

4K96-48

PROJECT OPERATIONAL PLAN  
BERING SEA TEST FISHERY PROGRAM:  
1996 BRISTOL BAY RED KING CRAB PROJECT

by

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and  
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Regional Information Report<sup>1</sup> No. 4K96-48

Alaska Department of Fish and Game  
Commercial Fisheries Management and Development Division  
211 Mission Road  
Kodiak, Alaska 99615

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## TABLE OF CONTENTS

	<u>Page</u>
LIST OF FIGURES .....	i
LIST OF APPENDICES.....	ii
FOREWORD.....	1
INTRODUCTION .....	2
OBJECTIVES .....	2
METHODS .....	2
Cost Recovery.....	3
Gear Study .....	3
Sample Design .....	3
Catch Sampling.....	3
DATA ANALYSIS.....	4
SCHEDULES AND PERSONNEL.....	4
SUPPORT OF OTHER REGIONAL PROJECTS .....	5
REPORTS .....	5
LITERATURE CITED.....	6
FIGURES .....	7
APPENDIX.....	9

## LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
1. Experimental gear study location, 1996 Bristol Bay Test Fish Project .....	7
2. Sample pot deployment grid pattern in the 1996 Bristol Bay experimental gear study ....	8

## LIST OF APPENDICES

<u>Appendix</u>	<u>Page</u>
A. FY97 Yellowbook for the Bering Sea Crab Test Fishery Program.....	10
B. Shipboard Instructions for the 1996 Bristol Bay Test Fish Charter .....	12
C. List of Reports and Presentations generated from the Bristol Bay Test Fishery Project.....	70

ALASKA DEPARTMENT FISH AND GAME  
DIVISION OF COMMERCIAL FISHERIES

**PROJECT OPERATIONAL PLAN**

Title: Bristol Bay Red King Crab Test Fishery Project

Yellowbook Project No.: TF-970 (Appendix A)

Project Leader: Donn Tracy PCN: 1857  
Biometrician: Douglas Pengilly PCN: 1227

Date Submitted: July 1996

Region: Westward  
Fishery Unit: Bering Sea/Aleutian Islands Crab  
Fishery: Bristol Bay Red King Crab  
Fishery Management Plan: Fishery Management Plan for the Commercial King and Tanner Crab Fisheries in the Bering Sea/Aleutian Islands

File Name: BB96POP.DOC

**APPROVALS**

Level	Signature	Date
Project Leader:	_____	_____
Regional Biometrician:	_____	_____
Research Supervisor:	_____	_____
Regional Supervisor:	_____	_____
Headquarters' Receipt:	_____	_____
Headquarters' Approval:	_____	_____
Headquarters' Recommendation:		
Further Review:	_____	_____
Approval:	_____	_____

## FOREWORD

This project, funded under the State of Alaska Bering Sea Crab Test Fishery Program, is in its seventh year and has previously focused on Bristol Bay red king crab tagging studies initiated in 1989. Operational plans for 1990, 1991, 1992, 1993, 1994 and 1995 are documented in Watson and Pengilly (1993b, 1992, 1993a, 1994, 1995 respectively), and Watson et al. (1996).

The FY97 project has two major components: 1) a 31 day charter in the Bristol Bay Registration Area 'T': (a) to conduct a study of experimental commercial king crab fishing gear (including two types of crab egress devices recently adopted into commercial gear regulation by the Alaska Board of Fisheries for the purpose of assessing directed catches of legal sized king and Tanner crabs, the incidental catches of sublegal and female king and Tanner crabs, and bycatch of other species; and (b) collect red king crabs for project cost recovery; 2) a 26 day charter to conduct a crab population assessment trawl survey in the Norton Sound section of the Bering Sea Registration Area 'Q'. A third and lesser component of the FY97 project will include recovery of externally tagged legal blue king crabs from the 1996 St. Matthew blue king crab fishery. The total budget for the Bering Sea Crab Test Fishery Program is \$450,840 (Appendix A).

For purposes of this operational plan, only the Bristol Bay charter and experimental gear study will be described. Details on the cost recovery segment of the Bristol Bay red king crab charter are contained in Appendix B. A description of the 26 day crab assessment trawl survey is provided in the "Project Operational Plan for the 1996 Norton Sound Red King Crab Trawl Survey (Blau et al. 1996). A list of reports and presentations generated from the project since its inception is given in Appendix C.

## INTRODUCTION

The incidental catch of non target crabs and other marine species in the Bering Sea/Aleutian Island shellfisheries has long been an issue of priority to the Alaska Department of Fish and Game (ADF&G) and the commercial fishing industry. Current regulatory definitions of allowable commercial crab gear are designed to minimize bycatch, although recent annual reports by at sea observers deployed on fishing vessels indicate that significant numbers of non target animals are captured and released (Boyle et al. 1996).

Additionally, commercial shellfish regulations adopted by the Alaska Board of Fisheries (BOF) in 1996 included egress devices (escape 'rings' and enlarged pot webbing ) required for crab pots fished in Bering Sea waters (ADF&G Commercial Shellfish Regulations, 1996). The BOF action was intended to inhibit the bycatch of undersized and female crabs, and incidental species during directed fishing for king and Tanner crabs. To date there has been a limited amount of published scientific information available on the overall effectiveness of these devices when utilized under commercial fishing conditions.

## OBJECTIVES

The primary objectives of the Bristol Bay Test Fish project consist of assessing the rates at which legal-sized and under-sized male red king crabs, and female red king crabs are captured in an experimental crab pot design, and assessing the rates at which under-sized male and female red king crabs, and under-sized male and female Tanner crabs are captured in commercial king and Tanner crab pots containing egress devices. Secondary objectives include evaluating the rates at which legal-sized male red king and Tanner crabs are observed in these pots.

A study of red king crab and Tanner crab catches using an experimental king crab pot design, and commercial king and Tanner crab pots outfitted with egress devices (escape rings) will be conducted in the Bristol Bay waters east of 168 degrees longitude. The species composition, catch and crab size distribution, reproductive condition and general vitality of all crabs captured will be assessed. A comparison between the experimental king crab pot design and the standard king crab pot design, and a comparison between standard king and Tanner crab pots with and without egress devices (escape rings) will be made based on the catch abundance and size distribution of male and female red king crabs and legal-sized Tanner crabs.

## METHODS

The project will be conducted aboard the test fishery charter vessel, F/V *Rosie G* from August 1 to August 31, 1996 operating in the waters of Bristol Bay (Area T).

## ***COST RECOVERY***

The initial 7 to 10 days of the project will be directed towards harvesting marketable male red king crab for program cost recovery. Up to 150 king crab pots of standardized design will be deployed at various locations presumed to contain dense concentrations of legal-sized male red king crabs. An estimated 50,000 to 70,000 pounds of male crabs equal to or greater than 6.5 inches in carapace width (CW) will be captured and sold to a processing facility to cover the cost of the project, including the vessel charter. If cost recovery goals are not attained during the 10 day period, the directed harvest of red king crabs will resume until such time that a sufficient number of legal-sized crabs are captured for subsequent sale.

Offloading of the catch will be monitored by ADF&G to ensure accurate counting of crabs for fish ticket documentation and accurate payment to the State of Alaska for the sale.

## ***GEAR STUDY***

The remainder of the charter will be utilized to complete the gear study objectives outlined previously. Waters fished during this phase of the cruise will include areas where an historically high abundance of adult and juvenile red king crabs, and legal-sized Tanner crabs have been documented during other surveys and the commercial fishery.

### **Sample Design**

Experimental king crab pots fished during the study will be alternately deployed amongst standard design king crab pots arrayed in a grid-like pattern. Deployed pots within each grid will be spaced  $1/3$  (.333) NM apart bilaterally. An example grid with assigned pot numbers is shown in Figure 1. Each pot will be identified by colored tags attached to the buoy line indicating the pot type (i.e. experimental or standard design). The target soak time for each pot will be 48 hr., with an acceptable range of 1.5 to 2.5 days in order to ensure comparability of data.

Additionally, standard king and Tanner crab pots, each containing 4 escape rings will be deployed amongst standard pots without escape rings, and arrayed in a grid-like pattern as shown in Figure 1.

Deployed pots within each grid will be spaced  $1/3$  (.333) NM apart bilaterally. An example grid with assigned pot numbers is shown in Figure 2. Each pot will be identified by colored tags attached to the buoy line indicating the presence or absence of escape rings. The target soak time for each pot will be 48 hr., with an acceptable range of 1.5 to 2.5 days in order to ensure comparability of data.

### **Catch Sampling**

Pot contents will be evaluated within gear study grids and cost recovery strings. Sampled crabs will be enumerated, measured and shell aged, and all males identified as legal or sub-legal, and all females assessed as adults or juveniles.

A comprehensive sample design, shipboard procedures, and data forms for the gear study segment of the charter are detailed in "Shipboard Instructions for the 1996 Bristol Bay Test Fishery Charter" (Appendix C).

## DATA ANALYSIS

Collected data will be analyzed to establish a corollary relationship between: 1) the design of a commercial king crab pot and the resulting catch abundance and size distribution of adult and juvenile female red king crabs; and 2) the presence or absence of egress devices (escape rings) in commercial king and Tanner crab pots and the resulting catch abundance and size distribution of captured adult and juvenile female red king crabs, and captured adult and juvenile male Tanner crabs. A secondary objective is to evaluate a corollary relationship between the catch abundance of various size classes of both legal-sized red king and legal-sized Tanner crabs by using pot of differing designs or both pots with or without escape ring devices. Results of the gear comparison will be evaluated mathematically and tested for statistical significance.

## SCHEDULES AND PERSONNEL

7/95-7/96	Project planning (Tracy and Pengilly)
8/96	1996 Bristol Bay red king crab cost recovery and gear study charter (Tracy et al.)
9/96-6/97	Data entry, analysis, and reporting (Tracy and Pengilly)

The 1996 Bering Sea Test Fish Program supports 14.5 man-months of personnel time, including two seasonal positions ( L. Watson FB I - 3.5 mm; S. Byersdorfer FB I - 6 mm). Short-term personnel costs (Sea Duty/Hazard Pay) will also be incurred to support staff onboard the survey vessels involved in post survey field activities. Long-term seasonal personnel that are partially supported by the project also write reports and perform logistics related to the project. All seasonal personnel provide assistance to shellfish management and the Mandatory Shellfish Observer Program. The field season in 1996 begins on August 1 with the Norton Sound red king crab trawl assessment survey charter and Bristol Bay red king crab gear study/cost recovery charter, and ends with the residual tag recovery effort in mid to late September following closure of the St. Matthew Island blue king crab fishery.

## SUPPORT OF OTHER REGIONAL PROJECTS

The Bering Sea Test Fishery Program also provides funding for other Westward Region projects, especially computers, office fixtures and related supplies, in the Kodiak and Dutch Harbor offices. Over the past several years, the test fishery project has supported studies involving genetic stock identification and visual image processing to determine the incidence of hybrid Tanner crabs (*C. bairdi* X *C. opilio*). The program supports the Dutch Harbor Observer Program Database Manager, who also serves as a research biologist, with equipment and supplies. Although the program does not fund regional biometricians, it has supported those positions in purchases of computers, statistical software, books, and travel to Alaska Board of Fisheries meetings, as well as other professional forums related to the Westward Region Shellfish Program.

The test fishery charters have been used to accomplish a variety of shellfish management and research objectives over the past several years. Most notably, the charters have served as the platform for the Mandatory Shellfish Observer Program Practicum, including capture of crabs for observer candidate testing and use of the vessel and crew for shipboard interviews and catch sampling. The National Marine Fisheries Service conducted a pilot crab mortality study onboard the charter vessel in 1992, utilizing ADF&G personnel in the process. Also, in the previous three years of test fishery charters, ADF&G has collected crab samples for the Alaska Department of Environmental Conservation (ADEC) in order to analyze the occurrence of paralytic shellfish poisoning (PSP) and domoic acid. Additionally, the charters have facilitated collections of crab for Genetic Stock Identification (GSI) studies.

## REPORTS

1. A summary of biological data collected during the 1996 Bristol Bay red king crab test fishery project. (R.I.R. 4K97-XX) Byersdorfer. January 1997 (final report).
2. A summary of biological data collected during the 1996 Norton Sound King Crab Assessment Survey (R.I.R. 4K97-XX) Blau, Watson and Blackburn. January 1997 (final report).
3. A comparison of red king crab catch size and abundance in an experimental king crab pot design. (Reg. Inf. Rep. 4K97-XX) Pengilly, Tracy. January 1997 (final report).
4. A comparison of red king crab and Tanner crab catch abundance and size in commercial king and Tanner crab pots containing variable diameter escape ring mechanisms. (Reg. Inf. Rep. 4K97-XX) Pengilly, Tracy. January 1997 (final report).

## LITERATURE CITED

- Watson, L.J., and D. Pengilly. 1992. Project operational plan for the 1991 Bristol Bay red king crab test fishery project. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 4K92-31, Kodiak.
- Watson, L.J., and D. Pengilly. 1993a. Project operational plan for the 1992 Bristol Bay red king crab test fishery project. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 4K93-5, Kodiak.
- Watson, L.J., and D. Pengilly. 1993b. Project operational plan for the 1990 Bristol Bay red king crab test fishery project. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 4K93-17, Kodiak.
- Watson, L.J., and D. Pengilly. 1994. Project operational plan for the 1993 Bristol Bay red king crab test fishery project. Alaska Department of Fish and Game, Commercial Fisheries Management and Development Division, Regional Information Report 4K94-27, Kodiak.
- Watson, L.J., and D. Pengilly. 1996. Project operational plan for the 1994 Bristol Bay red king crab test fishery project. Alaska Department of Fish and Game, Commercial Fisheries Management and Development Division, Regional Information Report 4K96-31, Kodiak.
- Watson, L.J., D. Tracy, and D. Pengilly. 1996. Project operational plan for the 1995 Bering Sea test fishery program: Bristol Bay red king crab test fishery project. Alaska Department of Fish and Game, Commercial Fisheries Management and Development Division, Regional Information Report 4K96-2, Kodiak.

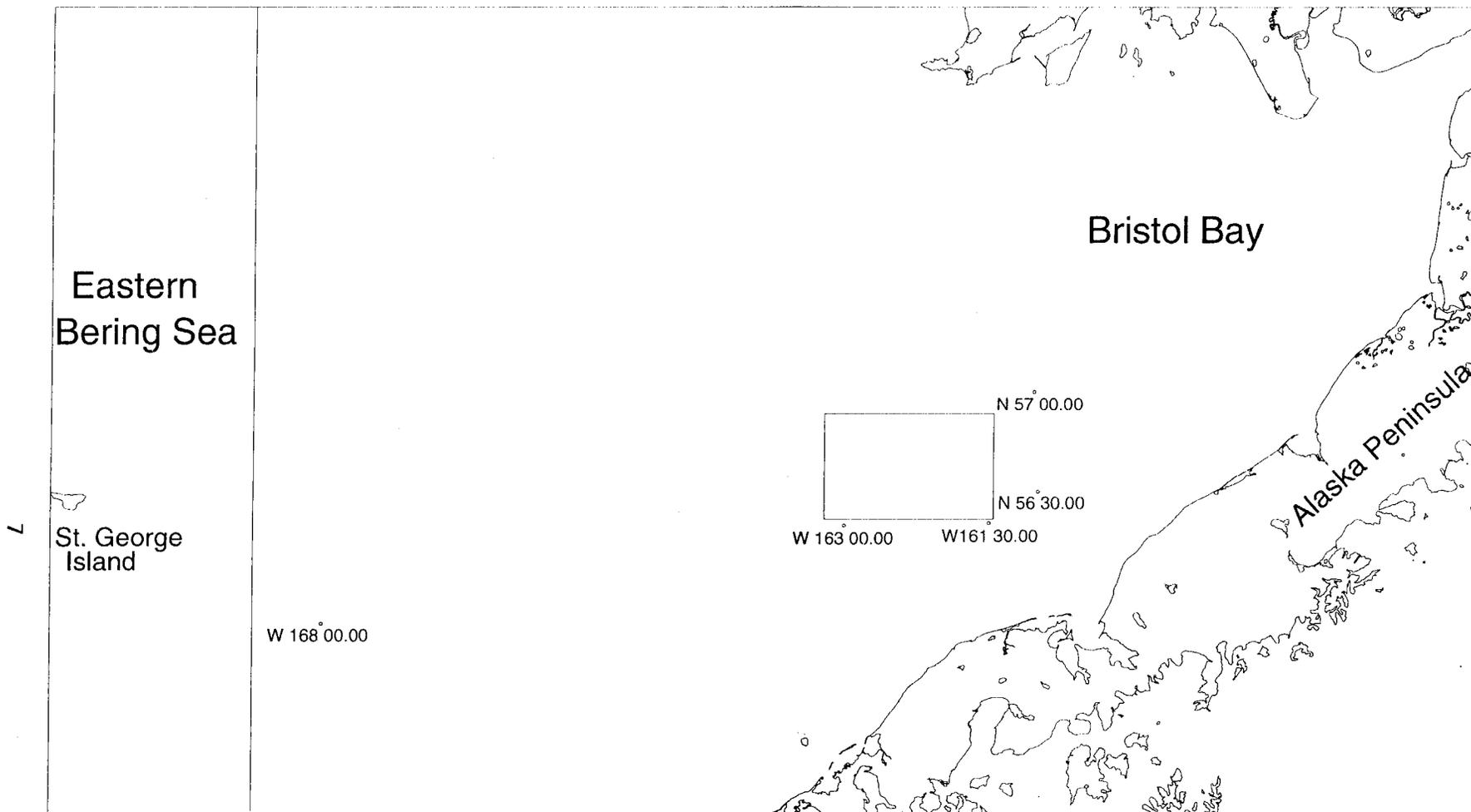


Figure 1. Experimental gear study location, 1996 Bristol Bay Test Fishery Project.

