

# Department of Fish and Game

#### DIVISION OF COMMERCIAL FISHERIES

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June 21, 2016

Re: Alaska Department of Fish and Game's (ADF&G) Bering Sea and Aleutian Islands (BSAI) crab observer program annual test-fish report.

Crab Observer Oversight Task Force members:

The following test-fish financial report summarizes July 1, 2015 – June 30, 2016 (fiscal year 2016; FY16) expenditures, and July 1, 2016 – June 30, 2017 (fiscal year 2017; FY17) expenditure projections for BSAI catcher vessel (C/V) and catcher-processor (C/P) observer deployments and observer program support costs. A summary of observer coverage level by fishery and vessel type is provided in Table 1.

**Bering Sea:** The observer coverage requirement for C/Vs in Bristol Bay red king crab (BBR) is 20%, with 10% coverage paid for with test-fish funds and 10% paid for with federal crab rationalization funds.

Bering Sea snow crab (BSS) C/V observer coverage is 30%, where 10% coverage is paid for with test-fish funds and 20% is paid for with federal crab rationalization funds.

C/V observer coverage for Eastern and Western Bering Sea Tanner crab (EBT, WBT) is 30 - 100% and observer costs are paid for with crab rationalization funds.

C/P observer coverage in all fisheries is 100% pay-as-you-go, and test-fish funds reimburse costs for 20% of observer days in the BBR fishery, and 30% of observer days in the BSS, EBT and WBT fisheries.

Table 2 summarizes the Bristol Bay red king crab FY16 test-fish revenue and the program's test-fish expenditures for Bering Sea crab fisheries observer coverage. The FY16 carryover account balance was \$609,199 and FY16 test-fish revenue totaled \$680,000. FY16 test-fish expenditures totaled \$380,643 and the fiscal year-end account balance of \$908,556 will be carried forward to FY17.

Table 3 is a summary of BBR, BSS, EBT and WBT projected and actual C/V observer coverage levels for FY06 through FY16, including projections for FY17.

Table 4 is a summary of projected and actual Bering Sea observer coverage expenses for FY06 through FY16, including projections for FY17.

Tables 5 through 8 outline FY16 Bering Sea C/V crab observer deployment expenses by fishery. Expenditures of crab rationalization federal fee reimbursements for FY16 are footnoted in these tables.

Table 9 summarizes FY16 expenditures for C/Ps in Bering Sea fisheries. In FY16, C/Ps received reimbursement for a percentage of their observer days. The C/P daily reimbursement rate was equal to the daily rate paid for C/Vs at \$320/day. Test-fish funds used for C/P reimbursement totaled \$21,056.

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Table 10 summarizes FY16 costs of C/V and C/P deployment and observer program support. Bristol Bay test-fishery budget expenditures were \$380,643 and expenditures of crab rationalization funds were \$855,200, totaling \$1,235,843 in Bering Sea observer training, deployments, and administrative costs.

Table 11 details FY17 expenditure projections totaling \$597,840 for Bering Sea observer coverage and associated program support.

<u>Aleutian Islands:</u> The observer coverage requirement for C/Vs in the Eastern Aleutian Islands (EAG) and Western Aleutian Islands (WAG) golden king crab fisheries is 50% of the weight retained by each C/V during each of three trimesters. Coverage is paid with test-fish funds.

Table 12 summarizes the Aleutian Islands FY16 test-fish revenue and the program's test-fish expenditures for Aleutian Islands golden king crab observer coverage. The FY15 carryover account balance was \$78,265 and FY16 test-fish revenue totaled \$300,000. FY16 expenditures totaled \$271,696 and the fiscal year-end account balance of \$106,569 will be carried forward to FY17.

Table 13 is a summary of projected and actual Aleutian Islands observer coverage expenses for FY15 through FY16, including projections for FY17.

Table 14 summarizes FY16 cost of observer deployment and observer program support.

Table 15 details FY17 expenditure projections totaling \$281,829 for Aleutian Islands golden king crab observer coverage and associated program support.

## **Summary:**

Table 16 summarizes the BSAI observer program's FY17 overall budget projection of \$1,743,088 which includes crab rationalization funds. ADF&G is planning two test fisheries in 2016 to help fund the crab observer program through harvest and sale of Bristol Bay red king crab for \$800,000 and Aleutian Islands golden king crab for \$300,000. ADF&G anticipates that processors will receive Invitations to Bid during the first week of July.

Please feel free to contact me with any questions regarding this report.

Sincerely,

Melissa Salmon

Melissa Salma

COOTF members: Jerry Bongen, Lance Farr, Mark Henkel, Linda Kozak (Chair), Edward Poulsen, Jeff Stephan, Anne Vanderhoeven and Doug Wells

cc: ADF&G staff: David Barnard, Melony Lechner, Doug Pengilly, Nick Sagalkin, Mark Stichert and Miranda Westphal

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## FY17 projection summary

**Table 16.** Summary of FY17 expenditure projections for crab observer program budgets.

Table 1. Observer coverage levels in the Bering Sea and Aleutian Islands crab fisheries.

