programs undertaken and all research activities conducted by the Groundfish Project have direct management application.

Fishery Program Management

The Fisheries Program Management budget increment is used primarily to fund the standard operational costs of the Groundfish Project and for direct management of the groundfish fisheries. During the reporting period funding from this program included: the Project Leader's and the Project Assistant's salaries; much of the fixed costs of the project such as photo copying, vehicle mileage, postage, communication (telephone, FAX, etc.); travel to attend local Advisory Committee meetings; regulation development and routine regulatory action such as issuance of Emergency Orders and circulation of News Releases; computer costs including hardware and software acquisition and upgrades; and funding for clerical support.

In-season management was required during the reporting period in the flatfish trawl fishery and in the rockfish and sablefish longline fisheries. Management action included:

1. Closure of two areas to trawling for conservation reasons when the seasonal harvest objectives were reached,
2. Setting open fishing periods and harvest objectives for demersal shelf rockfish fisheries in all five Southeast management areas,
3. Setting open fishing periods and harvest objectives for the NSEI and SSEI area sablefish fisheries.

Detailed information on catch and effort and specific regulatory action taken during 1989 is contained in the 1989 Report to the Board of Fisheries (Bracken, 1990). News releases and Emergency Orders are on file at ADF&G and Department of Public Safety offices throughout the region.

The Alaska Board of Fisheries considers groundfish regulations every other year. Regulations were reviewed at the spring 1989 meeting and are scheduled to be reviewed again during the spring 1991 meeting. During the reporting period eleven proposals for new regulations were developed and submitted to the Division of Boards to be considered by the Board of Fisheries in 1991.

As a member of the Gulf of Alaska Groundfish Plan Team, the Project Leader assisted in a review of proposals for regulatory changes to the groundfish fisheries in Federal waters of the Gulf of Alaska. Of special interest was the state's involvement in rockfish management. During the past year the Region I Groundfish Project developed and submitted a proposal to the North Pacific Fisheries Management Council to obtain additional state authority for management of the demersal shelf rockfish resource in the EEZ. The Council decided at their June, 1990 meeting to grant additional authority through a revision to the authorization language in the Gulf of Alaska Groundfish Fisheries Management Plan. The additional authority will include setting quotas and seasons for the directed fishery, in-season adjustments, establishing bycatch limits, specifying allowable gear, and establishing directed fishing definitions. These will go into effect in 1991.

Port Sampling

Port samplers were stationed at the major ports of landing during peak groundfish fishing periods. Specific duties depended to a large extent on the fishery. During the peak of the rockfish fishery samplers were stationed in Sitka and Ketchikan, the major rockfish ports in the region. Port samplers were stationed in Petersburg, Sitka, Ketchikan, Yakutat, Pelican, Hoonah, Excursion Inlet, Juneau, and Seattle at different times of the year to monitor the sablefish fisheries.

The port sampling program included three primary elements: biological sampling, logbook collection and dissemination, and skipper interviews. Port samplers also collected and edited fish tickets, and obtained species composition and biological data from the landed catch. Examples of logbook, interview, and biological sampling forms used in this program are included as Appendix A.

The program emphasis varied by fishery. During the federally-managed offshore sablefish fishery the samplers' primary responsibility was to collect and edit fish tickets and to verify catch information. During the state-managed sablefish fisheries, port samplers stationed in Sitka, Petersburg, and Ketchikan also conducted skipper interviews. During the rockfish fisheries more emphasis was placed on collection of species composition for the entire catch and other biological information, including AWL data for the more commercially important species. Biological samples were also obtained from lingcod and flatfish landings during the reporting period.

All individual sampling, tag recovery, interview and logbook records are confidential and are handled and stored accordingly. Even summarized information cannot be released unless there are more than three vessels participating during a given time/area strata. Published information is usually provided only by broad management area, and even then, information may not be released if it appears that doing so may influence the future distribution of the fleet. Interview and logbook information is currently used to assist in making in-season management decisions and for setting future harvest objectives.

Biological Samples

Biological samples of the landed catch were conducted in Sitka, Ketchikan, and Petersburg during the year. Samples taken during the year consisted of length, weight, sex, and maturity data, and collection of age structures (otoliths), although not all of these data were collected for each landing or for each fish sampled within a landing. The number of biological samples of each type by species in each port are shown in Table 2. The actual numbers of groundfish specimens sampled in each port are presented in Table 3.

Yelloweye rockfish (*Sebastes ruberrimus*) and quillback rockfish (*S. maliger*) dominated the samples with 61% and 20% of the total rockfish numbers sampled, respectively (Table 3.). Samples conducted by port samplers during this period were also used to determine reproductive timing of nearshore rockfish and to determine the sex ratio of the landed catch.