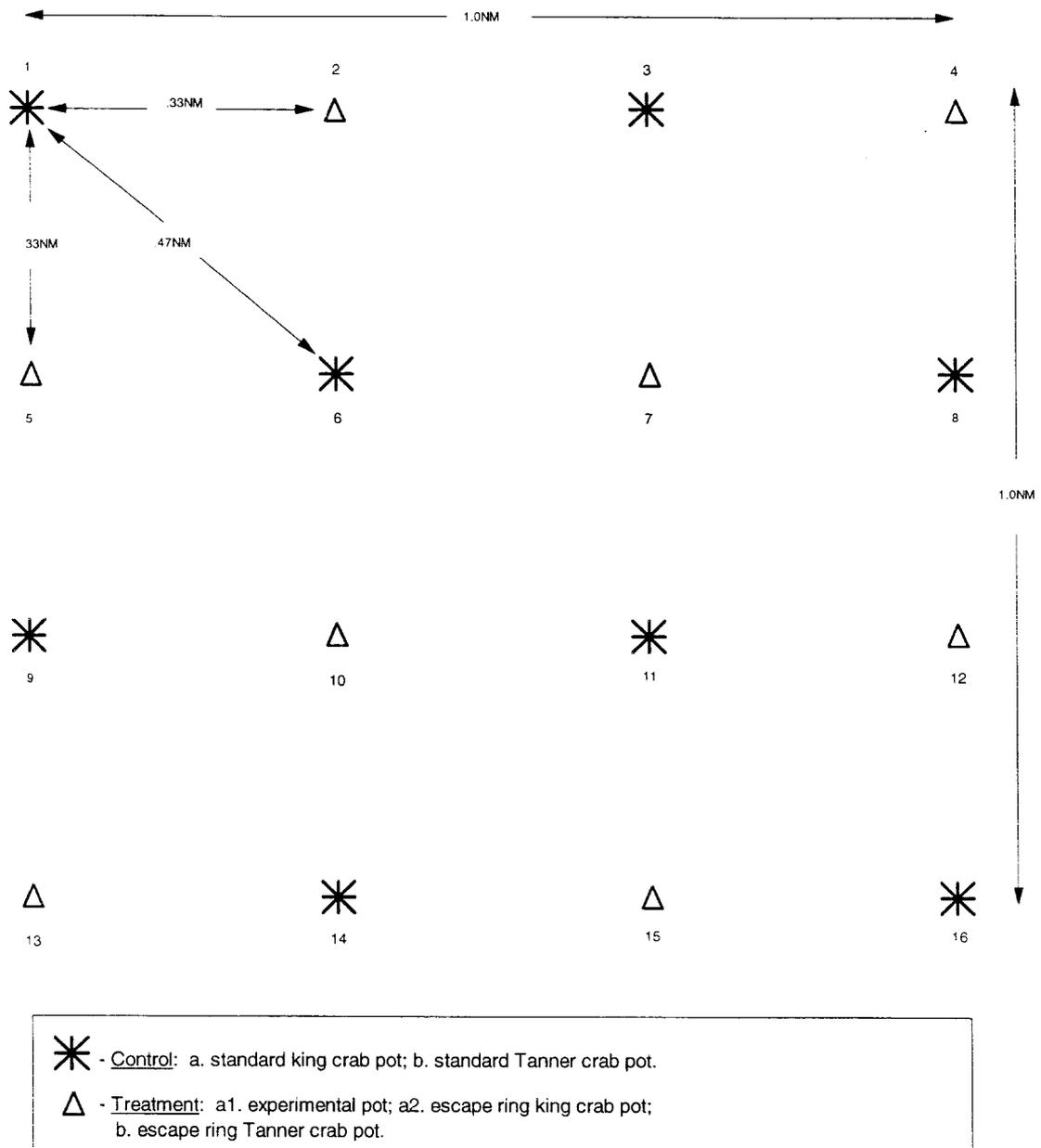


Figure 2. Sample pot deployment grid pattern for the 1996 Bristol Bay Test Fishery experimental gear study.

## **APPENDIX**

Appendix A. FY97 Yellowbook for the Bering Sea Crab Test Fishery Project. Note that the Yellowbook allocation reflects the legislative approved project amount of 450.8k.

PROJECT TITLE: Bering Sea Crab Test Fishery  
 PROJECT NUMBER: TF-785  
 FISHERY UNIT: Bering Sea/Aleutians Crab  
 LEDGER: 1147785  
 COMPONENT: 400110100 - Fisheries Mgt.  
 LOCATION: Kodiak  
 PROG. ELEMENT: Test Fish Survey  
 LEGISLATIVE DISTRICT: 27  
 FISHERIES AFFECTED: Bering Sea/Aleutian Islands Crab  
 SPECIES AFFECTED: King and Tanner Crab

**PROJECT DESCRIPTION:**

Funding from this project will support the state's expenses for conducting shellfish research projects and genetics investigation in the Bering Sea. The Bristol Bay red king crab harvest was valued recently in excess of \$50 million. Error in estimating natural mortality rates and population abundance can jointly provide major errors in development of Guideline Harvest Levels. Additional Bering Sea Tanner species and stock ID development research can be conducted.

**PROJECT OBJECTIVES:**

Bering sea crab populations are assessed to provide information for development of Guideline Harvest Levels. Data will be collected on all crab captured during the surveys. Long term tag recovery data should provide information on natural mortality rates to be used in estimating harvest rates designed to meet conservation and economic objectives established by the BOF.

BUDGET MANAGER: 11-1857 Donn Tracy TITLE: Fishery Biologist III

**PRIOR YEAR ALLOCATIONS**

Budget Detail	FY94	FY95	FY96	FY97
100 Personal Services	165.4	200.5	200.5	114.9
200 Travel	2.1	15.3	15.3	13.5
300 Contractual	223.2	222.8	222.8	304.9
400 Commodities	49.2	9.0	9.0	7.5
500 Equipment	0.0	7.0	7.0	10.0
Project Totals	459.9	454.6	446.8	450.8

-Continued-

Funding sources	FY94	FY95	FY96	FY97
Federal Receipts	0.0	0.0	0.0	0.0
General Fund	0.0	0.0	0.0	0.0
Interagency Receipts	0.0	0.0	0.0	0.0
Program Receipts	459.5	454.6	446.8	450.8
General Fund Match	0.0	0.0	0.0	0.0
Fish and Game Fund	0.0	0.0	0.0	0.0
CIP Funds	0.0	0.0	0.0	0.0
Staff months	29.0	30.0	30.0	14.5

PROJECT NUMBER: TF-785

PROJECT TITLE: Bering Sea  
Test Fishery

COMPONENT: 400110100 Fisheries Management  
REGION: 4

UNIT: Bering Sea Aleutians Crab  
LEDGER CODE: 11147785

PCN	TITLE	NAME	RS	S	LOC	PM	SWD	RDO	OT	HAZ	GY	SW	SB	TOTAL
11-1117	Fish Bio I	Byersdorfer, Susan	14F	F	CAA	6.0	14	7	60	200	0	0	0	\$ 37,840.0
11-1351	Fish Bio II	Boyle, Larry	16F	F	BKB	0	14	7	0	0	0	0	0	\$ 6,000.0
11-1390	Fish Bio III	Morrison, Rance	18F	F	BKB	0	14	7	0	0	0	0	0	\$ 6,500.0
11-1238	Fish Bio III	Blackburn, Jim	18F	F	CAA	0	10	4	0	0	0	0	0	\$ 5,000.0
11-1595	Fish Bio II	Blau, Forrest	16 M	M	CAA	0	10	4	0	0	0	0	0	\$ 4,500.0
11-1825	Fish Bio II	Zhou, Shijie	16A	A	AWA	0	21	10	0	300	0	0	0	\$ 6,000.0
11-1919	Fish Bio I	Brennan, Betsy	14F	F	BKB	0	10	4	0	0	0	0	0	\$ 3,500.0
11-1905	Fish Bio I	Robb, Peter	14F	F	BKB	0	10	4	0	0	0	0	0	\$ 3,500.0
11-1319	Admin Clerk II	Blackett, Nang	12D	D	CAA	2.0	0	0	0	0	0	0	0	\$ 6,742.0
11-1409	Fish Bio I	Moore, Holly	14A	A	BKB	2.0	0	0	45	0	0	0	0	\$ 12,016.0
11-C544	Fish Tech. II	Platter, Bridget	11A	A	CAA	1.5	0	0	100	0	0	0	0	\$ 5,000.0
11-1637	Admin Clerk II	Chisum, Tammy	12A	A	BKB	0	0	0	20	0	0	0	0	\$ 700.0
11-1857	Fish Bio III	Tracy, Donn	18 A	A	CAA	0	8	2	0	0	0	0	0	\$ 2,500.0
11-1967	Fish Bio I	Watson, Leslie	14 J	J	CAA	3.0	0	0	0	0	0	0	0	\$ 15,144.0
TOTALS						14.5	111	49	225	500	0	0	0	\$114,940.0

Line	Description	Amount	Comments
72240	Field travel	10.00	Travel
72500	Per Diem/Other costs	3.50	Per diem Expenses
73000	Other services/charges	304.90	Charter costs, other services
74480	Household/Institutional	0.00	
74520	Scientific supply	1.50	Misc. Scientific Equipment
74600	Other operation supplies	6.00	Tag Rewards
75690	Mach/Equip summary	10.00	Misc. Computer, sample equipment
TOTALS		335.90	

Grand Total

\$450,840.00

Shipboard Instructions  
1996 Bristol Bay Test Fishery Charter

by

Doug Pengilly, Donn Tracy  
and Susan Byersdorfer

July 16, 1996

## TABLE OF CONTENTS

	<u>Page</u>
LIST OF APPENDICES	i
SAFETY BRIEFING	1
GENERAL BRIEFING	1
SURVEY OBJECTIVES	3
METHODS	4
Cost Recovery Fishing and Delivery	4
Escape Ring/Experimental Pot Survey	6
Sampling Procedures	7
Survey Pot Catches	8
Cost Recovery Catches	9
Red King Crab and Tanner Crab Length/Width/Height measurements	10
Floy-Tagged Crab Recovery	11
Crab Collection for Paralytic Shellfish Poison (PSP) Testing	11
Crab Collection for Observer Practicum	12
Video/Photo Documentation	12
MISCELLANEOUS INSTRUCTIONS AND REMINDERS	12
APPENDICES	13

## LIST OF APPENDICES

<u>Appendix</u>		<u>Page</u>
A.	Radio Schedule and Catch Reporting Codes	14
B.	Forms and Examples of Properly Completed Forms	15
C.	Example Gear Survey Stations Grid	25
D.	Random Pot Sampling Instructions	27
E.	List of Equipment	32
F.	Charter Itinerary and Calendar	33
G.	Contract between the State of Alaska and the FV Rosie G	34
H.	Example of properly completed ADF&G timesheet for pay periods at-sea	54

## SAFETY BRIEFING

\*\*\* Check your suit, EPIRB, and strobe prior to departure \*\*\*

The captain and crew have been instructed to run through the shipboard safety drill with you PRIOR TO DEPARTURE (as per the charter contract), including pulling the general alarm, and where you should be in case of an emergency. Do not go on the back deck or anywhere outside when seas are rough, **especially alone**. When the gear is being worked, pay attention to buoy lines and trailers, slick decks and pots. **ADF&G personnel will not stack pots, operate hydraulics, or throw buoy lines** (department crew members that participate in any of these activities will at the very least be prohibited from future deployment on any Test Fishery vessel charters). Be aware of the crane at all times, especially when pots are being moved or stacked. Obey the captain in regards to your safety and the safety of others.

## GENERAL BRIEFING

The purpose of this manual is to provide instructions and information relating to the 1996 Bristol Bay red king crab gear study. Refer to it when in doubt regarding objectives and sampling procedures. Be prepared to accept changes to this manual if necessary; however, standardized methodologies will remain constant.

Larry Boyle is this year's cruise leader. Assisting personnel are Rance Morrison, Susie Byersdorfer, and Shijie Zhou. During the charter each crew member may be delegated tasks that will remain their responsibility throughout the entire trip. Any problems that arise should be channeled through Larry. Clean up any work areas that you use, including the galley table. All data will be kept as dry as possible and organized. Make sure the deck paperwork tracks with the pilot house records; every pot will have a unique sequential pot number which will enable cross referencing on a pot by pot basis. Although it is the cruise leader's responsibility to ensure data integrity, he will rely on other ADF&G crew members for assistance. If you have questions about the data, sampling protocols, or anything related to the work you are conducting please ask before you act. The cruise leader will note any changes in sampling plans, and the cumulative number of crabs put aboard the vessel for cost recovery.

All data will be edited daily; this practice ensures that the often important short-term details of the day's events are not overlooked. **There will be no compromise with regard to this responsibility.**

Maintain all sampling equipment and ensure that it is cleaned up and stored safely inside the vessel at the end of each day (calipers, clipboards, measuring sticks, etc.). Keep a daily log of activities, dates, any miscellaneous observations, Floy tag recoveries,

problems, a running tally of how many crabs you have aboard, sampling irregularities, etc. Where possible, offer your assistance to the vessel crew. When time permits, you are free to help out with some of the on-deck activities that aren't inherently dangerous, such as filling bait containers, coiling buoy set ups, etc. Please clean up after yourselves if you have coffee or snacks between meals. Offers for washing dishes, making coffee, cooking, and general cleaning are expected and **should be routine**. In the past, the vessel crew has typically had a busier work schedule than ADF&G personnel, and a cooperative effort toward maintaining living conditions on the boat is a great benefit to everybody's morale.

Timesheets. For pay periods that will be completed while you are at-sea, timesheets will need to be filled out FOR REGULAR PAY AND SEA DUTY ONLY, and submitted before you leave. Please record standard hours worked in the stop-start columns. Report time you left port and time you returned to port in the "comments section". You are not overtime eligible while at sea but, within reason, you are expected to work all hours necessary to complete the project objectives. This may include on-deck sampling and/or paperwork during early morning and late evening. Leave these timesheets with Donn before you depart on the boat. For those in "A" retirement (Susie and Shijie), you are eligible for hazard pay **only for the hours you work. This does not include running time to and from the fishing grounds**. When you return to Dutch Harbor or Kodiak, turn in an amended (second) timesheet to Donn for your hours worked at-sea; this amended timesheet will be submitted and you will receive a pay adjustment for hazard duty. Code timesheets as follows:

BOYLE: SEA DUTY (741-47785)  
BYERSDORFER: REG. PAY, SEA DUTY, HAZARD (741-47785)  
MORRISON: SEA DUTY, (741-47785)  
ZHOU: SEA DUTY, HAZARD (741-47785)

Check with Donn Tracy if you have questions about how to record hours at-sea on your timesheets. **\*\*See Appendix H for examples of how to fill out regular and amended time sheets.**

**THERE WILL BE NO HOMEPACKING OF ANY CRABS, CRAB LEGS, CRAB MEAT, OR FISH DURING THE CHARTER.** The personal retention of crabs and fish by department personnel on Test Fish research cruises will not be tolerated and constitutes **exceptionally unprofessional behavior** - particularly in view of the fact that it's unquestionably illegal for vessel crew members to do likewise. It is acceptable to consume mortally injured crabs, cod and flatfishes while at-sea, although all halibut are to be placed overboard immediately.

**\*\*There will also be no collections of crabs for biological or display purposes unless Larry Boyle authorizes it.\*\***

Radio Schedule. A daily radio schedule will be maintained with ADF&G as outlined in Appendix A.

