

Appendix C:

Effort in the Crab Fisheries:

A Comparison of Two Datasets from ADFG

William Stockhausen

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Introduction

This report calculates annual fishing effort by crab fishery as the total number of potlifts conducted for each target species (Tanner crab, snow crab, and red king crab in Bristol Bay) across the EBS. Two datasets were provided by ADFG, one starting in 1990 that separately compiled effort east and west of 166°W longitude for all three target species and the second starting in 2005 that separately compiled effort east/west of 166°W only for the directed Tanner crab fisheries. Here, effort is summed annually to total effort across the EBS for each target species. As indicated in Table 1 below, the two effort datasets are not always consistent with one another. The first dataset is consistent with effort data previously used in the Tanner crab assessment.

Fishery effort dataset 1

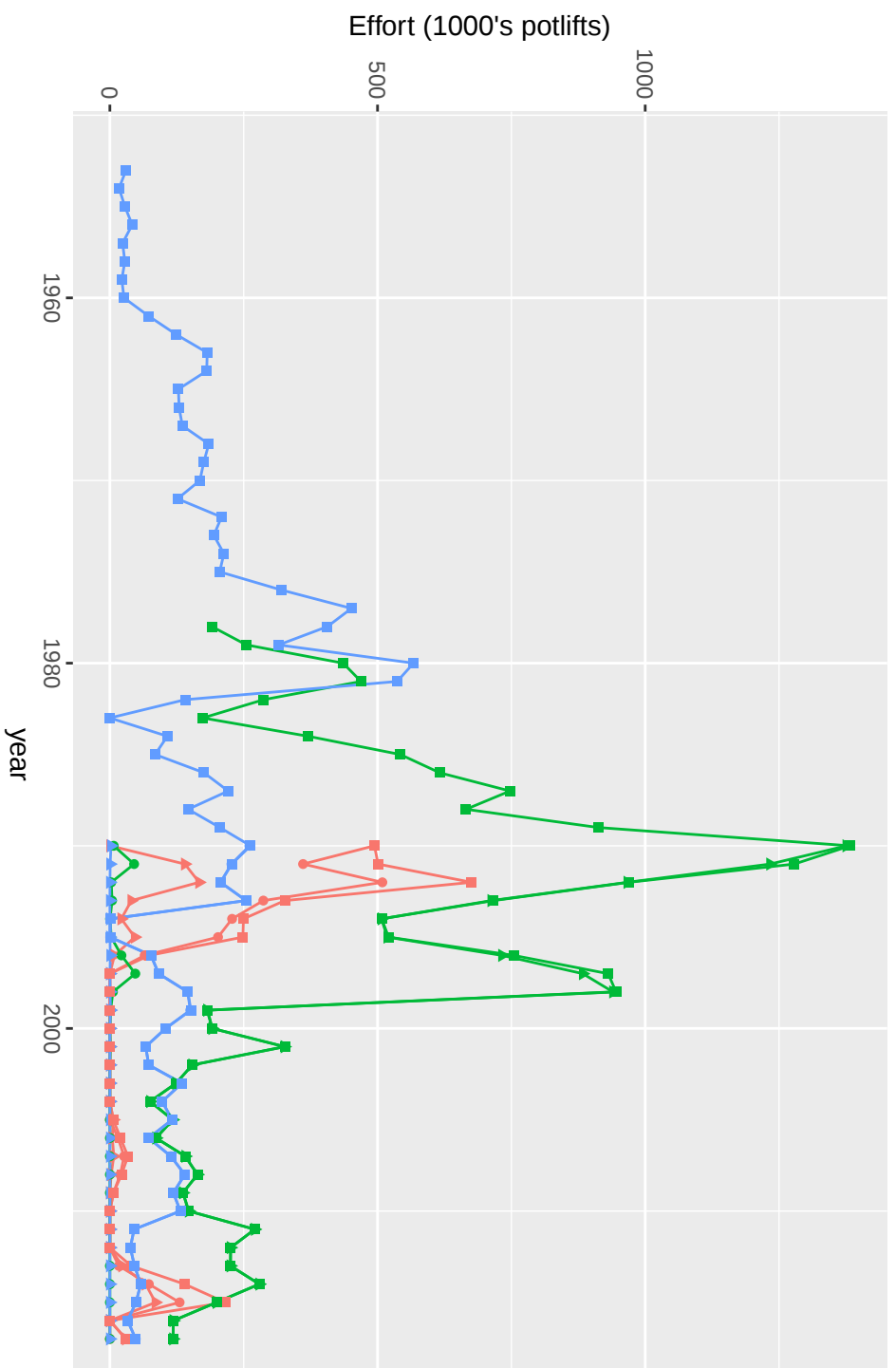


Figure 1: Fishery effort from 1990+ dataset. TCF: Tanner crab fisheries; SCF: snow crab fishery; RKF: BBRKC

