

PROJECT OPERATIONAL PLAN
BERING SEA TEST FISHERY PROGRAM:
1997 BRISTOL BAY RED KING CRAB PROJECT

by

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and
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Regional Information Report¹ No. 4K97-40

Alaska Department of Fish and Game
Commercial Fisheries Management and Development Division
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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-785 (Appendix A)

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

Date Submitted: July 7, 1997

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: bb97pop.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 eighth year and has previously focused on Bristol Bay red king crab tagging studies initiated in 1989. Operational plans for 1990, 1991, 1992, 1993, 1994, 1995, and 1996 are documented in Watson and Pengilly (1993b, 1992, 1993a, 1994, 1995 respectively), Watson et al. (1996), and Tracy and Pengilly (1996).

The FY98 project has three major components: 1) a 28 day charter in the Bristol Bay Registration Area 'T': (a) testing catch rates of red king crabs under varying pot fishing soak times in a portion of Bristol Bay; (b) to evaluate the catchability of king crab pots with a single tunnel eye opening against pots with two tunnel openings (current gear standard); and (c) to collect red king crabs for project cost recovery; 2) a 35 day charter to conduct a golden king crab population assessment and tagging survey in the Aleutian Islands Registration Area 'O'. Lastly, an intensive tagged crab recovery program will be conducted during the 1997 Aleutian Islands brown king crab commercial fishery beginning September 1, 1997. The total budget for the Bering Sea Crab Test Fishery Program is \$454,400 (Appendix A).

For purposes of this operational plan, only the Bristol Bay charter, soak time and catchability studies 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 35 day golden king crab survey is provided in Blau and Watson (1997). A list of reports and presentations generated from the project since its inception is given in Appendix C.

INTRODUCTION

The Bristol Bay (Management Area T) red king crab fishery has long comprised a significant economic component of Alaska's commercial shellfisheries. Historically, the total annual ex-vessel value of red king crabs harvested in this fishery has often exceeded 50 million dollars (Morrison 1995). Yearly stock assessment trawl surveys conducted by the National Marine Fisheries Service (NMFS) provide the Alaska Department of Fish and Game (ADF&G) with abundance estimates of the Bristol Bay red king crab population. The ADF&G uses these population abundance estimates as a guideline for management of the commercial fishery in which only male crabs measuring at least 6.5 inches in carapace width may be harvested (ADF&G 1996). In 1994 and 1995, results of the annual Bristol Bay stock assessment survey indicated that constituents of the red king crab population - particularly sexually mature female crabs - were in a state of depressed abundance (Otto et. al. 1994, 1995). These findings compelled ADF&G to implement a complete closure of the commercial fishery during both years (Morrison 1995).

In the spring of 1996 the Alaska Board of Fisheries (BOF) adopted a revised Bristol Bay fishery harvest strategy based upon population modeling directed at rebuilding the depressed red king crab stocks (Zheng et. al. 1996). A major component of the updated harvest policy included reducing the commercial fishery target exploitation rate of sexually mature male red king crabs from 20 percent to 10 percent until a minimum stock rebuilding index was achieved. Subsequent implementation of the adjusted harvest strategy resulted in a record low Guideline Harvest Level (GHL) of 5 million pounds for the 1996 Bristol Bay fishery (Morrison 1996). The unanticipated effect of the new harvest policy combined with accelerated catch rates during the November season complicated management of the fishery and resulted in significant overharvest (Morrison 1996).

In December 1996 ADF&G petitioned the BOF to consider the implementation of management measures which would allow for a more controlled red king crab harvest. A host of options presented to the BOF by the department and fishing industry representatives to serve this purpose included further limitations on numbers of pots allowed for participating vessels, and a repeal of regulations prohibiting baited crab gear left on the fishing grounds at the time of a previously announced closure date. Due to procedural technicalities, action by the BOF on this issue is pending.

Most management alternatives so far considered by the BOF are contingent upon the effects of reducing or extending the soak periods of fished gear - effects which may range from a desired reduction in the catch rate of legal crabs, to an increase in the directed catch rate as well as the bycatch of female and undersized male crabs. Johnson (1985) found that while numbers of male red king crabs entering pots in Chiniak Bay, Alaska were positively correlated to increases in pot soak periods, a similar association between soak periods and the catch rates of red king crab females and Tanner crabs *Chionocetes bairdi* was less apparent.

One means of controlling red king crab harvest rates that may be comparatively less dependent upon pot soak periods involves alteration of standardized king crab pots. A typical pot

configuration includes two tunnel-like openings for the entrance of crabs. Modification of the standard design to allow red king crabs a single opening for entry to each pot and thereby reduce the overall catch rate of legal and non-retainable crabs warrants investigation, as the full effects of this gear configuration remain unknown.

OBJECTIVES

The primary objectives of the 1997 Bristol Bay Test Fish project consist of 1) testing the rates at which legal-sized red king crabs (and to a lesser extent under-sized male and female red king crabs) are captured in a standardized king crab pot design under several different pot soak time scenarios; and 2) evaluating the rates at which legal-sized male red king crabs are captured in otherwise standardized king crab pots that contain a single tunnel opening. For the purposes of this report, a standardized king crab pot containing two tunnel openings will hereafter be referred to as "typical"; additionally, "non-typical" king crab pots will be defined as those containing a single tunnel opening, but otherwise standardized in configuration.

A study of legal-sized male red king crab catch abundance at variable pot soak time intervals will be conducted in the Bristol Bay waters east of 168° W longitude. The species composition, catch and crab size distribution, reproductive condition and general vitality of all crabs captured in pots fished within these soak intervals will also be examined.

Secondly, and concurrent to project cost recovery fishing, a comparison of the catchability of typical vs. non-typical king crab pots will be made based on the catch abundance of legal-sized male red king crabs.

Lastly, and as a lesser objective, an analysis of both variable soak period catch rates and the catchability of typical vs. non-typical king crab pots will be completed based on the catch abundance of female and undersized male red king crabs.

The results of the analyses described as the primary project objectives will be presented by the department to the BOF in August of 1996 in order to facilitate the implementation of rational management measure(s) prior to the presently scheduled opening of the 1997 Bristol Bay red king crab fishery.

METHODS

The project will be conducted aboard the test fishery charter vessel, F/V Grand Duchess from approximately July 25, 1997 to August 21, 1997 operating in the waters of Bristol Bay (Area T). An illustration of the project study area is given in Figure 1.

Cost Recovery Fishing / Pot Catchability Experiment

The initial 10 to 14 days of the project will be directed towards harvesting marketable male red king crab for project cost recovery and determining the catchability of typical pots and non-typical king crab pots. Up to 120 pots of typical and non-typical design will be fished at various locations presumed to contain dense concentrations of legal-sized male red king crabs.

Approximately 140,000 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. The total quantity of crabs harvested for project funding will be determined prior to cost recovery fishing through competitive bidding to ADF&G by Dutch Harbor-based processors. If cost recovery goals are not attained during the 10 -14 day period, the directed harvest of red king crabs will resume until such time that a sufficient number of crabs are captured.

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

The deployment of the typical and non-typical king crab pots during cost recovery fishing will occur systematically, and the resulting mean catch of legal-sized crabs observed in each pot type will be assessed by application of a statistical test. Linear "strings" containing a total of 20 to 30 pots (and consisting of equal numbers typical and non-typical pots) will be deployed, and all pots within each string will be spaced at 1/8 (.125) nautical mile (NM) intervals (Figure 2). It is anticipated that an average of three strings of pots will be set and pulled on a daily basis during the initial segment of the test fishery, although the total sample sizes of typical and non-typical pots fished will be contingent upon the number of fishing days required to achieve the project cost recovery goal of harvested crabs.

Pot Soak Time Study

The remainder of the charter will be utilized to complete the soak time study outlined above. The waters targeted for pot sets during this exclusively directed research phase of the cruise will include areas where a high abundance of legal-sized male red king crabs are observed during the cost recovery fishing, and have also been documented during previous stock assessment surveys and commercial fishing seasons. More specifically, results of the 1996 eastern Bering Sea trawl survey (Otto, et al. 1996) and the observed catches of red king crabs during the 1996 Bristol Bay red king crab fishery may also be used to locate densities of crabs targeted during the study.

Study Design

The catch abundance of legal-sized red king crabs within several pot soak time categories will also be assessed by employment of a systematic study design. A total of 36 pots will be fished simultaneously in a grid-like pattern - hereafter referred to as a "block". Pots fished within each block will be spaced at 1/3 (.333) NM intervals bilaterally. Approximately 4 blocks of pots will be deployed by the conclusion of the field study; however, the total sample size will be largely dependent upon the number of available fishing days and the logistics of maintaining

equivalent numbers of pots deployed within the soak period categories described below. An example of the systematic block deployment pattern is shown in Figure 3.

In order to maintain a random soak time effect on respective pot types, separate soak period categories will be applied to pots within individual blocks. Pot soak periods selected for comparative analysis will be categorized in a 12 hr. increment (with an acceptable interval of 10-14 hr.); a 24 hr. increment (with an acceptable interval of 20-28 hr.); and a 72 hr. increment (with an acceptable interval of 68-76 hr.) (see Figure 3). Optimally, sample sizes within each soak time category will be equivalent by the conclusion of the field study.

Catch Sampling

Pot contents will be evaluated within soak time study blocks 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 recording forms for the entire project are detailed in "Shipboard Instructions for the 1997 Bristol Bay Test Fishery Charter (Appendix C).

DATA ANALYSIS

Data will be entered and summarized on-board the charter vessel to facilitate presentation to BOF meeting in Anchorage on 25-27 August. A more detailed analysis will be performed for the project report, if possible prior to BOF meeting.

Pot Catchability Experiment

The significance of any observed reduction in catch of legal crabs in one-eyed pots relative to adjacent two-eyed pots will be tested using a turning points test (Brockwell and Davis 1987) against a one-sided alternative (i.e., that the within-string series of catch-per-pot in a string of alternating one-eyed and two-eyed pots fluctuates more rapidly than would be expected for a random series).

Pot Soak Time Study

The CPUE of legal crab in the soak time experiment will be initially analyzed as a randomized complete block design (Montgomery 1984) with the three target soak times (12 hr., 24 hr., and 72 hr.) as the treatments and the grids of 36 pots as blocks. The significance of contrast coefficients for a quadratic trend in treatment means ordered by target soak-time will be tested using SYSTAT 6.0. Data will be screened for departures from model assumptions; normalizing or variance stabilizing transforms will be applied as needed.