The lingcod landings were sampled to provide baseline length frequency information and to determine spawn timing. Flat fish landings were sampled to determine species composition, and length frequency by species, and to obtain other biological information such as sex ratio and maturity.

Tag Recovery

Samplers of both state and federal fisheries also collected sablefish tags. ADF&G tags were processed to determine movement and time at large. The information was entered on computer and also sent to the individuals who returned the tags. All other tags were returned to the originating agencies.

The numbers of sablefish and halibut tags collected in each port are shown in Table 6. A total of 871 sablefish tags and 17 halibut tags released by six agencies and nine separate projects, including ADF&G, were collected by ADF&G port samplers and biologists during the year. This was nearly twice the number recovered the previous year and represents an intensified tag recovery effort. Our port samplers were instructed to ask each skipper they contacted about tag recoveries. This represented the only comprehensive effort to gather sablefish tagging information from fisheries in Alaska. All other agencies currently rely upon voluntary return of tags. The information from these recoveries will contribute greatly to the knowledge on sablefish and halibut movement coast wide once the data is analyzed.

Interviews

This program is conducted by port samplers who are trained to collect specific information from operators of groundfish vessels. Interviews provide summary information from the fisheries in much greater detail than is available from the fish tickets. Information collected includes specific area(s) fished, duration of the trip, total amount of gear fished, average depth, and the total number or an estimate of pounds of fish caught by area during the trip.

Interviews are conducted primarily with participants in the state-managed rockfish and sablefish longline fisheries. The program is voluntary, but most vessel operators cooperate when asked. The information collected is entered on micro computers in Sitka and Petersburg. During the reporting period all rockfish interviews were entered in Sitka, while all sablefish interviews were entered in Petersburg. Analysis of the data is still on-going.

A total of 86 rockfish, 136 sablefish, 7 lingcod, and 10 flatfish interviews were conducted with vessel operators landing those species at three ports during the reporting period. Distribution of interview coverage by fishery and port is shown in Table 5.

Logbooks

The logbooks provide very detailed set-specific information including depth fished, amount of gear fished, a detailed description of the gear, and number of fish or an estimate of pounds of fish caught by species or species group in each set.

A regulation passed by the Board of Fisheries in 1989 requires logbooks for all operators in the directed demersal shelf rockfish fishery. Mandatory logbooks have been required in the groundfish trawl fisheries for a number of years.

The staff has been working toward establishing a micro computer program to enter and retrieve detailed logbook data. Until this program is complete, the logbook information collected from the groundfish fisheries will continue to be summarized and entered using the existing interview programs.

Resource Assessment

Five resource assessment surveys were completed during the reporting period. Two were conducted exclusively by the state and the other three were done in conjunction with the Auke Bay Laboratory of the National Marine Fisheries Service (NMFS). Cruise summaries are available for all surveys on request. Commercially valuable fish, with the exception of halibut, were retained from the two state surveys and sold to help off-set charter costs.

NSEI Area Sablefish Exploitation Rate Survey

The NSEI area sablefish exploitation rate survey was planned and conducted in cooperation with personnel from the NMFS Auke Bay Laboratory. It was executed in two separate "legs" or segments from the NOAA vessel *Townsend Cromwell* between August 28 and October 5, 1989. Two ADF&G staff participated.

The objective of the survey was to fish the area extensively and deploy tags on sablefish prior to the opening of the sablefish fishery. A subsequent fishing period was planned after the completion of the fishery to determine the change in catch rate. This change could hypothetically be attributed to the fishing effort. In addition, an extensive tag recovery effort was performed during the fishery to maximize the return of tags from fish recaptured during the fishery.

A total of 55 stations were sampled during the survey. Of these, 33 were fished prior to the fishery and 22 were fished after the fishery. The preliminary results show that the average catch-per-hook declined by 18.3% in the second leg. A total of 8,822 sablefish were tagged and released and 75 of the tags were recovered during the fishery. Results of this work are still being analyzed and will be reported later.

NSEI Area Sablefish Survey

The NSEI area sablefish survey was conducted between August 7 and August 25, 1989. This survey was the second year of a five-year study set up to assess sablefish (*Anoplopoma fimbria*) populations in the NSEI area. A chartered fishing vessel was used and snap-on longline gear was deployed. The sample sites were selected prior to fishing using a stratified random sampling technique. As a result of analysis of the 1988 survey data, the number of hooks per set was reduced from 1,000 hooks to 500 hooks, and the number of stations fished was expanded from 24 to 44.