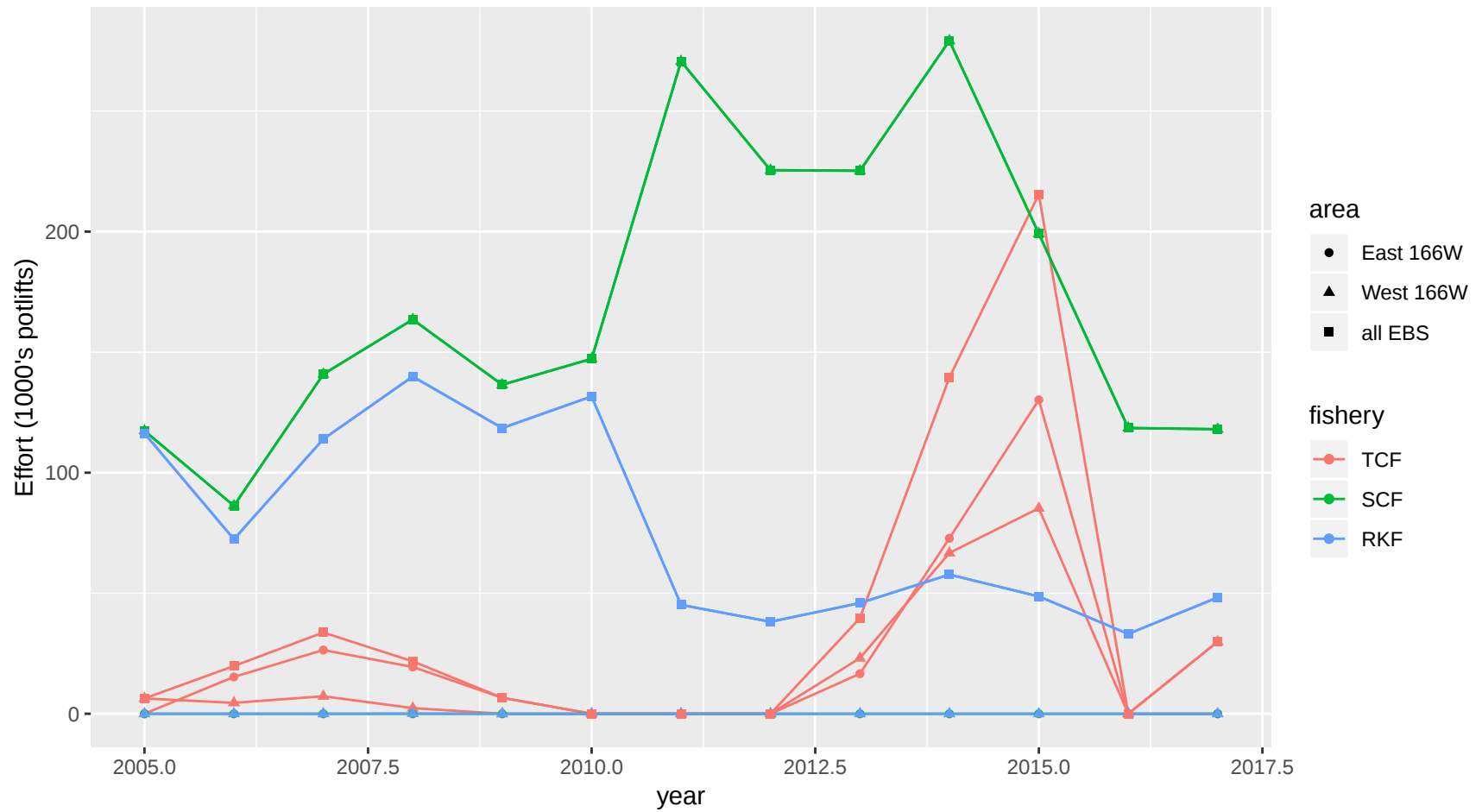


Figure 2: Fishery effort from 1990+ dataset, only 2005+ is shown. TCF: Tanner crab fisheries; SCF: snow crab fishery; RKF: BBRKC fishery.

