

Status report for squid species in the Bering Sea and Aleutian Islands

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Developments in North Pacific Fishery Management Council squid management

Historically, squids in the Bering Sea and Aleutian Islands (BSAI) region have been managed as a target stock complex with annual harvest specifications. In June 2017, the North Pacific Fishery Management Council (NPFMC) took final action to amend the fishery management plans (FMPs) for the BSAI (Amendment 117) and Gulf of Alaska (GOA; Amendment 106) regions and move the squid stock complex into the Ecosystem Component category. The rationales for this decision included (1) the lack of a directed fishery for squids in the BSAI or GOA, (2) because squids are highly productive, there is little risk of overfishing in the absence of a directed fishery, and (3) current incidental fishing mortality is considered insignificant at a population level.

The FMP amendments were implemented in the Federal Register on July 6, 2018 with an effective date of August 8, 2018 (Federal Register, Volume 83, Number 130, July 6 2018, pages 31460-31470. 50 CFR 679, docket # 170714670-8561-02. <https://www.federalregister.gov/d/2018-14457>). Briefly, the amendments accomplish the following:

- Place squids in the Ecosystem Component category of the FMP
- Prohibit directed fishing for squid
- Establish a 20% maximum retention allowance (MRA)
- Retain recordkeeping and recording requirements

The new management regime will be implemented in January 2019. For 2018, the Alaska Regional Office has maintained the harvest specifications and catch accounting for squids.

Proposed squid status reporting

As of the fall 2018 assessment cycle there is no longer a need for annual catch limits for squids or a formal stock assessment and fishery evaluation (SAFE) report. However the amendments, as well as the Plan Teams and SSC, call for monitoring of squid catches and regular reporting on squid status. The existing biennial “forage species” reports appear to be the most efficient means for doing this reporting. While the forage reports are focused on the “forage fish” group established in the FMP, they also include reporting on catches of herring and shrimp. In addition each report has a comprehensive section addressing all species considered to have a major forage role in each region, including squids, and directing readers to relevant documents for more information. The squid sections currently contain links to the relevant SAFE reports, and this could be modified to include catch and status information directly in the reports. Forage species reports are published in odd years in the BSAI and even years in the GOA.

Incidental squid catches in 2017 & 2018

Incidental catches of squids in 2017 and 2018 followed similar patterns to past years. Following a period of relatively low catches that ended in 2013, squid catches have ranged from 1,286 t in 2016 to 2,363 t in 2015 (Table 1 and Figure 1). The 2017 catch was 1996 t and as of October 9 the 2018 catch was 1,715 t. The vast majority of this catch occurred in the pollock fishery (Table 1). Catches are concentrated along the shelf break, typically around canyon heads and particularly in the Bering Canyon area (Table 2 and Figure 2). Seasonal increases in squid catches typically coincide with the onset of the pollock “A” (January) and “B” (July) seasons, although the relative amount of catch in each season varies among years (Figure 3). After September few squids are caught.

Tables

Table 1. Incidental catches (t) of squids in the Bering Sea and Aleutian Islands region by target fishery, 2003-2018. Data are from the Alaska Regional Office Catch Accounting System. 2018 catch (shaded column) is partial (retrieved October 9, 2018). Small catches are given to two decimal places and are in italics.