		Catcher vess	sels (C/V)	Catcher pro	ocessors (C/P)
	Preseason		Observer		
T' 1	registration	Observer	costs	Observer	Observer
Fishery	deadline a	coverage	funded b	coverage	costs funded
Saint Matthew Island Section blue king crab (SMB)	none	100%	no	100%	no
Saint Matthew Island Section golden king crab	none	100%	no	100%	no
Pribilof District red & blue king crab (PIK)	none	100%	no	100%	no
Pribilof District golden king crab	none	100%	no	100%	no
Bristol Bay red king crab (BBR)	Sep-24	20% <sup>c</sup>	yes	100%	20% d
Eastern Bering Sea Tanner crab (EBT)	Sep-24	30-100% <sup>c</sup>	yes	100%	30% <sup>d</sup>
Western Bering Sea Tanner crab (WBT)	Sep-24	30-100% <sup>c</sup>	yes	100%	30% <sup>d</sup>
Bering Sea snow crab (BSS)	Sep-24	30% °	yes	100%	30% <sup>d</sup>
Bering Sea hair crab	none	100%	no	100%	no
Area J grooved and triangle Tanner crab	none	100%	no	100%	no
Eastern Aleutian Islands golden king crab (EAG)	none	50% <sup>e</sup>	yes	100%	no
Western Aleutian Islands golden king crab (WAG)	none	50% <sup>e</sup>	yes	100%	no
Aleutian Islands red king crab between 171° W long and 179° W long	none	100%	no	100%	no
Western Aleutian Islands red king crab west of 179° W long (WAI)	none	100%	no	100%	no

<sup>&</sup>lt;sup>a</sup> When the preseason vessel registration deadline occurs on a weekend or holiday, the deadline is extended to the next business day.

<sup>&</sup>lt;sup>b</sup> C/V observer coverage is funded with test-fishery revenues and federal crab rationalization funds.

<sup>&</sup>lt;sup>c</sup> For Bristol Bay red king, Eastern and Western Bering Sea Tanner, and Bering Sea snow crab, C/V observer coverage is the percentage of randomly selected C/Vs preseason registered for each fishery where C/V observer deployment costs are paid with Bristol Bay red king crab test-fishery revenues and federal crab rationalization funds.

<sup>&</sup>lt;sup>d</sup> For C/Ps fishing Bristol Bay red king, Eastern and Western Bering Sea Tanner, and Bering Sea snow crab, a percentage of the C/P observer coverage is refunded through ADF&G contracts and paid with Bristol Bay red king crab test-fishery revenues.

<sup>&</sup>lt;sup>e</sup> For Aleutian Islands golden king crab, coverage is set at a percentage of the harvest on each C/V during each of three trimesters where C/V observer deployment costs are paid with Aleutian Islands golden king crab test-fishery revenues.

Table 2. Summary of FY16 Bristol Bay red king crab test-fishery account revenues and expenses.

Bering Sea test-fishery budget allocation		
Test-fishery account balance carried forward from FY15 into FY16		609,199
Test-fishery revenue		680,000
Sum of carry forward and revenue	\$	1,289,199
Test-fishery expenditures	\$	380,643
Test-fishery account funds to be carried forward from FY16 for start up funds in FY17	_\$	908,556

Table 3. Comparison of projected and actual C/V effort and observer coverage for Bering Sea crab fisheries.