## SURVEY OBJECTIVES

1. **Cost Recovery.** Catch approximately 18,500 male red king crabs  $\geq$  6.5 inches carapace width (CW) for delivery to Royal Aleutian Seafood's in Dutch Harbor on August 10, 1996. Cost recovery catches will be sampled as outlined in the "Methods" section.
2. **Escape ring/Experimental Pot Survey.** A study of the catchability of experimental king crab pots, and king and Tanner crab pots with and without escape rings will be conducted, and consist of surveying the species composition (primarily red king crabs and *C. bairdi*), catch distribution, catch per pot, female reproductive condition, and mortality of crabs observed in each respective gear type.
3. **Red King Crab and Tanner Crab Length/Width/Height Measurements.** Male and female red king crabs, and male and female Tanner crabs of all observed sizes will be measured for "standard" carapace length and/or width (depending on the species), greatest carapace width, greatest carapace length, and carapace height to determine a correlation coefficient to the standard measurement(s). These samples will be taken from crabs captured in both cost recovery and survey pots. Sampled crabs need not be randomly selected, although a representative sample of all sizes of crabs observed in sampled pots is needed.
4. **Floy-Tagged Crab Recovery.** Document all captures of tagged crabs, regardless of agency or date of tagging. Release crabs after documentation is completed. Additional sampling required if a PIT-tagged crab is captured.
5. **Crab Collection for PSP Testing.** Collect, label and freeze red king crab, *C. bairdi*, *C. opilio*, *bairdi X opilio* hybrids as per Department of Environmental Conservation (DEC) request.
6. **Crab Collection for observer practicum** collect, tag and bag (in burlap sacs) adult and juvenile male and female red king crab, adult male and female *C. bairdi*, adult male and female *C. opilio*, adult male and female *bairdi X opilio* hybrids, and adult male and female Korean hair crabs as per Mike Ward's instructions for an observer practicum to be held on August 26.

## METHODS

### *Cost Recovery Fishing and Delivery*

#### Catch objectives

Catch approximately 18,500 male red king crabs  $\geq$  6.5 inches CW (approximately 110,000 lb. using 6.0 lb. average weight). **EVERY SINGLE CRAB RETAINED FOR COST RECOVERY WILL BE MEASURED WITH A 6.5" STICK.** Ideally, there will be a single delivery of crab for the entire 31-day charter. Directed cost recovery fishing will occur in the first 10 days of the charter. Donn Tracy will likely be the only ADF&G crew member aboard the vessel during this leg. However, if the cost recovery objectives are not achieved during this segment of the cruise, crabs may be retained during the later stages of the gear study period for a second delivery at the conclusion of the charter. Bid price per pound is \$4.53 for red king crab.

#### Pilot house logs

Ensure that the **Pilot House Logs** are completed at the end of each day, including the catch per pot (C/P) for retained male red king crabs  $\geq$  6.5 inches CW, and male red king crabs  $\geq$  6 inches CW (but  $<$  6.5 inches CW), which will be released. Note that the **Pilot House Log - Survey Stations** (Form 1, Appendix B) is slightly different than the **Pilot House Log - Cost Recovery** (Form 2, Appendix B). However, the C/P column is the record for documenting cost recovery catches on **both** types of pilot house logs. It is the cruise leader's responsibility to make sure the captain completes this task.

#### Catch reporting

Using the code sheet provided, please report via radio the daily catch and cumulative total of the cost recovery catch aboard, in numbers of crabs on the **Red King Crab Cost Recovery Daily and Cumulative Catch Record** (Form 3, Appendix B).

#### Non-salable crabs

Following delivery of cost recovery crabs to the processor, instruct the captain to release all non-legal and deadloss crabs at the nearest dump zone (Boyle's responsibility). Live non-legal crabs cannot be sold under the test fish program.

### Fish ticket for cost recovery delivery

Tracy will handle the paperwork for the delivery of crabs to the processor (unless a second delivery is made at the conclusion of the charter, in which case Larry Boyle will assume this responsibility); **this transaction in no way involves the charter vessel or the vessel captain.** A crew member from ADF&G will take brailer weights; provide a notebook for this purpose. This information must be returned to Donn Tracy, along with the check and the completed fish ticket and copies. To complete the fish ticket, bring the CFEC card(s) to the processor's business office and fill in the information as follows: **a) record "Vessel Name" as "ADF&G-Kodiak 1996 Bering Sea Test Fishery" (do not write the vessel name on any part of the ticket; b) compute the average weight of the crabs and record the catch by appropriate statarea(s); c) estimate deadloss and enter on the ticket with the appropriate code by species; d) verify the poundage, and the price agreed upon in the processing contract; e) triple-check the fish ticket before you sign it, making sure it is complete and accurate; f) do not sign the fish ticket until you have received a check for payment-in-full (remember, we are tax-exempt); g) the check is to be made out to: State of Alaska, 211 Mission Road, Kodiak, Alaska 99615.**

If Donn Tracy does not personally complete the financial transaction for delivery of the cost recovery crabs, any problems on the settlement can be resolved by contacting him immediately.

### Payment for the vessel charter

Please ask the captain to send a bill for the amount as agreed to in the charter contract to Linda Wisner, 211 Mission Road, Kodiak, AK 99615.

## *Escape Ring/Experimental Pot Survey*

The survey will consist of: 1) alternately deploying experimental and standard king crab pots spaced 1/3 (0.33) NM apart on a grid pattern; 2) alternately deploying standard king crab pots with and without escape rings, and spaced 1/3 (0.33) NM apart on a grid pattern; 3) and alternately deploying Tanner crab pots with and without escape rings, and spaced 1/3 (0.125) NM apart on a grid pattern **The deployment of blocks of experimental pots and the deployment of blocks of pots with escape rings will take place concurrently.** **VERY IMPORTANT: Each block can only contain ONE TYPE of treatment pot (i.e. don't deploy experimental pots and pots with escape rings in the same block).** The location of the survey grids will be determined based on areas of immature and mature red king crab, and Tanner crab high catch abundance during the 1995 NMFS trawl survey, the 1995 Bristol Bay charter, and the cost recovery segment of this charter. Larry Boyle will be responsible for plotting pot grids during the study. An example of a block (grid pattern) with assigned numbers is shown in Figure 1 (Appendix C); the location of the first pot in the block will determine the placement of subsequent pots. Each pot type will be flagged with different colored buoy tags for quick identification. **VERY IMPORTANT: Pot types must be recorded for each pot sampled and are defined as follows:**

1. **“Standard” king crab pots** - Pots with two 8” inch tunnels, and either 7.75” or 9.25” stretched mesh (either one or the other for **all pots fished**). These pots will be used for cost recovery fishing, alternate deployment (in blocks) with experimental pots, and alternate deployment (in blocks) with pots containing 6” escape rings.
2. **Experimental king crab pots** - Shijie Zhou's patented design. These pots will be randomly deployed during cost recovery fishing, and alternately deployed (in blocks) with standard king crab pots.
3. **Escape ring king crab pots** - Pots with two 8” tunnels, and opilio curtains **covering** the enlarged web panel. These pots will be outfitted with **four** 6” escape rings sewed in vertical panels only, and within **18”** of the pot base; spacing between rings should be approximately even. These pots will be alternately deployed (in blocks) with standard king crab pots.
4. **“Standard” Tanner crab pots** - Pots with two 3” Dorian ® tunnels, and opilio curtains **covering** the enlarged web panel. These pots will be alternately deployed (in blocks) with pots containing 5” escape rings.
5. **Escape ring Tanner crab pots** - Pots with two 3” Dorian ® tunnels, and opilio curtains **covering** the enlarged web panel. These pots will be outfitted with **four** 5” escape rings sewed in vertical panels only, and within **18”** of the pot base; spacing between rings should be approximately even. These pots will be alternately deployed (in blocks) with standard Tanner crab pots.

The standard soak time for each survey pot will be 2 days (48 hrs) with an acceptable range of 1.5 to 2.5 days; although target soak periods of 3 days (72 hrs) with an acceptable range of 2.5 to 3.5 days may also be applied to blocks of gear deployed while the vessel returns to port for the observer practicum. In each scenario, soak time must be standard in order to compare pot catches between gear types. Two liters of chopped herring will be used in each pot set.

Survey pot numbers will be sequential. It is **essential** that the survey grids are set in blocks of **16 pots each** (Figure 1, Appendix C). Block number is not recorded on any data sheets and is just a concept useful for keeping the survey organized on a digestible scale. The vessel and ADF&G crew should be able to work at least **4 blocks per day** (a total of 64 pots, including pots pulled and sampled and pots set or re-set) once the gear is deployed. This number is the expected daily sampling/fishing objective, and may be adjusted upward if there appears to be additional time available, or downward if it becomes apparent that the original schedule is too ambitious. The blocking scheme should not constrain the survey in any way; it is the best approach for maintaining a systematic design to achieve the project objectives.

When cost recovery pots are set, **string** numbers will be assigned that are unique, beginning at 001 so as not to duplicate survey numbers. In sampling cost recovery pots, record string number in the section for station number. Pot numbers begin with the first pot set, run sequentially, and will encompass both survey and string gear. The intent is provide unique pot numbers while identifying survey gear separately from cost recovery strings.

Please familiarize yourselves with the example pot grid pattern (Figure 1), and routinely check with Larry Boyle to keep informed of the location of the survey pots so that you are ready to start sampling. Before sampling each pot, check in with the captain to confirm sequential pot number. Expect to work 12-14 hour days to accomplish these sampling goals.

### Sampling Procedures

Sampling will occur within survey gear and cost recovery strings. Crabs will be sampled almost identically in both pot types. However, all survey pots will be sampled, whereas pots sampled from cost recovery fishing will be randomly selected. **VERY IMPORTANT: When sampling survey pots, you must indicate on each data form which type of pot is being sampled (i.e. standard, experimental, escape rings).** Codes have been assigned for each pot type and are listed at the bottom of each data form. All crabs should be handled gently during sorting, measuring and release. Crabs are to be released immediately following sampling into the water trough. The vessel may transit to the next pot while sampling is occurring; however, you must instruct the crew not to pull the next pot out of the water until you are finished sampling the previous pot.

## Survey Pot Catches

When a pot comes aboard, divide the catch of all crabs by species. Using a **separate form for red king (male and female) and Tanner (male and female)** sample crabs and record required data (number of crabs measured and number of crabs counted, CL or CW, legal/sub-legal, juvenile/adult, shell age, egg clutch conditions, disease, mortality) according to the rules for each species as given below. The catch of retained crabs ( $\geq 6.5$ ) and non-retained mature male red king crabs ( $\geq 6$ " and  $< 6.5$ ") will be counted in every pot pulled, and recorded in the respective C/P columns on the **Pilot House Log - Survey Stations** (Form 1 Appendix B). Ensure that the vessel captain receives and records this information on a daily basis throughout the charter. For female RKC crabs, determination of juvenile or adult will be made based on whether or not the crab is egg-bearing, or there is evidence that it was egg-bearing (females less than 80mm CL are predominately immature, but do not use this as a standard). For female Tanner crabs, determination of juvenile or adult will be made based on whether or not the crab is egg-bearing, or there is evidence that it was egg-bearing; complete the "Eggs" section fully and note adults (code 3) and juveniles (code 4) in the Legal section.

If a crab is dead when you sample it, please note it as code 1 (dead) in the "Other" column. **The "number of crabs measured" and "number of crabs counted"** will be filled out on every form even though all animals in a pot will be measured.

Information from all sampled crabs will be recorded on the **Crab Data Form** (Form 4, Appendix B).

### Red king crab:

Divide the red king crab catch into males and females and further sub-divide the males into legals ( $\geq 6.5$  inches CW) and sub-legals ( $< 6.5$  inches CW). Record data for all crabs in each of the three sex/size classes. If all crabs in each category are sampled, data from each can be recorded on the same form. If sub-sampling in any category occurs, then data from that category of crabs must be recorded on a separate form, and the number measured and number caught must be recorded in the spaces provided at the top of the form. **Sub-sampling will not occur unless there is some unavoidable reason for doing so.**

C. bairdi:

Divide the *C. bairdi* catch into males and females and further sub-divide the males into legals ( $\geq 5.5$  inches CW) and sub-legals ( $< 5.5$  inches CW). Record data for all crabs in each of the three sex-size classes. If all crabs in each category are sampled, data from each can be recorded on the same form. If sub-sampling in any category occurs, then data from that category of crabs must be recorded on a separate form, and the number measured and number caught must be recorded in the spaces provided at the top of the form. **Sub-sampling will not occur unless there is some unavoidable reason for doing so.**

Korean hair crab:

Whenever Korean hair crabs are captured in either survey pots or cost recovery pots, fully sample them for sex, size, egg condition, etc. Record data for all Korean hair crabs captured. \*(This data may be put on the bottom of a king or Tanner form as long as the information on male hair crabs is on a form that has male crab data on it, and female hair crab data is on a form that has other female data on it.) Document any observed mating activity in the "Comments" section.

C. opilio, Tanner hybrids, or other incidental crab species:

As you will not catch large numbers of any species besides red king crabs and *C. bairdi*, all other incidental commercially valuable crabs will be sampled. Record data for all crabs as above.

Cost Recovery Catches

The ADF&G crew member(s) onboard the vessel during cost recovery fishing will count catches of retained crabs ( $\geq 6.5$ ) and non-retained mature male red king crabs ( $\geq 6$ " and  $< 6.5$ ) from every pot pulled, and ensure that the captain records this data in the respective C/P columns on the **Pilot House Log - Cost Recovery Strings** (Form 2, Appendix B). All experimental pots will be sampled and additionally, at least 10 pots per day will be randomly selected for sampling; see Appendix D for random sampling procedures. Crab catches from these pots will be sampled the same way as for survey pot catches. Remember to record **string** number in the section for **station** number on the crab data forms. Record all data on the appropriate forms for each species according to the rules for the survey pot catches (see above).

If weather conditions are unsafe or sampling efforts are severely hampering cost recovery objectives, the numbers of pots selected for sampling on a daily basis may be reduced or eliminated.

### *Red King Crab and Tanner Crab Length/Width/Height Measurements*

During directed research fishing (and cost recovery fishing if time permits), morphometric measurements of male and female king and Tanner crabs will be collected, and consist of 1) carapace length of king crabs, and carapace width (inside the spines) of Tanner crabs (i.e. the same measurements you record on the Crab Data Form); 2) the greatest carapace width (including spines); 3) the greatest length (**including the rostrum**); and 4) the body height (including spines). In order to ensure a representative size distribution sample of both species/sexes, **when available, at least 10 crabs in the following size categories should be measured during each day of fishing (up to 60 total in each class):**

male red king crab (CL) -

< 90mm;  
90-109mm;  
110-129mm;  
130-149mm;  
≥ 150mm;

female red king crab (CL) -

< 90mm;  
90 -109;  
110 -129;  
≥ 130mm;

male Tanner crab (CW) -

< 80mm;  
80 -99mm;  
100 -119mm;  
120 -139mm;  
≥ 140mm;

female Tanner crab (CW) -

< 60mm;  
60 -79mm;  
80 -99mm;  
≥ 100mm;

Corresponding measurements for each crab sampled will be recorded on the **Crab Morphometric Form** (Form 6, Appendix B). Sampling should be **opportunistic** for each size/sex category if necessary. Ideally, by the end of the charter measurements from a minimum of 300 red king crab males, 300 red king crab females, 300 Tanner crab males, and 300 Tanner crab females will be collected.

### *Floy-Tagged Crab Recovery*

Be on the look-out for tagged crabs, especially during cost recovery fishing. **These tags are hard to see.** Remind the crew to keep a look-out as well.

When a Floy-tagged crab is captured, sample it immediately. Tagged crabs are a priority whenever they are found. Document recovery of all tagged crabs on the **Bristol Bay Red King Crab Tag Recovery Form** (Form 5, Appendix B), including **tag letter** (if appropriate), tag number, measurement, legal status, shell age, capture date and location. Also note the sequential pot number and buoy number so that you can retrieve the capture location data from the captain. Return the crab to the sea as soon as possible. However, if the tag is numbered **0001-3,421 and there is not "A" letter prefix**, sacrifice the animal, collect, label and freeze the tail section. Collection labels for recording capture date and location information are in the forms supply box. Instruct the crew to wake you up if they catch a tagged crab while you are asleep so that you can sample it. **This information is very important;** please stress its significance to the vessel crew.

### *Crab Collection for Paralytic Shellfish Poison (PSP) Testing*

We have received a request from DEC again this year for the collection of crabs during our charter for PSP and demoic acid testing. You will need to collect, label and freeze red king crabs, *C. bairdi*, *C. opilio*, and any Tanner hybrids. **Collect three crabs of each species from each statistical area the vessel pulls gear in during cost recovery fishing.** The captain can tell you when you're in a new area (refer to the Bristol Bay statistical area chart). Collection labels for recording capture date and location information are in the forms supply box. As no sampling plan came with this request, take small males of each species (put red king crabs in one bag w/label, *C. bairdi* crabs in another w/label, etc.) from a single pot in each statistical area at your convenience. The Dutch Harbor DEC office is aware that these samples will be coming in on August 10 and will send someone down to pick them up when the vessel comes in.