target fishery	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018*
pollock	1,226	977	1,150	1,399	1,169	1,452	209	277	178	495	118	1,478	2,206	1,164	1,887	1,644
ATF	7	6	10	4	3	46	96	104	67	60	68	69	24	30	10	3
rockfish	12	6	7	6	8	25	18	12	37	33	60	56	66	26	31	30
other	0	0	0	0	0	0	0	0	48	76	36	42	52	22	24	6
Atka	21	7	9	9	5	12	14	16	5	23	15	31	13	16	12	6
G turbot	<i>3.46</i>	<i>6.05</i>	<i>0.42</i>	<i>0.00</i>	<i>0.00</i>	<i>4.18</i>	<i>22.66</i>	<i>0.88</i>	<i>0.00</i>	<i>0.00</i>	<i>0.06</i>	<i>0.60</i>	<i>0.00</i>	<i>3.06</i>	<i>14.04</i>	<i>22.37</i>
FHS	<i>0.15</i>	<i>3.94</i>	<i>1.13</i>	<i>0.17</i>	<i>0.16</i>	<i>0.47</i>	<i>0.03</i>	<i>0.17</i>	<i>0.11</i>	<i>0.29</i>	<i>0.86</i>	<i>0.20</i>	<i>1.26</i>	<i>16.53</i>	<i>7.86</i>	<i>0.20</i>
other flat	<i>2.89</i>	<i>1.76</i>	<i>6.05</i>	<i>0.00</i>	<i>2.09</i>	<i>0.85</i>	<i>0.45</i>	<i>0.09</i>	<i>0.00</i>	<i>0.18</i>	<i>1.16</i>	<i>0.43</i>	<i>1.09</i>	<i>5.12</i>	<i>6.46</i>	<i>0.53</i>
Pacific cod	<i>8.59</i>	<i>5.52</i>	<i>2.50</i>	<i>0.98</i>	<i>0.79</i>	<i>0.20</i>	<i>0.12</i>	<i>0.26</i>	<i>0.08</i>	<i>0.21</i>	<i>0.07</i>	<i>0.67</i>	<i>0.64</i>	<i>1.87</i>	<i>0.37</i>	<i>0.06</i>
sablefish	<i>0.01</i>	<i>0.11</i>	<i>0.12</i>	<i>0.02</i>	<i>0.10</i>	<i>0.96</i>	<i>0.11</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.07</i>	<i>0.23</i>	<i>0.00</i>	<i>1.25</i>	<i>3.23</i>	<i>2.83</i>
YFS	<i>1.40</i>	<i>0.00</i>	<i>0.01</i>	<i>0.00</i>	<i>0.01</i>	<i>0.28</i>	<i>0.01</i>	<i>0.06</i>	<i>0.24</i>	<i>0.05</i>	<i>0.43</i>	<i>0.07</i>	<i>0.25</i>	<i>0.11</i>	<i>0.00</i>	<i>0.48</i>
rock sole	<i>0.02</i>	<i>0.26</i>	<i>0.03</i>	<i>0.00</i>	<i>0.37</i>	<i>0.04</i>	<i>0.00</i>	<i>0.00</i>	<i>0.13</i>	<i>0.02</i>	<i>0.16</i>	<i>0.00</i>	<i>0.04</i>	<i>0.03</i>	<i>0.00</i>	<i>0.06</i>
halibut	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.05</i>
AK plaice	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>
total	1,282	1,014	1,186	1,418	1,188	1,542	360	410	336	688	299	1,678	2,363	1,286	1,996	1,715

Table 2. Incidental catches (t) of squids in the Bering Sea and Aleutian Islands region by NMFS statistical area, 2003-2018. Data are from the Alaska Regional Office Catch Accounting System. 2018 catch (shaded column) is partial (retrieved October 9, 2018).

area	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018*
508	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
509	2	7	5	162	13	25	1	5	3	16	5	19	9	3	8	12
512	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
513	2	2	0	1	12	9	2	0	1	2	1	0	1	1	0	1
514	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EBS 516	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
517	746	587	539	965	690	1,066	143	133	119	308	63	938	1,495	891	1,331	884
518	0	0	0	0	0	23	40	17	30	17	2	43	42	25	18	1
519	484	398	527	261	419	344	74	145	52	187	41	548	580	180	265	577
521	12	5	95	15	26	25	9	5	17	20	33	13	59	49	170	174
523	0	0	3	0	0	1	0	1	3	0	1	3	94	83	149	26
524	0	0	0	0	15	0	0	0	12	9	11	5	2	3	11	5
541	9	4	3	2	2	25	66	90	75	114	107	76	32	25	24	21
AI 542	10	7	2	6	3	6	5	4	8	6	5	13	12	9	5	6
543	17	3	12	7	8	18	20	11	16	8	30	21	40	16	14	8
total	1,282	1,014	1,186	1,418	1,188	1,542	360	410	336	688	299	1,678	2,363	1,286	1,996	1,715