Table 1: Total annual fishing effort (potlifts) from the 'standard' dataset. TCF: Tanner crab fisheries, SCF: snow crab fishery, RKF: BBRKC fishery.

year	TCF all EBS potlifts	SCF all EBS potlifts	RKF all EBS potlifts
1953	NA	NA	30,083
1954	NA	NA	17,122
1955	NA	NA	28,045
1956	NA	NA	41,629
1957	NA	NA	23,659
1958	NA	NA	27,932
1959	NA	NA	22,187
1960	NA	NA	26,347
1961	NA	NA	72,646
1962	NA	NA	123,643
1963	NA	NA	181,799
1964	NA	NA	180,809
1965	NA	NA	127,973
1966	NA	NA	129,306
1967	NA	NA	135,283
1968	NA	NA	184,666
1969	NA	NA	175,374
1970	NA	NA	168,059
1971	NA	NA	126,305
1972	NA	NA	208,469
1973	NA	NA	194,095
1974	NA	NA	212,915
1975	NA	NA	205,096
1976	NA	NA	321,010
1977	NA	NA	451,273
1978	NA	190,746	406,165
1979	NA	255,102	315,226
1980	NA	435,742	567,292
1981	NA	469,091	536,646
1982	NA	287,127	140,492
1983	NA	173,591	0
1984	NA	370,082	107,406
1985	NA	542,346	84,443

Table 2: Total annual fishing effort (potlifts) from the 'standard' dataset. TCF: Tanner crab fisheries, SCF: snow crab fishery, RKF: BBRKC fishery.

year	TCF			SCF			RKF		
	East 166W potlifts	West 166W potlifts	all EBS potlifts	East 166W potlifts	West 166W potlifts	all EBS potlifts	East 166W potlifts	West 166W potlifts	all EBS potlifts
1986	0	0	NA	0	0	616,113	0	0	175,753
1987	0	0	NA	0	0	747,395	0	0	220,971
1988	0	0	NA	0	0	665,242	0	0	146,179
1989	0	0	NA	0	0	912,718	0	0	205,528
1990	493,820	479	494,299	7,125	1,375,783	1,382,908	260,732	2,029	262,761
1991	360,864	140,050	500,914	45,184	1,233,318	1,278,502	227,075	480	227,555
1992	508,922	166,670	675,592	2,514	966,695	969,209	206,717	98	206,815
1993	286,620	40,100	326,720	3,979	712,545	716,524	254,389	0	254,389
1994	228,254	21,282	249,536	350	507,253	507,603	697	0	697
1995	201,988	46,454	248,442	2,318	518,367	520,685	547	0	547
1996	64,989	8,533	73,522	21,517	732,623	754,140	76,381	700	77,081
1997	0	0	0	47,421	883,373	930,794	91,085	0	91,085
1998	0	0	0	5,632	939,901	945,533	145,230	459	145,689
1999	0	0	0	1,194	181,440	182,634	150,233	979	151,212
2000	0	0	0	0	191,200	191,200	104,056	0	104,056
2001	0	0	0	801	326,176	326,977	66,947	0	66,947
2002	0	0	0	0	153,862	153,862	72,514	0	72,514
2003	0	0	0	0	123,709	123,709	134,515	0	134,515
2004	0	0	0	0	75,095	75,095	97,621	0	97,621
2005	0	6,346	6,346	0	117,375	117,375	116,320	0	116,320
2006	15,273	4,517	19,790	0	86,288	86,288	72,404	0	72,404
2007	26,441	7,268	33,709	0	140,857	140,857	113,948	0	113,948
2008	19,401	2,336	21,737	0	163,537	163,537	139,837	100	139,937
2009	6,635	0	6,635	0	136,477	136,477	118,521	0	118,521
2010	0	0	0	0	147,244	147,244	131,627	0	131,627
2011	0	0	0	0	270,602	270,602	45,166	0	45,166
2012	0	0	0	0	225,489	225,489	38,159	0	38,159
2013	16,613	23,062	39,675	0	225,245	225,245	45,927	0	45,927
2014	72,781	66,685	139,466	0	279,183	279,183	57,725	0	57,725
2015	130,221	85,244	215,465	0	199,133	199,133	48,665	0	48,665
2016	0	0	0	0	118,548	118,548	33,126	0	33,126
2017	0	29,903	29,903	0	118,034	118,034	48,242	0	48,242

