

Draft SSC Report October 2018



BC1 BSAI Crab Specifications

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- The SSC **agreed** with all Crab Plan Team (CPT) recommendations for ABC and OFL for:
 - Bristol Bay red king crab
 - Bering Sea snow crab
 - Bering Sea Tanner crab
- The SSC **agreed** with the CPT recommendation on OFL for St. Matthew Is. blue king crab
- However, the SSC **disagreed** with the CPT on the buffer used to calculate ABC; the SSC recommended a **25% buffer** for ABC compared to 20% recommended by the CPT for St. Matthew Is blue king crab

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- SSC's rationale for 25% buffer:
 - spatial mismatch between trawl and pot surveys, distribution of recruited crab, and the commercial fishing grounds
 - historically large uncertainty in survey biomass estimates, which are in part due to the large contribution of survey catches from one hotspot station
 - lack of fit to recent declines in pot survey CPUE, and historically poor fits to the trawl survey
 - this is a data-limited stock assessment compared to the relatively data-rich EBS snow crab and EBS Tanner crab stocks, both of which use a buffer of 20% for calculations of ABC
 - Tier 4 assessments for Pribilof Is. red and blue king crab also use 25% buffer

Table 2. SSC recommendations for October 2018. Note that recommendations for stocks 7, 8 represent those final values from the SSC in February and June 2018 while 4,5,9,10 represent the October 2018 assessment. Hatched areas indicate parameters not applicable for that tier. Bold indicates where SSC recommendations differ from Crab Plan Team recommendations. Values are in thousand metric tons (kt).

Chapter	Stock	Tier	Status (a,b,c)	F _{OFL}	B _{MSY} or B _{MSYproxy}	Years ^[1] (biomass or catch)	2018/19 ^[2] MMB	2018/19 MMB / MMB _{MSY}	γ	Mortality (M)	2018/19 ^[3] OFL	2018/19 ABC	ABC Buffer
1	EBS snow crab	3	b	1.04	142.80	1982-2017 [recruitment]	123.1	0.86		0.36 (females) 0.27 (imm) 0.26 (mat males)	29.70	23.80	20%
2	BB red king crab	3	b	0.25	25.50	1984-2017 [recruitment]	20.80	0.82		0.18	5.34	4.27	20%
3	EBS Tanner crab	3	a	0.74	30.29	1982-current [recruitment]	35.95	1.19		0.32 (females) 0.23 (imm) 0.27 (mat males)	20.87	16.70	20%
4	Pribilof Islands red king crab	4	b	0.13	4.60	1991/92-2016/17	3.36	0.73	1	0.18	0.48	0.36	25%
5	Pribilof Islands blue king crab	4	c		4.11	1980/81-1984/85 & 1990/91-1997/98	0.23	0.06	1	0.18	0.00116	0.00087	25%
6	St. Matthew Island blue king crab	4	c	0.04	3.70	1978-2018	1.31	0.35	1	0.18	0.04	0.03	25%
7	Norton Sound red king crab	4	b	0.15	2.19	1980-2017	1.85	0.84	1	0.18	0.20	0.16	20%
8	AI golden king crab	3	a	EAG (0.64) WAG (0.60)	12.09	1987/88-2012/13	17.95	1.48		0.21	5.51	4.14	25%
9	Pribilof Islands golden king crab	5				See intro chapter					0.09	0.07	25%
10	Western AI red king crab	5				1995/96-2007/08					0.06	0.01	75%

^[1] For Tiers 3 and 4 where B_{MSY} or B_{MSYproxy} is estimable, the years refer to the time period over which the estimate is made. For Tier 5 stocks it is the years upon which the catch average for OFL is obtained.

^[2] MMB as projected for 2/1/2018 for Norton Sound red king crab, 2/15/2018 for AIGKC, and 2/15/2019 for other stocks.

^[3] AIGKC OFL and ABC calculated by author outside the chapter for using the Approach 2 combination of EAG and WAG and 25% buffer between OFL and ABC.