Figures

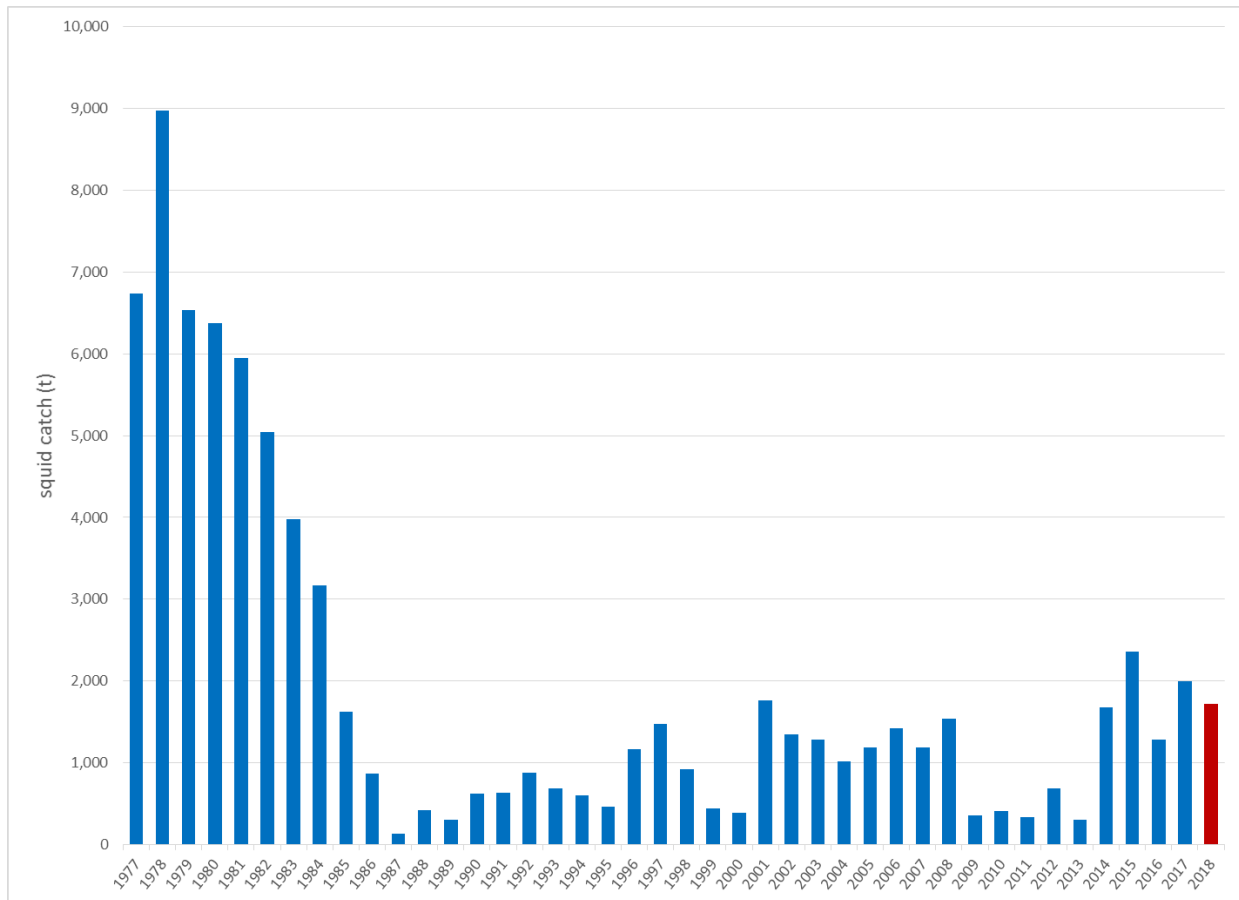


Figure 1. Catches of squids in the Bering Sea and Aleutian Islands region, 1977-2018. Data from before 2003 are from the Alaska Regional Office (AKRO) foreign blend and blend databases; data from 2003-present are from the AKRO Catch Accounting System. 2018 catch is partial (retrieved October 9, 2018) and is marked in red.