A total of 22,000 hooks were set and 2,758 sablefish were captured. Preliminary results indicated a significant decline in catch-per-hook compared to the previous year. A sample of roughly 10% (248 fish) were examined for biological information including length, weight, sex, and maturity. Otolith pairs were removed from all sampled fish and sent to our laboratory in Kodiak for age determination.

SSEI Area Sablefish Exploitation Rate Survey

This survey was patterned from the exploitation rate study conducted in the NSEI area the previous fall. It was also set up in cooperation with NMFS and was conducted from the NOAA vessel *Townsend*

Cromwell. The primary difference was that the vessel was not available for a follow-up survey, so the study relied totally upon tag returns as an indicator of exploitation rate.

The survey was conducted between April 27 and May 5, 1990. A total of 12,685 hooks were deployed at 18 stations. The catch rates were quite low; only 1,877 sablefish were captured of which 1,669 were tagged and released. The others contributed to a biological sample. Dogfish sharks were numerous in the area and may have contributed to the low catch rates of sablefish.

At the time of this report tags are still being returned from the SSEI area fishery. Once the data is analyzed, a formal survey report will be published.

SSEI Area Sablefish Survey

The 1990 survey was conducted between May 9 and May 23. This study was established to determine long-term trends in relative abundance of the sablefish population in the SSEI area. The survey was the third of a five-year study conducted to assess sablefish (*Anoplopoma fimbria*) populations in that area. It was patterned after our previous sablefish surveys using a chartered fishing vessel and snap-on longline gear.

During the 1990 survey a total of 45 survey sets and 4 production sets were made and a total of 29,300 hooks were deployed. A total of 2,825 sablefish were taken of which 1,864 were on survey sets and the remainder on production sets. The production sets were added to the end of the survey to help offset the cost of the charter. Because of the extensive tagging conducted during the NMFS/ADF&G exploitation rate survey, no additional tagging occurred during the abundance indexing survey. A total of 161 sablefish were utilized for biological samples.

Sablefish catch rates were again lower in the 1990 survey than in 1989, but the rate of decline was much less than observed between 1988 and 1989.

SSEO/CSEO Area Larval Rockfish Survey

This survey was actually a second segment of the cooperative NMFS/ADF&G survey on the *Townsend Cromwell*. The work was completed between May 7 and May 23, 1990 along the outer coast from Cape Muzon to Cross Sound. Because of unannounced scheduling changes, some of ADF&G's objectives for this survey were not realized. We were, however, able to collect larval rockfish from some of the offshore stations. These were sorted and sent to the University of Southern Illinois for electrophoretic identification studies. Adult specimens of known species were also sent for comparison and verification.

An interesting side note of this study was that larval sablefish were encountered in fairly substantial numbers at some of the stations. This marks the first documented recovery of any number of larval forms of that species in this area.

Other Programs

The above sections outline the activities conducted in the three Federal Aid groundfish programs during the reporting period. As indicated in the introduction to this report, there were numerous other activities conducted by the groundfish project during that time period as well. This section briefly outlines some of those activities.

NMFS Fisheries Monitoring Cooperative Agreement

The funding contract with NMFS to collect catch information from the EEZ fisheries was renewed for the third year. Funding from that contract was used to station technicians in Sitka, Petersburg, and Ketchikan for four to six months each, and to place a technician in Yakutat for one month during the offshore sablefish fishery. In addition to collecting and editing fish tickets, the technicians funded under this contract monitored the off shore sablefish fisheries, conducted interviews for state-managed fisheries, and sampled the demersal shelf rockfish, flatfish and lingcod landings during the peak seasons for those species. They also collected sablefish tags from fishermen during the sablefish fisheries.

North Pacific Fisheries Management Council (NPFMC) Plan Team

Within the period between September 1989 and June 1990 the Project Leader participated actively with the NPFMC Groundfish Plan Team. From August through mid-December the Plan Team examined stock status reports and compiled a stock assessment and fisheries evaluation (SAFE) document which recommended biologically acceptable harvest levels for all Gulf of Alaska groundfish stocks. During this process, the Project Leader co-authored and presented a rockfish status of stocks report for the Eastern Gulf of Alaska and compiled the demersal shelf rockfish section of the SAFE.

In January the Team reviewed regulations to be considered for the 1991 season and developed a regulatory impact review/environmental assessment (RIR/EA) document to evaluate the impact of implementing the regulations which were accepted for further consideration by the NPFMC at its January meeting. The Project Leader drafted the chapters proposing changes to the authorization language for state management of demersal shelf rockfish and participated in the process to present and defend the state's position on this issue.