		BBI	R			BS	S			EBT and	WBT					
Fiscal Year	# C/Vs preseason registered a	registered C/V effort		% C/Vs observed	# C/Vs preseason registered <sup>a</sup>	registered C/V effort		% C/Vs observed	# C/Vs preseason registered <sup>a</sup>	registered C/V effort	# C/Vs observed	% C/Vs observed				
FY06 projected	129		26	20	129		39	30	NP		NP	NP			V. ***	
FY06 actual	84	85	20	24	106	77	27	35	101	70 t	14	20				
FY07 projected	100	NP	20	20	100	NP	30	30	NP		7	30				
FY07 actual	84		18	23	76		24	38	76		20	31				
FY08 projected	85		17	20	80		24	30	NP	NP	14	30 - 100				
FY08 actual	82		19	27	88		26	34	63	57		46	RANGE OF THE SECOND			
		BBI	R			BS	S			EBT	e			WBT	C	
Fiscal Year	# C/Vs preseason registered <sup>a</sup>	registered C/V effort		% C/Vs observed	# C/Vs preseason registered <sup>a</sup>	registered C/V effort		% C/Vs observed	# C/Vs preseason registered <sup>a</sup>	registered C/V effort	# C/Vs observed	% C/Vs observed	# C/Vs preseason registered <sup>a</sup>	registered C/V effort	# C/Vs observed	% C/Vs observed
FY09 projected	75	NP	15	20	80	NP	24	30	NP	NP	10	30 - 100	NP	NP	10	30 - 100
FY09 actual	86	75	19	25	85	73	25 f	34	75	10	8 f	80	73	7	5 1	71
FY10 projected	75	NP	15	20	75	NP	22	30	NP	NP	10	30 - 100	NP	NP	7	30 - 100
FY10 actual	86		19	28	94	67	22	32	82	10	10	100	FC	FC	FC	FC
FY11 projected	86	NP	18	20	94	NP	28	30	NP	NP	10	30 -100	NP	NP	NP	NP
FY11 actual	81	63	14	22	84	66	23	35	FC		FC	FC	FC	FC	FC	FC
FY12 projected	86		16	19-21	94	70	26	28-38	NP	NP	NP	NP	NP	NP	NP	NP
FY12 actual	81	62	15	24	84	72	24 g		FC	FC	FC	FC	FC	FC	FC	FC
FY13 projected	81	62	13	16-20	84	70	21	25-30	NP	NP	NP	NP	NP	NP	NP	NP
FY13 actual	82		16		83	70	24 g		FC	FC	FC	FC	FC	FC	FC	FC
FY14 projected	82		13	16-20	83	70	21	25-30	NP	NP	NP	NP	NP	NP	NP	NP
FY14 actual	82		16	25	82	67	19	28 f,i		16	4	25 f,i		1707	4	25 f,i
FY15 projected	82		13	16-20	82	70	21	25-30	75		5	31	75	16	5	31
FY15 actual	76		11	18	78		22	32 f,i	66		13	36 f,		26	8	31 <sup>f,i</sup>
FY16 projected	76		13	16-20	78	70	22	25-30	66		12	33	67	26	8	31
FY16 actual	82		12	18	81	68	22	32 <sup>f,i</sup>			17	36 f,i		36	16	44 f,i
FY17 projected	82	65	13	16-20	81	68	21	25-30	78	47	14	30	76	36	11	31

Note: BBR = Bristol Bay red king crab, BSS = Bering Sea snow crab, EBT = Eastern Bering Sea Tanner crab, WBT = Western Bering Sea Tanner crab, C/V = Catcher vessel, NP = No projection, and FC = Fishery closed

<sup>&</sup>lt;sup>a</sup> Selection of C/Vs for observer coverage is based on the number of C/Vs preseason registered with intent to fish. The deadline for preseason registration is September 24, Vessels are allowed to late-register if certain criteria are met.

b One-hundred-one C/Vs preseason registered with intent to fish, 70 C/Vs registered to harvest Tanner crab and 14 of the 41 C/Vs that delivered Tanner crab, whether targeted or bycatch, carried observers,

<sup>&</sup>lt;sup>c</sup> Seventy-six C/Vs preseason registered with intent to fish, 64 C/Vs registered to harvest Tanner crab and 20 of the 55 C/Vs that delivered Tanner crab, whether targeted or bycatch, carried observers.

d Sixty-three C/Vs preseason registered with intent to fish, 57 C/Vs registered to harvest Tanner crab and 26 of the 41 C/Vs that delivered Tanner crab, whether targeted or bycatch, carried observers.

e Beginning October 15, 2008 vessels may no longer be registered to harvest Bering Sea Tanner crab and Bering Sea snow crab at the same time aside from a 5% incidental take allowance.

Some C/Vs were allowed to carry an observer for only a portion of their snow or Tanner crab harvest dependent on vessel fishing plans and observer availability; the % CVs observed may not match the % harvest observed.

<sup>&</sup>lt;sup>6</sup> Many of the observed C/Vs carried an observer for only a portion of their snow crab harvest due to Bering Sea ice conditions and program budgetary constraints allowing for only a set number of observer deployment days. Vessels not selected originally were required to carry observers when the selection list was exhausted and to assure that observers were collecting data at all times during the fishery.

h Includes 3 vessels that harvested test-fishery crab.

<sup>&</sup>lt;sup>1</sup>Due to opening of EBT and WBT and limited availability of observers, observers were distributed between BSS, WBT and EBT to best meet observer coverage goals.

Table 4. Comparison of projected and actual observer deployment and program support costs funded with Bristol Bay test-fishery revenues. This table does not reflect observer program costs paid with crab rationalization federal fee reimbursements.

