

STATE-FUNDED BERING SEA / ALEUTIAN ISLANDS
SHELLFISH OBSERVER PROGRAM,
REPORT TO THE ALASKA BOARD OF FISHERIES

By

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TABLE OF CONTENTS

	<u>Page</u>
LIST OF TABLES	i
BACKGROUND	1
SUMMARY OF CURRENT OBSERVER PROGRAM STRUCTURE	3
Alaska Department of Fish and Game Responsibilities	3
Observer Contracting Companies Responsibilities	3
Unionization of Observers	3
EVOLUTION OF OBSERVER COVERAGE REQUIREMENTS.....	3
ELEMENTS OF A STATE-FUNDED CRAB OBSERVER PROGRAM (BOF PROPOSAL #304)	5
Funding Mechanism.....	5
Establishing a Special Fund.....	5
Ability to Carry Funds Across Fiscal Years	5
Observer Options for the State Funded Program.....	6
ADF&G Biologist Observer Costs	6
Prime Contractor Observer Costs	6
ANTICIPATED STRUCTURE TO DEPLOY OBSERVERS ON CRAB CATCHER VESSELS	6
VALUE OF THE BERING SEA / ALUETIAN ISLANDS CRAB FISHERIES.....	7
CONCLUSION.....	7

LIST OF TABLES

<u>Table</u>		<u>Page</u>
1.	Annual number of observer days of deployments by vessel type, 1988 - 1998.....	8
2.	Historic vessel and observer participation, St. Matthew and Pribilof king crab fisheries, 1989-1998.....	9
3.	Historic vessel and observer participation, Bristol Bay red king crab Fishery, 1988-1998	10
4.	Historic vessel and observer participation, Bering Sea <i>Chionoecetes opilio</i> and <i>C. bairdi</i> fisheries.....	11
5.	Estimated cost of ADF&G seasonal Fishery Biologist observers	12
6.	Estimated cost of prime contractor observers.....	13
7.	Exvessel values of principal Bering Sea / Aleutian Islands crab fisheries, 1988-1998	14

BACKGROUND

Under the existing state Shellfish Observer Program, private third-party contracting companies provide observers to vessels. Those vessels required by the Alaska Department of Fish and Game (ADF&G) to carry onboard observers must bear the full cost of observer deployments. Current costs to a vessel for carrying an observer range from \$260 to \$336 per day for observer services and associated deployment costs.

ADF&G has been developing proposed changes to the existing state Shellfish Observer Program at the direction of the Board of Fisheries (BOF). This followed the 1996 statewide king and Tanner crab BOF meeting where BOF had addressed proposals and heard public testimony on the state Shellfish Observer Program. Among the proposals were three from the public to make shellfish observers ADF&G employees. Another public proposal would have required at least 30% observer coverage on crab catcher vessels in all Bering Sea/Aleutian Islands (BS/AI) crab fisheries. The BOF heard testimony from observers and former observers about low pay and morale, and the inherent conflict of interest that exists in the current program structure. Operators of catcher vessels also testified with concerns about the costs they were incurring to carry an observer.

After the BOF discussed these various issues, the proposal for 30% coverage on catcher vessels was not adopted. No action was taken on the proposals specifying that observers should be ADF&G employees. The BOF voiced the need to re-evaluate the existing observer program. The department was directed to look at options to the current program structure and report back to the BOF at their October 1996 Work Session.

At the October 1996 work session the department presented a draft proposal for a state-funded observer program for the BS/AI crab fisheries that addressed the concerns the BOF had expressed at the March meeting:

- Costs to the vessel operators for observer coverage,
- Provisions for flexible, partial coverage,
- Developing alternatives to the existing third party contracting, “pay-as-you-go” program structure:
 - Using seasonal ADF&G employees as observers or,
 - Using a ‘prime contractor’,
- Observer compensation, and
- Adding more Alaskan resident observers.

Department staff reiterated the importance of the data gathered by at-sea observers. Observers on crab fishing vessels had become the primary means for gathering data the department uses for research, in-season management, and developing management measures by the BOF. The members were reminded that since 1993 virtually every consideration by the BOF on regulations pertaining to BS/AI king and Tanner crab or in the special-permit fisheries has been largely informed by observer data. More recently, observer requirements have become important to attain the conservation, research and management objects of the state’s Fishery Management

Plan with the North Pacific Fisheries Management Council and fulfilling required provisions of the Magnuson-Stevens Fishery Conservation and Management Act.

