

## **9 Pribilof District Golden King Crab**

In accordance with the approved schedule, the Pribilof Islands golden king crab (PIGKC) assessment is conducted triennially with the previous assessment having taken place in 2023. Therefore, a stock assessment was conducted in 2026 with results to be applied for the 2027–2029 specifications. The PIGKC stock is managed by calendar year, rather than on a crab year, basis. Additional information listed below summarizes the 2026 assessment.

### ***Fishery information relative to OFL setting***

The PIGKC fishery began in the 1981/82 season. The directed fishery mainly occurs in Pribilof Canyon of the continental slope. Peak directed harvest was 388 t by 50 vessels during the 1983/84 season; fishery participation has since been sporadic and retained catches vary from 0 to 155 t. A guideline harvest level (GHL) was first established in 1999 at 91 t and the fishery was managed with a GHL of 68 t from 2000 to 2014, which was reduced to 59 t in 2015. Discarded (non-retained) catch has occurred in the directed golden king crab fishery, the eastern Bering Sea snow crab fishery, the Bering Sea grooved Tanner crab fishery, and in Bering Sea groundfish fisheries. Estimates of annual total fishery mortality during 2001–2025 due to crab fisheries range from 0 to 73 t. Estimates of annual fishery mortality during 1991/92–2025 due to groundfish fisheries range from negligible to 9 t.

### ***Data and assessment methodology***

There is no assessment model for this stock. Fish ticket and observer data are available, as are size-frequency data from samples of landed crabs, and pot lifts sampled during crab fisheries, and from the groundfish fisheries. Much of the directed fishery data are confidential due to low participation levels. Historical slope survey (NMFS) data are available between 2002 and 2016. A random effects model based on data from the NMFS slope survey for moving toward a Tier 4 assessment was explored during the 2023 assessment. However, there is no indication that the slope survey will be conducted with any regularity in future years. The CPT recommended that the Tier 4 model not be adopted until updated survey data become available.

The SSC (in June 2023) recommended an approach (termed ‘Tier 4/5’ in Jackson and Daly 2023, Appendix B) borrowed from the BSAI and GOA groundfish tier system (Tier 5) where the OFL is computed by applying an exploitation rate equal to  $M$  to average survey MMB from 2002–2016. This approach used survey estimates of MMB from a more recent time period (2002 – 2016) than the fishery total catch data used in Tier 5 (1993 – 1998). The SSC acknowledged potential concern that survey biomass may change over time due to climate change and would be unknown without future surveys, but still recommended this approach because golden king crab are a deep-water species that may presumably be less affected than shallow water crab species. This approach, termed groundfish Tier 5, was applied for the 2026 assessment.

### ***Stock biomass and recruitment trends***

There are no stock biomass data used in this assessment.

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

The CPT recommends this stock be managed under the groundfish Tier 5 HCR in 2027-2029. The CPT concurs with the author’s recommended OFL of 112.6 t. The OFL differs from the previous SAFE due to an error that was discovered in computing the area over which the survey estimates were calculated, which resulted in a small change to the OFL. The author-recommended ABC buffer was 25%. The CPT recommended a larger buffer of 30% based on concerns related to the lack of recent survey data, that one-third of the MMB data used are being interpolated, and to provide consistency with other stocks with more data, such as AIGKC. The resulting ABC with a buffer of 30% was 78.8 t, which is reflected in the tables below.

Total catches in 2023-2026 were below the OFL thus overfishing did not occur.

*Status and catch specifications (1000 t) for Pribilof Islands golden 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.*

<b>Year</b>	<b>MSST</b>	<b>Biomass (MMB)</b>	<b>GHL</b>	<b>Retained Catch</b>	<b>Total Catch</b>	<b>OFL</b>	<b>ABC</b>
2023				Conf.	Conf.	93.0	70.0
2024		517	59	Conf.	Conf.	113.7	85.3
2025		517	59	Conf.	Conf.	113.7	85.3
2026		517	59	Conf.	Conf.	113.7	85.3
2027		512				112.6	78.8
2028		512				112.6	78.8
2029		512				112.6	78.8

*Status and catch specifications (million lb) for Pribilof Islands golden 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.*

<b>Year</b>	<b>MSST</b>	<b>Biomass (MMB)</b>	<b>GHL</b>	<b>Retained Catch</b>	<b>Total Catch</b>	<b>OFL</b>	<b>ABC</b>
2023			0.13	Conf.	Conf.	0.20	0.14
2024			0.13	Conf.	Conf.	0.19	0.14
2025			0.13	Conf.	Conf.	0.19	0.14
2026			0.13	Conf.	Conf.	0.19	0.14
2027		1.129				0.25	0.17
2028		1.129				0.25	0.17
2029		1.129				0.25	0.17