		Obs	erver depl	oyn	ent costs			Program support costs					Total				
					EBT	BI	BR, BSS,										
					and	E	BT, and	S	upplies								
	BBR		BSS		WBT		WBT		and						Office		
Fiscal Year	C/V		C/V	_	C/V		C/P	eq	uipment		Admin	(	Cost-rec	p	ersonnel	Tota	al expenses
FY06 projected	\$ 164,920	\$	295,720	\$	-			\$	3,500	\$	19,600	\$	68,000	\$	284,163	\$	835,903
FY06 actual	\$ 119,045	\$	95,748	\$	6,266			\$	322	\$	517	\$	72,330	\$	256,000	\$	550,228
FY07 projected	\$ 119,900	\$	176,500	\$	-			\$	600	\$	10,100	\$	167,069	\$	286,000	\$	760,169
FY07 actual	\$ -	\$	155,710	\$	23,894			\$	9,273	\$	-	\$	6,961	\$	111,045	\$	281,515
FY08 projected	\$ 107,806	\$	167,864	\$				\$	4,900	\$	8,600	\$	141,000	\$	284,300	\$	714,470
FY08 actual	\$ 116,589	\$	155,710	\$	-			\$	9,273	\$	11,860	\$	6,961	\$	111,045	\$	411,439
FY09 projected	\$ 105,760	\$	191,260	\$	-			\$	5,000	\$	7,782	\$	3-2	\$	270,846	\$	580,648
FY09 actual	\$ -	\$	61,468	\$	-			\$	1 -	\$	12	\$	12	\$	1,251	\$	62,718
FY10 projected	\$ 118,354	\$	137,096	\$	-			\$	5,500	\$	17,200	\$	9,000	\$	168,440	\$	455,590
FY10 actual	\$ 93,805	\$	68,398	\$	-			\$	5,136	\$	8,286	\$	5,812	\$	42,314	\$	223,751
FY11 projected	\$ 93,950	\$	126,025	\$	-			\$	600	\$	8,300	\$	5,000	\$	274,100	\$	507,975
FY11 actual	\$ -	\$	-	\$	-			\$	2,612	\$	4,070	\$	725	\$	268,678	\$	275,360
FY12 projected	\$ 71,290	\$	93,507	\$	-2			\$	-	\$	-	\$	6,000	\$	477,699	\$	648,496
FY12 actual	\$ 37,571	\$	97,953	\$				\$	-	\$	4,891	\$	6,000	\$	459,179	\$	605,594
FY13 projected	\$ 50,560	\$	99,720	\$				\$	2,000	\$	2,400	\$	4,000	\$	573,435	\$	732,115
FY13 actual	\$ 35,212	\$	113,189	\$				\$	6,399	\$	347	\$	4,250	\$	522,704	\$	682,099
FY14 projected	\$ 49,760	\$	124,640	\$	~	\$	39,000	\$	1,500	\$	121	\$	8,135	\$	422,964	\$	645,999
FY14 actual	\$ 53,151	\$	75,717	\$	18,992	\$	20,800	\$	1,432	\$	7,895	\$	10,005	\$	348,274	\$	536,266
FY15 projected	\$ 61,270	\$	113,130	\$	-	\$	30,400	\$	1,900	\$	200	\$	13,335	\$	466,391	\$	686,626
FY15 actual	\$ 38,407	\$	129,671	\$	-	\$	22,400	\$	2,695	\$	1,772	\$	2,346	\$	375,716	\$	573,007
FY16 projected	\$ 49,100	\$	163,600	\$	-	\$	28,800	\$	3,000	\$	2,510	\$	2,300	\$	376,405	\$	625,715
FY16 actual	\$ 37,571	\$	97,953	\$	-	\$	21,056	\$	21,620	\$	4,337	\$	8,791	\$	189,315	\$	380,643
FY17 projected	\$ 52,040	\$	129,350	\$	-	\$	26,598	\$	4,500	\$	4,510	\$	2,300	\$	378,542	\$	597,840
FY17 actual																	

Table 5. The 2015/2016 Bristol Bay red king crab fishery C/V observer deployment costs paid with test-fishery revenues, and average observer deployment lengths since 2005/2006.

	Source	of Cost	
<u> </u>	ADF&G	SOA contract	Totals
Number of deployments	1	6	
Observer deployment days	7	96.5	Total deployments7
Cost of observers a \$	3,700	\$ 30,880	Total deployment days103.5
Expenses per source between Anchorage and Dutch Harbor for		· · · · · · · · · · · · · · · · · · ·	Total observer personnel \$ 34,580
transportation, and room and board a	-	\$ -	Total non-remote \$ -
Expenses per source between Dutch Harbor and remote ports for transportation, and room and board \$	E_	\$ 2,991	
	*		Total remote \$ 2,991 Total costs b \$ 37,571

Average C/V observer deployment lengths since 2005/2006

Season	Fishery length (days)	Average deployment length (days) <sup>c</sup>	Deployment duration range (days) <sup>d</sup>
2005/06	93	26	9 - 89
2006/07	93	23	11 - 42
2007/08	93	28	9 - 68
2008/09	93	34	4 - 61
2009/10	93	26	6 - 53
2010/11	93	31	12 - 53
2011/12	93	17	5 - 29
2012/13	93	14	8 - 26
2013/14	93	22	11 - 31
2014/15	93	20	4 - 38
2015/16	93	16	7 - 27

Note: BBR = Bristol Bay red king crab, C/V = Catcher vessel

ADF&G staff lodge in state housing when available. Costs for contract observer transportation and room and board, except travel to remote ports, are included in the contract cost of \$320/day.