Depending on the actual effects of soak period on catch per pot, these data may be best analyzed using continuous time models. Accordingly, and to provide some predictions for the effects of soak times between 12 and 72 hours on catch of both legal and non-legal red king crab, the catch per pot data will also be fit to continuous time non-linear models. The catch, C_t , of legal (or non-legal crab) in a pot at soak period will be fit to both a maximum asymptotic catch model,

$$C_t = C_{\infty}(1 - e^{-rt}),$$

or to the three parameter model of Zhou (1996) that allows for a decrease in retained catch with increasing soak times. A term to represent a block effect will be added if the need is indicated. The nonlinear models will be fit using SYSTAT 6.0

SCHEDULES AND PERSONNEL

7/96-7/97	Project planning (Tracy and Pengilly)
7/97-8/97	1997 Bristol Bay red king crab cost recovery fishing and directed research at-sea (Tracy et al.)
9/97-6/98	Data entry, analysis, and reporting (Tracy and Pengilly)

The 1997 Bering Sea Test Fish Program supports 12.0 man-months of personnel time, including two seasonal positions (L. Watson FB I - 3.0 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 1997 begins on July 25 with Bristol Bay red king crab studies and cost recovery charter, and ends with initiation of the tag recovery effort in early September following closure of the Aleutian Islands brown 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 1997 Bristol Bay red king crab test fishery project. (R.I.R. 4K98-XX) Byersdorfer. January 1998 (final report).
2. A summary of biological data collected during the 1997 Aleutian Islands golden king crab survey (R.I.R. 4K98-XX) Blau and Watson. January 1998 (final report).
3. A categorical analysis of red king crab *Paralithodes camtschaticus* catch rates with variable pot soak periods in Bristol Bay, Alaska. (Reg. Inf. Rep. 4K98-XX) Pengilly, Tracy. January 1998 (final report).
4. Evaluation of the catchability of red king crabs *Paralithodes camtschaticus* in pots with a single tunnel eye opening. (Reg. Inf. Rep. 4K98-XX) Pengilly, Tracy. January 1998 (final report).

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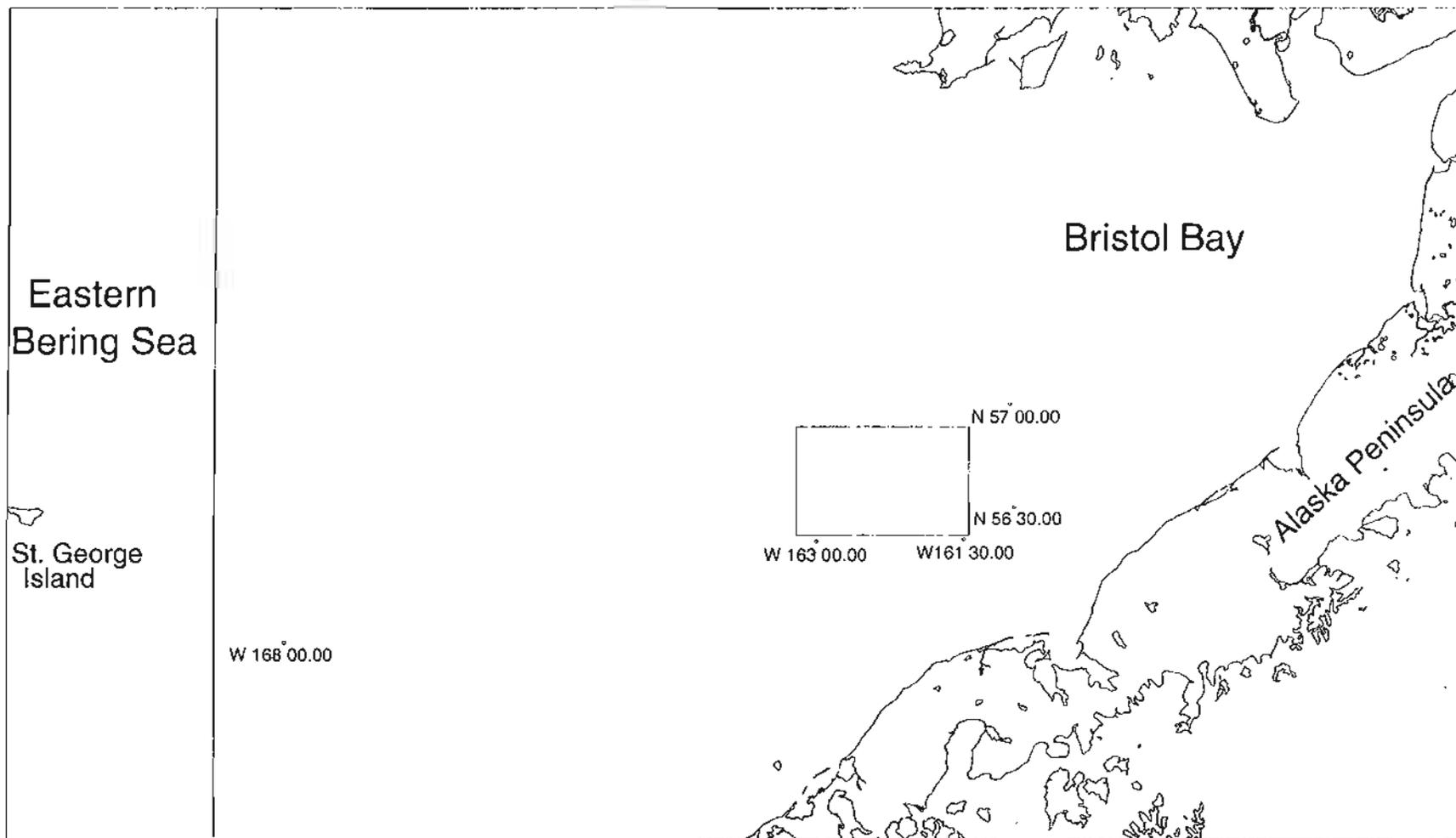
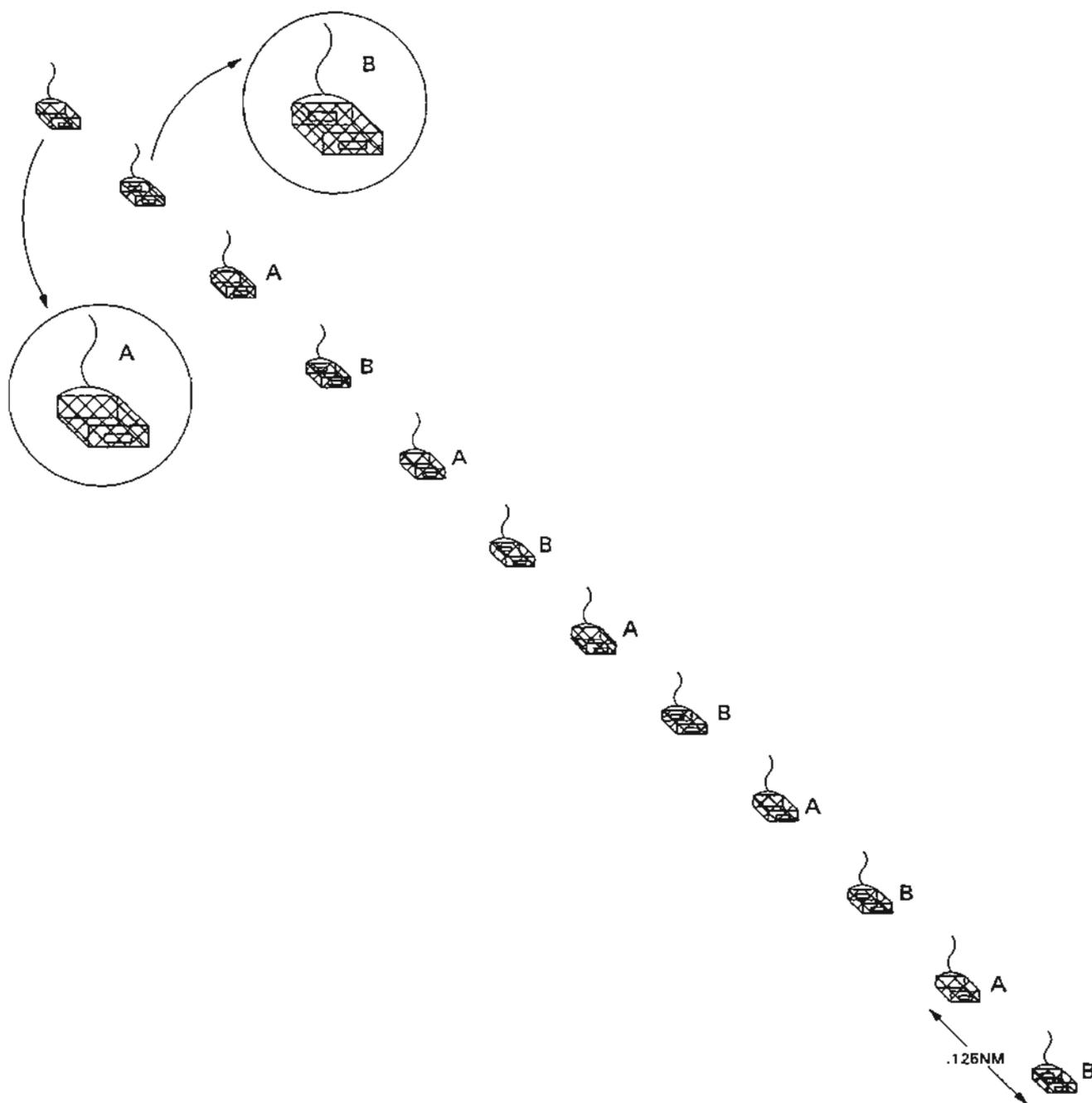


Figure 1. General location of cost recovery fishing and directed research studies, 1997 Bristol Bay Test Fishery Project.



A - Non-typical one tunnel opening king crab pot
 B - Typical (two tunnel opening) king crab pot

Figure 2. Systematic typical vs. non-typical pot string deployment pattern for the 1997 Bristol Bay test fishery project.