Staff informed the BOF members that coverage levels should be part of a statistical design for an observer-based data-gathering program, which would require flexibility to be effective. They also explained that partial coverage levels set in regulation couldn't adapt to changing needs or conditions without changes in regulation. Such regulations would also be inflexible in some fisheries and could result in a program much larger than necessary to meet data gathering needs. (For example, the 1996 proposal for 30% observer coverage on catcher vessels would have required 80 observers to deploy in the 1998 Bristol Bay red king crab fishery. This would exceed the size of the program the department was proposing).

It is clear that different fisheries require different levels of observer coverage depending on the data needs and the fishery characteristics. Those conditions will vary between fisheries and can vary from season to season within a single fishery. Ideally, observer coverage should be fishery-based.

The proposal further stated that flexible coverage levels could only be implemented if the state, rather than the vessels, were to bear the costs of observer deployments. Many who now benefit from the observer program pay no cost at all in the current pay-as-you-go system. Also, the observer costs can comprise a disproportionately high percentage of gross revenues in some fisheries among vessels that do pay.

Staff then outlined the draft plan for implementing a State-funded observer program with up to 7,500 days of observer coverage annually. The proposed plan would redistribute observer coverage, reducing it in some fisheries while increasing it in fisheries where data gathering needs are not being met. The overall amount of observer coverage would not change, it would simply be redistributed. Funding for the program would come from cost-recovery fishing directed on BS/AI king and Tanner crab stocks.

The department also stated that, ideally, the BOF would grant ADF&G the flexibility to determine and implement observer coverage levels on catcher vessels in each of the BS/AI crab fisheries to meet data gathering needs. Current regulations for observer coverage levels are inflexible, with the exception of new and developing fisheries where ADF&G has some discretion.

The BOF directed the department to develop the proposed changes to the observer program for the March 1999 BOF king and Tanner crab meeting. The Department's October 1996 proposal was widely distributed to the crab industry, observer contractors, Fish and Game Advisory Committees in Kodiak, Unalaska and Homer, and the Pacific Northwest Crab Industry Advisory Committee in Seattle. ADF&G was asked to report annually to the BOF on progress towards developing the State-funded observer program. The Shellfish Observer Program for the Westward Region crab fisheries would continue under the status quo until at least the March 1999 BOF meeting. Staff presented progress reports to the BOF at their 1997 and 1998 October Work Sessions.

SUMMARY OF CURRENT OBSERVER PROGRAM STRUCTURE

The BOF established the Mandatory Onboard Observer Program in 1988. The Board established provisions of shellfish observer coverage and the regulations that govern the existing program.

Alaska Department of Fish and Game Responsibilities

ADF&G is responsible for establishing observer qualifications and establishing sampling procedures. The department also establishes observer and contractor conflict of interest standards as well as certification and decertification. The department is further charged with review and approval of observer training programs, observer testing, observer briefings and debriefings, analysis of observer data, and progress reports.

Observer Contracting Companies Responsibilities

Contracting companies are required to hire, compensate, train, and deploy observers. The contractors also provide all observer logistical support including food, accommodations, sampling equipment, and transportation.

There are five contracting companies currently certified by ADF&G to provide observers for the crab fishing industry. Two are based in Alaska, two are in Washington State and one is in Oregon. Four of the five companies are actively involved in the shellfish observer program. These five companies also supply observers for the National Marine Fisheries Service (NMFS) groundfish observer program. Vessels required to carry an observer negotiate directly with the contracting company for observer services. The inherent conflict-of-interest potential this creates has been a concern since the inception of ADF&G and NMFS observer programs. Vessel companies informed ADF&G that currently vessels pay \$260 to \$336 per day to the contracting companies for observer services and associated deployment costs.

Unionization of Observers

The Association of Professional Observers voted to unionize under the Alaska Fishermen's Union late in 1997. Union contracts with the five observer contracting companies were first ratified in 1998 for shellfish and groundfish observers. The observers with one contracting company opted out of the union in 1999. The security of the contracts was an important step towards addressing the observer's pay and benefits concerns.