<sup>&</sup>lt;sup>b</sup>A total of \$67,742 was spent on BBR C/V deployments; \$33,871 from test-fishery revenues and \$33,871 from crab rationalization federal fee reimbursements.

<sup>&</sup>lt;sup>c</sup>Observers frequently deploy more than once during a fishery.

<sup>&</sup>lt;sup>d</sup> Range includes the single shortest observer deployment to the single longest deployment.

Table 6. The 2015/2016 Bering Sea snow crab fishery C/V observer deployment costs paid with test-fishery revenues, and average observer deployment lengths since 2005/2006.

	Source	of Cost	
	ADF&G	SOA contract	Totals
Number of deployments	0	10	Total dealers were 10
Observer deployment days	0	287	Total deployments10
			Total deployment days287
Cost of observers <sup>a</sup> \$	<u>.</u>	\$ 91,550	T
Expenses per source between Anchorage and Dutch Harbor for			Total observer personnel \$ 91,550
transportation, and room and board a \$		\$ -	
Every way and a service between Divish Harbor and remain marks for			Total non-remote \$ -
Expenses per source between Dutch Harbor and remote ports for		Φ (100	
transportation, and room and board_\$	-	\$ 6,403	Total remote \$ 6,403
			Total costs b \$ 97,953
	Average C/V	observer deployment len	gths since 2005/2006

Averag	ge C/V observ	er deployment le	ngths since 2005/2006
Season	Fishery length (days)	Average deployment length (days) <sup>c</sup>	Deployment duration range (days) <sup>d</sup>
2005/06	229	39	12 - 64
2006/07	229	59	8 - 73
2007/08	229	29	4 - 87
2008/09	229	43	3 - 81
2009/10	229	35	13 - 78
2010/11	229	41	11 - 97
2011/12	244 °	43	3 - 120
2012/13	229	48	11 - 95
2013/14	229	36	8 - 79
2014/15	229	33	4 - 78
2015/16	229	30	12 - 93

Note: BSS = Bering Sea snow crab, C/V = Catcher vessel

<sup>&</sup>lt;sup>a</sup>ADF&G staff lodge in state housing when available. Costs for contract observer transportation and room and board, except travel to remote ports, are included in the contract cost of \$320/day.

<sup>&</sup>lt;sup>b</sup>A total of \$293,858 was spent on BSS C/V deployments; \$97,953 from test-fishery revenues, \$195,905 from crab rationalization federal fee reimbursements.

<sup>&</sup>lt;sup>c</sup>Observers frequently deploy more than once during a fishery.

<sup>&</sup>lt;sup>d</sup>Range includes the single shortest observer deployment to the single longest deployment.

eThe 2011/12 season was extended to June 15 due to persistent ice on the grounds through May.

Table 7. The 2015/2016 Eastern Bering Sea Tanner crab fishery C/V observer deployment costs paid with test-fishery revenues, and average observer deployment lengths since 2005/2006.

	9	Source of Co	ost	
-	ADF&	<u>G</u> .	SOA contract	Totals
Number of deployments		<u>0</u>	0	Tatal deslacements
Observer deployment days		0	0	Total deployments
obbliver approyment augu		<u>×</u>		Total deployment days
Cost of observers <sup>a</sup>	\$	<u>-)</u> .	\$ -	· · · · · · · · · · · · · · · · · · ·
Expenses per source between Anchorage and Dutch Harbor for				Total observer personnel \$ -
transportation, and room and board <sup>a</sup>	\$	<u>.</u> .	\$ -	Total non-remote \$
Expenses per source between Dutch Harbor and remote ports for				Total total total
transportation, and room and board	\$	<u>.</u> .	\$ -	
				Total remote \$ - Total costs b \$ -
	Average	e C/V observ	er deployment le	engths since 2005/2006
		Fishery	Average	
		length	deployment	Deployment duration range
7	Season	(days)	length (days) °	(days) <sup>d</sup>
	2005/06	168	39	11 - 37
	2006/07	168	59	1 - 35
	2007/08	168	20	3 - 51
	2008/09	168	23	13 - 40
	2009/10	168	14	9 - 25

FC

FC

FC

168

168

168

NA

NA

NA

23

20

29

NA

NA

NA

9 - 45

5 - 44

5 - 52

Note: EBT = Eastern Bering Sea Tanner crab, C/V = Catcher vessel, FC = Fishery closed, NA = Not applicable

2010/11

2011/12

2012/13

2013/14

2014/15

2015/16

ADF&G staff lodge in state housing when available. Costs for contract observer transportation and room and board, except travel to remote ports, are included in the contract cost of \$320/day.

<sup>&</sup>lt;sup>b</sup> A total of \$170,342 was spent on EBT C/V deployments; \$0 from test-fishery revenues, \$170,342 from crab rationalization federal fee reimbursements.