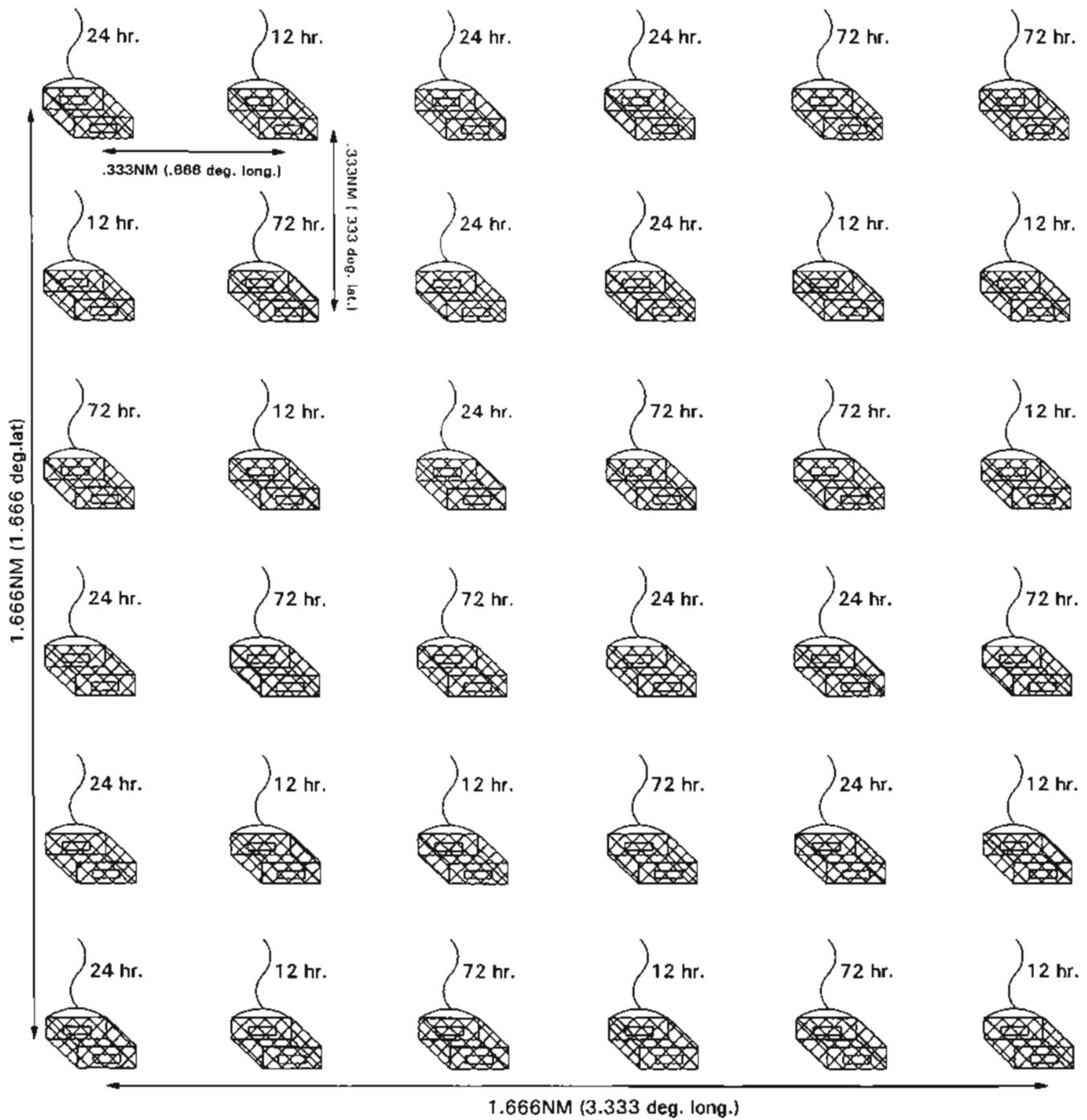


Figure 3. Systematic pot deployment pattern/random sampling scenario (by soak period) during the 1997 Bristol Bay test fishery project.

Appendix A. FY98 Yellowbook for the Bering Sea Crab Test Fishery Project. Note that the Yellowbook allocation reflects the legislative approved project amount of 454.4K.

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	FY98
100 Personal	165.4	200.5	200.5	114.9	118.5
Services					
200 Travel	2.1	15.3	15.3	13.5	13.5
300 Contractual	223.2	222.8	222.8	304.9	304.9
400 Commodities	49.2	9.0	9.0	7.5	7.5
500 Equipment	0.0	7.0	7.0	10.0	10.0
Project Totals	459.9	454.6	446.8	450.8	454.4

Appendix A. (page 2 of 2)

Funding sources	FY94	FY95	FY96	FY97	FY98
Federal Receipts	0.0	0.0	0.0	0.0	0.0
General Fund	0.0	0.0	0.0	0.0	0.0
Interagency Receipts	0.0	0.0	0.0	0.0	0.0
Program Receipts	459.5	454.6	446.8	450.8	454.4
General Fund Match	0.0	0.0	0.0	0.0	0.0
Fish and Game Fund	0.0	0.0	0.0	0.0	0.0
CIP Funds	0.0	0.0	0.0	0.0	0.0
Staff months	29.0	30.0	30.0	14.5	12.0

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	RS	R&S	LO C	TITLE	NAME	MM	OT	SE A	HA Z	SW	SB	TOTAL
11-1857	A P	18 B	CAA	Fish Bio III	Tracy, Donn	0	0	28	0	0	0	\$ 6,000.00
11-1390	P P	18F	BKB	Fish Bio III	Morrison, Rance	0	0	35	0	0	0	\$ 8,000.00
11-1595	P P	16 M	CAA	Fish Bio II	Blau, Forrest	0	0	35	0	0	0	\$ 7,000.00
11-1117	A S	14F	CAA	Fish Bio I	Byersdorfer, S.	6.0	60	0	0	0	0	\$ 38,360.00
11-1919	A S	14A	BKB	Fish Bio I	Ruccio, Mike	0	0	28	0	0	0	\$ 5,000.00
11-1319	A S	11D	CAA	Admin Clerk II	Blackett, Nang	2.0	0	0	0	0	0	\$ 6,742.00
11-1409	A S	14B	BKB	Fish Bio I	Moore, Holly	2.0	30	28	0	0	0	\$ 17,000.00
11-1906x	A S	9C	BKB	Fish Tech. II	Engle, Susan	0	0	28	0	0	0	\$ 5,000.00
11-1967	P S	14F	CAA	Fish Bio I	Watson, Leslie	3.0	0	0	0	0	0	\$ 15,144.00
11-1603	P S	11D	BKB	Fish Tech. III	Schwenzler, Mary	0	0	35	0	0	0	\$ 6,500.00
11-1818	p S	11C	BKB	Fish Tech. III	Wilson, Elizabeth	0	0	35	0	0	0	\$ 6,500.00
TOTALS						13.0	90	252	0	0	0	\$121,246.00

Line	Description	Amount	Comments
72240	Field travel	10.0	Travel
72500	Per Diem/Other costs	3.5	Per diem Expenses
73000	Charters/Other	302.2	Vessel charters, tags, printing phone, freight
74520	Misc. Sci. Supply	7.5	Misc. Scientific Equipment
75690	Misc. Equipment	10.0	Computer upgrades
TOTAL LINES 200-500:		\$333.2	
GRAND TOTAL ALL LINES:		\$454.4	

Shipboard Instructions
1997 Bristol Bay Test Fishery Charter

by
Donn Tracy

July 10, 1997

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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 deployment on any future test fish vessel charters). Be aware of the crane at all times, especially when pots are being moved or stacked. **Obey the captain in regard to your safety and the safety of others.**

GENERAL BRIEFING

The purpose of this manual is to provide instructions and information relating to the 1997 Bristol Bay red king crab test fish project. Refer to it when in doubt regarding project objectives and sampling procedures. Be prepared to accept changes to this manual if necessary; however, standardized methodologies will remain constant.

Donn Tracy is this year's cruise leader. Assisting personnel are Holly Moore, Mike Ruccio and Susan Engle. 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 Tracy. 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; the vessel pilot house logs will also be entered into a spreadsheet on a daily basis. 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 Kathleen before you depart on the boat. **You are eligible for hazard pay only for the hours you work.** This does not include running time to and from the fishing grounds. You are responsible for keeping a log of the actual hours you work while onboard the vessel. When you return to Dutch Harbor or Kodiak, turn in an amended (second) timesheet to Tracy 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:

REG. PAY: To be coded to whatever budget your salary is normally paid from - **do not use the code below.**

SEA DUTY and HAZARD PAY: Code timesheets to CC:741 - LC:47785.

Check with Tracy if you have questions about how to record hours at-sea.

There will be no homepacking of any crabs, crab legs, crab meat, fish or any other "seafood" during the charter. The personal retention of crabs and fish by department personnel on test fish research cruises constitutes exceptionally unprofessional behavior will not be tolerated - particularly in view of the fact that it's unquestionably illegal for vessel crew members to retain any of the catch for personal consumption. However, it is acceptable to consume mortally injured crabs, cod and flatfishes while at-sea, although all halibut (dead or alive) are to be placed overboard immediately. There will also be no collections of crabs for biological or display purposes unless Tracy 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 24,000 male red king crabs \geq 6.5 inches carapace width (CW) for delivery to Unisea Inc. in Dutch Harbor on approximately August 4 or 5, 1997. Cost recovery catches will be sampled as outlined in the "Methods" section.
2. *Soak Time/Pot Catchability Experiments.* The directed research objectives of this year's survey include 1) employing a categorical data analysis to test the rates at which legal-sized red king crabs (and to a lesser extent under-sized male and female red king crabs) are captured in a standardized king crab pot design under several different pot soak time scenarios; and 2) evaluating the rates at which legal-sized male red king crabs are captured in otherwise standardized king crab pots that contain a single tunnel opening. As a lesser objective, the rates at which female and sub-legal male red king crabs are captured in otherwise standardized king crab pots that contain a single tunnel opening will also be evaluated. Refer to the "Methods" section for a description of the study design for each of the objectives listed.
3. *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.
4. *Crab Collection for PSP Testing.* Collect, label and freeze red king crabs, Tanner crabs, snow crabs, Tanner hybrids as per Department of Environmental Conservation (DEC) request.

METHODS

Cost Recovery Fishing and Delivery

Catch objectives

Using 6.0 lb. as an average weight, this year's cost recovery fishing goal will be to catch approximately 24,000 male red king crabs \geq 6.5 inches CW (approximately 140,000 lb.). In order to achieve this goal at least 2 strings of 20-30 pots will be set and pulled on a daily basis in areas of presumed concentrations of legal-sized male red king crabs. The actual

cost recovery fishing location(s) will be determined by the vessel captain and Tracy, and will be based upon the captain's fishing experience, the successful placement of cost recovery gear during previous test fish surveys, or the results of the 1996 Eastern Bering Sea Crab Stock Assessment Survey. Two liters of chopped herring (and hanging bait when available) will be used in each pot set during cost recovery fishing.

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 28-day charter. Directed cost recovery fishing will occur at least during the first 10 days of the charter. Donn Tracy and Holly Moore will likely be the only ADF&G crew members aboard the vessel during this leg. However, if the cost recovery objectives are not achieved during the initial segment of the cruise, directed fishing for retainable crabs will continue and a second delivery will be made prior to the commencement of directed research fishing. Bid price per pound is \$3.55 for red king crabs.

Pilot house logs

The vessel pilot house logs (for each segment of the charter) must be completed by the vessel captain at the conclusion of each day, and edited and entered by the ADF&G crew. Note that the "Pilot House Log - Cost Recovery Strings" (Form 1, Appendix B) is slightly different than the "Pilot House Log - Pot Soak Study Blocks" (Form 2, Appendix B). **The "6.5" rkc per pot" column is the record for documenting catches of legal crabs on both types of pilot house logs, and must be completed for every pot pulled during the charter.** It is the cruise leader's responsibility to make sure the captain completes this task.

Catch reporting

The daily catch and cumulative total of the cost recovery catch aboard (in numbers of crabs) will be recorded on the "Red King Crab Cost Recovery Daily and Cumulative Catch Record" (Form 3, Appendix B); and reported daily to the Kodiak or Dutch Harbor ADF&G office via sideband radio using the code sheet provided

Non-salable crabs

Following delivery of cost recovery crabs to the processor, the vessel crew will release all non-legal and deadloss crabs at the nearest dump zone. 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; **this transaction in no way involves the charter vessel or the vessel captain.** A crew member from ADF&G will take brailer weights of cost recovery crabs throughout the offloading. Also,

counts of crabs will be made for at least 6 brailers; this information will be used to calculate the average weight of the catch. If for some reason Tracy is unable to complete the transaction with the processor for the sale of cost recovery crabs, 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 1997 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) weigh or estimate the deadloss and enter on the ticket with the appropriate code; 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 Tracy does not personally complete the financial transaction for delivery of the cost recovery crabs, any disagreement with the processor 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.