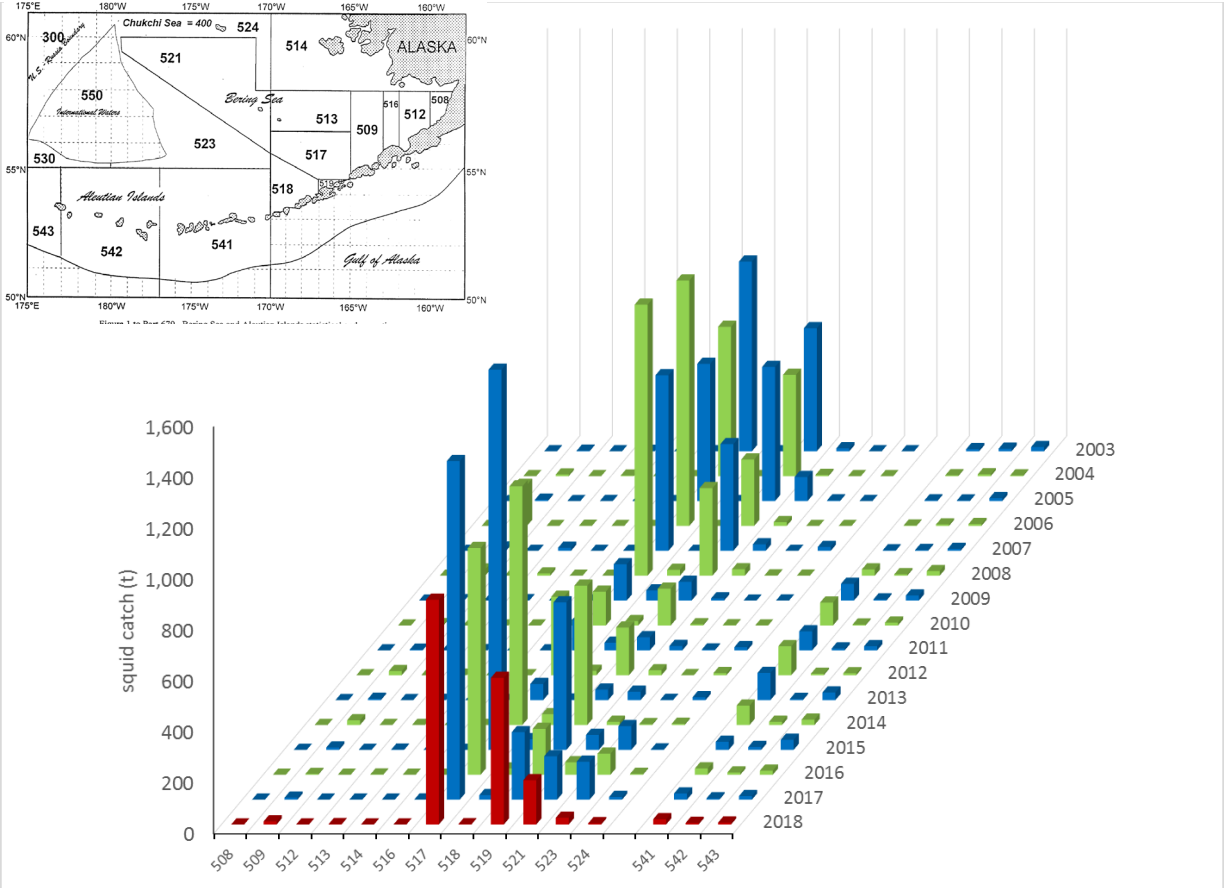


Figure 2. Incidental catches of squids in the Bering Sea and Aleutian Islands region, 2003-2018, by NMFS statistical area (see inset map). Data are from the Alaska Regional Office Catch Accounting System. 2018 catch is partial (retrieved October 9, 2018) and is marked in red.