PSMFC Rockfish Management Plan Development

ADF&G staff participated in the second year of a PSMFC-sponsored program to develop a management plan for demersal shelf rockfish. While the 1988-89 effort was geared toward more conventional measurement measures, the 1989-90 effort concentrated on an examination of limited access alternatives for this fishery with an emphasis on developing an individual share quota (IFQ) program.

During this past year a program coordinator was contracted by PSMFC and the ADF&G staff acted in a support capacity. Project staff actively participated in four out of five meetings held to discuss the IFQ option with fishermen in five Southeast Alaska ports during the fall and winter months.

Canada/U.S. Groundfish Committee Technical Subcommittee

The 1990 annual meeting of the Technical Sub-committee (TSC) of the Canada\U.S. Groundfish Committee was hosted by the ADF&G Groundfish Project in Sitka during June. A summary report on 1989 Alaska groundfish fisheries was presented at this meeting. The host agency traditionally provides the secretary for the meeting, therefore the Project Leader assumed the responsibility in 1990. The final report on the meeting will be available for review later this year.

Groundfish Age Reader

Groundfish Project funding was used to support a groundfish age reader in Kodiak for four months during the reporting period. Most of the emphasis was placed on reading rockfish age structures (otoliths) collected during rockfish port sampling. Aging of sablefish from the two sablefish surveys was also accomplished. An otolith exchange between ADF&G, NMFS in Seattle, and the Canadian Department of Fisheries and Oceans is expected to be helpful in determining the precision of our sablefish aging. The results of this work are still being analyzed and will be reported in detail in later reports.

The age reader traveled to Seattle during the reporting period to attend the biennial meeting of the Coastal Age Reading Experts (CARE) group and to Sitka to present the results of that meeting to the TSC.

Dive Projects

Three staff members obtained updated dive gear, received check dives, obtained physical examinations, and were endorsed for state dive projects to conform to the new dive safety standards. The Sitka staff made 11 dives in Sitka Sound during the winter and spring to look for nest-guarding lingcod. Three nests were located and were monitored during the breeding season.

Project divers also participated in dive activities with other projects and made additional dives throughout the year to maintain proficiency.

REPORTS PREPARED DURING THE CONTRACT PERIOD

- Bracken, B. E. 1989a. Southeast Alaska and Yakutat area groundfish investigations, final report for the period 1 July, 1988 to June 30, 1989. AK. Dept. of Fish and Game Regional Info. Report. IJ89-23. 26p.
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Table 1. Distribution of seasonal personnel funded by the Region I Groundfish Project from July 1, 1989 through June 30, 1990.

Port	Jul/ Aug ¹	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
SITKA	B	B	B	B	B	PC	PC	PC	PC	PC	B
PETERSBURG		P	P	P	P	P	PC	PC	PC	PC	PC
KETCHIKAN	P	P	P	P	P	P	P	P	P	P	P
YAKUTAT									P		
KODIAK					A	A	A	A			

B = Biologist, P = Port Sampler, C = Clerical Support, and A = Age Reader

¹ There was only one seasonal employee on the project during most of July and August as these are the "slow months" for groundfish landings.

Table 2. Distribution of groundfish port samples collected by fishery and port in the Southeast area from July 1, 1989 through June 30, 1990.

Port	Rockfish Landings	Lingcod Landings	Flatfish Landings	Rockfish ¹ O t o l i t h s
Sitka	30	7	0	0
Ketchikan	12	0	11	305

¹ Rockfish otoliths are taken in pairs. The sample included 149 pairs of yelloweye, 106 pairs of quillback, and 50 pairs of silverygrey rockfish otoliths.

Table 3. Number of individual groundfish measured by ADF&G port samplers in Southeast Alaska by species and port from July 1, 1989 through June 30, 1990.

Species	Sitka	Ketchikan	Total
Hake	0	1	1
Idiots	0	9	9
Lingcod	369	44	413
Pacific Cod	97	26	123
Pollock	0	186	186
Rockfish:			
black	26	1	27
canary	13	0	13
China	34	7	41
copper	0	6	6
dusky	87	3	90
greenstripe	0	1	1
harlequin	0	2	2
Pacific Ocean perch	0	14	14
quillback	342	333	675
redbanded	27	10	37
redstripe	5	55	60
rosethorn	45	7	52
rougeye	54	12	66
sharpchin	1	44	45
shortraker	0	1	1
silvergrey	26	115	141
tiger	9	19	28
yelloweye	1,619	395	2,014
yellowmouth	0	1	1
yellowtail	2	0	2
Total Rockfish	2,290	1,026	3,316
Flatfish:			
arrowtooth	0	9	9
English sole	0	94	94
flathead sole	0	127	127
rock sole	0	54	54
sand sole	0	1	1
starry flounder	0	1,993	1,993
yellowfin sole	0	19	19
Total flatfish		2,297	2,297
Total All Species	2,756	3,589	6,345

Table 4. Sablefish and halibut tags collected by ADF&G personnel in Southeast Alaska ports from July 1, 1989 to June 30, 1990.

