

Catch Only Projection for Arrowtooth Flounder (*Atheresthes stomias*) in 2021

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This document provides the first catch-only projection of the 2017 update assessment of Arrowtooth flounder (*Atheresthes stomias*), with updated catch data through 2020. Updated total catches for years 2017 – 2019 were derived from GEMM reports. Catches from years prior to the end of the data used in the last update assessment were virtually unchanged, and therefore there was no need to rerun the original assessment with updated catch data. Estimated 2020 and projected 2021 and 2022 catches were provided by the Groundfish Management Team (GMT). For years 2023 and beyond, ABC catches were assumed. In the projections, the split of catches among fleets was based upon the split in the final year. Scientific Uncertainty Buffer Fractions are based upon the number of years since the last assessment was conducted in 2017, based upon a Category-2 assessment with $P^* = 0.40$. Those Buffer Fractions, along with previous and updated Catches, OFLs and Depletions and updated Biomass, Spawning output and ABCs are given in Table 1.

Table 1. Catch only projections through 2032.

Year	OFLs from 2017 Assesment Update (mt)	Updated OFL projection (mt)	Scientific Uncertainty Buffer Fraction	Updated ABC Projection (mt)	Assumed Catch in 2017 Update (mt)	Actualized Catch and Projection (mt)	Summary (age 3+) biomass (mt)	Spawning biomass (mt)	Depletion (%) from 2017 Assessment Update	Depletion (%)
2017	20,041				13,804	1,429			86.6%	86.6%
2018	19,739				13,743	1,133			87.3%	101.8%
2019	18,696				17,873	970			79.8%	109.0%
2020	15,306				14,632	443			62.2%	110.6%
2021	12,235				11,697	970			48.8%	110.9%
2022	10,016				9,575	970			40.3%	109.8%
2023	8,688	26,391	0.706	18,632	8,305	18,632	95,626	70,783	35.6%	108.2%
2024	7,981	20,459	0.693	14,178	7,630	14,178	77,879	54,933	33.1%	83.9%
2025	7,616	16,460	0.680	11,193	7,281	11,193	66,042	44,332	31.8%	67.7%
2026	7,417	13,833	0.667	9,227	7,090	9,227	58,344	37,425	31.1%	57.2%
2027	7,290	12,152	0.654	7,947	6,969	7,947	53,448	33,043	30.6%	50.5%
2028	7,196	11,107	0.642	7,131	6,880	7,131	50,397	30,346	30.3%	46.4%
2029		10,476	0.630	6,600		6,600	48,525	28,727		43.9%
2030		10,109	0.618	6,247		6,247	47,399	27,788		42.5%
2031		9,907	0.606	6,004		6,004	46,745	27,270		41.7%
2032		9,808	0.595	5,836		5,836	46,394	27,014		41.3%