<sup>&</sup>lt;sup>c</sup>Observers frequently deploy more than once during a fishery.

<sup>&</sup>lt;sup>d</sup> Range includes the single shortest observer deployment to the single longest deployment.

Table 8. The 2015/2016 Western Bering Sea Tanner crab fishery C/V observer deployment costs paid with test-fishery revenues, and average observer deployment lengths since 2005/2006.

	Source of	f Cost	
=	ADF&G	SOA contract	Totals
Number of deployments	0	0	Total dealer-marks
Observer deployment days	0	0	Total deployments
		•	Total deployment days
Cost of observers a _\$_  Expenses per source between Anchorage and Dutch Harbor for	- 5	3 -	Total observer personnel _\$
transportation, and room and board <sup>a</sup> _\$		\$ -	T . I
Expenses per source between Dutch Harbor and remote ports for			Total non-remote \$ -
transportation, and room and board _\$_		_\$	Total remote_\$
	Average C/V ob	server deployment le	Total costs b \$
	Fisher lengt		Deployment duration range

	Average	e C/V observe	er deployment ler	igths since 2005/2006	
-	Season	Fishery length (days)	Average deployment length (days) °	Deployment duration range (days) <sup>d</sup>	
	2005/06	168	39	11 - 37	
	2006/07	168	59	1 - 35	9
	2007/08	168	20	3 - 51	
	2008/09	168	13	7 - 22	
	2009/10	FC	NA	NA	
	2010/11	FC	NA	NA	
	2011/12	FC	NA	NA	
	2012/13	FC	NA	NA	
	2013/14	168	21	12 - 37	
	2014/15	168	30	12 - 76	
	2015/16	168	25	10 - 76	

Note: WBT = Western Bering Sea Tanner crab, C/V = Catcher vessel, FC = Fishery closed, NA = Not applicable

ADF&G staff lodge in state housing when available. Costs for contract observer transportation and room and board, except travel to remote ports, are included in the contract cost of \$320/day.

<sup>&</sup>lt;sup>b</sup> A total of \$133,651 was spent on WBT C/V deployments; \$0 from test-fishery revenues, \$133,651 from crab rationalization federal fee reimbursements.

<sup>&</sup>lt;sup>c</sup>Observers frequently deploy more than once during a fishery.

<sup>&</sup>lt;sup>d</sup> Range includes the single shortest observer deployment to the single longest deployment.

Table 9. The 2015/2016 Bristol Bay red king crab, Eastern and V Sea Tanner crab, and Bering Sea snow crab catcher-processor of deployment costs paid with test-fishery revenues.		_
Number of deployment	s	7
Observer deployment days	·—	65.8
Cost of observers	s <u> </u>	21,056

Table 10. Summary of FY16 Bering Sea crab fisheries C/V and C/P observer deployment and program support costs paid with Bristol Bay red king crab test-fishery revenues.

<u>-</u>	Source	of Cost			
_	ADF&G	Contract			
OBSERVER DEPLOYMENT COSTS					
Number of deployments	1	23			
			Total deployments24	1	
Observer deployment days	7_	449			
			Total deployment days 456	5	
Cost of observers _\$	3,700	\$ 143,486			
			Total observer personnel \$ 147,186	5	
Non-remote deployment expenses_\$	-	\$ -			
			Total non-remote \$		
Remote deployment expenses _\$	-	\$ 9,394			
			Total remote \$ 9,394	1	
			Total deployment costs	s _\$_	156,580
OBSERVER PROGRAM SUPPORT COSTS				-	
Supplies					
Deployment and sampling supplies \$	1,348				
Office supplies (inc. new copy center) \$	20,272				
Safety supplies \$	1963				
Briefing and debriefing supplies \$	-				
Postage and shipping \$	-				
Data forms \$	.=				
		T	otal supplies and equipment \$ 21,620	)	
Administrative					
Travel and per diem \$	3,883				
Cell phone, sat phone, and internet \$	454				
			Total administration \$ 4,337	7	
Cost-recovery test fishery			•	_	
Personnel \$	8,791				
Charter \$	40				
Vessel Inspection \$	_				
			Total cost-recovery \$ 8,791	Ĺ	
Office personnel salaries and benefits				_	
Fishery Biologist III, 11 months \$	-				
Fishery Biologist II, 10 months \$	138,925				
Seasonal Fishery Biologist I, 4.5 months \$					
			Total office personnel \$\_\$ 189,315	<u>;</u>	
			Total program support costs	\$	224,063
		R.	ristol Bay test-fishery budget expenditures	\$	380,643
	Crah ratio		al fee reimbursement budget expenditures	\$	855,200
Drogram agets maid for with Drietal Done					
riogram costs daig for with Bristol Bay t	est-Hsnerv re	venues and crab	rationalization federal fee reimbursement	\$	1,235,843

Table 11. Summary of FY17 expenditure projections for observer program costs paid with Bristol Bay red king crab test-fishery revenues.