Tagging Agency	Port Where Returned				Total
	Petersburg	Sitka	Ketchikan	Yakutat	
ADF&G	70	26	31	0	127
ADF&G/NMFS Coop.	56	33	17	0	106
NMFS Seattle	95	16	33	50	194
NMFS Auke Bay	138	52	39	21	250
NMFS Growth	19	17	3	0	39
Japan FSRC	40	5	14	9	68
Canada DFO	48	7	17	14	86
Korea ROK	0	0	1	0	1
IPHC Halibut	5	2	10	0	17
Total	471	158	165	94	888

Table 5. Distribution of groundfish skipper interviews collected by fishery and port in the Southeast area from July 1, 1989 through June 30, 1990.

Port	SSEI Area Sablefish	NSEI Area Sablefish	Rockfish	Flatfish	Lingcod
Petersburg	12	32	0	0	7
Sitka	1	34	57	0	0
Ketchikan	15	15	29	10	0
Hoonah	0	8	0	0	0
Pelican	0	5	0	0	0
Excursion Inlet	0	6	0	0	0
Juneau	0	3	0	0	0
Seattle	0	5	0	0	0
Total	28	108	86	10	7

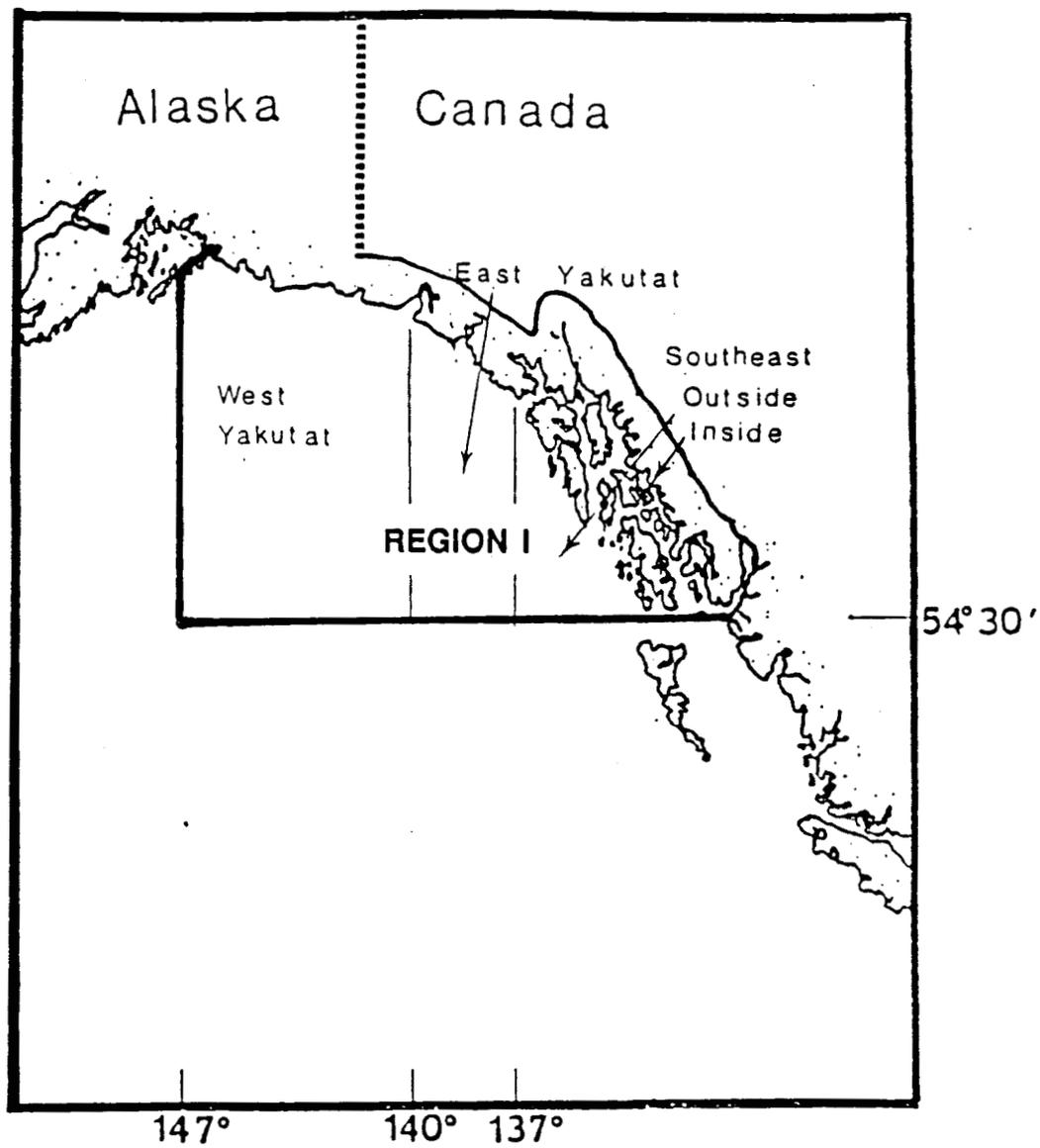


Figure 1. Alaska Department of Fish and Game Region I boundaries and groundfish management areas in the Eastern Gulf of Alaska.

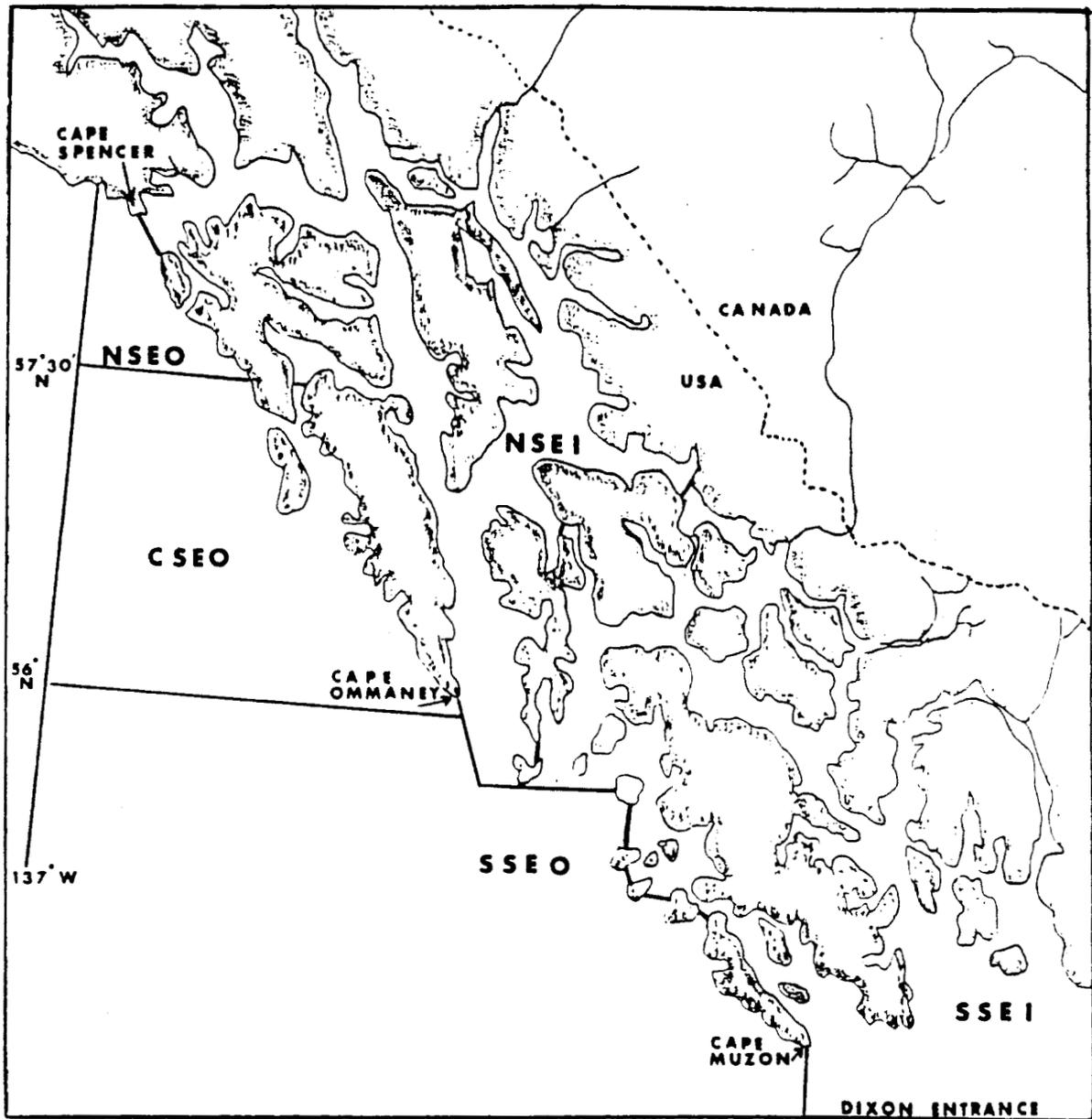


Figure 2. The Southeastern Alaska coastline showing Alaska Department of Fish and Game groundfish management areas.