EVOLUTION OF OBSERVER COVERAGE REQUIREMENTS

Initially, observers were required on all vessels that processed king crab or *C. bairdi* Tanner crab at sea in Alaska because of the documentation of illegal retention and processing of crab at-sea. The BOF expanded the mandatory coverage on those vessels in 1991 to include the *C. opilio*

Tanner crab fishery because of illegal processing of *C. bairdi* Tanner crab during the *C. opilio* season. Since that time the number of crab catcher-processor (C/P) vessels participating in the various BS/AI crab fisheries has decreased from 33 to 13 vessels (Table 1). The C/Ps still remaining in the Alaska crab fisheries are participating in fewer fisheries. The result can be lack of biological data, or unrepresentative data, being collected at-sea during many fisheries.

The lack of an adequate number of C/Ps participating in the Aleutian Islands Area king crab fisheries was the principal reason the BOF expanded mandatory observer coverage regulations for that area. The lack of biological data being collected at-sea handicapped the management of these unsurveyed fisheries and implementing management measures. Subsequently, all catcher vessels participating in those fisheries were also required to carry an observer at all times, beginning in September 1995.

A lack of C/P participation still exists in many Bering Sea crab fisheries. Table 2 shows the historic number of crab observers deployed on C/P vessels and the total number of vessels that participated in the St. Matthew and Pribilof king crab fisheries. Data collected at-sea by observers during these fisheries would benefit ADF&G management and research. This is especially clear in the Pribilof red and blue king crab fishery where no observers have been present during the fishery to collect catch composition and other data the past three seasons. However, under the existing regulations the department cannot require catcher vessels to carry observers in these or other Bering Sea king or Tanner crab fisheries.

The Bristol Bay red king crab fishery has also experienced a decline in the number of observers deploying on C/Ps (Table 3). This became a concern when the fishery reopened in 1997. The BOF had enacted interim pot limit regulations for the 1997 and 1998 seasons to slow the fishery down and improve the department's ability to manage the fishery. The department, the BOF and crab industry sought information on the effects of these regulation changes on the fishery. However, with fewer C/Ps available to carry observers and the expected short season, it was especially important that additional data be collected during the fishery to evaluate the interim regulations. ADF&G solicited catcher vessels to voluntarily carry department staff as observers during the fishery to collect additional data at-sea. These deployments were funded by ADF&G with surplus revenues from the Bering Sea shellfish research test fish project.

Historic C/P observer coverage in the Bering Sea *C. opilio* and directed *C. bairdi* Tanner crab fisheries are provided in Table 4. Even though the *C. bairdi* fishery remains closed, assessing the bycatch of *C. bairdi* occurring in other crab fisheries will be integral in the State's rebuilding plan for that stock. Deploying observers to do this may not be possible under the current regulations.

Whereas observer deployments have become insufficient in the Bering Sea king and Tanner crab fisheries in recent years, the coverage levels in the Aleutian Islands king crab fishery and in permit fisheries may be excessive. The current 100% observer coverage levels in the Aleutian Islands king crab fishery and in the permit fisheries (e.g., Bering Sea Korean hair crab and deep water king and Tanner crab) are necessitated by the current 'pay-as-you-go' system. To assure equitability, only coverage levels of either 0% or 100% can be required on catcher vessels under a 'pay-as-you-go' system. Vessel operators participating in fisheries with 100% observer coverage have testified that the costs of observer coverage in those fisheries are a significant

portion of their operating expenses and could prohibit their continued participation in those fisheries.

ELEMENTS OF A STATE-FUNDED CRAB OBSERVER PROGRAM (BOF PROPOSAL #304)

The department has identified the principal issues to resolve for Proposal #304, a State-funded Bering Sea/Aleutian Islands crab observer program. These issues are:

- Funding mechanism,
- Establishing a special fund to deposit receipts,
- Ability to carry unspent funds across fiscal years,
- Determining the costs for the alternative program options:
 - Seasonal ADF&G biologist observers and,
 - Prime contractor observer procurement,
- Annual program costs and,
- Increase the number of Alaskan residents as observers.