### *Crab Collection for Observer Practicum*

The observer program staff has requested that crabs are during the directed research leg of the charter for a practicum being held in Dutch Harbor on August 26. You will need to collect, label and bag (in burlap sacs) juvenile and adult male and female red king crabs, adult male and female *C. bairdi*, adult male and female *C. opilio*, adult male and female Tanner hybrids, and adult male and female hair crabs. (You can use Form 9 to help keep track of crabs collected). **Collect up to 25 crabs of each sex, size and species opportunistically, but preferably shortly prior to your return to port (hair crabs are very localized, so you'll want to grab them whenever possible)**. Place crabs in burlap sacs fasten them securely. Crabs seem to retain greater viability in the sacs in comparison to those freely washing around inside the vessel tank. The practicum will be held at Royal Aleutian Seafood's; Mike Ward will stay in contact with the vessel daily to notify the processor of your arrival. Following your arrival in Dutch Harbor for the practicum, you will be expected to assist Mike Ward if he requests it. The vessel is expected to depart for Bristol Bay immediately following completion of the practicum. ADF&G crew members will not delay the vessel's departure.

### *Video/Photo documentation*

Wherever possible, document activities aboard the vessel. **We need overall footage of sampling and fishing activities, and especially footage of the experimental pots and escape ring pots as they're fished and sampled.** All video footage should be accompanied by a narrative relevant to what's being filmed. Photo and video footage should be documented on Form 7 (Appendix B).

### MISCELLANEOUS INSTRUCTIONS/REMINDERS

1. Leave timesheets with Donn in Dutch or FAX them to Kodiak.
2. Leave CFEC cards with Donn.
3. Check your survival suit and EPIRB prior to departure.
4. Check your supply of forms, sampling equipment, and rain gear prior to departure (Appendix E).
5. Survey itinerary and schedules are reviewed in Appendix F.
6. Questions regarding the contract between ADF&G and the vessel may be resolved by reviewing the contract in Appendix G.
7. Leave all receipts for purchases with Donn.
8. If there are no forms to record other data you collect, make them up. The Pilot House Logs must be completed at the end of each day. Complete every column in every form as required.
9. Be careful and have fun.

**APPENDICES**

## Appendix A. Radio Schedule

A daily radio schedule will be maintained with Kodiak ADF&G or with Dutch Harbor if vessel cannot hail Kodiak. If all else fails, ADF&G will monitor vessel check-in through its processor on its daily radio schedule. Vessel location will be reported by lat/long. A summary of stations sampled each day will be reported. When cost recovery fishing begins, report catches using the codes below.

### **\*\*Hail Kodiak ADF&G (WHM 29) on 5195 at 1600 hrs (4 p.m.)\*\***

If reception is poor, switch to 3230 (WON 32) In addition, ADF&G Kodiak also has 3201, 4125 and 2512. Dutch Harbor ADF&G has 4125 (WIM 76) and 3230 (WOM 32)

<u>Channel Code</u>	<u>Frequency</u>
A	5195
B	6227
C	2512

### Catch reporting codes:

0	VICTOR	KILO	4	LIMA	PAPA
00	FOXTROT	OSCAR	5	JULIET	UNIFORM
000	ZULU	HOTEL	6	TANGO	ECHO
1	INDIA	MIKE	7	DELTA	YANKEE
2	ROMEO	X-RAY	8	GOLF	QUEBEC
3	ALPHA	BRAVO	9	WHISKEY	NOVEMBER

Appendix B. Forms and Examples (in bold) of Selected Properly Completed Forms.

- Form 1. **Pilot House Log - Survey Stations**
- Form 2. **Pilot House Log - Cost Recovery Strings**
- Form 3. **Cost Recovery Daily Tally and Cumulative Catch Record**
- Form 4. **Crab Data Form** (for all species during cost recovery and survey)
- Form 5. **Bristol Bay Red King Crab Tag Recovery Form**
- Form 6. **Crab Morphometric Form**
- Form 7. Video/Photo Documentation Log
- Form 8. Check form for Morphometric measurements
- Form 9. Observer Practicum Collection Log







ADF&G CRAB RESEARCH DATA FORM

FORM 4

SPECIES \_\_\_\_\_

STATION NO. \_\_\_\_\_


VESSEL \_\_\_\_\_

SEX \_\_\_\_\_

BUOY NO. \_\_\_\_\_

MEASURER \_\_\_\_\_

DATE 

	+		+	
--	---	--	---	--

NO. CRAB MEASURED \_\_\_\_\_

RECORDER \_\_\_\_\_

TOTAL NO. CAUGHT 

--	--	--

PAGE \_\_\_\_\_ OF \_\_\_\_\_

SAMPLE TYPE 

--

SEQUENTIAL POT NUMBER	SPECIES	SEX	SIZE CRABS(MM) FISH(CM)	LEGAL	SHELL AGE	EGGS				OTHER	COMMENTS
						COLOR	DEVELOPMENT	CONDITION	% CLUTCH		
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											

- |  |   |   |  |  |  |  |
|--|---|---|--|--|--|--|
| <p><b>Crab Species</b></p> <ul style="list-style-type: none"> <li>1 - L. aquispina</li> <li>2 - P. camtschaticus</li> <li>3 - P. platypus</li> <li>4 - Erimacrus</li> <li>5 - C. baridi x opilio</li> <li>6 - C. baridi</li> <li>7 - C. opilio</li> <li>8 - C. angustatus</li> <li>9 - Cancer magister</li> <li>10 - L. couesi</li> <li>11 - C. tanneri</li> </ul> | <p><b>Fish &amp; Invert. Species</b><br/>See coded species list</p> <p><b>Sex</b></p> <ul style="list-style-type: none"> <li>1 - Male</li> <li>2 - Female</li> </ul> <p><b>Legal</b></p> <ul style="list-style-type: none"> <li>1 - Sublegal</li> <li>2 - Legal</li> </ul> <p><b>Shell Age</b></p> <ul style="list-style-type: none"> <li>0 - Soft</li> <li>1 - New</li> <li>2 - Old</li> <li>3 - Very Old</li> </ul> | <p><b>Live Egg Color</b></p> <ul style="list-style-type: none"> <li>1 - Tan</li> <li>2 - Purple</li> <li>3 - Brown</li> <li>4 - Orange</li> <li>5 - Purple-brown</li> <li>6 - Pink</li> <li>7 - Reddish</li> <li>8 -</li> <li>9 -</li> <li>0 - Other, describe in comments</li> </ul> | <p><b>Egg Development</b></p> <ul style="list-style-type: none"> <li>1 - Uneyed</li> <li>2 - Eyed</li> </ul> <p><b>Clutch Condition</b></p> <ul style="list-style-type: none"> <li>1 - Dead eggs not apparent</li> <li>2 - Dead eggs &lt; 20%</li> <li>3 - Dead eggs &gt; 20%</li> </ul> | <p><b>Percent Clutch</b></p> <ul style="list-style-type: none"> <li>1 - Barren, clean pleopods</li> <li>2 - Barren, with empty eggs cases and/or stalks</li> <li>3 - Clutch 1-29% full</li> <li>4 - Clutch 30-50% full</li> <li>5 - Clutch 60-89% full</li> <li>6 - Clutch 90-100% full</li> </ul> | <p><b>Others</b></p> <ul style="list-style-type: none"> <li>1 - Dead</li> <li>2 - Alive</li> <li>3 - Nemertean in clutch</li> <li>4 - Turbellarians in clutch</li> <li>5 - Black mat</li> <li>6 - Bitter crab disease</li> <li>7 - "cottage cheese" disease</li> <li>8 - Shell rust</li> <li>9 - B. calosus</li> </ul> | <p><b>Sample type</b></p> <ul style="list-style-type: none"> <li>1 - Standard king crab pot</li> <li>2 - Experimental pot</li> <li>3 - King crab with escape</li> <li>4 - Standard Tanner</li> <li>5 - Tanner with escape</li> </ul> |
|--|---|---|--|--|--|--|



# CRAB MORPHOMETRIC FORM

# FORM 6

Project/Fishery \_\_\_\_\_ String Number \_\_\_\_\_ Date \_\_\_\_\_  
 Vessel \_\_\_\_\_ Seq. Pot Number \_\_\_\_\_ Statarea \_\_\_\_\_  
 Recorder \_\_\_\_\_

	Species	Sex	Legal	Standard CL/CW	Greatest Carapace Length	Greatest Carapace Width	Greatest Carapace Height	Comments
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
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26								
27								
28								
29								
30								

- |  |   |   |
|--|---|---|
| <p><b>Species</b></p> <ul style="list-style-type: none"> <li>1 - brown king crab</li> <li>2 - red king crab</li> <li>3 - blue king crab</li> <li>4 - Korean hair crab</li> <li>5 - Tanner hybrid</li> <li>6 - C. bairdi</li> </ul> | <p><b>Sex</b></p> <ul style="list-style-type: none"> <li>1 - C. opilio</li> <li>2 - C. angulatus</li> <li>3 - Dungeness</li> <li>4 - L. couesi</li> <li>5 - C. tanneri</li> </ul> | <p><b>Legal</b></p> <ul style="list-style-type: none"> <li>1 - Male</li> <li>2 - Female</li> <li>3 - Sublegal</li> <li>4 - Legal</li> <li>5 - Mature Female</li> <li>6 - Immature Female</li> </ul> |
|--|---|---|



# CHECK FORM FOR MORPHOMETRIC MEASUREMENTS

\*60-75 Measurements are to be taken in each size category for a total of 300 for each species/sex.

## RED KING MALES

< 90 mm CL									
90-109									
110-129									
130-149									
≥150									

## RED KING FEMALE

< 90 mm CL									
90-109									
110-129									
>150									

## TANNER MALES

< 80 mm CW									
80-99									
100-119									
120-139									
≥ 140									

## TANNER FEMALES

< 60 CW									
60-79									
80-99									
≥ 100									

ADF&G OBSERVER PRACTICUM CRAB COLLECTION RECORD  
(Onboard Collection)

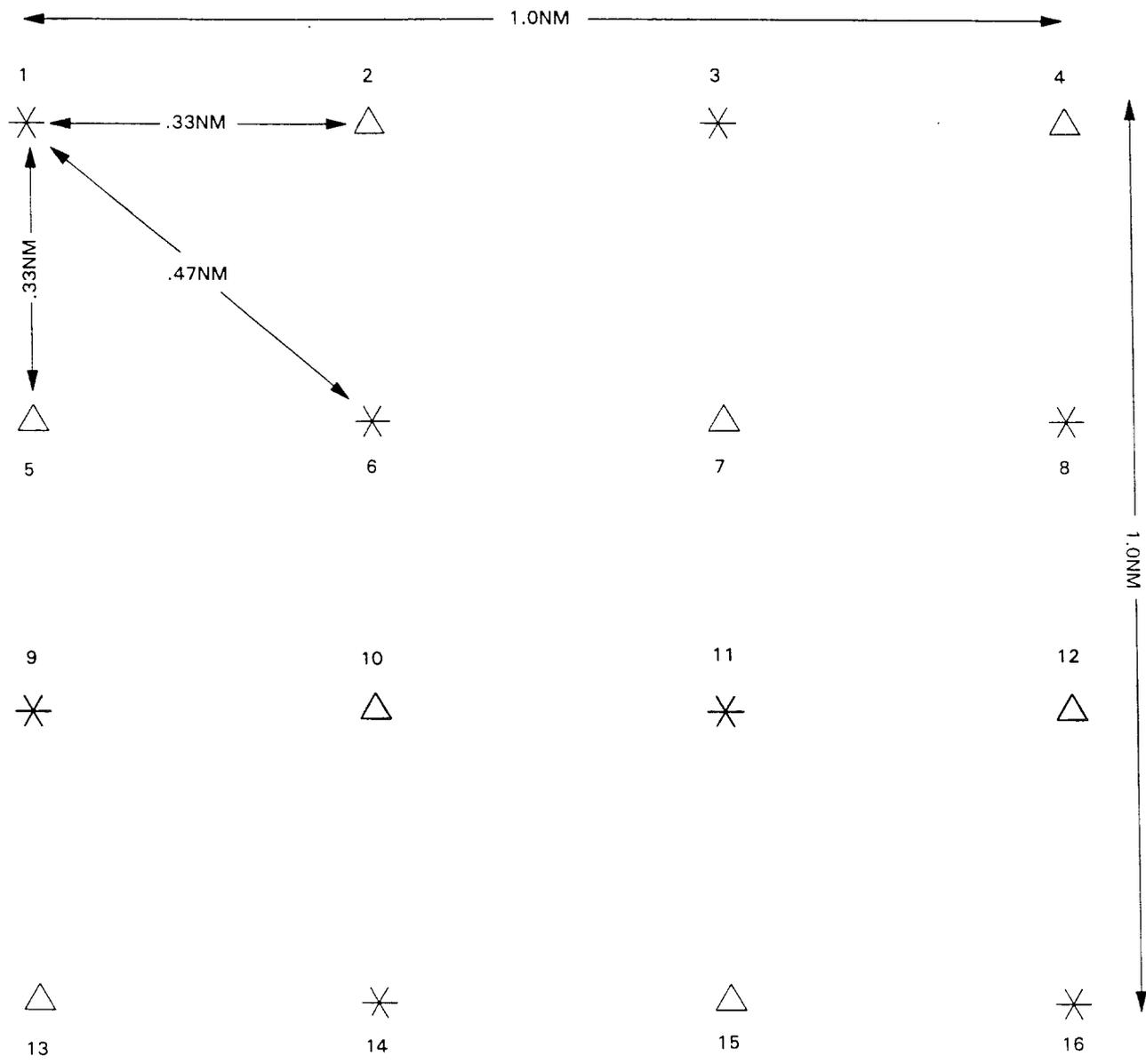
RECORDER(S) \_\_\_\_\_

SEX	SPECIES	DATE				TALLY	TOTAL	DATE				TALLY	TOTAL
		M	M	D	D			M	M	D	D		

SEX	SPECIES	DATE				TALLY	TOTAL	DATE				TALLY	TOTAL
		M	M	D	D			M	M	D	D		

SEX	SPECIES	DATE				TALLY	TOTAL	DATE				TALLY	TOTAL
		M	M	D	D			M	M	D	D		

Appendix C. Examples of Survey Pot Grid Patterns.



\* - Control: a. standard king crab pot; b. standard Tanner crab pot.  
 Δ - Treatment: a1. experimental pot; a2. escape ring king crab pot; b. escape ring Tanner crab pot.

Figure 1. Illustration of control and treatment pot deployment grid pattern in the Bristol Bay gear study.

#### Appendix D. Random Selection of Cost Recovery Pots for Catch Sampling

You must randomly pre-select your pots each day prior to actually seeing the pots come aboard. Once you have pre-selected the 10 pots for the day, you cannot alter your sampling scheme whether or not the pot is empty or full). This is to be done using the Table of Random Digits (pages 48-51). Here's an example of how to use the random digit table:

The captain says he will pull 75 pots today. You need to sample 10 of those. In order to select the ten pots, you decide to start with the 7th number in the first column, count by multiples of 10 and pick the first 10 numbers between 1 and 75 using the first two 2 digits of the number. Obviously, you will discard duplicate numbers and numbers greater than 75. Your 10 pot numbers for that day will be pots 12, 13, 21, 28, 36, 54, 57, 58, 67, and 74. Confirm your understanding of this using the example on page 47 (next page).

A different random selection scheme must be used every day. All you need to know is the estimated number of pots to be pulled. Start with the nth number in the nth column (or row), count by multiples of X, and use the first two (or the middle two or the last two numbers) of the nth number to get your pot numbers.