Pot Catchability Comparison

The method for evaluating pot catchability will consist of: alternately deploying 20 to 30 "typical" and "non-typical" (see below) king crab pots in linear strings at 1/8 (.125) NM intervals during the latter stages of cost recovery fishing. The number of strings containing each pot type that are set and pulled by the conclusion of the charter will be based upon the number days needed to complete cost recovery fishing; although ideally, at least 100 pots of each configuration will be fished. Pot types must be recorded for each pot sampled and are defined as follows:

1. "Typical" king crab pots - Pots with two, 8" inch tunnels, and 3.5 - 4" stretched mesh. These pots will be used for cost recovery fishing, the soak time study, and for alternate deployment with non-typical pots - described below;
2. "Non-typical" king crab pots - Pots with one 8" inch tunnel, and 3.5 - 4" stretched mesh. Non-typical pots will be constructed by fastening (using zip ties) an inverted Tanner crab hood over one of the two tunnels comprising a typical pot. These pots will be alternately deployed with typical pots during cost recovery fishing.

Each typical and non-typical pot deployed will be "flagged" with colored buoy tags (one color for each pot type) for quick identification. There will be no established target soak

time for pots deployed during cost recovery fishing (although it is expected that soak periods will range between 24 and 48 hr.); however, soak times will be standardized within individual cost recovery strings containing typical and non-typical pots to ensure comparability between gear types.

When cost recovery pots are set, string numbers will be assigned that are unique, beginning at 001. When sampling cost recovery pots, record string number in the section for "station number". Pot numbers begin at "1" with the first pot set, run sequentially, and will encompass both cost recovery and the directed research gear. The intent is provide unique pot numbers while identifying study pots separately from cost recovery pots.

Pot Soak Time Study

In order to conduct a categorical analysis of the effects of variable pot soak periods on the catch rates of legal-sized, sublegal-sized and female red king crabs, the appropriate study design will consist of deploying a total of 36 typical pots at 1/3 (0.33) NM intervals bilaterally on a grid pattern - hereafter referred to as a "block" - and randomly alternating target soak times of each pot within individual blocks between 12, 24 and 72 hours. Ideally, at least four blocks will be fished and sampled by the conclusion of the charter. The deployment of typical pots in blocks and the induced variability in pot soak periods will take place exclusively during the directed research leg of the charter. The location of the survey blocks will be based on areas of a high abundance of legal-sized red king crabs observed during cost recovery fishing, prior test fish projects, and/or during the 1996 NMFS trawl survey. Tracy and the vessel captain will be responsible for plotting pot grids during the study. Illustrations of the four blocks to be fished (and the correspondingly randomly selected soak periods for pots within each block during the soak time experiment) are shown in Appendix C. The location of the first pot in each block will determine the placement of subsequent pots within that block.

It is essential that the soak study blocks are set in a series of 36 pots each. Block numbers will be start at 1 and will be recorded on the "Pilot House Log - Pot Soak Study Blocks" (Form 2, Appendix B). Due to the random nature of targeting variable soak times for pots within each of the study blocks, on most days of directed research fishing a total of only 12 pots will be pulled and sampled; although up to 36 pots per day may be set in order to maintain each subsequent random pot sampling schedule. The soak study pot setting, pulling and sampling schedule is provided in Appendix D. The blocking scheme is the best scientific approach to maintain a systematic design for the purpose of data analysis; even though maintaining the randomly selected target soak periods for pots within each block may prove tedious. Both the vessel and ADF&G crews must be diligent in their pursuit of accomplishing this objective.

You must familiarize yourselves with the illustrations of pot block patterns (Appendix C) and routinely check with Tracy to keep informed of the location and scheduled retrieval of the

study pots so that you are always ready to start sampling. Before sampling each and every pot, check in with Tracy and/or the captain to confirm block number, sequential pot number, and soak time category. Expect to work any and all hours necessary on a daily basis in order to accomplish the sampling goals of the study.

Sampling Procedures

Sampling will occur within both the study blocks and the cost recovery strings. Crabs will be sampled almost identically in both scenarios. However, all soak time study pots will be sampled, whereas pots sampled from cost recovery fishing will be randomly selected. When sampling soak time study pots, you must indicate on each data form which soak category is being sampled (i.e. 12 hr : 24 hr : 72 hr.). Codes have been assigned for each category and are listed at the bottom of each data form. All crabs should be handled gently during sorting, measuring and release. Crabs not retained for cost recovery purposes are to be released into the water trough immediately following sampling. The vessel may transit 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.

Soak study pot catches

When a pot comes aboard, divide the catch of all crabs by species. Using a separate form for each species, 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 (≥ 6.5) will be counted in every pot pulled, and recorded in the respective column on the Pilot House Log - Pot Soak Study Blocks (Form 2 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 - Pot Soak Study Blocks (Form 4, Appendix B).

red king crabs:

Divide the red king crab catch into males and females and further sub-divide the males into legal (≥ 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.

Tanner crabs:

Divide the *C. bairdi* catch into males and females and further sub-divide the males into legal (≥ 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 crabs:

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 on a separate form for misc. species. Document any observed mating activity in the "Comments" section.

snow crabs, Tanner hybrids, or other incidental crab species:

As we will not catch large numbers of any species besides red king crabs and Tanner crabs, all other incidental commercially valuable crabs will be sampled. Record data for these crabs using a separate form for misc. species.

Pot catchability /cost recovery catches

The ADF&G crew onboard the vessel during cost recovery fishing will count catches of retained crabs (≥ 6.5) from every pot pulled, and ensure that the captain records this data in the appropriate column on the "Pilot House Log - Cost Recovery Strings" (Form 1, Appendix B). All legal-sized, sublegal-sized and female red king crabs captured in strings containing both typical and non-typical pots will be counted, and additionally, during all cost recovery fishing at least 5 pots per day will be randomly selected for sampling (See Appendix E for random sampling procedures). Crab catches from these pots will be sampled the same way as for survey pot catches - however, all data will be recorded on the "Crab Data Form - Cost Recovery Strings" (Form 5, Appendix B). Remember to record

string number in the section for station number on the crab data forms, as well as the pot type (if applicable) in the appropriate column. Record all data on the suitable forms for each species according to the rules for the Soak study pot catches”(see above).

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

Floy-Tagged Crab Recovery

All ADF&G crew should 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 6, 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 1-3,421 and there is no "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. 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 domoic acid testing. You will need to collect, label and freeze red king crabs, Tanner crabs, snow crabs, 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, Tanner crabs in another bag 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 4-5 and will send someone down to pick them up from the vessel.

Video/Photo documentation

Wherever possible, document activities aboard the vessel. We need footage of sampling and fishing activities, and especially footage of the typical and non-typical 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 Kathleen in Dutch or Fax them to Kodiak.
2. Leave CFEC cards with Tracy
3. Check your survival suit and EPIRB prior to departure.
4. Check your supply of forms, sampling equipment, and personal gear (seasick med.) 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 Tracy.
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 the vessel cannot hail Kodiak. If all else fails, ADF&G will monitor vessel check-in through its processor's (Unisea's) radio schedule. The general vessel location will be reported by lat/long. A summary of blocks or strings 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 hr. (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. Data Forms and Examples (in bold) of Properly Completed Forms.

- Form 1. **Pilot House Log - Cost Recovery Strings**
- Form 2. **Pilot House Log - Pot Soak Study Blocks**
- Form 3. **Cost Recovery Daily Tally and Cumulative Catch Record**
- Form 4. **Crab Data Form - Pot Soak Study Blocks**
- Form 5. **Crab Data Form - Cost Recovery Strings**
- Form 6. **Bristol Bay Red King Crab Tag Recovery Form**
- Form 7. Video/Photo Documentation Log

ADF&G CRAB RESEARCH DATA FORM

FORM 4

SPECIES RKC
 SEX M
 DATE 08+310+97

STATION NO. _____
 BUOY NO. _____
 NO. CRAB MEASURED _____
 TOTAL NO. CAUGHT _____

		2
	H	R
		5
		5

VESSEL Grand Dutchess
 MEASURER JT
 RECORDER HM

PAGE _____ OF 108

CATEGORY 1

SEQUENTIAL POT NUMBER	SPECIES	SEX	SIZE CRAB(SMM) FISH(CM)	LEGAL	SHELL	AGE	EGGS				OTHER	COMMENTS
							COLOR	DEVELOPMENT	CONDITION	% CLUTCH		
5		2	152	2	1							
7		1	87	1	1							
11			91	1	2							
12		1	121	1	1							
15		2	149	2	3							

- | | | | | | |
|--|--|--|---|---|--|
| <p>Crab Species</p> <ul style="list-style-type: none"> 1 - <i>Emphorina</i> 2 - <i>Chlorodiastole</i> 3 - <i>Diastole</i> 4 - <i>Erismurus</i> 5 - <i>C. borealis</i> 6 - <i>C. borealis</i> 7 - <i>C. borealis</i> 8 - <i>C. borealis</i> 9 - <i>C. borealis</i> 10 - <i>C. borealis</i> 11 - <i>C. borealis</i> 12 - <i>C. borealis</i> 13 - <i>C. borealis</i> 14 - <i>C. borealis</i> 15 - <i>C. borealis</i> 16 - <i>C. borealis</i> 17 - <i>C. borealis</i> 18 - <i>C. borealis</i> 19 - <i>C. borealis</i> 20 - <i>C. borealis</i> 21 - <i>C. borealis</i> 22 - <i>C. borealis</i> 23 - <i>C. borealis</i> 24 - <i>C. borealis</i> 25 - <i>C. borealis</i> 26 - <i>C. borealis</i> 27 - <i>C. borealis</i> 28 - <i>C. borealis</i> 29 - <i>C. borealis</i> 30 - <i>C. borealis</i> | <p>Egg & Infant Stages</p> <p>See attached reference list</p> <ul style="list-style-type: none"> 1 - Egg 2 - 1st stage 3 - 2nd stage 4 - 3rd stage 5 - 4th stage 6 - 5th stage 7 - 6th stage 8 - 7th stage 9 - 8th stage 10 - 9th stage 11 - 10th stage 12 - 11th stage 13 - 12th stage 14 - 13th stage 15 - 14th stage 16 - 15th stage 17 - 16th stage 18 - 17th stage 19 - 18th stage 20 - 19th stage 21 - 20th stage 22 - 21st stage 23 - 22nd stage 24 - 23rd stage 25 - 24th stage 26 - 25th stage 27 - 26th stage 28 - 27th stage 29 - 28th stage 30 - 29th stage 31 - 30th stage 32 - 31st stage 33 - 32nd stage 34 - 33rd stage 35 - 34th stage 36 - 35th stage 37 - 36th stage 38 - 37th stage 39 - 38th stage 40 - 39th stage 41 - 40th stage 42 - 41st stage 43 - 42nd stage 44 - 43rd stage 45 - 44th stage 46 - 45th stage 47 - 46th stage 48 - 47th stage 49 - 48th stage 50 - 49th stage 51 - 50th stage 52 - 51st stage 53 - 52nd stage 54 - 53rd stage 55 - 54th stage 56 - 55th stage 57 - 56th stage 58 - 57th stage 59 - 58th stage 60 - 59th stage 61 - 60th stage 62 - 61st stage 63 - 62nd stage 64 - 63rd stage 65 - 64th stage 66 - 65th stage 67 - 66th stage 68 - 67th stage 69 - 68th stage 70 - 69th stage 71 - 70th stage 72 - 71st stage 73 - 72nd stage 74 - 73rd stage 75 - 74th stage 76 - 75th stage 77 - 76th stage 78 - 77th stage 79 - 78th stage 80 - 79th stage 81 - 80th stage 82 - 81st stage 83 - 82nd stage 84 - 83rd stage 85 - 84th stage 86 - 85th stage 87 - 86th stage 88 - 87th stage 89 - 88th stage 90 - 89th stage 91 - 90th stage 92 - 91st stage 93 - 92nd stage 94 - 93rd stage 95 - 94th stage 96 - 95th stage 97 - 96th stage 98 - 97th stage 99 - 98th stage 100 - 99th stage 101 - 100th stage | <p>Egg Development</p> <ul style="list-style-type: none"> 1 - Unfertilized 2 - Fertilized 3 - Cleared 4 - Cleared 5 - Cleared 6 - Cleared 7 - Cleared 8 - Cleared 9 - Cleared 10 - Cleared 11 - Cleared 12 - Cleared 13 - Cleared 14 - Cleared 15 - Cleared 16 - Cleared 17 - Cleared 18 - Cleared 19 - Cleared 20 - Cleared 21 - Cleared 22 - Cleared 23 - Cleared 24 - Cleared 25 - Cleared 26 - Cleared 27 - Cleared 28 - Cleared 29 - Cleared 30 - Cleared 31 - Cleared 32 - Cleared 33 - Cleared 34 - Cleared 35 - Cleared 36 - Cleared 37 - Cleared 38 - Cleared 39 - Cleared 40 - Cleared 41 - Cleared 42 - Cleared 43 - Cleared 44 - Cleared 45 - Cleared 46 - Cleared 47 - Cleared 48 - Cleared 49 - Cleared 50 - Cleared 51 - Cleared 52 - Cleared 53 - Cleared 54 - Cleared 55 - Cleared 56 - Cleared 57 - Cleared 58 - Cleared 59 - Cleared 60 - Cleared 61 - Cleared 62 - Cleared 63 - Cleared 64 - Cleared 65 - Cleared 66 - Cleared 67 - Cleared 68 - Cleared 69 - Cleared 70 - Cleared 71 - Cleared 72 - Cleared 73 - Cleared 74 - Cleared 75 - Cleared 76 - Cleared 77 - Cleared 78 - Cleared 79 - Cleared 80 - Cleared 81 - Cleared 82 - Cleared 83 - Cleared 84 - Cleared 85 - Cleared 86 - Cleared 87 - Cleared 88 - Cleared 89 - Cleared 90 - Cleared 91 - Cleared 92 - Cleared 93 - Cleared 94 - Cleared 95 - Cleared 96 - Cleared 97 - Cleared 98 - Cleared 99 - Cleared 100 - Cleared | <p>Percent Clutch</p> <ul style="list-style-type: none"> 1 - 0-20% 2 - 21-40% 3 - 41-60% 4 - 61-80% 5 - 81-100% | <p>Other</p> <ul style="list-style-type: none"> 1 - Other 2 - Other 3 - Other 4 - Other 5 - Other 6 - Other 7 - Other 8 - Other 9 - Other | <p>Soak category</p> <ul style="list-style-type: none"> 1 - 12 hr soak 2 - 24 hr soak 3 - 72 hr soak |
|--|--|--|---|---|--|