Fishery effort dataset 2

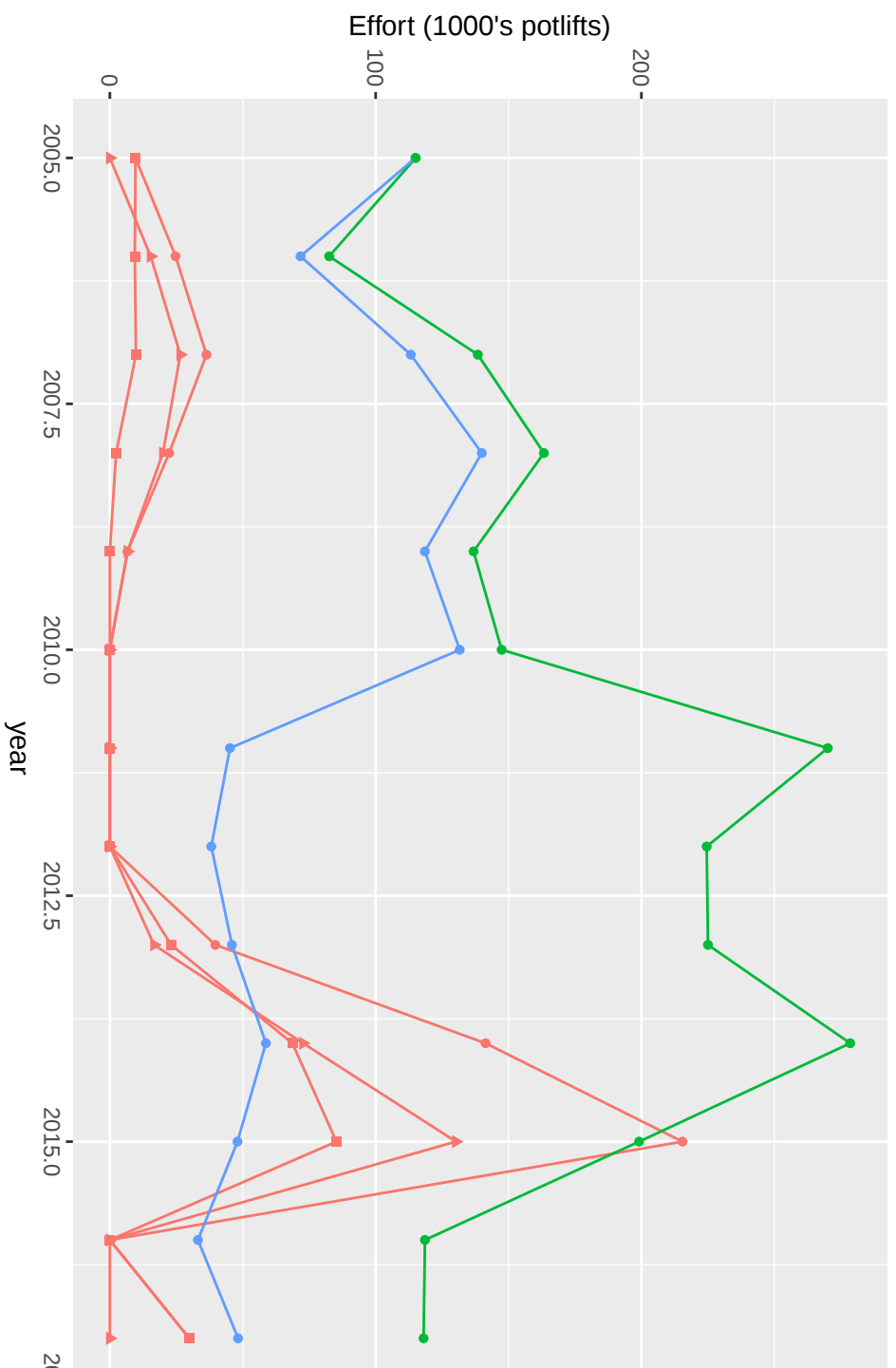


Figure 3: Fishery effort from 2005+ dataset. TCF: Tanner crab fisheries; SCF: snow crab fishery; RKF: BBKCF

A consistency check

Table 3: Comparison of total annual fishing effort (potlifts) since 2005 from two ADFG datasets.
TCF: Tanner crab fisheries, SCF: snow crab fishery, RKF: BBRKC fishery.

year	TCF			SCF			RKF		
	Effort Type 1	Effort Type 2	Difference	Effort Type 1	Effort Type 2	Difference	Effort Type 1	Effort Type 2	Difference
2005	6,346	9,653	− 3,307	117,375	115,059	2,316	116,320	114,944	1,376
2006	19,790	24,728	− 4,938	86,288	82,515	3,773	72,404	71,735	669
2007	33,709	36,323	− 2,614	140,857	138,451	2,406	113,948	113,214	734
2008	21,737	22,293	− 556	163,537	163,317	220	139,937	139,937	0
2009	6,635	6,616	19	136,477	136,838	− 361	118,521	118,521	0
2010	0	0	0	147,244	147,421	− 177	131,627	131,627	0
2011	0	0	0	270,602	270,122	480	45,166	45,166	0
2012	0	0	0	225,489	224,557	932	38,159	38,159	0
2013	39,675	39,676	− 1	225,245	225,048	197	45,927	45,927	0
2014	139,466	141,362	− 1,896	279,183	278,559	624	57,725	58,702	− 977
2015	215,465	215,465	0	199,133	199,133	0	48,665	48,008	657
2016	0	0	0	118,548	118,548	0	33,126	33,126	0
2017	29,903	29,903	0	118,034	118,034	0	48,242	48,242	0