Funding Mechanism

The program would be funded by cost-recovery fishing directed on BS/AI king and Tanner crab stocks. The department would utilize expanded test-fishing through legislative authorization. The State-funded program eliminates the direct costs to the vessels for observer coverage. This in turn would provide flexibility for the department to deploy observers to meet data gathering needs in each fishery. Department discussions with the crab industry indicated that the cost-recovery fishing should occur after the completion of the open access fishery to minimize the affect on their markets. This would also enhance the availability of crab vessels for the department to charter for the cost-recovery fishing. The harvests by the department would not reduce the fishery GHGs.

Establishing a Special Fund

Legislative action will be required to establish a special fund to deposit the cost-recovery receipts. This fund would be used specifically for deploying observers in the BS/AI crab fisheries. ADF&G Headquarters staff has submitted the request to the Legislature.

Ability to Carry Funds Across Fiscal Years

The budget appropriations bill language, as submitted to the legislature, would enable fund carry over. The language states that the unexpended and unobligated balance of the test-fishery receipts remaining at the end of the FY are appropriated to the new FY.

Observer Options for the State-funded Program

The two options in the ADF&G October 1996 observer program proposal were to use seasonal ADF&G biologists as crab observers or procuring observer services through a single source or 'prime contractor'.

The use of ADF&G seasonal employees as observers would fully integrate the observer program into the department. The department would gain control of all aspects of the program for the first time. This would increase ADF&G's ability to resolve concerns of the industry. This option would also satisfy the BOF's desire for more Alaskan residents as observers. Currently only 24% of crab observers are Alaskan residents. A group of up to 50 seasonal Fishery Biologists would be trained as observers. ADF&G prefers this option.

The 'prime contractor' option would procure observers through a competitive bidding process among the existing contractors. This bidding would be an annual process initially. Observers obtained through a prime contractor could possibly cost less than ADF&G employees. However, there would be additional staff time spent administering and enforcing the contract. Also, the low bidder may not be the best service provider.

ADF&G Biologist Observer Costs

A FY 2000 budget increment was developed by ADF&G (Table 5) and was submitted to the Legislature in January. The department has determined that, based on past coverage levels (Table1), a state-funded observer program should be capable of supporting 7,500 days of observer coverage. The estimated cost of 7,500 days of observer coverage and associated deployment costs using seasonal ADF&G biologists would be \$2.7 million. In addition to the observer pay and benefits, one full-time administrative support position would be added in Dutch Harbor. Projected vessel charter costs for the cost-recovery fishing were based on daily rates charged for past test-fishery charters. The cost recovery receipts would not be used to fund current observer program staff salaries, office lease costs, etc. Inclusive costs for deployments of ADF&G observers would be \$355 per day.

Prime Contractor Observers Costs

The estimated annual program costs for this option were developed using current cost figures. Additionally, the estimated cost-recovery vessel charter costs of \$300,000 would be included in the total cost determinations for this option (Table 6). The estimated annual cost for 7,500 days of observer coverage for contracted observers would be \$2.2 to \$2.8 million. Deployment costs would be \$300 to \$373 per day.

ANTICIPATED STRUCTURE TO DEPLOY OBSERVERS ON CRAB CATCHER VESSELS

The ability for ADF&G to have flexibility in determining observer coverage in each fishery would allow the department to adapt quickly to changing fishery dynamics. This would be true for both in-season variables and variances between seasons. The department would be able to

react to changes in the participation levels in a fishery as well as any new or developing fisheries that might occur in the future. Additional observers could be deployed to assess specific biological concerns or evaluate management measures, such as was done by the department in the Bristol Bay red king crab fishery in 1997 and 1998. Except for fisheries with relatively few participating vessels (e.g. Aleutian Islands king crab), observer coverage levels would be well below the 30% that has been proposed in the past.

Vessel pre-registration would be necessary in most fisheries to determine the number of observers to deploy. Selection of the catcher vessels that would carry observers could be accomplished through a random drawing from the pre-registration list for that fishery. Alternate vessel names would also be selected in the event a selected vessel did not fish. Provisions could be made in those fisheries that historically have a large number of participants to remove a vessel from the following year's drawing if they had carried an observer the previous year. Examples of fisheries with large participation are the *C. opilio* and the Bristol Bay red king crab fisheries.