ADF&G WESTWARD REGION CRAB TAG RECOVERY FORM

SPECIES Red King Crab FISHERY Test Fish SAMPLER Downing

FORM 6

	FLOY TAG SERIES & NUMBER		SIZE (mm CL)		LEGAL /a	SEX /b	SHELL /c	FATE /d	CAPTURE DATE			CAPTURE LOCATION				DEPTH (fm)	STATISTICAL AREA			ADF&G VESSEL NO.																
									Mo.	Day	Yr.	N. LATITUDE		W. LONGITUDE																						
1	A	1780	138	111	2	0	8	1	7	9	7	5	6	3	1	9	0	1	6	3	5	2	1	8	4	0	6	3	5	6	3	7	X	1	8	7
2																																				
3																																				
4																																				
5																																				

/a LEGAL: 1=Sublegal; 2=Legal. /b SEX: 1=Male; 2=Female. /c SHELL AGE: 0=Soft; 1=New; 2=Old; 3=Very Old. /d FATE: 1=Dead; 2=Released alive; 3=Dead (not retained for sale; e.g., found in deadloss pile or frozen for ADF&G or Observer sampling, etc.)

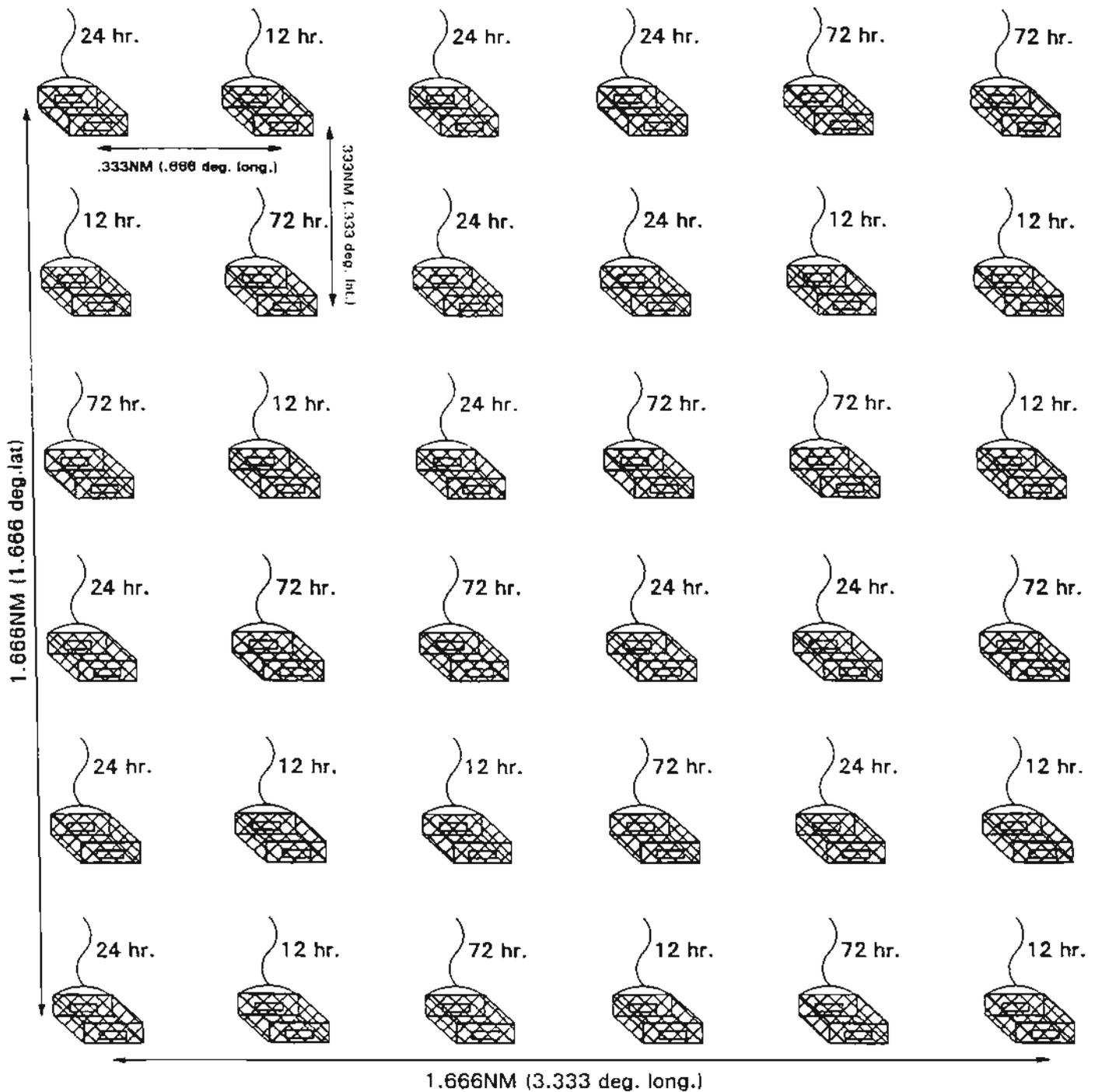
NOTE: If female crab; record additional information on the back of this form. Record comments for captured male and female crabs on the back of this form.

93

	Received Tag or Tagged Crab From: Name, Address & Phone	Received Recovery Location Data From: Name, Address & Phone	Vessel Name	Processor Name	Sampling Date		
					Mo.	Day	Year
1	Dick Jones 17 Ramon Santa Rosa, CA 95615	Capt. Jones 1822 West 3rd Seattle, WA 98121	Grand Dutchess	Downing	08	11	77
2							
3							
4							
5							

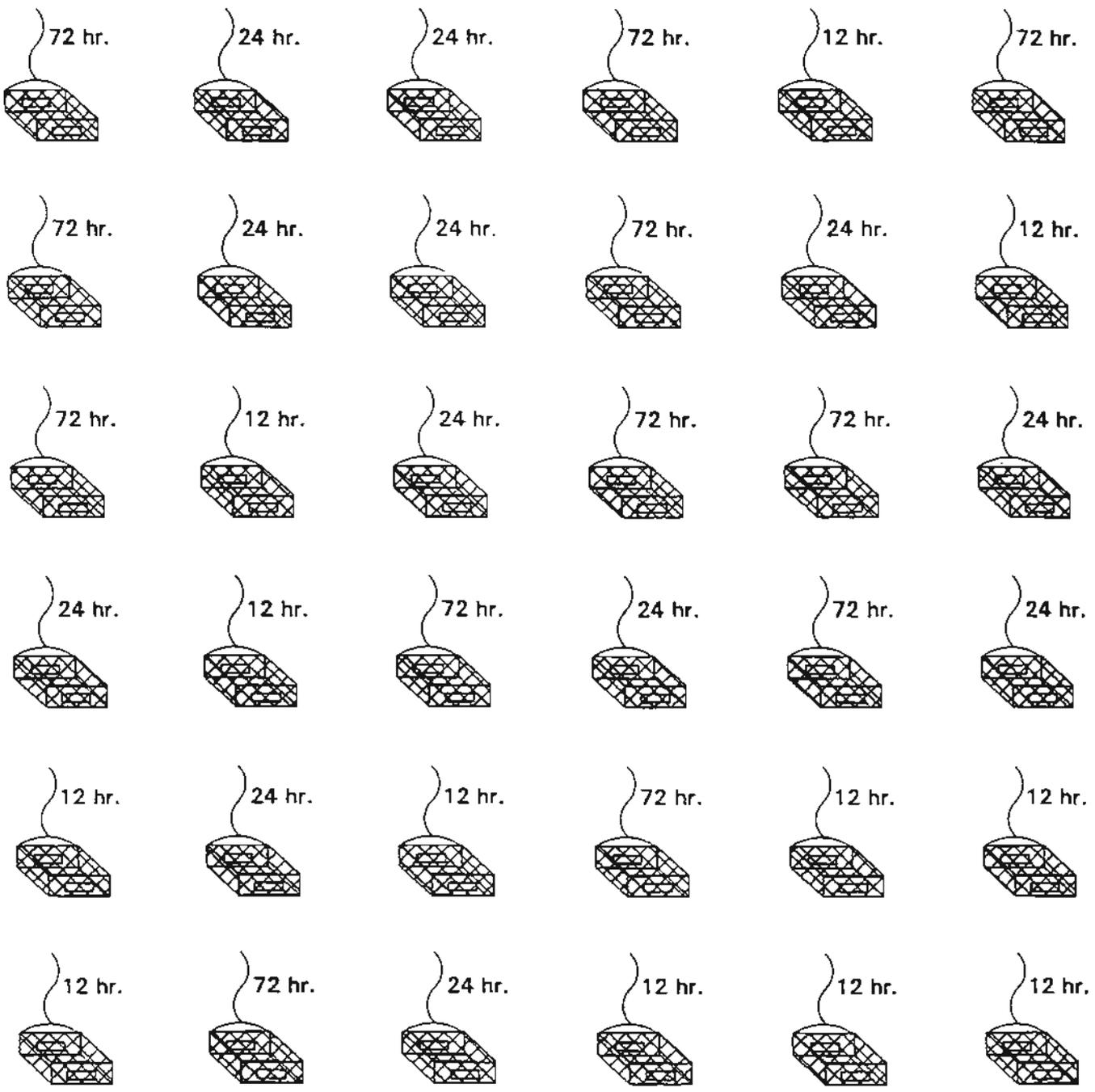
Edited by: _____ Date: _____ Entered by: _____ Date: _____

Appendix C. Soak Time Study Pot Deployment Patterns, Block Numbers and Randomly Assigned Soak Periods for Pots Within Each Block.