TABLE XIII Random numbers

74970	06996	11136	26428	23607	97462
74077	63454	45058	20708	42772	61311
13557	72942	59693	42635	69187	17870
66824	77092	51315	11910	91362	85877
36135	62333	37762	06766	52006	48746
06176	37697	40726	66014	78540	03503
17371	29089	26149	86755	36502	45455
21223	60124	07325	61085	61663	93814
31842	75317	58670	07821	75722	75152
20516	27594	21126	21262	14847	85513
99277	64548	70107	01059	34794	89863
01991	83000	27894	43577	82087	71504
54377	90482	39785	75722	20978	72511
20121	24555	25752	35312	85403	46189
11571	25668	34005	60874	72564	27470
93725	16472	21779	22432	71132	58118
65299	19900	21083	77915	20234	57314
36671	66533	86361	01327	80226	67405
49870	72912	20126	71728	86130	22113
50647	27134	56117	08650	91732	56189
17834	90311	00470	25024	20604	55526
27421	59467	69163	36665	26139	59445
26586	93561	52994	91112	74191	53986
51769	19891	46105	60143	63230	43817
41635	22882	85301	06875	58116	90778
04382	75863	37867	86246	58449	47432
48736	95362	21908	86094	43262	82826
49226	85080	33783	98388	62526	04014
20854	80874	15061	24566	72654	83590
50093	79411	58243	12538	16000	81354
32746	91894	87531	03933	08670	35011
45655	67247	49062	80256	21828	70217
96268	69668	23518	85192	81640	19832
43792	70776	17047	10233	44527	40725
66726	38354	88229	52784	48167	43464
00305	60732	03985	83552	83744	33572
47203	23522	41528	72453	88184	97289
94417	00980	76255	09103	55746	57149
28492	27329	28987	08292	22457	27594
15068	78906	13085	52751	42272	10144
86628	62686	03694	38080	35208	10638
70099	52095	34944	74139	92323	24202
59642	03751	88891	73720	90197	48857
21373	68891	89516	31394	29618	13531
62249	55787	68112	51338	09111	84084
15068	28465	20985	64222	79260	22767
35078	08613	30709	07408	99171	30553
19643	91937	12828	53404	07541	10589
75025	72481	37200	27222	92688	11164
71553	58597	83573	12991	32797	24758

TABLE XI, Random Numbers (Continued)

48611	62866	33963	14045	79451	04934	45576
78812	03509	78673	73181	29973	18664	04555
19472	63971	37271	31445	49019	49405	46925
51266	11569	08697	91120	64156	40365	74297
55806	96275	26130	47949	14877	69594	83041
77527	81360	18180	97421	55541	90275	18213
77680	58788	33016	61173	93049	04694	43534
15404	96554	88265	34537	38526	67924	40474
14045	22917	60718	66487	46346	30949	03173
68376	43918	77653	04127	69930	43283	35766
93385	13421	67957	20384	58731	53396	59723
09858	52104	32014	53115	03727	98624	84616
93307	34116	49516	42148	57740	31198	70336
04794	01534	92058	03157	91758	80611	45357
86265	49096	97021	92582	61422	75890	86442
65943	79232	45702	67055	39024	57383	44424
90038	94209	04055	27393	61517	23002	96560
97283	95943	78363	36498	40662	94188	18202
21913	72958	75637	99936	58715	07943	23748
41161	37341	81838	19389	80336	46346	91895
23777	98392	31417	98547	92058	02277	50315
59973	08144	61070	73094	27059	69181	55623
82690	74099	77885	23813	10054	11900	44653
83854	24715	48866	65745	31131	47636	45137
61980	34997	41825	11623	07320	15003	56774
99915	45821	97702	87125	44488	77613	56823
48293	86847	43186	42951	37804	85129	28993
33225	31280	41232	34750	91097	60752	69783
06846	32828	24425	30249	78801	26977	92074
32671	45587	79620	84831	38156	74211	82752
82096	21913	75544	55228	89796	05694	91552
51666	10433	10945	55306	78562	89630	41230
54044	67942	24145	42294	27427	84875	37022
66738	60184	75679	38120	17640	36242	99357
55064	17427	89180	74018	44865	53197	74810
69599	60264	84549	78007	88450	06488	72274
64756	87759	92354	78694	63638	80939	98644
80817	74533	68407	55862	32476	19326	95558
39847	96884	84657	33697	39578	90197	80532
90401	41700	95510	61166	33757	23279	85523
78227	90110	81378	96659	37008	04050	04228
87240	52716	87697	79433	16336	52862	69149
08486	10951	26832	39763	02485	71688	90936
39338	32169	03713	93510	61244	73774	01245
21188	01850	69689	49426	49128	14660	14143
13287	82531	04388	64693	11934	35051	68576
53609	04001	19648	14053	49623	10840	31915
87900	36194	31567	53506	34304	39910	79630
81641	00496	36058	75899	46620	70024	88753
19512	50277	71508	20116	79520	06269	74173

TABLE XI Random Numbers (Continued)

24418	23508	91507	76455	54941	72711	39406
57404	73678	08272	62941	02349	71389	45605
77644	98489	86268	73652	98210	44546	27174
68366	65614	01443	07607	11826	91326	29664
64472	72294	95432	53555	96810	17100	35066
88205	37913	98633	81009	81060	33449	68055
98455	78685	71250	10329	56135	80647	51404
48977	36794	56054	59243	57361	65304	93258
93077	72941	92779	23581	24548	56415	61927
84533	26564	91583	83411	66504	02036	02922
11338	12903	14514	27585	45068	05520	56321
23853	68500	92274	87026	99717	01542	72990
94096	74920	25822	98026	05394	61840	83089
83160	82362	09350	98536	38155	42661	02363
97425	47335	69709	01386	74319	04318	99387
83951	11954	24317	20345	18134	90062	10761
93085	35203	05740	03206	92012	42710	34650
33762	83193	58045	89880	78101	44392	53767
49665	85397	85137	30496	23469	42846	94810
37541	82627	80051	72521	35342	56119	97190
22145	85304	35348	82854	55846	18076	12415
27153	08662	61078	52433	22184	33998	87436
00301	49425	66682	25442	83668	66236	79655
43815	43272	73778	63469	50083	70696	13558
14689	86482	74157	46012	97765	27552	49617
16680	55936	82453	19532	49988	13176	94219
86938	60429	01137	86168	78257	86249	46134
33944	29219	73161	46061	30946	22210	79302
16045	67736	18608	18198	19468	76358	69203
37044	52523	25627	63107	30806	80857	84383
61471	45322	35340	35132	42163	69332	98851
47422	21296	16785	66393	39249	51463	95963
24133	39719	14484	58613	88717	29289	77360
67253	67064	10748	16006	16767	57345	42285
62382	76941	01635	35829	77516	98468	51686
98011	16503	09201	03523	87192	66483	55649
37366	24386	20654	85117	74078	64120	04643
73587	83993	54176	05221	94119	20108	78101
33583	68291	50547	96085	62180	27453	18567
02878	33223	39199	49536	56199	05993	71201
91498	41673	17195	33175	04994	09879	70337
91127	19815	30219	55591	21725	43827	78862
12997	55013	18662	81724	24305	37661	18956
96098	13651	15393	69995	14762	69734	89150
97627	17837	10472	18983	28387	99781	52977
40064	47981	31484	76603	54088	91095	00010
16239	68743	71374	55863	22672	91609	51514
58354	24913	20435	30965	17453	65623	93058
52567	65085	60220	84641	18273	49604	47418
06236	29052	91392	07551	83532	68130	56970

TABLE XI Random Numbers (Continued)

94620	27963	96478	21559	19246	88097	44926
60947	60775	73181	43264	56895	04232	59604
27499	53523	63110	57106	20865	91683	80688
01603	23156	89223	43429	95353	44662	59433
00815	01552	06392	31437	70385	45863	75971
83844	90942	74857	52419	68723	47830	63010
06626	10042	93629	37609	57215	08409	81906
56760	63348	24949	11859	29793	37457	59377
64416	29934	00755	09418	14230	62887	92683
63569	17906	38076	32135	19096	96970	75917
22693	35089	72994	04252	23791	60249	83010
43413	59744	01275	71326	91382	45114	20245
09224	78530	50566	49965	04851	18280	14039
67625	34683	03142	74733	63558	09665	22610
86874	12549	98699	54952	91579	26023	81076
54548	49505	62515	63903	13193	33905	66936
73236	66167	49728	03581	40699	10396	81827
15220	66319	13543	14071	59148	95154	72852
16151	08029	36954	03891	38313	34016	18671
43635	84249	88984	80993	55431	90793	62603
30193	42776	85611	57635	51362	79907	77364
37430	45246	11400	20986	43996	73122	88474
88312	93047	12088	86937	70794	01041	74867
98995	58159	04700	90443	13168	31553	67891
51734	20849	70198	67906	00880	82899	66065
88698	41755	56216	66852	17748	04963	54859
51865	09836	73966	65711	41699	11732	17173
40300	08852	27528	84648	79589	95295	72895
02760	28625	70476	76410	32988	10194	94917
78450	26245	91763	73117	33047	03577	62599
50252	56911	62693	73817	98693	18728	94741
07929	66728	47761	81472	44806	15592	71357
09030	39605	87507	85446	51257	89555	75520
56670	88445	85799	76200	21795	38894	58070
48140	13583	94911	13318	64741	64336	95103
36764	86132	12463	28385	94242	32063	45233
14351	71381	28133	68269	65145	28152	39087
81276	00835	63835	87174	42446	08882	27067
55524	86088	00069	59254	24654	77371	26409
78852	65889	32719	13758	23937	90740	16866
11861	69032	51915	23510	32050	52052	24004
67699	01009	07050	73324	06732	27510	33761
50064	39500	17450	18030	63124	48061	59412
93126	17700	94400	76075	08317	27324	72723
01657	92602	41043	05686	15650	29970	95877
13800	76690	75133	60456	28491	03845	11507
98135	42870	48578	29036	69876	86563	61729
08313	99293	00990	13595	77457	79969	11339
90974	83965	62732	85161	54330	22406	86253
33273	61993	88407	69399	17301	70975	99129

## Appendix E. List of Equipment

1. Survival suits with EPIRB and strobe attached (1 for each ADF&G crew member).
2. Rain gear, gloves and boots.
3. Shipboard Instruction Manuals (one for the vessel captain and each ADF&G crew member).
4. Notebooks of 1995 NMFS survey data and 1995 Test Fishery Data Summary R.I.R (one for captain; one for Boyle/Tracy).
5. Forms:
  - a. Pilot House Log - Survey Stations (60).
  - b. Pilot House Log - Cost Recovery Strings (30).
  - c. Cost Recovery Daily Tally and Cumulative Catch Record (5).
  - d. Crab Data Form (10 ream = 5000; use for all species).
  - e. Tag Recovery Form (5).
  - f. Crab Morphometric Form (200).
  - g. Check Form for Crab Morphometric Measurements(10).
  - h. ADF&G Test Fishery Photographic Log (5).
  - i. Observer Practicum Collection Log (10).
6. Small (6") dial calipers (1).
7. Large calipers (1 from Kodiak, 3 from Dutch).
8. Crab height 'Pengometer'(1 from Dutch).
9. Modified calipers for recording crab length/width (1 from Dutch).
10. 5.5, 6 and 6.5 inch measuring sticks (3 of each).
12. **Camera, film, and extra battery (Tracy's).**
13. **Video camera, film, and extra battery (Tracy's).**
14. Rite-in-Rain notebooks (5).
15. Pencils (2 doz. sharpened).
16. Paper clips (assorted).
17. Rubber bands.
18. Manila envelopes for data (1 legal-size, 12 regular).
19. Permanent markers (1 large black; 1 ea. small black, red).
20. Clipboard(s) 1 l for captain; 6-8 regular size for crew.
21. Calculator w/ extra batteries.
22. Tally wackers (3) (in DH).
23. One can WD40.
24. Statistical charts (2); one for captain, one for ADF&G crew. (in DH)
25. Timesheets (10).
26. Buoy tags (4 different colors, 50 of each)
27. Burlap sacs (20)
28. 18"nylon zip ties (500)
29. 5.5"and 6"escape rings (200 each) (in DH)
30. 3"Dorian Tanner hoods (50) (in DH)
31. 400 square ft. 1.25"webbing (in DH)

Appendix F. Survey Itinerary and Calendar

Date

8/1 Depart Dutch Harbor/travel to grounds  
8/2 Travel to grounds/set gear  
8/3 Set gear/pull gear  
8/4 Pull gear/set gear  
8/5 Pull gear/set gear  
8/6 Pull gear/set gear  
8/7 Pull gear/set gear  
8/8 Pull gear/Travel to Dutch Harbor  
8/9 Travel to Dutch Harbor  
8/10 Deliver cost recovery crab/pick up ADF&G crew and equipment  
8/11 Travel to grounds  
8/12 Travel to grounds/set survey gear  
8/13 Set survey gear  
8/14 Set survey gear/pull survey gear  
8/15 Set survey gear/pull survey gear  
8/16 Set survey gear/pull survey gear  
8/17 Set survey gear/pull survey gear  
8/18 Set survey gear/pull survey gear  
8/19 Set survey gear/pull survey gear  
8/20 Set survey gear/pull survey gear  
8/21 Set survey gear/pull survey gear  
8/22 Set survey gear/pull survey gear  
8/23 Set survey gear/pull survey gear  
8/24 Set survey gear/travel to DH for observer practicum  
8/25 Travel to DH for observer practicum  
8/26 Observer practicum/travel to fishing grounds  
8/27 Travel to fishing grounds/pull survey gear  
8/28 Set survey gear/pull survey gear  
8/29 Set survey gear/pull survey gear  
8/30 Pull survey gear/travel to Dutch Harbor  
8/31 Travel to Dutch Harbor/Disembark vessel with equipment

Appendix G. Contract between the State of Alaska and  
the F/V Rosie G

RETURN THIS BID TO:  
State of Alaska  
Department of Fish & Game  
Division of Administration  
1255 W. 8th Street  
P.O. Box 25526  
Juneau, Alaska 99803-5526

BID NUMBER: 11-001-97

THIS IS NOT AN ORDER

DATE ITB ISSUED: May 10, 1996

=====

SEALED BIDS WILL BE RECEIVED IN SINGLE COPY AT THE ABOVE ADDRESS UNTIL 1:30 pm on May 31, 1996 AT WHICH TIME THEY WILL BE PUBLICLY OPENED.

DELIVERY LOCATION: Dutch Harbor, AK. DATE REQUIRED AT FINAL DESTINATION: August 1, 1996

F.O.B.: FINAL DESTINATION.

=====

\*\*\*\* IT IS NOT NECESSARY TO RETURN THIS FORM IF YOU DO NOT WISH TO BID \*\*\*\*

BID TITLE: VESSEL CHARTER IN BRISTOL BAY, AREA "T", FOR KING CRAB RESEARCH

BIDDER'S NOTICE: by signature on this form, the bidders certify that: (1) the bidder has a valid Alaska business license and has written the license number below or has submitted one of the following forms of evidence of an Alaska business license with the bid; (a) a cancelled check for the business license fee; (b) a copy of a business license application with a receipt date stamp from the State's business license office; (c) a receipt from the State's business license office for the license fee; (d) a copy of the bidder's valid business license; (e) a sworn notarized affidavit that the bidder has applied and paid for a business license; (2) the price(s) submitted was arrived at independently and without collusion and that the bidder is complying with: (a) the laws of the State of Alaska; (b) the applicable portion of the Federal Civil Rights Act of 1964; (c) the Equal Employment Opportunity Act and the regulations issued thereunder by the State and Federal government; and (d) all terms and conditions set out in the Invitation to Bid (ITB). If any bidder fails to comply with (1) of this paragraph, the bid will be rejected. If any bidder fails to comply with (2) of this paragraph, the State may reject the bid, terminate the contract, or consider the contractor in default.

=====

CONTRACTING OFFICER:

Rikki Maganer

Phone: (907) 465-4131

Fax: (907) 465-6181

DOES YOUR BUSINESS QUALIFY FOR THE ALASKA BIDDER'S PREFERENCE? [ ] YES [X] NO  
SEE ITB FOR EXPLANATION OF CRITERIA TO QUALIFY.

COMPANY SUBMITTING BID: Basie C Partnership

AUTHORIZED SIGNATURE: \_\_\_\_\_

PRINTED NAME: Rick Mezich

STREET ADDRESS: 7215 156th St. SW

CITY, STATE, & ZIP: Edmonds, WA 98026

PHONE NUMBER: (206) 742-7456

FAX NUMBER: (206) 742-7712

TAX ID#: 91-1651044

ALASKA BUSINESS LICENSE #: \_\_\_\_\_

STANDARD TERMS AND CONDITIONS

INSTRUCTIONS TO BIDDERS:

1. INVITATION TO BID (ITB) REVIEW: Bidders shall carefully review this ITB for defects and questionable or objectionable material. Bidders' comments concerning defects and questionable or objectionable material in the ITB must be made in writing and received by the purchasing authority at least ten (10) days before the bid opening date. This will allow time for an amendment to be issued if one is required. It will also help prevent the opening of a defective bid, upon which award cannot be made, and the resultant exposure of bidders' prices. Bidders' original comments should be sent to the purchasing authority listed on the front of this ITB.
2. BID FORMS: Bidders shall use this and attached forms in submitting bids. A photocopied bid may be submitted.
3. SUBMITTING BIDS: Envelopes containing bids must be sealed, marked, and addressed as shown in the example below. Do not put the ITB number and opening date on the envelope of a request for bid information. Envelopes with ITB numbers annotated on the outside will not be opened until the scheduled date and time.

