

10 Western Aleutian Islands red king crab

In accordance with the approved schedule, the Western Aleutian Islands king crab assessment is conducted triennially with the previous assessment in 2017. Therefore, a full stock assessment was conducted in 2020 with results to be applied for the 2020/21, 2021/22, and 2022/23 specifications. Additional information listed below summarizes the 2020 assessment.

Fishery information relative to OFL and ABC setting

The domestic fishery was prosecuted every season from 1960/61 to 1995/96. After 1995/96, the fishery was opened only occasionally. There was an exploratory fishery in 1998/99, three ADF&G Commissioner's Permit fisheries implemented for limited areas during 2000/01–2002/03 to allow for ADF&G-Industry surveys, and two commercial fisheries with a GHl of 227 t in 2002/03 and 2003/04 in the Petrel Bank area. The fishery has remained closed following 2003/04.

Non-retained catch of red king crab occurs in the directed red king crab fishery, the Aleutian Islands golden king crab fishery, and in groundfish fisheries. Estimated annual total fishing mortality from 1995/96 to 2019/20 averaged 30 t. The average retained catch during that period was 23 t. This fishery falls under the Crab Rationalization Program only for the area west of 179° W longitude

Data and assessment methodology

The 1960/61 to 2007/08 time series of retained catch (number and pounds of crabs), effort (vessels, landings and pot lifts), average weight and average carapace length of landed crabs, and catch-per-unit effort (number of crabs per pot lift) are available. Bycatch from crab fisheries from 1995/96 to 2019/20 and from groundfish fisheries from 1993/94 to 2019/20 are available. There is no assessment model for this stock. The standardized surveys of the Petrel Bank area conducted by ADF&G in 2006 and 2009 and the ADF&G-Industry Petrel Bank surveys conducted in 2001 were too limited in geographic scope and too infrequent for reliable estimation of abundance for the entire western Aleutian Islands area.

Stock biomass and recruitment trends

Estimates of stock biomass, recruitment trends, and current levels relative to virgin or historic levels are not available for this stock. The fishery has remained closed following 2003/04 due to apparent poor recruitment. A 2009 survey conducted by ADF&G in the Petrel Bank area encountered an ageing population of legal male crab occurring in a more limited area and at lower densities than were found in a 2006 survey and provided no expectations for recruitment. A test fishery conducted by a commercial vessel during October–December 2009 in the area west of Petrel Bank yielded only one legal male red king crab. A cooperative red king crab survey was performed by the Aleutian Islands King Crab Foundation and ADF&G in the Petrel Bank area in November 2016 averaged less than one crab per pot lift suggesting that the stock remains in poor condition.

Tier determination/Plan Team discussion and resulting OFL and ABC determination

The CPT recommends that this stock be managed under Tier 5 for the 2020/21, 2021/22, and 2022/23 seasons. The CPT concurs with the assessment author's recommendation of an OFL based on the 1995/96–2007/08 average total catch following the recommendation of the SSC in June 2010 to set the time period for computing the OFL at 1995/96–2007/08. The recommended total catch OFL for 2020/21, 2021/22, and 2022/23 is 56 t.

The CPT continues to have concerns regarding the depleted condition of this stock. Groundfish bycatch in recent years has accounted for the majority of the total catch. The CPT recommends a total catch ABC of 14 t for 2020/21, 2021/22, and 2022/23, equivalent to a 75% buffer on OFL. This approach reflects the

continued depressed status of the stock, the lack of new stock information, and the absence of industry interest in an exploratory fishery.

Status and catch specifications (t) of Western Aleutian Islands red king crab. Shaded values are new estimates or projections based on the current assessment. Other table entries are based on historical assessments and are not updated except for total and retained catch.

Fishing Year	MSST	Biomass (MMB)	TAC	Retained Catch	Total Catch	OFL	ABC
2016/17	N/A	N/A	Closed	0	<1	56	34
2017/18	N/A	N/A	Closed	0	<1	56	34
2018/19	N/A	N/A	Closed	0	<1	56	14
2019/20	N/A	N/A	Closed	0	<1	56	14
2020/21	N/A	N/A				56	14
2021/22	N/A	N/A				56	14
2022/23	N/A	N/A				56	14

Status and catch specifications (million lb) of Western Aleutian Islands red king crab. Shaded values are new estimates or projections based on the current assessment. Other table entries are based on historical assessments and are not updated except for total and retained catch.

Fishing Year	MSST	Biomass (MMB)	TAC	Retained Catch	Total Catch	OFL	ABC
2016/17	N/A	N/A	Closed	0	0.00045	0.12387	0.07432
2017/18	N/A	N/A	Closed	0	0.00075	0.12387	0.03097
2018/19	N/A	N/A	Closed	0	0.00031	0.12387	0.03097
2019/20	N/A	N/A	Closed	0	0.00164	0.12387	0.03097
2020/21	N/A	N/A				0.12387	0.03097
2021/22	N/A	N/A				0.12387	0.03097
2022/23	N/A	N/A				0.12387	0.03097