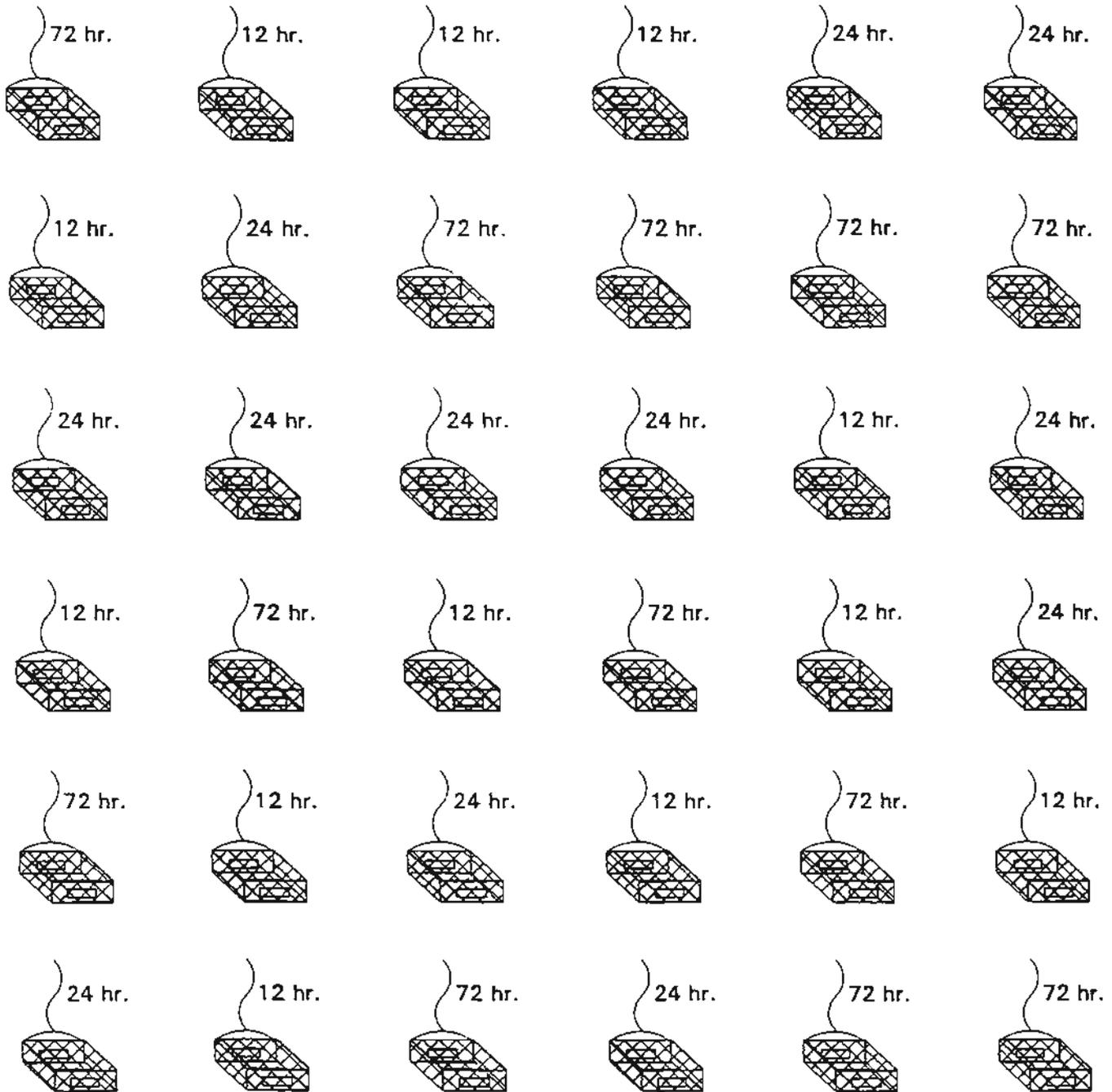
BLOCK #1

Appendix C. (Cont'd).



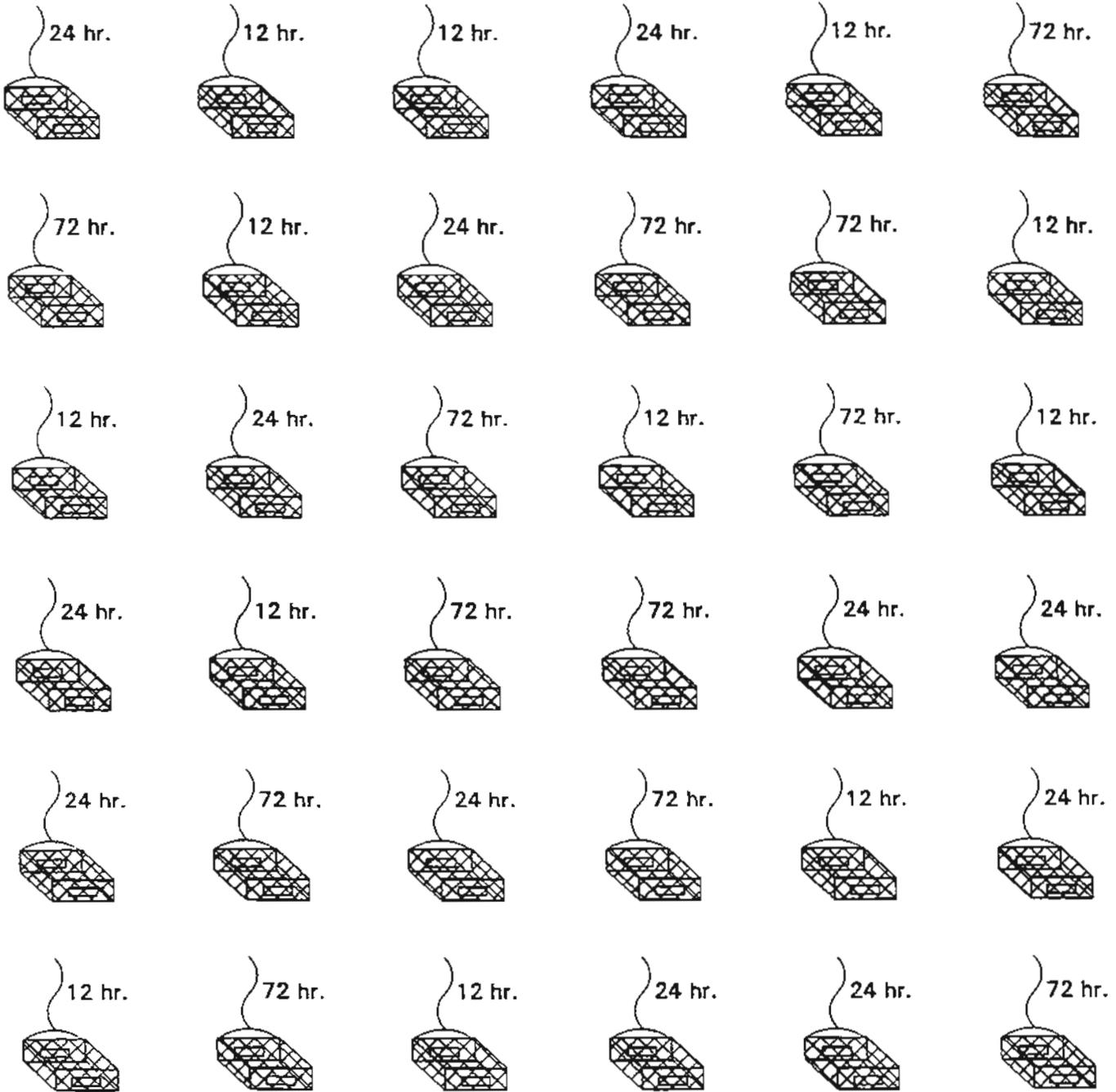
BLOCK #2

Appendix C. (Cont'd).



BLOCK #3

Appendix C. (Cont'd).



BLOCK #4

Appendix D. Pot Soak Study Gear Setting, Pulling and Sampling Schedule.

Study Day	Block 1	Block 2	Block 3	Block 4
1	A.M: set block P.M: 12 hr. pick			
2	A.M: 24 hr. pick	P.M: set block		
3		A.M: 12. hr. pick P.M: 24. hr. pick		
4	A.M: 72. hr pick			
5		P.M: 72 hr. pick		
6			A.M: set block PM: 12 hr. pick	
7			A.M: 24 hr. pick	P.M: set block
8				A.M: 12 hr. pick P.M: 24 hr. pick
9			A.M: 72 hr. pick	
10				P.M: 72 hr. pick

Appendix E. 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 pots for the day, you cannot alter your sampling scheme whether or not the pot is empty or full. The random selection of pots is to be made by using a random number generator (most calculators and computers have them) or the enclosed Table of Random Digits (pages 27-30). Following is an example of how to use the random digit table:

The captain says he will pull 60 pots today. You need to sample 10 pots. In order to select the 10 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 60 using the first two 2 digits of the number. Obviously, you will discard duplicate numbers and numbers greater than 60. As a result of using this method, your 10 pot numbers for the day will be pots 4, 13, 18, 23, 29, 36, 37, 44, 50, and 54. Confirm your understanding of this using the example on the 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	87907	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 F. List of Equipment

1. Survival suits with EPIRB and strobe attached (1 for each ADF&G crew member).
2. Marine survival first aid kit
3. Rain gear, gloves and boots.
4. Shipboard Instruction Manuals (one for the vessel captain and each ADF&G crew member).
5. Notebooks of 1996 NMFS survey data and 1996 Test Fishery Data Summary R.I.R (one for captain; one for Tracy).
6. Forms:
 - a. Pilot House Log - Pot Soak Study Blocks (30).
 - b. Pilot House Log - Cost Recovery Strings (60).
 - c. Cost Recovery Daily Tally and Cumulative Catch Record (5).
 - d. Crab Data Form - Pot Soak Study Blocks(5 ream = 2500).
 - e. Crab Data Form - Cost Recovery Strings(5 ream = 2500).
 - f. Tag Recovery Form (5).
 - g. PIT Tag Tail Section Specimen Labels (5).
 - j. ADF&G Test Fishery Photographic Log (5).
7. Small (6") dial calipers (1).
8. Large calipers (3 from Kodiak, 1 from Dutch).
9. 5.5 and 6.5 inch measuring sticks (3 of each).
10. Camera, film, and extra battery (Tracy's).
11. Video camera, film, and extra battery (Tracy's).
12. Notebook computer (Tracy's).
13. Rite-in-Rain notebooks (5).
14. Pencils (2 doz. sharpened).
15. Paper clips (assorted).
16. Rubber bands.
17. Manila envelopes for data (2 legal-size, 12 regular).
18. Permanent markers (1 large black; 1 ea. small black, red).
19. Clipboard(s) 1 legal size for captain; 6-8 regular size (4 weather-proof).
20. Calculator w/ extra batteries.
21. Tallywackers (3).
22. One can WD40.
23. Statistical charts (2); one for captain, one for ADF&G crew.
24. Timesheets (10).
25. Buoy tags (2 different colors, 60 of each)
26. Burlap sacs (20)
27. 18"nylon zip ties (500)
28. 3"or 5"Dorian Tanner hoods (60)
29. DEC PSP Labels (25)

Appendix G. Charter Itinerary and Calendar.