---

Bidder's Return Address Dept. of Fish and Game  
PO BOX 25526/1255 W.8th Street  
Juneau, Ak. 99802-5526

ITB No.: 11-001-97  
Opening Date: 5-31-96

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4. PRICES: The bidder shall state prices in the units of issue on this ITB. Prices quoted for commodities must be in U.S. funds and include applicable federal duty, brokerage fees, packaging, and transportation cost to the FOB point so that upon transfer of title the commodity can be utilized without further cost. Prices quoted for services must be quoted in U.S. funds and include applicable federal duty, brokerage fee, packaging, and transportation cost so that the services can be provided without further cost. Prices quoted in bids must be exclusive of federal, state, and local taxes. If the bidder believes that certain taxes are payable by the state, the bidder may list such taxes separately, directly below the bid price for the affected item. The state is exempt from Federal Excise Tax except the following:
  - Coal - Internal Revenue Code of 1986 (IRC), Section 4121 - on the purchase of coal;
  - "Gas Guzzler" - IRC, Section 4064 - on the purchase of low m.p.g. automobiles, except that police and other emergency type vehicles are not subject to the tax;
  - Air Cargo - IRC, Section 4271 - on the purchase of property transportation services by air;
  - Air Passenger - IRC, Section 4261 - on the purchase of passenger transportation services by air carriers.
5. VENDOR TAX ID NUMBER: If goods or services procured through this ITB are of a type that is required to be included on a Miscellaneous Tax Statement, as described in the Internal Revenue Code, a valid tax identification number must be provided to the State of Alaska before payment is made.
6. FILING A PROTEST: A bidder may protest the award of a contract or the proposed award of a contract for supplies, services, or professional services. The protest must be filed in writing and include the following information: (1) the name, address, and telephone number of the protester; (2) the signature of the protester or the protester's representative; (3) identification of the contracting agency and the solicitation or contract number; (4) a detailed statement of the legal and factual grounds of the protest, including copies of relevant documents; and (5) the form of relief requested. Protests will be treated in accordance with Alaska Statutes (AS) 36.30.560-36.30.610.

CONDITIONS:

1. AUTHORITY: This ITB is written in accordance with AS 36.30 and 2 AAC 12.
2. COMPLIANCE: In the performance of a contract that results from this ITB, the contractor must comply with all applicable federal, state, and local regulations, codes, and laws; and be liable for all required insurance, licenses, permits and bonds; and pay all applicable federal, state, and borough taxes.
3. SUITABLE MATERIALS, ETC.: Unless otherwise specified, all materials, supplies or equipment offered by a bidder shall be new, unused, and latest edition, version, model or crop and of recent manufacture.

4. SPECIFICATIONS: Unless otherwise specified in the ITB, product brand names or model numbers specified in this ITB are examples of the quality of product required, and are not statements of preference. If the specifications describing an item conflict with a brand name or model number describing the item, the specifications govern. Reference to brand name or number does not preclude an offer of a comparable or better product. If full specifications and descriptive literature are provided for the product. Failure to provide such specifications and descriptive literature may be cause for rejection of the offer.
5. FIRM OFFER: For the purpose of award, offers made in accordance with this ITB must be good and firm for a period of ninety (90) days from date of bid opening.
6. EXTENSION OF PRICES: In case of error in the extension of prices in the bid, the unit prices will govern; in a lot bid, the lot prices will govern.
7. BID PREPARATION COSTS: The state is not liable for any costs incurred by the bidder in bid preparation.
8. CONSOLIDATION OF AWARDS: Due to high administrative costs associated with processing of purchase orders, a single low bid of \$50 or less at the discretion of the state, be awarded to the next low bidder receiving other awards for consolidation purposes. This paragraph is not subject to the protest terms enumerated in "INSTRUCTION" above.
9. CONTRACT FUNDING: Bidders are advised that funds are available for the initial purchase and/or the first term of the contract. Payment and performance obligations for succeeding purchases and/or additional terms of the contract are subject to the availability and appropriation of funds.
10. CONFLICT OF INTEREST: An officer or employee of the State of Alaska may not seek to acquire, be a party to, or possess a financial interest in a contract if (1) the officer or employee is an employee of the administrative unit that supervises the award of this contract; or (2) the officer or employee has the power to take or withhold official action so as to effect the award or execution of the contract.
11. ASSIGNMENT(S): Assignment of rights and duties under a contract resulting from this ITB is not permitted unless authorized in writing by the Governor of Alaska, Department of Administration, Division of General Services.
12. SUBCONTRACTOR(S): Within five (5) working days of notice, the apparent low bidder must submit a list of the subcontractors that will be used for the performance of the contract. The list must include the name of each subcontractor and the location of the place of business for each subcontractor and evidence of each subcontractor's valid Alaska business license. Subcontractors can only be changed per AS 36.30.115 (b).
13. FORCE MAJEURE: (Impossibility to perform) The contractor is not liable for the consequences of any failure to perform, or default in performing any of its obligations under this Agreement, if that failure or default is caused by any unforeseeable Force Majeure, beyond the control of and without the fault or negligence of the contractor. For the purposes of this Agreement, Force Majeure will mean war (whether declared or not); revolution; invasion; insurrection; riot; civil commotion; sabotage; military or usurped power; lightning; explosion; fire; storm; drought; flood; earthquake; epidemic; quarantine; strikes; acts or restraints of governmental authorities affecting the project or directly or indirectly prohibit or restricting the furnishing or use of materials or labor required; inability to secure materials, machinery, equipment or labor because of price allocation or other regulations of any governmental authorities.
14. LATE BIDS: Late bids are bids received after the time and date set for receipt of the bids. Late bids will not be accepted.
15. CONTRACT EXTENSION: Unless otherwise provided in the ITB, the state and the successful bidder/contractor agree: (1) that any holding of the contract excluding any exercised renewal options, will be considered as a month-to-month extension, and all other terms and conditions remain in full force and effect and (2) to provide written notice to the other party of the intent to cancel such month-to-month extension at least thirty (30) days before the desired date of cancellation.
16. DEFAULT: In case of default by the contractor, for any reason whatsoever, the State of Alaska may procure the goods or services from another source and hold the contractor responsible for any resulting excess cost and may seek other remedies under law or equity.
17. DISPUTES: Any dispute arising out of this agreement shall be resolved under the laws of Alaska. Any appeal of an administrative order or an original action to enforce any provision of this agreement or to obtain any relief from or remedy in connection with this agreement may be brought only in the superior court for the First Judicial District of Alaska.
18. CONSUMER ELECTRICAL PRODUCT: AS 45.45.910 requires that "a person may not sell, offer to sell, or otherwise transfer in the course of their person's business a consumer electrical product that is manufactured after August 14, 1990, unless the product is clearly marked as being (1) an approved third party certification program." Electrical consumer products manufactured before August 14, 1990 must either be clearly marked as being third party certified or be marked with a warning label that complies with AS 45.45.910(e). Even exempted electrical products must be marked with the warning label. By signature on this bid the bidder certifies that the product offered is in compliance with the law. A list of approved third party certifiers, warning labels and additional information is available from: Department of Labor, Labor Standards & Safety Division, Mechanical Inspection Section, P.O. Box 107020, Anchorage, Alaska 99510-7020, (907)269-4925.

SPECIAL CONDITIONS:

1. **ORDER DOCUMENTS:** Except as specifically allowed under this ITB, an ordering agency will not sign any vendor contract. The state is not by a vendor contract signed by a person who is not specifically authorized to sign for the state under this ITB. The State of Alaska Purchase Contract Award and Delivery Order are the only order documents that may be used to place orders against the contract(s) resulting from this ITB.
2. **BILLING INSTRUCTIONS:** Invoices must be billed to the ordering agency's address shown on the Individual Purchase Order, Contract Award Delivery Order, not to the Division of General Services. The ordering agency will make payment after it receives the merchandise or service invoice. Questions concerning payment must be addressed to the ordering agency.
3. **CONTINUING OBLIGATION OF CONTRACTOR:** Notwithstanding the expiration date of a contract resulting from this ITB, the contractor is to fulfill its responsibilities until warranty, guarantee, maintenance and parts availability requirements have completely expired.

PREFERENCES:

1. **ALASKAN BIDDER'S PREFERENCE:** Award will be made to the lowest responsive and responsible bidder after an Alaskan bidder's preference five percent (5%) has been applied. The preference will be given to a person who: (1) holds a current Alaska business license; (2) submits a goods or services under the name on the Alaska business license; (3) has maintained a place of business within the state staffed by the bidder or an employee of the bidder, for a period of six months immediately preceding the date of the bid; (4) is incorporated or qualified to do business under the laws of the state, is a sole proprietorship, and the proprietor is a resident of the state or is a partnership, and all partners are residents of the state; (5) if a joint venture, is composed entirely of venturers that qualify under (1) - (4) of this subsection. AS 36.30.170(b)
2. **USE OF LOCAL FOREST PRODUCTS:** In a project financed by state money in which the use of timber, lumber and manufactured lumber is required, only timber, lumber and manufactured lumber products originating in this state shall be used unless the use of those products has been determined to be impractical, in accordance with AS 36.15.010.
3. **LOCAL AGRICULTURAL AND FISHERIES PRODUCTS PREFERENCE:** When agricultural, dairy, timber, lumber, or fisheries products are purchased using state money, only those products harvested in Alaska, or in the case of fisheries products harvested or processed within the jurisdiction of Alaska, will be purchased, provided they are available, of comparable quality, and priced no more than 7% higher than products harvested in the state or in the case of fisheries products harvested or processed outside the jurisdiction of the state, in accordance with AS 36.15.050.
4. **ALASKA PRODUCT PREFERENCE:** A bidder that designates the use of an Alaska Product which meets the requirements of the ITB specifically designated as a Class I, Class II or Class III Alaska Product by the Department of Commerce & Economic Development shall receive a preference in the bid evaluation in accordance with AS 36.30.332 and 3 AAC 92.010.
5. **EMPLOYMENT PROGRAM PREFERENCE:** If a bidder qualifies for the Alaskan bidder's preference, under AS 36.30.170(b), and is offering goods or services through an employment program, as defined under 36.30.990(10), and is the lowest responsive and responsible bidder with a bid that is no more than 15 percent higher than the lowest bid, the procurement officer will make the award to that bidder, in accordance with AS 36.30.170(d) and 2 AAC 12.050.
6. **ALASKANS WITH DISABILITIES PREFERENCE:** If a bidder qualifies for the Alaskan bidder's preference, under AS 36.30.170(b), and is a sole proprietorship owned by a person with a disability, as defined in AS 36.30.170(j), and is the lowest responsive and responsible bidder with a bid that is no more than 10 percent higher than the lowest bid, the procurement officer will make the award to that bidder, in accordance with AS 36.30.170(e).
7. **EMPLOYERS OF PEOPLE WITH DISABILITIES PREFERENCE:** If a bidder qualifies for the Alaskan bidder's preference, under AS 36.30.170(b) at the time the bid is submitted, employs a staff that is made up of 50 percent or more people with disabilities, as defined in AS 36.30.170(j), and submits a responsive and responsible bid that is no more than 10 percent higher than the lowest responsive and responsible bid, the procurement officer will make the award to that bidder, in accordance with AS 36.30.170(f).
8. **PREFERENCE QUALIFICATION LETTER:** Regarding preferences 5, 6, and 7, above, the Division of Vocational Rehabilitation in the Department of Education maintains lists of Alaskan: [1] employment programs that qualify for preference, [2] individuals who qualify for preference as Alaskans with disabilities, and, [3] employer's who qualify for preference as employer's of people with disabilities.

As evidence of an individual's or a business' right to a certain preference, the Division of Vocational Rehabilitation will issue a certification letter. To take advantage of the preferences 5, 6, or 7, above, an individual or business must be on the appropriate Division of Vocational Rehabilitation list, at the time the bid is opened, and must provide the procurement officer a copy of their certification letter. Bidder's must attach a copy of their certification letter to their bid. The bidder's failure to provide the certification letter mentioned above, with their bid, will cause the state to disallow the preference.

STATE OF ALASKA ITB # 11-001-97  
KING CRAB VESSEL CHARTER IN BRISTOL BAY AREA "T" OF THE BERING SEA

**PURPOSE:** Contract of a vessel, with captain and three (3) crew, for use of Department of Fish and Game (F&G) as living quarters and an operations base for monitoring and research activities relating to king crab studies in the Bristol Bay Area "T" of the Bering Sea. F&G will place four (4) of their personnel aboard the vessel. Biologists will study crabs which are captured and monitor all catches. Approximately thirty-one (31) days of at-sea charter time will be devoted to research.

**DEFAULT:** A contractors failure to comply with any of the terms and conditions of this contract may result in a default action by the State.

**COMPLIANCE:** The bidder must comply with all applicable national, federal, State, local and borough regulations, codes, and laws; be liable for all required insurance, licenses, permits and bonds; pay all applicable federal, State, local and borough taxes.

**NOTICE OF INTENT:** After the responses to this invitation to Bid (ITB) have been opened and evaluated a tabulation of the bids will be prepared. this tabulation, called a Notice of Intent, serves two purposes. It lists the name of each company or person that offered a bid and the price they bid. It also serves as notice of the State's intent to award a contract (s) to the bidder(s) indicated. A copy of the Notice of Intent will be mailed to each company or person who responded to the ITB. Bidders, identified as the apparent low responsive bidders, are instructed not to proceed until a Purchase Order, Contract Award, Lease, or, some other form of written notice is given by the Contracting Officer. A company or person who proceeds prior to receiving a Purchase Order, Contract Award, Lease, or, some other form of written notice from the Contracting Officer does so without a contract and at their own risk.

**PAYMENT FOR STATE PURCHASES:** Payment for agreements under \$500,000, for the undisputed purchase of goods or services provided to a State agency, will be made within 30 days of the receipt of a proper billing or the delivery of the goods or services to the location(s) specified in the agreement, whichever is later. A late payment is subject to 1.5% interest per month on the unpaid balance. Interest will not be paid if there is a dispute or if there is an agreement which establishes a lower interest rate or precludes the charging of interest.

**FEDERAL EXCISE TAX:** The State of Alaska is exempt from the Federal Excise Tax except the following:

- Coal - Internal Revenue Code of 1986 (IRC), Section 4121 - on the purchase of coal;
- "Gas Guzzler" - IRC, Section 4064 - on the purchase of low m.p.g. automobiles, except that police and other emergency type vehicles are not subject to the tax;
- Air Cargo - IRC, Section 4271 - on the purchase of property transportation services by air;

STATE OF ALASKA ITB # 11-001-97  
KING CRAB VESSEL CHARTER IN BRISTOL BAY AREA "T" OF THE BERING  
SEA

\* Air Passenger-IRC, Section 4261 - on the purchase of passenger transportation services by air charter.

**CONTRACT ENFORCEMENT:** Enforcement of this contract is the responsibility of the Division of General Services (DGS) Contracting Officer. When a State agency has a complaint concerning a contractor's performance the agency must contact DGS in writing. Facsimile notification at (907) 465-2189 is also acceptable. DGS will contact the contractor and resolve the matter.

**FIRM AND UNQUALIFIED (UNCONDITIONAL) OFFER:** Bidder's must provide enough information, with their bid, to constitute a definite, firm, and unqualified or unconditional offer. In order to be responsive a bid must constitute a definite, firm, and unqualified or unconditional offer to meet all of the meaningful or material terms of the ITB. Some meaningful or material terms are those items which could affect price, quantity, qualify, or delivery. Also included as meaningful or material terms are those which are clearly identified in the ITB, and which, for reasons of policy, must be complied with at risk of bid rejection for nonresponsiveness.

**BIDDERS NOTE:** This contract involves financial risks. Please read this ITB very carefully and make certain that you understand the risks and responsibilities. If you have any questions contact the Contracting Officer at: Voice (907) 465-4131, TDD (907) 465-3646 or FAX (907) 465-6181.

**HOLD HARMLESS:** The contractor will indemnify, save harmless and defend the State, it's officers, agents and employees from all liability, including costs and expenses, for all actions or claims resulting from injuries or damages sustained by any person or property arising directly or indirectly as a result of any error, omission or negligent act of the contractor, subcontractor or anyone directly or indirectly employed by them in the performance of this contract.

All actions or claims including costs and expenses resulting from injuries or damages sustained by any person or property arising directly or indirectly from the contractor's performance of this contract which are caused by the joint negligence of the State and the contractor will be apportioned on a comparative fault basis. Any such joint negligence on the part of the State must be direct result of active involvement by the State.

**INSURANCE:** The contractor will maintain insurance satisfactory to the Division of Risk Management, Department of Administration. Certificates of Insurance will be furnished to the Contracting Officer which will provide for a 30 day prior notice of cancellation, nonrenewal or material change in such insurance.