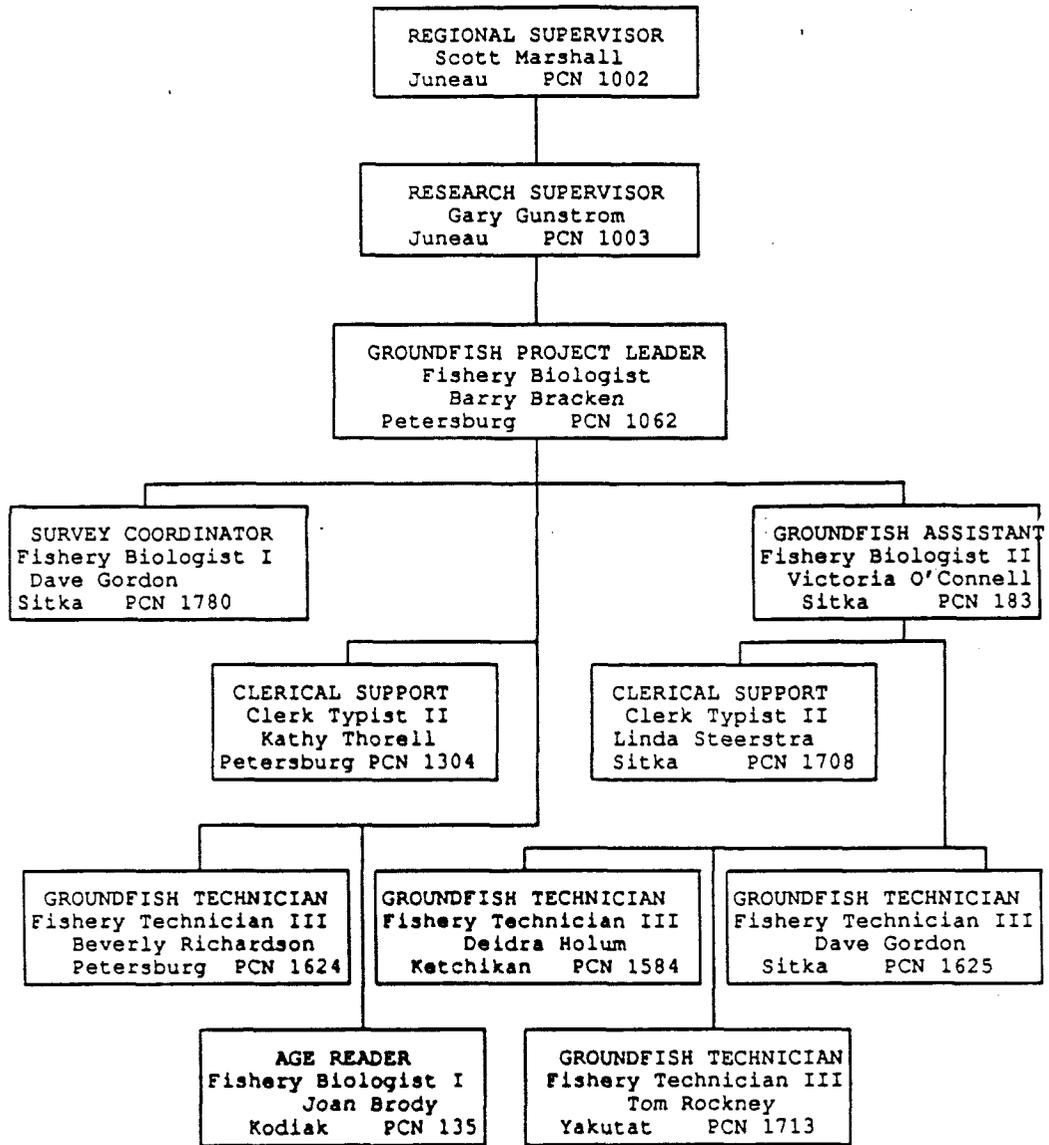


Figure 3. Region I Groundfish Project organizational chart, FY-90.