VALUE OF THE BERING SEA/ALEUTIAN ISLANDS CRAB FISHERIES

The cost of the proposed program in relation to the value of the BS/AI crab fisheries is relevant. Historic exvessel values of the principal BS/AI crab fisheries are presented in Table 7. For the period 1994 through 1998 the exvessel values have averaged over \$197 million and ranged from \$148 million to over \$276 million for that period. Since the 1988 inception of the shellfish observer program the average annual exvessel value of the BS/AI crab fisheries has exceeded \$239 million. The annual program costs would be small (less than 2%) in relation to the historic exvessel value of the fisheries.

The department has met with members of the crab industry at least annually to update them on the progress developing the proposed program changes. Their input will continue to be important should the State-funded program be enacted.

CONCLUSION

The department's fishery management and research abilities have been eroded in many Bering Sea crab fisheries because of the lack of data collected by at-sea observers under the current regulations. The dramatic decrease in the number of catcher-processor vessels has severely limited the department's ability to deploy an adequate number of observers to meet its data gathering needs in many of these fisheries. Placing observers on crab catcher vessels is the only option for the department to collect this necessary data. The department's proposal to fund the program would eliminate the costs to vessel operators that can exist in the current program structure. The department's proposal would also allow the use of seasonal ADF&G biologists as observers, which would give the department full control of the observer program for the first time.

Table 1. Annual number of observer days of deployments by vessel type, 1988 - 1998.

Year	C/Ps		F/Ps		Catcher Vessels		Total Observer Days
	Number of Vessels	Observer Days	Number of Vessels	Observer Days	Number of Vessels	Observer Days	
1988	21	756	6	175			931
1989	22	3,043	12	629			3,672
1990	26	3,247	15	1,299			4,546
1991	33	7,726	18	2,875			10,601
1992	32	5,936	19	2,441	2	21	8,398
1993	29	3,670	21	1,766	14	853	6,289
1994	24	2,000	17	1,267	19	1,345	4,612
1995	21	1,728	15	843	50	3,477	6,048
1996	16	1,480	13	820	38	4,745	7,045
1997	15	1,635	11	882	30	2,356	4,873
1998	13	1,534	11	928	43	2,839	5,301

Table 2. Historic vessel and observer participation, St. Matthew and Pribilof king crab fisheries, 1989 – 1998.

Year	Total Vessels	Number of Observed C/P Vessels	Percent of Fleet Observed
St. Matthew King Crab Fishery			
1989	69	15	21.7
1990	31	7	22.6
1991	68	9	13.2
1992	174	8	4.6
1993	92	3	3.3
1994	87	6	6.9
1995	90	1	1.1
1996	122	3	2.5
1997	117	1	0.9
1998 ^a	131	2	2.3
Pribilof King Crab Fishery			
1989	No Fishery	-	-
1990	No Fishery	-	-
1991	No Fishery	-	-
1992	No Fishery	-	-
1993	112	2	1.8
1994	104	0	0
1995	127	1	0.8
1996	66	0	0
1997	53	0	0
1998	55	0	0

^a One catcher vessel also carried an observer during the fishery and is included in the percent of fleet observed.

Table 3. Historic vessel and observer participation, Bristol Bay red king crab fishery, 1988 – 1998.

Year	Total Vessels	Number of Observed C/P Vessels	Percent of Fleet Observed
1988	200	20	10.0
1989	211	18	8.5
1990	240	20	8.3
1991	302	25	8.3
1992	281	18	6.4
1993	292	17	5.8
1994	No Fishery	-	-
1995	No Fishery	-	-
1996	196	4	2.0
1997	256	8 <i>(plus 11 ADF&G staff on catcher vessels)</i>	7.4 ^a
1998	275	11 <i>(plus 10 ADF&G staff on catcher vessels)</i>	7.6 ^a

^a Includes ADF&G observers.

Table 4. Historic vessel and observer participation, Bering Sea *Chionoecetes opilio* and *C. bairdi* fisheries.