PROOF OF INSURANCE IS REQUIRED FOR THE FOLLOWING:

STATE OF ALASKA ITB # 11-001-97  
KING CRAB VESSEL CHARTER IN BRISTOL BAY AREA "T" OF THE BERING SEA

- A. Protection and Indemnity, including crew exposure, in the amount of 1,000,000.00.

Failure to supply satisfactory proof of insurance within the time required will cause the State to declare the bidder nonresponsive and reject the bid.

**LENGTH OF CONTRACT:** Approximately thirty-one (31) continuous days, as biological and weather conditions permit, between August 1, 1996 and August 31, 1996. The length of the charter and starting date may vary by mutual agreement between the vessel owner and the State of Alaska but payment will not exceed the thirty-one (31) day period. Charter service will begin and end in Dutch Harbor, Alaska.

**CANCELLATION:** The State reserves the right to cancel the contract at the State's sole discretion.

The State will have the sole discretion to cancel any contract that results from this ITB after the charter has commenced, if it is determined by the State that there is an insufficient quantity of crabs to cover the State's expense and the cost of the charter.

**ESTIMATED USE:** The charter dates and length of charters referenced in this ITB are the State's estimated requirements. The State does not guarantee a minimum or maximum number of charter days. However, for the purpose of bid evaluation the State will assume the use of thirty-one (31) contract days.

**LOCATION OF VESSEL OPERATION:** The vessel is required to operate in the Bristol Bay Registration area "T" of the Bering Sea. The charter will begin and end in Dutch Harbor, Alaska.

**CAPTAIN AND CREW ABOARD THE VESSEL:** This contract requires a vessel Captain and three (3) crew members. The experience and licensing requirements are set out below.

**STATE PERSONNEL ABOARD THE VESSEL:** During this contract the State will place four (4) biological crew members aboard the vessel.

**VESSEL INSPECTION:** The vessel will be subject to inspection by the Department of Fish and Game. The bidder(s) must, upon 10 days notice, make the vessel available for inspection at Dutch Harbor, Alaska.

By the date set for the vessel inspection, all of the equipment called for in this ITB must be installed and functional. The successful bidder must pay the cost of all the equipment and any vessel alterations needed to meet the requirements of this ITB.

STATE OF ALASKA ITB # 11-001-97  
KING CRAB VESSEL CHARTER IN BRISTOL BAY AREA "T" OF THE BERING SEA

If, at the time of inspection, a vessel fails to meet the ITB requirements, the State may consider the offer non-responsive and reject the bid or terminate the contract.

A USCG Certificate of Inspection may be required depending on the type/size of vessel offered.

**SEAWORTHINESS:** inspection of the vessel is not intended to convey acceptance by the State nor should it be considered conclusive evidence that the State believes the vessel is seaworthy. If during the department's inspection or at any time during the subsequent term of the contract, conditions are noted that might affect the safety or seaworthiness of the vessel, the State will arrange for further inspection by a person with the appropriate credentials to determine if the condition of the vessel is acceptable.

**VESSEL REQUIREMENTS:**

- A. Length of not less than ninety (90) feet. Length will be determined by measuring the centerline.
- B. Sleeping space for four (4) State personnel, in addition to the Captain and crew. Each sleeping space used by State personnel must be at least twenty-six (26) inches in width at the shoulders and seventy-seven (77) inches long.
- C. Minimum nine (9) cubic feet of dry storage drawer space for State equipment.
- D. Minimum six (6) square feet of flat, clear, interior work space for daily data entry work by State personnel. Galley table is acceptable. One 110 volt AC outlet must be available near this area.
- E. Minimum four (4) square feet of flat, clear, interior work space, either shelf or table, in a relatively undisturbed location, for semi-permanent installation of an electronic data entry device during the charter period. One 110 volt AC outlet must be available near this area.
- F. Minimum five hundred (500) square feet of flat, clear, exterior deck work space for State personnel. Vessels with shelter decks are highly preferred. The work area must be well lit (direct lights within a radius of six feet of State personnel) to permit work at night, including data recording and tagging. If fixed lighting is unavailable, responsive vessels must have mobile lighting, power cords, and all associated accessories to make a temporary installation of required lighting.
- G. Stove, oven, sink, galley table, and all materials and equipment necessary for daily meal preparation, cooking, and clean-up.

STATE OF ALASKA ITB # 11-001-97  
KING CRAB VESSEL CHARTER IN BRISTOL BAY AREA "T" OF THE BERING SEA

- H. Refrigerated storage space sufficient to maintain frozen food for all personnel for the duration of the longest continuous period of operation.
- I. Freezer storage space sufficient to maintain frozen food for all personnel for the duration of the longest continuous period of operation and sufficient to maintain frozen bait herring for the duration of the longest continuous period of operation.
- J. Water storage or seawater conversion capable of providing sufficient fresh water to permit thirty-one continuous days of operation. Water supply must be sufficient to permit daily washing of dishes, clothing, and showers for all personnel.
- K. Radar, with a minimum range of 40 miles, in good operating condition.
- L. Automatic pilot in good operating condition. Automatic readout Loran C. Backup system is desirable. Fathometer with 150 fathom range. Backup system is highly desirable. minimum of two anchors with ground tackle; all of the size and type required for the size and type of vessel chartered.
- M. Radio transmitter and receiver in good operating condition equipped with standard marine frequencies for the area in which operations will be conducted including VHF channels 7 and 16 and in good working condition. Radio transceiver: Single side-band frequencies 2309 (for receiving) and 2131 (for transmitting) to allow direct communication with RCA Alaska Communication, Inc. Backup system is desirable.
- N. USCG approved first-aid kit.
- O. USCG approved fire-fighting equipment of the size and type required for the size and type vessel chartered.
- P. USCG approved life rafts. The rated capacity of the rafts must be adequate to accommodate all of the people aboard the vessel; this includes the Captain, the vessel crew, and all of the biological crew.
- Q. Survival suits are required for all the people aboard the vessel. This includes the Captain, the vessel crew, and all of the biological crew. Sizes large and extra large.
- R. The vessel's main engine(s) must be diesel powered. Bids offering gasoline powered engines will be rejected as non-responsive.
- S. Power block to pull crab gear, minimum capacity 650 pounds.

STATE OF ALASKA ITB # 11-001-97  
KING CRAB VESSEL CHARTER IN BRISTOL BAY AREA "T" OF THE BERING SEA

- T. Bait chopper and sampling table (minimum 4 feet by 8 feet) for biologists.
- U. Catch sorting table (in addition to sampling table), minimum 4 feet by 8 feet.
- V. Skiff and outboard engine, minimum length of ten (10) feet and minimum of ten (10) horsepower.
- W. Vessel must be equipped with 150 rectangular King Crab pots, with lines, buoys, and bait jars. All pots must be identical in size and dimension, including mesh sizes on all panels, and tunnel eye openings. All pots must have opilio curtains.

**VESSEL CREW REQUIREMENTS:**

- (a) Crew to consist of a Captain with at least five (5) years of crab pot fishing experience in the Bering Sea and three (3) experienced fishermen. One of the fishermen must be an engineer with five (5) years experience aboard fishing vessels and fully knowledgeable of the vessel and equipment. Vessel crew will be expected to perform cooking and cleaning duties in addition to operating the vessel and assisting biologists by handling catches as prescribed by the biological crew leader.
- (b) The vessel crew will be expected to fish the gear. The biological crew will handle sampling of catches once they are aboard the vessel.
- (c) The State will have the right to require replacement of any vessel crew member. If the vessel operates shorthanded due to replacement or illness of a vessel crew member for a period in excess of twenty-four (24) hours, the State will deduct from the charter rate for that period of time in an amount equal to the missing crewman's wages and related direct cost of employment (i.e., social security tax, unemployment insurance, etc.). The total cost of replacing a vessel crew member aboard the vessel will be at the owner's expense. The owner will be responsible for payment of wages, direct cost of employment and will be responsible for all vessel crew members. The State will be responsible for payment of daily charter rates only, and will not reimburse the owner for vessel crew wages.
- (d) Captain will be required to complete proper fishing forms for each day of fishing, including recording weather conditions and fishing location data. Captain and vessel crew will be required to locate scheduled fishing areas.
- (e) There shall be no alcohol or controlled substances aboard the charter vessel during the charter.

STATE OF ALASKA ITB # 11-001-97  
KING CRAB VESSEL CHARTER IN BRISTOL BAY AREA "T" OF THE BERING SEA

**UNUSUAL HOURS:** It may be necessary to run the vessel twenty-four (24) hours continuously to travel from one location to another. Further, it may be necessary to set or lift gear at night (midnight) or early in the morning (midnight to 6:00 a.m.).

**DELAYS OR INTERRUPTIONS OF OPERATIONS:** For each hour of contract time lost, for any reason other than weather or an act directly attributable to state personnel aboard the vessel, the State will on each occasion, be entitled to deduct from the total contract payment, an amount equal to the hourly contract rate for each of the hours the vessel or essential equipment on the vessel is out of service.

**TERMINATION OF THE CONTRACT:** The State may, without fault or liability, terminate the contract for any of the following reasons:

- 1) The condition of the vessel or essential equipment on the vessel remains such that it cannot be used for work by the biological crew for a period of more than seventy-two (72) hours.
- 2) Lack of funds for the contract project.
- 3) Insubordination and/or lack of cooperation by the Captain or vessel crew.
- 4) Failure of the Captain, vessel, or vessel crew to report at the time and location specified in this ITB to begin the contract.

In the event of early termination of the contract, State-owned gear may be placed in storage or returned to a location that is mutually agreed upon by the State and vessel owner. Charges for gear storage will be paid by the State. The State will not assume any liability for transporting the Captain and vessel crew to their home port. Contract payments will cease on the hour and date the vessel is unable to continue normal operations.

**PERFORMANCE REQUIREMENTS OF THE VESSEL CAPTAIN & COMMAND OF THE VESSEL:**

- A. Either underway or at anchor the vessel Captain's orders will be final in matters regarding the general operation of the vessel, the operation of the vessel's equipment and fishing gear, the general activities and safety of the vessel crew and biological crew, and the navigation of the vessel.
- B. The vessel Captain will comply with all orders given by the biological crew leader regarding the State's research activities, provided that those orders do not endanger the vessel or the people aboard the vessel.

STATE OF ALASKA ITB #11-601-97  
KING CRAB VESSEL CHARTER IN BRISTOL BAY AREA "T" OF THE BERING SEA

- C. The vessel Captain will obey all USCG, State and other applicable regulations, rules, and statutes pertaining to the safe and legal operation of the vessel.

**PERFORMANCE REQUIREMENTS OF THE VESSEL CREW MEMBERS:** In the role of operations base and living quarters for State personnel, the vessel, it's Captain and crew will be required to provide these services and accommodations:

- A. General navigation and operation of the vessel either underway or at anchor.
- B. Space for compiling and analyzing the data collected.
- C. Communications base for dispersing information.
- D. Basic living accommodations for four (4) State biologists and technicians.
- E. Meal preparation, cooking and clean-up.
- F. General cleaning of the interior and exterior of the vessel.
- G. General assistance to the State personnel in the performance of their work. Crew will be expected to handle catches as prescribed by the crew leader and will be expected to fish the gear. The biological crew will handle sampling of the catches once they are aboard the vessel.
- H. The Captain must provide a safety orientation briefing to all vessel and biological crew members prior to embarking from Dutch Harbor. Both the crew and personnel must have general instructions on the following:
  - 1. The location and operation of lifesaving and emergency equipment (life rings, life rafts, immersion/survival suits, activating the general alarm).
  - 2. Operation of assigned equipment.
  - 3. Instructions for making a distress call.
  - 4. What to do in the event of a person overboard.
  - 5. What to do in the event of a fire.
  - 6. What to do in the event of flooding.
  - 7. What to do in the event of an abandon ship order.

STATE OF ALASKA ITB # 11-001-97  
 KING CRAB VESSEL CHARTER IN BRISTOL BAY AREA "T" OF THE BERING SEA

**\* CONSUMABLES TO BE PROVIDED BY THE CONTRACTOR AND INCLUDED IN THE PER DAY CONTRACT PRICE:**

- The contractor will provide all fuel, lubricants, oils, greases and filters required during the contract. At the beginning of the contract all fuel and lubricant tanks must be full and all filters must be fresh. In addition, the vessel must have aboard extra lubricants, oils, greases and filters in amounts sufficient for the entire contract period.
- The contractor will provide all bait for the entire charter period.
- The contractor will provide three ample, balanced, and nutritious meals each day for all biological crew, the vessel Captain and the vessel crew.

**MISCELLANEOUS PROVISIONS:** The State may, at it's own expense and only for the term of the contract, install and retain in the vessel equipment necessary to accomplish the objectives of the charter. The State will remove this equipment at the termination of the contract period without damage to the vessel.

**VESSEL INFORMATION FORM.** Bidders must complete the vessel information form below. A bidder's failure to complete the vessel information form may cause the State to reject the bid as nonresponsive

OWNERS NAME: Rick W. Mezich / R & B Fisheries, Inc.

ADDRESS: 7215 156th St. SW, Edmonds WA 98026

PHONE: (206) 742-7456

VESSEL NAME AND NUMBER: Rosie G 517812

VESSEL TYPE: 94' Marco steel crab vessel - oil screw

CURRENT LOCATION OF VESSEL: Dutch Harbor, AK

CALL NUMBERS AND FREQUENCY: WBM 8501 - all frequencies

YEAR BUILT: 1968

REGISTRY NUMBER: 517812 U.S. Coast Guard No.

CRUISING SPEED KNOTS: 9 knots

ADF & G # 03400

STATE OF ALASKA ITB # 11-501-97  
 KING CRAB VESSEL CHARTER IN BRISTOL BAY AREA "T" OF THE BERING SEA

OVERALL LENGTH: 94'  
 (Straight line measurement from end to end over the deck, excluding sheer, measured parallel to the centerline)

VESSEL WEIGHT: 196 Gross, 136 Net

DIESEL POWERED MAIN ENGINE:  YES  NO

HAS THE VESSEL BEEN INSPECTED BY THE USCG IN THE LAST 12 MONTHS?  
 YES  NO

If yes, please furnish a copy of the USCG "Commercial Vessel Safety Examination" letter with your bid. recommendations were all complied with.

**SURVIVAL EQUIPMENT:** The State requires that the life rafts carried aboard the vessel be USCG approved. The rated capacity of the life rafts must be adequate to accommodate all of the people aboard the vessel, this includes the State biological crew, the vessel Captain and vessel crew members.

Bidders must provide life rafts to accommodate all of the people aboard the vessel. Indicate the brand, capacity and USCG approval number for the life raft you will carry aboard the vessel.

RAFT BRAND	CAPACITY	USCG APPROVAL NUMBER
EXAMPLE: Beaufort	8	
A. Goodrich	6	serial { 6 MMUSG Lot #100
B. Viking	6	ms. { 6 DK B10695042
C.		
D.		

Bidders must provide at least enough survival suits for all those onboard. Indicate the brand and model of survival suits you carry aboard the vessel.

SURVIVAL SUIT BRAND AND MODEL	NUMBER OF SUITS
A. Imperial	7
B.	
C.	

STATE OF ALASKA ITB # 11-001-92  
KING CRAB VESSEL CHARTER IN BRISTOL BAY AREA "T" OF THE BERING SEA

Failure to specify survival suits and USCG approved life rafts to accommodate all those on board will cause the State to declare the bidder nonresponsive and to reject the bid.

Is all of the equipment called for in this ITB installed and functional on the date of the bid opening?

[ ] YES [X] NO

If "NO", indicate exceptions which will be corrected prior to the date set for the inspection by the State:

Need 1 more survival suit

Skiff & motor are not on vessel at present

sampling table

**BIDDERS NOTE:** All of the equipment called for in this ITB must be installed and functional at the time of the vessel inspection.

**USCG LICENSE:** In the space provided, bidder's must enter the name of the person who will serve as Captain of the vessel. The Captain must be properly licensed by the USCG for the size/type vessel being offered. A photo copy of that person's USCG license should be submitted with the bid and must be submitted within 10 days of the State's request. A bidder's failure to provide a copy of the license, as stated above, may cause the State to consider the offer nonresponsive and reject the bid.

If during the term of the contract, a different person is retained as Captain, a photo copy of that person's license must be submitted to the Contracting Officer prior to the time the person begins working as vessel Captain. The Contracting Officer must accept and authorize the change of Captains. The contractor's failure to follow this procedure may cause the State to terminate the contract.

On the line below, print the name of the person who will serve as Captain.

Jerry Barnett

VESSEL CAPTAIN

STATE OF ALASKA ITB # 11-001-97  
KING CRAB VESSEL CHARTER IN BRISTOL BAY AREA "T" OF THE BERING SEA

Identify the rating held by the person named above.