Appendix A. Longline interview forms and longline and trawl logbook forms.

Appendix A.1

CARLETON

YEAR _____

FISHERY _____

DATE OF LANDING _____

VESSEL _____ ADF&G # _____ DATE OF INTERVIEW _____

PERMIT HOLDER _____ PROCESSOR _____ PORT OF LANDING _____

SKIPPER _____ DAYS/HRS FISHED _____ LOC OF INTERVIEW _____

PERSON INTERVIEWED _____ LOGBOOK ABOARD Y/N COLLECTED Y/N DISTRIBUTED Y/

GEAR LL/POTS SNAPON OR FIXED TYPE OF SYSTEM _____

HOOK TYPE CIRCLE J TARA MIXED HOOK SPACING _____ IN SKATE LENGTH _____ F

BAIT: HERRING SQUID OCTUPUS OTHER _____ FRESH FROZEN SALTE

CONVENTIONAL	SNAP-ON	POTS
# HOOKS/SKATE _____	# HOOKS/SET _____	# POTS/SET _____
# SKATES SET _____	# SETS/TRIP SET _____	# POTS/TRIP SET _____
# SKATES RETRIEVED _____	# SETS/TRIP RTRVD _____	# SETS/TRIP RTRVD _____

TOTAL # HOOKS (POTS) SET TOTAL # HOOKS (POTS) RETRIEVED

LOST GEAR Y/N NO OF HOOKS LOST _____ WHY _____

STATAREA	# HOOKS IN AREA	AVG DEPTH	# OF FISH	APROX ACC	ESTIMATE POUNDS	DR	ACTUAL POUNDS (FT)	DR
----------	--------------------	--------------	--------------	--------------	--------------------	----	-----------------------	----

_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

RECOVERD TAGS? _____

INCIDENTAL SPECIES _____

COMMENTS (ESP THOSE AFFECTING CPUE, SPECIFIC AREA FISHED) _____

DATA QUALITY _____ (1-5) (1=EXCELLENT, 5=POOR)

FISH SAMPLED Y/N OTOLITHS TAKEN Y/N SAMPLER _____

ALASKA TRAWL LOGBOOK

Vessel Name: _____

Date Left Port: _____

ADFG Number: _____

Port of Landing: _____

Date of Landing: _____

Date mo/day	Haul No.	Position		Time (24 hr)	Depth fm.	RPM	Gear No.	Trawl Type	Total Haul lb. or mt	Catch by Species lbs. or mt					Discard or Other	Comments
		LORAN 1	LORAN 2													
		or 1/4° by 1°														
		Set														
		Up														
		Set														
		Up														
		Set														
		Up														
		Set														
		Up														
		Set														
		Up														
		Set														
		Up														
		Set														
		Up														

Further Comments:

B N^o 10203

ALASKA LONGLINE — POT FISHERY LOGBOOK

Appendix A.4

VESSEL NAME _____
VESSEL NUMBER _____
SKIPPER NAME _____
TARGET SPECIES _____
PORT OF LANDING _____
DATE LEFT PORT _____
DATE OF LANDING _____

CREW SIZE _____
(include skipper)
SYSTEM USED _____

LONGLINE GEAR			
HOOK SIZE/TYPE	SKATE LINE SIZE	HOOK SPACING	NUMBER OF HOOKS/SKATE

POT GEAR		
POT DIMENSIONS (ft)	GROUNDLINE WT. OR DIAMETER	POT SPACING(ft)

BAIT(S) USED	%

SET OR BOUY NO.	DATE SET	TIME SET	DATE HAILED	TIME HAILED	POSITION COMPASS OR LORAN	AVERAGE DEPTH(ft)	NO. SKATES OR POTS RUN	CATCH BY SPECIES IN NUMBERS				COMMENTS
								TARGET				
-22-												

ADDITIONAL COMMENTS _____

Appendix B. Port sampling and biological
sampling forms.

The Alaska Department of Fish and Game (ADF&G) administers all programs and activities free from discrimination based on race, color, national origin, age, sex, religion, marital status, pregnancy, parenthood, or disability. The department administers all programs and activities in compliance with Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act (ADA) of 1990, the Age Discrimination Act of 1975, and Title IX of the Education Amendments of 1972.

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U.S. Fish and Wildlife Service, 4040 N. Fairfax Drive, Suite 300 Webb, Arlington VA 22203

Office of Equal Opportunity, U.S. Department of the Interior, Washington DC 20240

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For information on alternative formats and questions on this publication, please contact:

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