Fishery	Total Vessels	No. of Observed C/P Vessels	Percent of Fleet Observed
Bering Sea <i>C. opilio</i> fishery, 1991 - 1999			
1991	220	26	11.8
1992	250	30	12.0
1993	254	25	9.8
1994	273	24	8.8
1995	253	19	7.5
1996	234	15	6.4
1997	226	13	5.8
1998	229	12	5.2
1999	236	10	4.2
Bering Sea <i>C. bairdi</i> directed fishery, 1991 - 1998			
1991-92	255	27	10.6
1992-93	285	22	7.7
1993	283	17	6.0
1994	183	9	4.9
1995	196	11	5.6
1996	135	2	1.5
1997	No Fishery	-	-
1998	No Fishery	-	-

Table 5. Estimated cost ADF&G seasonal Fishery Biologist observers.

<i>Line 100 - Personnel</i>		
7,500 days of at-sea observer coverage: Fishery Biologist I, Step 'B', Sea-duty pay,	Salaries	\$1,590,000
	Benefits	502,500
12 mm Administrative Clerk III, Dutch Harbor (Salary & Benefits)		<u>50,000</u>
Total Line 100		\$2,142,500
<i>Line 200 - Travel</i>		
Airfare, 180 RT Anchorage-Dutch Harbor		
90 advance fare @ \$710 each	\$ 63,900	
90 regular fare @ \$1,034 each	<u>93,060</u>	
Subtotal Line 200	\$156,960	\$ 157,000
Per Diem		<u>30,500</u>
Total Line 200		\$ 187,500
<i>Line 300 - Contractual</i>		
Vessel charters, cost recovery fishing		\$ 300,000
Phone/fax \$1,000 month		12,000
First-aid, CPR and vessel safety training for FB Ones		<u>5,000</u>
Total Line 300		\$ 317,000
<i>Line 400 - Equipment & Supplies</i>		
Sampling equipment and data forms		\$ 7,500
Office supplies		<u>5,000</u>
Total Line 400		\$ 12,500
TOTAL		\$2,659,500
		(\$355 per day)

Table 6. Estimated cost of prime contractor observers.

Cost for 7,500 days of coverage (daily rate paid by vessels for observer coverage = \$260 to \$336)	\$1,950,000 to \$2,520,000
Vessel charters, cost recovery fishing (est. 75 days x \$4,000/day)	<u>300,000</u>
	\$2,250,000 to \$2,820,000
	(\$300 to \$376 per day)

Table 7. Exvessel values¹ of principal Bering Sea/Aleutian Island crab fisheries, 1988 – 1998.

Year	St. Matt blue king crab	Pribilof red/blue king crab	Bristol Bay red king crab	Aleutian brown king crab	Aleutian red king crab	Bering Sea bairdi	Bering Sea opilio	Bering Sea hair crab	Total Annual Value of Fisheries
1988	4.0	Closed	37.6	33.3	8.0	20.3	100.7	Closed	203.9
1989	3.5	Closed	50.9	36.6	4.6	45.3	110.7	1.2	252.8
1990	5.7	Closed	101.2	21.0	2.8	44.5	102.3	0.5	278.0
1991	9.0	Closed	51.2	18.0	2.9	47.3	162.6	2.8	293.8
1992	7.4	Closed	40.0	13.4	6.5	58.8	156.5	NA	282.6
1993	9.7	13.0	55.1	13.1	2.7	31.6	171.9	5.3	302.4
1994	15.0	8.0	Closed	27.2	1.1	28.5	192.4	4.0	276.2
1995	7.1	6.8	Closed	14.7	0.1	11.7	180.0	5.7	226.1
1996	6.7	3.0	33.6	12.5	Closed	4.5	85.6	1.8	147.7
1997	9.8	3.7	28.5	12.4	Closed	Closed	92.5	1.9	148.8
1998	5.3	2.7	37.4	5.9 ⁴	na	Closed	134.7	0.8	186.8
5 yr. avg. value²	8.8	4.8	19.9	14.5	0.2	8.9	137.0	2.8	197.1
10 yr. avg. value³	7.9	3.7	39.8	17.5	2.1	27.2	138.9	2.4	239.5

14

¹Estimates in million of dollars (US). Data derived from ADF&G fish tickets and do not reflect any post-season settlements.

²Average values for the period 1994 through 1998 (includes years during which fishing seasons were closed).

³Average values for the period 1989 through 1998 (includes years during which fishing seasons were closed).

⁴Preliminary 1998/99 season data, through November 7, 1998. Fishery remains open west of 174° W. longitude.

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