- |  |                                 |  |
|--|---------------------------------|--|
| <input type="checkbox"/> Master, 25 Ton vessels                            | <input type="checkbox"/> Inland | <input type="checkbox"/> Near coastal            |
| <input type="checkbox"/> Master, 50 Ton vessels                            | <input type="checkbox"/> Inland | <input type="checkbox"/> Near coastal            |
| <input checked="" type="checkbox"/> Master, 100 Ton vessels                | <input type="checkbox"/> Inland | <input checked="" type="checkbox"/> Near coastal |
| <input type="checkbox"/> Master, 150 Ton vessels                           | <input type="checkbox"/> Inland | <input type="checkbox"/> Near coastal            |
| <input type="checkbox"/> Master, 200 Ton vessels                           | <input type="checkbox"/> Inland | <input type="checkbox"/> Near coastal            |
| <input type="checkbox"/> Master, 500 Ton vessels                           | <input type="checkbox"/> Inland | <input type="checkbox"/> Near coastal            |
| <input type="checkbox"/> Master, 1600 Ton vessels                          | <input type="checkbox"/> Inland | <input type="checkbox"/> Near coastal            |
| <input checked="" type="checkbox"/> <i>Inspected Mate, 200 Ton vessels</i> |                                 | <input checked="" type="checkbox"/>              |

**CREW REQUIREMENTS:** At a minimum, the vessel crew will consist of a Captain and three (3) crew members. The contractor will be responsible for payment of wages, direct cost of employment and fringe benefits, if any, to the vessel crew members. The State will be responsible for payment of the daily charter rate only and will not reimburse the contractor for crew wages in addition to the charter rate.

**CAPTAIN AND CREW EXPERIENCE INFORMATION:** Bidders must complete the Captain and crew information form below. Bidders failure to complete the Captain and crew information may cause the State to reject the bid as nonresponsive.

**CAPTAIN EXPERIENCE REQUIREMENTS:** The vessel Captain must have a minimum of five (5) years experience in crab-pot fishing operating in Alaskan waters. Captain must have a minimum of one (1) year experience, as a Captain, in the type and size vessel specified for this contract.

- Captain's experience operating in Alaskan waters. 16 years.
- Captain's experience, as a Captain, in various size, type/class vessels.
  - a) Size type/class of vessel: 100' crabber  
Number of years experience in this size type/class of vessel: 1 years.
  - b) Size type/class of vessel: 165' crabber  
Number of years experience in this size type/class of vessel: 1 years.
  - c) Size type/class of vessel: 153' crab catcher/processor  
Number of years experience in this size type/class of vessel: 1 years.
  - d) Size type/class of vessel: 127' trawler/crabber

STATE OF ALASKA ITB # 11-001-97  
KING CRAB VESSEL CHARTER IN BRISTOL BAY AREA "T" OF THE BERING SEA

Number of years experience in this size type/class of vessel: 6 mo. years.

**CREW EXPERIENCE REQUIREMENTS:**

1. ENGINEER

One of the crew must be an engineer. The engineer must have a minimum of five (5) years experience as an engineer in the type and size vessel specified for this contract.

Engineer's experience, as an engineer, in various size, type/class vessels.

~~UNINSPECTED 4 COMM FISHING TO INSPECTED TUGS~~  
a) Size type/class of vessel: 12' GILLNET TO 9,000 HP TUGS

Number of years experience in this size type/class of vessel: 14-3+ years.

b) Size type/class of vessel: COMM FISHING-CRAB 80-110' (UP TO 2,000 H.P.)

Number of years experience in this size type/class of vessel: 5+ years.

c) Size type/class of vessel: COMM. FISHING-CRAB 165 FEET (3,000 H.P.)

Number of years experience in this size type/class of vessel: 5+ years.

d) Size type/class of vessel: COMM FISHING 12' GILLNET (500 HP.)

Number of years experience in this size type/class of vessel: 4+ years.

2. REMAINING CREW MEMBERS

The remaining crew members must have a minimum of one (1) year experience fishing at sea.

a) First crew member's experience fishing at sea: 12 years.

b) Second crew member's experience fishing at sea: 8 years.

c) Third crew member's experience fishing at sea: 10 years.

STATE OF ALASKA ITB # 11-201-97  
KING CRAB VESSEL CHARTER IN BRISTOL BAY AREA "T" OF THE BERING SEA

**METHOD OF AWARD:** Award will be made to the lowest responsive and responsible bidder.

**BID SCHEDULE**

CONTRACT RATE PER DAY \$ 3000 X 31 DAYS = \$ 93,000 TOTAL BID PRICE

*Rick Mazzei*

FOR STATE USE ONLY. THIS CONTRACT IS SUBJECT TO THE TERMS AND CONDITIONS OF THE BIDDING DOCUMENTS.

STATE OF ALASKA ITB # 11-001-97  
KING CRAB VESSEL CHARTER IN BRISTOL BAY AREA "T" OF THE BERING SEA  
**AMENDMENT #1 (05/30/96)**

**TEST FISH PROGRAM:** The Test Fish Program was established by the legislature {AS 16.05.050(15)} to allow the Department of Fish and Game to conduct research programs funded by the sale of fish caught during research. The Department of Fish and Game's expense for this research is \$250,000.00. The charter will be financed as follows:

DAY 1 TO DAY 15: Cost recovery fishing and delivery in Dutch Harbor, Alaska. Revenues for the project will be generated by retaining 100% of the red king crabs equal or greater than 6.5 inches in carapace width.

DAY 16 TO DAY 31: At sea research. The Captain and appropriate crew must be onboard for this purpose.

**RISK TO VESSEL OWNER:** Because funding for this charter is totally dependent on the crab catch, the charter involves a monetary risk. You may receive less than the amount you bid and there is also a risk of not receiving anything. When you sign your name to this ITB, you are agreeing to take that risk.

**PAYMENT FOR THE CHARTER:** The vessel owner/Captain will be paid the amount bid up to the maximum thirty-one (31) days, or the amount of revenue generated by the crab sold, less \$250,000.00 for the Department of Fish and Game's fixed expenses, whichever is the least.

- (1) If attained, the state will retain the first \$200,000.00 from the receipts of harvested crabs, which will be sold under the Department of Fish and Game's Test Fish Program.
- (2) If attained, the vessel owner will receive up to \$50,000.00 in the form of a check from the State of Alaska from the next \$50,000.00 in receipts of harvested crabs.
- (3) If attained, the State of Alaska will receive the next \$50,000.00 in receipts of harvested crabs.
- (4) If attained, the vessel owner will receive either the remaining amount of receipts from the crab harvest up to the bid price of the charter or the balance of the crab harvest, whichever is the least.

The vessel will fish in the manner directed by the State officials until sufficient crabs are obtained to cover costs to the State of Alaska (\$250,000.00) plus the cost of the vessel charter, or until thirty-one (31) days have lapsed.

ALASKA DEPARTMENT OF FISH AND GAME

Time and Attendance Report

(Regular pay)

Pay period ending:

8/15/96

SSN:

Name:

Division

Commercial Fish M & D

Record Start and Stop times in military format. Midnight = 24:00. 12:01 AM = 00:01. If you work past midnight, stop at 24:00 and resume at 00:01 the next day.

Day	Date	Charge To	Start	Stop	Start	Stop	Start	Stop	Start	Stop	Start	Stop	Leave Taken	Sea Duty	Standby	Hazard	Comment
Thu	8/1	A	8:00	12:00	13:00	16:30											
Fri	8/2	A	8:00	12:00	13:00	16:30											
Sat	8/3	A	RDO														
Sun	8/4	A	RDO														
Mon	8/5	A	8:00	12:00	13:00	16:30											
Tue	8/6	A	8:00	12:00	13:00	16:30											
Wed	8/7	A	8:00	12:00	13:00	16:30											
Thu	8/8	A	8:00	12:00	13:00	16:30											Travel to Dutch
Fri	8/9	A	8:00	12:00	13:00	16:30											
Sat	8/10	A	RDO											RDO			Left port @ 8:00pm
Sun	8/11	A	RDO											RDO			at sea
Mon	8/12	A	8:00	12:00	13:00	16:30								SWD			at sea
Tue	8/13	A	8:00	12:00	13:00	16:30								SWD			"
Wed	8/14	A	8:00	12:00	13:00	16:30								SWD			"
Thu	8/15	A	8:00	12:00	13:00	16:30								SWD			"

89

Charge to A

CC/LC %

	100

Charge to B

CC/LC %


Charge to C

CC/LC %


Charge to D

CC/LC %


Leave Use Codes

H=Holiday/105 X=Comp Ann/170  
 S=Sick/150 Y=Comp Pers/172  
 A=Annual/160 C=Court/195  
 P=Personal/165 L=LWOP/953

We certify that the information provided above is true and correct

Employee Signature: \_\_\_\_\_

Date: 8/15/96

Supervisor Signature: \_\_\_\_\_

Date: 8/15/96

Approving Officer Signature: \_\_\_\_\_

Date: \_\_\_\_\_

ARE YOU WORKING ON A FEDERAL PROJECT? Yes  No

If you answered yes, indicate on EACH DAY in the Comments:

What project(s) you worked on AND

% of each day spent working on ALL projects

If you don't know, ASK YOUR SUPERVISOR Employee's Initials:

54

revised 09/1996

ALASKA DEPARTMENT OF FISH AND GAME

Time and Attendance Report **AMENDED** (for hazard only)

Pay period ending: 8/15/96 SSN: \_\_\_\_\_ Name: \_\_\_\_\_ Division Commercial Fish M & D

Record Start and Stop times in military format: Midnight = 24:00; 12:01 AM = 00:01. If you work past midnight, stop at 24:00 and resume at 00:01 the next day.

Day	Date	Charge To	Start	Stop	Start	Stop	Start	Stop	Start	Stop	Start	Stop	Leave Taken	Sea Duty	Standby	Hazard	Comment
Thu	8/1	B															
Fri	8/2	B															
Sat	8/3	B															
Sun	8/4	B															
Mon	8/5	B															
Tue	8/6	B															
Wed	8/7	B															
Thu	8/8	B															
Fri	8/9	B															
Sat	8/10	B															left port @ 8pm
Sun	8/11	B	7:00	11:00	16:00	19:30											
Mon	8/12	B	7:00	12:00	12:30	17:00	19:00	21:00									actual hours to use for
Tue	8/13	B	9:00	13:00	15:00	19:00											hazard pay
Wed	8/14	B	7:00	12:30	13:30	15:00	20:00										
Thu	8/15	B	7:30	11:00	12:00	17:00	19:00	20:30									

59

Charge to A

CC/LC	%

Charge to B

CC/LC	%
11100741/	100
11147785	

Charge to C

CC/LC	%

Charge to D

CC/LC	%

**Leave Use Codes**

H=Holiday/105 X=Comp Ann/170  
 S=Sick/150 Y=Comp Pers/172  
 A=Annual/160 C=Court/195  
 P=Personal/165 L=LWOP/953

We certify that the information provided above is true and correct

Employee Signature: \_\_\_\_\_ Date: 8/15/96

Supervisor Signature: \_\_\_\_\_ Date: 8/15/96

Approving Officer Signature: \_\_\_\_\_ Date: \_\_\_\_\_

ARE YOU WORKING ON A FEDERAL PROJECT? Yes  No

If you answered yes, indicate on EACH DAY in the Comments:  
 What project(s) you worked on AND  
 % of each day spent working on ALL projects  
 If you don't know, ASK YOUR SUPERVISOR **Employee's Initials:**

55

Appendix C. List of reports and presentations generated from the Bristol Bay red king crab Test Fishery program.

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- Blau, S.F. 1996 The 1995 St. Matthew Island blue king crab survey. Alaska Department of Fish and Game, Division of Commercial Fisheries Management and Development, Regional Information Report 4K96-27, Kodiak.
- Byersdorfer, S., and L.J. Watson. 1992. A summary of biological data collected during the 1991 Bristol Bay red king crab tagging study. Alaska Department of Fish and Game, Division of Commercial Fisheries, Technical Fishery Report 92-14, Juneau.
- Byersdorfer, S., and L.J. Watson. 1993. A summary of biological data collected during the 1992 Bristol Bay red king crab test fishery charter. Alaska Department of Fish and Game, Division of Commercial Fisheries Management and Development, Regional Information Report 4K93-24, Kodiak.
- Byersdorfer, S., L.J. Watson, and D. Tracy. 1994. A summary of biological data collected during the 1993 Bristol Bay red king crab tagging study. Alaska Department of Fish and Game, Division of Commercial Fisheries Management and Development, Regional Information Report 4K94-27, Kodiak.
- Byersdorfer, S., L.J. Watson, and D. Tracy. 1995 A summary of biological data collected during the 1994 Bristol Bay red king crab tagging study. Alaska Department of Fish and Game, Division of Commercial Fisheries Management and Development, Regional Information Report 4K95-33, Kodiak.
- Byersdorfer, S. 1996. A summary of biological data collected during the 1995 Bristol Bay red king crab tagging study. Alaska Department of Fish and Game, Division of Commercial Fisheries, Technical Fishery Report 92-14, Juneau.
- Donaldson, W.E., D. Schmidt, L. Watson, and D. Pengilly. 1992. Development of a technique to tag adult red king crab, *Paralithodes camtschaticus* (Tilesius, 1815), with passive integrated transponder tags. J. Shellf. Res. 11(1):91-94.
- Pengilly, D., and L.J. Watson. 1992. Visible (Floy) and non-visible (PIT) tag retention experiments and automated PIT tag detection trials conducted on Bristol Bay red king crab in 1991. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 4K92-28, Kodiak.

- Pengilly, D. and L.J. Watson. 1992. Differential harvest rates on newshell and oldshell red king crabs *Paralithodes camtschaticus* in the Bristol Bay commercial fishery: inferences from tagging studies, preseason surveys, and commercial catch sampling (abstract and presentation). Alaska Chapter of the American Fisheries Society, 19th annual meeting, Valdez, Alaska, November 16-19, 1992.
- Pengilly, D., and L.J. Watson. 1993. Automated detection of PIT-tagged red king crabs in commercial deliveries to crab processing facilities. Alaska Department of Fish and Game, Division of Commercial Fisheries Management and Development, Contribution PP-080, Juneau.
- Pengilly, D., and L.J. Watson. 1994. Automated detection of internally injected tags in red king crabs at crab processing facilities. *Fish. Res.* 19:293-300.
- Pengilly, D., and D. Tracy. 1996. Effectiveness of 3-inch tunnel eye openings in reducing capture rates of red king crab in Tanner crab fishing pots. In: Report to the Alaska Board of Fisheries for the Shellfish Fisheries of the Westward Region, 1996. Alaska Department of Fish and Game, Division of Commercial Fisheries Management and Development, Regional Information Report 4K96-XX (in press), Kodiak.
- Watson, L. J., D. Pengilly, W.E. Donaldson, and D. Schmidt. 1991. A pilot mark recapture study using external tags and implantable Passive Integrated Transponder (PIT) tags on red king crab in Bristol Bay, Alaska. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 4K91-21, Kodiak.
- Watson, L.J. 1992. An introduction to implantable passive integrated transponder (PIT) tag technology as applied to red king crab in Bristol Bay, Alaska (summary and presentation). Pages 156 to 159 in L.E. White, editor. Proceedings of the international crab rehabilitation and enhancement symposium, Kodiak, Alaska, January 21-24, 1992.
- Watson, L.J. 1994. Bering Sea crab test fishery program: framework and Bristol Bay red king crab tagging project update (executive summary and presentation). Alaska Board of Fisheries, Anchorage, Alaska, March 15, 1994.
- Watson, L.J., and D. Pengilly. 1992. Project operational plan for the 1991 Bristol Bay red king crab test fishery project. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 4K92-31, Kodiak.

- Watson, L.J., and D. Pengilly. 1993. Project operational plan for the 1992 Bristol Bay red king crab test fishery project. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 4K93-5, Kodiak.
- Watson, L.J., and D. Pengilly. 1994. Project operational plan for the 1993 Bristol Bay red king crab test fishery project. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 4K94-XX, (in press) Kodiak.
- Watson, L.J., and D. Pengilly. 1996. Project operational plan for the 1994 Bristol Bay red king crab test fishery project. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 4K96-31, Kodiak.
- Watson, L.J., and D. Pengilly. 1993. Project operational plan for the 1990 Bristol Bay red king crab test fishery project. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 4K93-17, Kodiak.
- Watson, L.J., D. Pengilly, and W. Donaldson. 1993. Studies on the application of PIT tags to red king crab fishery research in Alaska (executive summary and presentation). Alaska Board of Fisheries meeting, Anchorage, Alaska, February 1-9, 1993.
- Watson, L.J., D. Pengilly, and W. Donaldson. 1993. Application of PIT tags to red king crab fishery research in Alaska (abstract and presentation). Page 31 *in* Pacific States Marine Fisheries Commission 1993 PIT tag workshop. Portland, Oregon, January 20-22, 1993.

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