Date

7/25 depart Dutch Harbor/travel to grounds
7/26 travel to grounds/set gear
7/27 set gear/pull gear
7/28 pull gear/set gear
7/29 pull gear/set gear
7/30 pull gear/set gear
8/01 pull gear/set gear
8/02 pull gear/set gear
8/03 pull gear/travel to Dutch Harbor
8/04 travel to Dutch Harbor
8/05 deliver cost recovery crab/pick up ADF&G crew and equipment
8/06 travel to grounds
8/07 set block/pull 12 hr. soak
8/08 pull 24 soak/set block
8/09 pull 12 hr. soak/pull 24 hr. soak
8/10 pull 72 hr. soak
8/11 pull 72 hr. soak
8/12 set block/pull 12 hr. soak
8/13 pull 24 hr. soak/set block
8/14 pull 12 hr. soak/pull 24 hr. soak
8/15 pull 72 hr. soak
8/16 pull 72 hr. soak
8/17 set block/pull 12 hr. soak
8/18 pull 24 soak
8/19 collect ancillary data/stack pots
8/20 pull 72 hr. soak/travel to Dutch Harbor
8/21 travel to Dutch Harbor/conclude charter

RETURN THIS BID TO:
State of Alaska
Department of Fish and Game
211 Mission Rd.
Kodiak, Alaska
99615
ATTN. Donn Tracy

THIS IS NOT AN ORDER

BID NUMBER: 11-235-97 - REVISED DATE ITB ISSUED: MAY 02, 1997

SEALED BIDS WILL BE RECEIVED IN SINGLE COPY AT THE ABOVE ADDRESS UNTIL 4:30 P.M. ON MAY 21, 1997 AT WHICH TIME THEY WILL BE PUBLICLY OPENED.

**DELIVERY LOCATION: See Text
DATE REQUIRED AT FINAL DESTINATION: See Text
F.O.B. FINAL DESTINATION, See Text**

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

BID TITLE: VESSEL CHARTER BRISTOL BAY AREA T, RED KING CRAB RESEARCH.

BIDDER'S NOTICE: by signature of 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 canceled 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 for 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 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.

STATE OF ALASKA ITB #11-235-97
VESSEL CHARTER BRISTOL BAY AREA T, RED KING CRAB

CONTRACTING OFFICER: Royce Aragonis

Phone: (907) 465-4131 Fax: (907) 465-6181

DOES YOUR BUSINESS QUALIFY FOR THE ALASKA BIDDER'S PREFERENCE?
[] YES [] NO

SEE ITB FOR EXPLANATION OF CRITERIA TO QUALIFY.

COMPANY SUBMITTING BID: TRANS-COASTAL FISHERY PARTNERSHIP

AUTHORIZED SIGNATURE: [Signature] (KENNETH OSTERO)

PRINTED NAME: KENNETH OSTERO

STREET ADDRESS: 434 NW 21ST PL

CITY, STATE, & ZIP: NEWPORT OREGON 97365

PHONE NUMBER: (541) 265 8566

FAX NUMBER: (541) 265 2756

TAXID#: 91-1652256

ALASKA BUSINESS LICENSE #: APPLICATION FORWARDED

ATTN
DOWN
TRACY

AS PER PHONE CONVERSATION.

STATE OF ALASKA ITB #11-235-97
VESSEL CHARTER BRISTOL BAY AREA T, RED KING CRAB

STANDARD TERMS AND CONDITIONS

1. **AGREEMENT FORMS:** Contractors shall use this and attached forms.
2. **PRICES:** The contractor shall state prices in the units of issue used herein. Prices quoted 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 supply 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 service can be provided without further cost. Prices quoted must be exclusive of federal, state, and local taxes. If the contractor believes that certain taxes are payable by the state, the contractor may list such taxes separately, directly below the quoted price for the affected item. The state is exempt from Federal Excise Tax under Registration No. 92-73-00006-K.
3. **VENDOR TAX ID NUMBER:** If supplies or services procured through this agreement 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 will be made.
4. **AUTHORITY:** This agreement is written in accordance with AS 36.30 & 2 AAC 12.
5. **COMPLIANCE:** In the performance of a contract that results from this agreement, the contractor must comply with all applicable federal, state, and borough regulations, codes, and laws; and be liable for all required insurance, licenses, permits and bonds; and pay all applicable federal, state, and municipal taxes.
6. **SUITABLE MATERIALS:** Unless otherwise specified, all materials, supplies or equipment offered by a contractor shall be new, unused, or recent manufacture, and suitable for the manufacturer's intended purpose.
7. **EXTENSION OF PRICES:** In case of error in the extension of prices in the agreement, the unit prices will govern; in a lot agreement, the lot prices will govern.
8. **AGREEMENT PREPARATION COSTS:** The State is not liable for any costs incurred by the contractor in agreement preparation.
9. **CONTRACT FUNDING:** Contractors 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 resulting from this agreement if (1) the officer or employee is an employee of the administrative

STATE OF ALASKA ITB #11-235-97
VESSEL CHARTER BRISTOL BAY AREA T, RED KING CRAB

unit that supervises the award of the contract; or (2) the office or employee has the power to take or withhold official action so as to affect the award or execution of the contract.

11. **ASSIGNMENT:** Assignment of rights and duties under a contract resulting from this agreement is not permitted unless authorized in writing by the head of the purchasing agency.

12. **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 an 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 prohibiting or restricting the furnishing or use of materials or labor required; inability to secure materials, machinery, equipment or labor because of priority, allocation or other regulations of any governmental authorities.

13. **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.

14. **DISPUTES:** Any dispute arising out of this agreement shall be resolved under the laws of Alaska. Any appeal of an administrative order or any 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.

15. **ORDER DOCUMENTS:** Except as specifically allowed under this agreement, an ordering agency will not sign any vendor contract. The state is not bound by a vendor contract signed by a person who is not specifically authorized to sign for the state under this agreement. The State of Alaska Purchase Order, Contract Award and Delivery Order are the only order documents that may be used to place orders against the contract(s) resulting from this agreement.

16. **BILLING INSTRUCTIONS:** Invoices must be billed to the ordering agency's address shown on the individual Purchase Order, Contract Award or Delivery Order. The ordering agency will make payment after it has received the merchandise or service and the invoice. Questions concerning payment must be addressed to the ordering agency.

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17. CONTINUING OBLIGATION OF CONTRACTOR: Notwithstanding the expiration date of a contract resulting from this agreement, the contractor is obligated to fulfill its responsibilities until warranty, guarantee, maintenance and parts availability requirements have completely expired.

18. WARRANTIES: Contractor warrants that the equipment when installed will be in good working order and will conform to the contractor's official published specifications and the technical specifications of the agreement. Manufacturer's standard warranty provisions for the purchased equipment to the extent that they are not inconsistent with the terms of these Contractual Provisions, shall apply beginning on the date of installation. Maintenance charges, if applicable, shall not begin until the date of expiration of warranty period.

The use of the equipment will be under the state's exclusive management and control. The state agrees that the contractor will not be liable for any damages caused by the state's failure to fulfill state responsibilities or by the state's negligence.

19. GENERAL: The state certifies that it is purchasing this equipment for its own use and not for re-marketing, and will not assign the on-order equipment to any party other than the contractor or contractor's affiliate without written consent of the contractor, which shall not be unreasonably withheld. The state reserves the right to sign any agreement which is deemed to be beneficial to the state. The state's agreement, the contractor's response, and the resulting Contract Award will be the complete and exclusive statement of the agreement between the parties, superseding all proposals or prior agreements, oral or written, and all other communications between the parties relating to the subject matter here of.

20. 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 at issue; (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

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PREFERENCES:

1. **ALASKAN BIDDER's preference:** Award will be made to the lowest responsive and responsible bidder after an Alaskan bidder's preference of 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 bid for 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 he 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 outside of 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 specification and is 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 36.30332 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(c) 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

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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), and, 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 Alaskan's 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.

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RIGHT OF REJECTION: The state reserves the right to reject any proposals that do not address all the requirements of this RFQ. In addition, the state may reject all proposals at any time if there has been improper or inadequate review, or when it is in the best interest of the state to not select a proposal.

MINOR DEVIATIONS: The state reserves the right to waive minor deviations and technical defects in proposals if it is in the best interest of the state.

ADDITIONAL TERMS AND CONDITIONS: The state reserves the right to include additional terms and conditions during the process of contract negotiations. These terms and conditions must be within the scope of the RFQ and will be limited to, clarification, definition, methodology, analysis, and administrative and legal requirements.

CANCELLATION: The state will have the sole discretion to cancel any contract that results from this RFQ after the charter has commenced, if it is determined that the vessel does not comply with the terms specified in this RFQ.

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

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PURPOSE: Contract of a vessel, with captain and three (3) crew, for use of Alaska Department of Fish and Game (ADF&G) as living quarters and an operations base for monitoring and research activities relating to red king crab studies in the Bristol Bay waters (Area T) of the Bering Sea. ADF&G will place four (4) of their personnel aboard the vessel. The onboard ADF&G crew will study crabs which are captured and monitor all catches. Approximately twenty-eight (28) days of at-sea charter time will be devoted to cost recovery fishing and 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: 1) it lists the name of each company or person that offered a bid and the price they bid; 2) 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;

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- 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, quality, 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 non-responsiveness.

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 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, non-renewal or material change in such insurance.
Proof of insurance is required for the following:

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- 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 non-responsive and reject the bid.

LENGTH OF CONTRACT: Approximately twenty-eight (28) continuous days, to occur approximately between July 25, 1997 and August 21, 1997. 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 twenty-eight (28) 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 twenty-eight (28) contract days.

LOCATION OF VESSEL OPERATION: The vessel is required to operate in the Bristol Bay waters (Area 'T') of the Bering Sea. The charter will begin and end in Dutch Harbor, Alaska.

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 and shellfish caught during research. The Department of Fish and Game's expense for this research is \$335,000. The charter will be financed as follows:

DAY 1 TO DAY 10: Cost recovery fishing in the Bristol Bay waters (Area 'T') of the Bering Sea, and delivery of cost recovery crabs in Dutch Harbor, Alaska. Revenues for the project will be generated by retaining 100% of the male red king crabs equal to or greater than 6.5 inches in carapace width.