T-	Λ	Source			
OBSERVER DEPLOYMENT COSTS	A	DF&G_	<u> </u>	Contract	
ristol Bay red king crab observer coverage on 10% of catcher vessels					
Number of deployments_		1_		7	
			(01		Total BBR deployments 8
Average deployment length (days)_		7	-	20 To	otal BBR deployment days 147
Contract cost per observer day	\$	329	\$	341	mai BBR deployment days147_
Total observer personnel_		2,300	\$	47,740	
					Total observer personnel \$ 50,040
Non-remote travel	\$	<del></del>	\$		Total non-remote \$
Remote travel	S	-	\$	2,000	Total non-remote 5 -
			_	-,	Total remote \$ 2,000
		Expe	enditu	ire projecti	on for BBR C/V observer deployments \$ 52,0
ering Sea snow crab observer coverage on 10% of catcher vessels  Number of deployments		0		7	
number of deployments_		<u> </u>	_		Total BSS deployments 7
Average deployment length_		0		50	
					otal BSS deployment days 350
Contract cost per observer day		=	\$	341	
Total observer personnel_	3		7	119,350	Total observer personnel \$ 119,350
Non-remote travel	\$	-	\$	_	Total doserver personner 4 112,330
1			-		Total non-remote \$ -
Remote travel	\$		\$	10,000	
		Evn	andit	ura project	Total remote \$ 10,000 ion for BSS C/V observer deployments \$ 129,3
		-			
ost reimbursement for Bristol Bay and Bering Sea crab observer days on catch			20%	of BBR a	nd 30% of BSS, EBT, WBT
Number of deployments_	-	0		- 6	Total C/P deployments 6
Average deployment length		0		13	Total C/T heployments
			9.4	7	otal C/P deployment days
Reimbursable cost per observer day		-	\$	341	
Total observer personnel	3		_ \$	26,598	Total observer personnel \$ 26,598
Non-remote travel	\$		\$	_	Total observer personner 3 20,398
					Total non-remote _\$
Remote travel_	\$		-\$		***************************************
			Eve	ondituro n	Total remote \$ - rojection for C/P observer deployments \$ 26,5
			Ехр	enditure p	
ROGRAM SUPPORT COSTS					Total deployment cost projection \$\)\$ 207,9
upplies					
Deployment and sampling supplies		2,000			
Office supplies		500			
Safety supplies Briefing and debriefing supplies		500			
Postage and shipping		500			
Data forms		1,500			
				Tot	al supplies and equipment \$ 4,500
dministrative	ø	2.000			
Travel and per diem Cell phone, sat phone, and internet		2,000 510			
Archiving observer data		2,000			
Anomy in good for data	-	-12.00			Total administration \$ 4,510
ost-recovery test fishery					
Personnel		2,300			
Charter Vessel Inspection_		-			
vessei inspection_	Φ				Total cost-recovery \$ 2,300
ffice personnel salaries and benefits					Total South San
Fishery Biologist III, 11 months		160,534			
		133,540			
Fishery Biologist II, 10 months		84,468			
Fishery Biologist II, 10 months Seasonal Fishery Biologist I, 6 months	.p				
	g.				Total office personnel \$ 378 542
	a .				Total office personnel \$ 378,542

Note: BBR = Bristol Bay red king crab, BSS = Bering Sea snow crab, Eastern Bering Sea Tanner crab, and WBT = Western Bering Sea Tanner crab

Table 12. Summary of FY16 Aleutian Islands golden king crab test-fishery account revenues and expenses.

Observer program test fishery budget allocation	\$ 300,000
Test-fishery account balance carried forward from FY15 into FY16	\$ 78,265
Test-fishery revenue	\$ 300,000
Sum of carry forward and revenue	\$ 378,265
Test-fishery expenditures	\$ 271,696
Test-fishery account funds to be carried forward from FY16 for start up funds in FY17	\$ 106,569

Table 13. Comparison of projected and actual observer deployment and program support costs funded with Aleutian Islands test-fishery revenues.

	Observer deployment costs				Totals						
	EAG and		Su	ıpplies						•	
	WAG			and					Office		
Fiscal Year	C/V	N	equ	ipment	Admin	C	Cost-rec	p	ersonnel	Tot	al expenses
FY14 projected	\$ 190,700		\$	1,400	\$ 3,870	\$	9,582	\$	94,400	\$	299,952
FY14 actual	\$ 153,280		\$	1,934	\$ 	\$	7,500	\$	97,614	\$	260,328
FY15 projected	\$ 164,000		\$	4,600	\$ 1,600	\$	13,335	\$	117,402	\$	300,937
FY15 actual	\$ 146,320		\$	1,500	\$ (¥)	\$	120	\$	114,781	\$	262,601
FY16 projected	\$ 146,450		\$	2,200	\$ 10 m	\$	2,450	\$	102,723	\$	253,823
FY16 actual	\$ 157,728		\$	2,596	\$ 5 <b>6</b> 0	\$	2,166	\$	109,206	\$	271,696
FY17 projected	\$ 170,858		\$	4,700	\$ 2,050	\$	2,500	\$	101,721	\$	281,829
FY17 actual											

Note: EAG = Eastern Aleutian Islands golden king crab, WAG = Western Aleutian Islands golden king crab, and C/V = Catcher vessel

Table 14. Summary of FY16 Aleutian Islands golden king crab fisheries observer deployment and program support costs paid with Eastern

Aleutian Islands golden king crab test-fishery revenues.