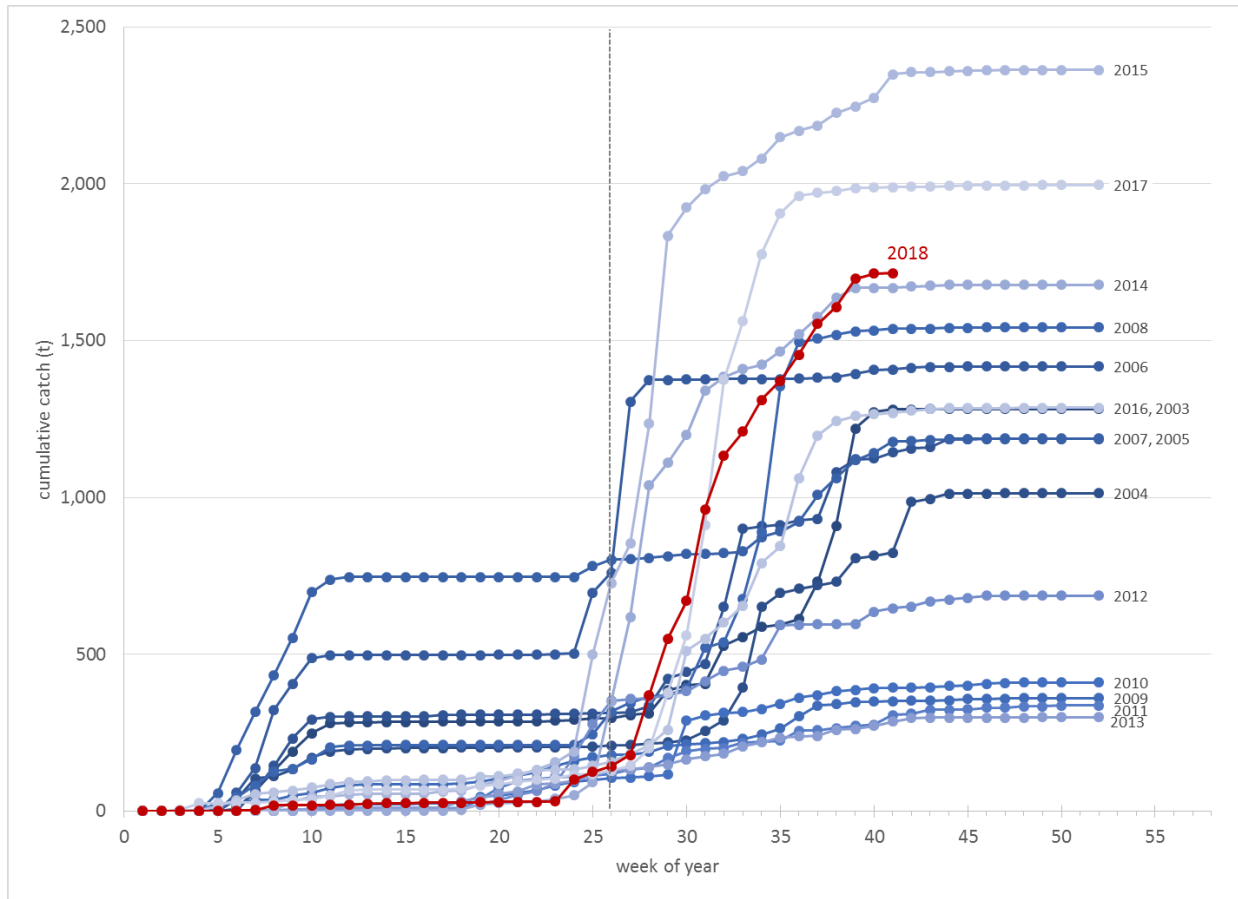


Figure 3. Cumulative weekly catches of squids in the Bering Sea and Aleutian Islands region, 2003-2018. Week 26 (year midpoint) marked with vertical dashed line. Data are from the Alaska Regional Office Catch Accounting System. 2018 catch is partial (retrieved October 9, 2018) and is marked in red.