DAY 10 TO DAY 28: 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

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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 twenty-eight (28) days, or the amount of revenue generated by the crab sold, less \$335,000 for the Department of Fish and Game's fixed expenses, whichever is the least. Payment for partial calendar day charter vessel operation from the contractual commencement and conclusion date of the twenty-eight (28) continuous day charter period will be prorated on an hourly basis from the daily charter vessel rate.

- (1) If attained, the state will retain the first \$200,000 from the receipts of harvested crabs, which will be sold under authority of the Department of Fish and Game's Test Fish Program.
- (2) If attained, the vessel owner will receive up to \$50,000 in the form of a check from the State of Alaska from the next \$50,000 in receipts of harvested crabs.
- (3) If attained, the State of Alaska will receive the next \$135,000 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 ADF&G crew leader until sufficient crabs are obtained to cover costs to the State of Alaska (\$335,000) plus the cost of the vessel charter, or until twenty-eight (28) days have lapsed.

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.

ADF&G PERSONNEL ABOARD THE VESSEL: During this contract the State will place four (4) ADF&G 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.

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.

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A USCG Certificate of Inspection will be required to validate the type/size and other specifications of the 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 ADF&G'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 one hundred (100) feet. Length will be determined by measuring the centerline.
- B. Sleeping space for four (4) ADF&G personnel, in addition to the Captain and crew. Each sleeping space used by ADF&G 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 ADF&G 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 ADF&G personnel. Vessels with shelter decks are highly preferred. The work area must be well lit (direct lights within a radius of six feet of ADF&G 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.
- H. Refrigerated and freezer storage space sufficient to maintain perishable and frozen food for the twenty-eight (28) days of the charter.

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- I. Freezer storage space sufficient to maintain frozen bait herring and any biological specimens collected by ADF&G personnel for the twenty-eight (28) days of the charter.
- J. Fresh water storage or sea water conversion capabilities sufficient to permit twenty-eight (28) continuous days of operation. Water supply must be sufficient to permit daily cooking and daily washing of dishes, weekly washing of clothing, and showers (at least once every two (2) days) for all personnel.
- K. Radar, with a minimum range of 60 miles, in good operating condition. Backup system is highly desirable
- L. Automatic pilot in good operating condition. Automatic readout Loran C, or GPS. Backup system is highly desirable. Fathometer with minimum 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. Single side-band and VHF radio transmitter(s) and receiver(s) in good operating condition equipped with standard marine frequencies for the area in which operations will be conducted, including VHF channels 6 and 16. Single side-band radio transceiver; at minimum, single side-band frequencies of 4125, 5195 and 3230 (for receiving) and 4125, 5195 and 3230 (for transmitting) to allow direct communication with marine operator (KMI). Backup communications system is highly desirable. Vessels equipped with INMARSAT Standard C satellite communication capability are highly preferred.
- 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 (as required by CFR 46, part 28) to accommodate all of the people aboard the vessel; this includes the Captain, the vessel crew, and all of the ADF&G crew.
- Q. Survival suits are required for all the people aboard the vessel. Sizes large and extra large. The State will provide survival suits for the ADF&G crew members.
- R. The vessel's main engine(s) must be diesel powered at a minimum of 900 horsepower. Bids offering gasoline powered engines will be rejected as non-responsive.

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- S. Minimum cruising speed (without pots on deck and without crabs in the holding tanks, and in calm seas) must be at least 10 knots.
- T. Power block (spare block is highly desirable) to pull crab gear, minimum capacity 850 pounds.
- U. Bait chopper and sampling table for ADF&G personnel (minimum 4 feet by 8 feet) in addition to vessel's catch sorting table.
- V. Catch sorting table (in addition to sampling table), minimum 4 feet by 8 feet.
- W. Skiff and outboard engine, minimum length of twelve (12) feet and minimum of ten (10) horsepower.
- X. Vessel must be equipped with one hundred and twenty-five (125) rectangular king crab pots (as defined in the Alaska Department of Fish and Game "1996-97 Commercial Shellfish Fishing Regulations"), 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 or panels.

VESSEL CREW REQUIREMENTS:

- A. Crew to consist of a Captain with at least five (5) years of crab pot fishing experience in Bristol Bay waters (Area 'T') 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 ADF&G personnel by handling catches as prescribed by the ADF&G crew leader.
- B. The vessel crew will be expected to fish the gear. The ADF&G crew will routinely 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.

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- D. Captain will be required to complete proper fishing forms for each day of fishing, including recording weather conditions and fishing location, and catch data. Captain and vessel crew will be required to locate designated fishing areas.
- E. There shall be no alcohol or controlled substances aboard the charter vessel during the charter.

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 ADF&G 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) failure of the Captain, vessel, or vessel crew to report at the time and location specified in this ITB to begin the contract;
- 2) the condition of the vessel or essential equipment on the vessel remains such that it cannot be used for work by the ADF&G crew for a period of more than seventy-two (72) hours;
- 3) lack of funds for the charter contract;
- 4) insubordination and/or lack of cooperation by the Captain or vessel crew.

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 state-owned 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. The vessel Captain's orders will be final in matters regarding the general operation of the vessel (either underway or at anchor); the operation of the

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vessel's equipment and fishing gear; any emergency situations that endanger the vessel or pose a direct or indirect threat to the safety and well being of the Captain, vessel crew and ADF&G crew; the general activities and safety of the vessel crew and ADF&G crew; and the navigation of the vessel.

- B. The vessel Captain will comply with all orders given by the ADF&G crew leader regarding ADF&G's research activities and cost recovery fishing objectives, provided that those orders do not endanger the vessel or pose a direct or indirect threat to the safety and well being of the Captain, vessel crew and ADF&G crew.
- 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 an operations base and living quarters for ADF&G personnel, the vessel, its 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) ADF&G personnel.
- E. Meal preparation, cooking and clean-up.
- F. General cleaning of the interior and exterior of the vessel.
- G. General assistance to the ADF&G personnel in the performance of their work. Crew will be expected to handle catches as prescribed by the ADF&G crew leader and will be expected to fish the gear. The ADF&G 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 ADF&G crew members prior to embarking from Dutch Harbor. Both the vessel crew and ADF&G crew 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;

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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.

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

- A. 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.
- B. The contractor will provide all bait for the entire charter period; up to a maximum 28 fishing days with 60 pots fished per day, and 2 quarts frozen herring (chopped) per pot.
- C. The contractor will provide three ample, balanced, and nutritious meals each day for all ADF&G 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 non-responsive.

OWNERS NAME: TRAN-COASTAL FISHERIES PARTNERSHIP

ADDRESS: 434 NW 21ST PL Newport OREGON 97365

PHONE: (541) 265 8866

VESSEL NAME AND ADF&G NUMBER: GRAND DUCHESS 55849

VESSEL TYPE: CRABBER

**STATE OF ALASKA ITB #11-235-97
VESSEL CHARTER BRISTOL BAY AREA T, RED KING CRAB**

CURRENT LOCATION OF VESSEL: DUTCH HARBOR

CALL NUMBERS AND FREQUENCY: WCO 7726

YEAR BUILT: 1981

REGISTRY NUMBER: _____

CRUISING SPEED (KNOTS): 10

OVERALL LENGTH: 114
(Straight line measurement from end to end over the deck, excluding sheer, measured parallel to the centerline)

VESSEL WEIGHT: 399

DIESEL POWERED MAIN ENGINE: YES NO

MAIN ENGINE HORSEPOWER: 16 V149 GMC

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.

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 ADF&G crew, the vessel Captain and vessel crew members.

Indicate the brand, capacity and USCG approval number for the life raft(s) you will carry aboard the vessel.

RAFT BRAND	CAPACITY	USCG APPROVAL NUMBER
EXAMPLE: Beaufort	8	
A. VIKING	6	
B. ELLIOT	6	
C.		
D.		

**STATE OF ALASKA ITB #11-235-97
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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. HARVEY	6
B. VIKING	2
C.	
D.	
E.	
F.	

Failure to specify survival suits and USCG approved life rafts to accommodate all those on board will cause the State to declare the bidder non-responsive 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 NO

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

BIDDERS NOTE: All of the equipment listed above and 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 non-responsive 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.

**STATE OF ALASKA ITB #11-235-97
VESSEL CHARTER BRISTOL BAY AREA T, RED KING CRAB**

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

KENNETH OSTEBO

VESSEL CAPTAIN

Identify the rating(s) held by the person named above.

- Operator of Uninspected Six Passenger Vessel
- Master, 25 Ton vessels Inland Near coastal
- Master, 50 Ton vessels Inland Near coastal
- Master, 100 Ton vessels Inland Near coastal
- Master, 150 Ton vessels Inland Near coastal
- Master, 200 Ton vessels Inland Near coastal
- Master, 500 Ton vessels Inland Near coastal
- Master, 1600 Ton vessels Inland Near coastal

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 non-responsive.

CAPTAIN EXPERIENCE REQUIREMENTS: The vessel Captain must have a minimum of five (5) years experience in crab pot fishing for red king crabs in Bristol Bay waters (Area T). The Captain must also 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 Bristol Bay waters. 8 years.
- Captain's experience, as a Captain, in various size, type/class vessels.

- a) Size type/class of vessel: 97' CRABBER
Number of years experience in this size type/class of vessel: 1 years.
- b) Size type/class of vessel: 130' CRABBER
Number of years experience in this size type/class of vessel: 4 years.

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VESSEL CHARTER BRISTOL BAY AREA T, RED KING CRAB

- c) Size type/class of vessel: 114' CRABBER
Number of years experience in this size type/class of vessel: 3 years.
- d) Size type/class of vessel: _____
Number of years experience in this size type/class of vessel: _____ years.

CREW EXPERIENCE REQUIREMENTS:

1. ENGINEER

One of the vessel crew members must be an engineer. The engineer must have a minimum of five (5) years certified experience as an engineer. The engineer must also have a minimum of one (1) year 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.

- a) Size type/class of vessel: 127' CRABBER
Number of years experience in this size type/class of vessel: 2 years.
- b) Size type/class of vessel: 153' CRABBER
Number of years experience in this size type/class of vessel: 2 years.
- c) Size type/class of vessel: 107' CRABBER
Number of years experience in this size type/class of vessel: 2 years.
- d) Size type/class of vessel: 114' CRABBER
Number of years experience in this size type/class of vessel: 2 years.

2. REMAINING CREW MEMBERS

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

- a) First crew member's experience fishing at sea: 7 years.
- b) Second crew member's experience fishing at sea: 5 years.
- c) Third crew member's experience fishing at sea: 5 years.

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d) If applicable, fourth crew member's experience fishing at sea: 2
years.

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

BID SCHEDULE

CONTRACT RATE PER DAY \$ 3350 X 28 DAYS = \$ 93,700 TOTAL BID PRICE

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

- 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.
- Blau, S. F., L. J. Watson and J. Blackburn. 1997 The 1996 Norton Sound red king crab Trawl Survey. Alaska Department of Fish and Game, Division of Commercial Fisheries Management and Development, Regional Information Report 4K97-54, 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. 1995 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 Management and Development, Regional Information Report 4K95-47, Kodiak.
- Byersdorfer, S. 1996 A summary of biological data collected during the 1996 Bristol Bay red king crab tagging study. Alaska Department of Fish and Game, Division of Commercial Fisheries Management and Development, Regional Information Report 4K96-55, Kodiak.
- 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.

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- 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.

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- 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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