Treatian Islands golden king erab test Isliery revenues		of Cost	
	ADF&G	Contract	
OBSERVER DEPLOYMENT COSTS			
Number of deployments	1	8	
			Total deployments9
Observer deployment days	3	490	
	400	4.5.000	Total deployment days493
Cost of observers <u>\$</u>	928	\$ 156,800	т. 1.1.
N		ф	Total observer personnel \$\_\$157,728
Non-remote deployment expenses \$		2 -	Total non nomesta (\$
Dameta danlariment armanaa C		¢.	Total non-remote
Remote deployment expenses		<u> </u>	Total remote
			Total remote <u>\$ -</u>
			Total deployment costs \$ 157,728
PROGRAM SUPPORT COSTS			Total deployment costs
Supplies			
Deployment and sampling supplies \$	77		
Office supplies \$	2,512		
Safety supplies \$	· -		
Briefing and debriefing supplies \$	-		
Postage and shipping \$	7		
Data forms \$	-		
-	-		Total supplies and equipment \$ 2,596
Administrative			
Travel and per diem \$	•		
Cell phone, sat phone, and internet \$	•		
			Total administration \$
Cost-recovery test fishery			
Personnel \$	2,166		
Charter \$	( <del>-</del> 3		
Vessel Inspection \$			T. 1. 1
			Total cost-recovery \$ 2,166
Office personnel salaries and benefits	25 406		
Seasonal Fishery Biologist I, 2 months \$	25,406		
Seasonal Fishery Biologist I, 8 months\$	83,800		Total office personnel \$ 109,206
			Total office personnel 4 107,200
			Total program support costs \$113,968
			10ml program support voite 4 1103700
		Aleutiar	Islands test-fishery account expenditures \$ 271,696
			•

Table 16. Summary of FY17 expenditure projections for crab observer program budgets.

Bering Sea and Bristol Bay test fish	\$ 597,840
Aleutian Islands test fish	\$ 281,829
Crab rationalization federal fee reimbursement	\$ 863,419
Program expenditure projections for FY17	\$ 1,743,088

Table 15. Summary of FY17 expenditure projections for observer program costs paid with Aleutian Islands golden king crab test-fishery revenues.

		Source	of Co	st	k
	Al	DF&G	C	ontract	
DESERVER DEPLOYMENT COSTS					
leutian Islands golden king crab observer coverage of at least 50% of the weight of go		-	ırveste		e
Number of deploymen	its	1		8	Total deployments 9
Average deployment length (days	s)	7		61	Total deployments
					Total deployment days 495
Contract cost per observer da		350	\$	341	
Total observer personne	el_\$	2,450	_\$	166,408	
N	. 1 . 0		d)		Total observer personnel \$ 168,858
Non-remote trave	ei <u>\$</u>		7		Total non-remote _\$
Remote trave	el \$		\$	2,000	Total hon-remote
Kemote trave	<u> </u>		Ψ	2,000	Total remote \$ 2,000
					***
DOOD IN GUIDDONT COSTS	ŀ	Expenditur	e proje	ection for W	AG and EAG C/V observer deployments \$\_\$170,8
ROGRAM SUPPORT COSTS					
upplies  Deployment and sampling supplie	ec \$	500			
Office supplie		500			
Safety supplie		500			
Briefing and debriefing supplie		1,200			
Postage and shippin		500			
Data form		1,500			
				To	tal supplies and equipment \$ 4,700
dministrative					
Travel and per dier		-			
Cell phone, sat phone, and interne		50			
Archiving observer date	ta_\$	2,000			T-1-1-1-1-1-0-0050
and a second section of the se					Total administration \$ 2,050
ost-recovery test fishery Personne	al ¢	2,500			
Charte		2,300			
Vessel Inspectio					
Vessel hispeetto	лі <u> </u>				Total cost-recovery \$ 2,500
ffice personnel salaries and benefits					- Star approved to the salary
Seasonal Fishery Biologist I, 2 month	hs \$	28,156			
Seasonal Fishery Biologist I, 8 month		73,565			
					Total office personnel \$ 101,721
					Total program support costs \$ 110,9
Projected FY17 observer	r progra	am expend	itures 1	to be paid fo	or with Aleutian Islands test-fishery funds \$\frac{\$281,8}{}