

# Catch only projection for canary rockfish

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2025-07-29

This document details a catch-only projection for canary rockfish. The most recent assessment for canary rockfish was conducted in 2023. This analysis updates catches between 2023 - 2024 to the best information about observed removals as provided by the Groundfish Management Team (GMT). The removals for 2025 and 2026 were set equal to mortality projections provided by the GMT for each fleet in the model. For years 2027 and beyond, removals were set equal to the projected Annual Catch Limit (ACL) based on a category 1 time-varying  $\sigma$  of 0.5 and a P\* value of 0.45. These buffers are the same as in the previous stock assessment, with two additional years of buffers for years 2035 and 2036.

Two alternative projections are provided. In Table 2, the assumed catch in 2026 is based on the ACL from a catch-only projection through 2025 rather than the current harvest specifications. In Table 3, the assumed catch in 2026 is based on the ABC from a catch-only projection through 2025 rather than the current harvest specifications, thereby removing the effect of the 40-10 rule for 2026. An assumption of 88% attainment for 2026 catches, as estimated by the GMT, was used in both cases.

Table 1: Original 2023 projection and new catch-only projection for OFLs (mt), buffer, ABCs (mt), actual & assumed catch (mt), ACLs (mt), spawning output (millions of eggs), and stock status (fraction of unfished spawning output) given the removals. The gray shading indicates values associated with the original 2023 assessment projection. In both the original model and the new projection, the removals for years beyond the values in the ‘Actual & Assumed Removals’ columns are the ACL values estimated from that model.

Year	OFL (2023)	OFL	Buffer	ABC (2023)	ABC	Actual & Assumed Removals (2023)	Actual & Assumed Removals	ACL (2023)	ACL	Spawning Output	Stock Status (2023)	Stock Status
2023	—	—	—	—	—	863	724	—	—	2,808.87	0.351	0.351
2024	—	—	—	—	—	860	575	—	—	2,796.91	0.347	0.349
2025	647	—	—	605	—	—	504	571	—	2,783.23	0.342	0.348
2026	655	—	—	609	—	—	504	573	—	2,762.25	0.338	0.345
2027	674	696	0.926	624	644	—	—	584	608	2,730.19	0.333	0.341
2028	703	723	0.922	648	667	—	—	601	625	2,687.86	0.328	0.336
2029	737	755	0.917	676	693	—	—	623	645	2,648.60	0.323	0.331
2030	774	790	0.913	706	721	—	—	648	669	2,621.94	0.319	0.327
2031	810	824	0.909	736	749	—	—	674	694	2,615.05	0.318	0.327
2032	843	856	0.904	762	774	—	—	700	718	2,629.97	0.320	0.328
2033	873	884	0.900	785	795	—	—	726	743	2,663.80	0.325	0.333
2034	898	908	0.896	804	813	—	—	749	765	2,711.33	0.331	0.339
2035	—	927	0.892	—	827	—	—	—	785	2,767.34	—	0.346
2036	—	944	0.887	—	837	—	—	—	801	2,827.63	—	0.353

Table 2: Original 2023 projection and alternative catch-only projection in which the 2026 assumed catches are set to 88% of the ACL ( $522 = 0.88 * 593$ ) rather than fixed at the values calculated by the GMT based on the current harvest specifications. See caption of table above for additional details.

Year	OFL (2023)	OFL	Buffer	ABC (2023)	ABC	Actual & Assumed Removals (2023)	Actual & Assumed Removals	ACL (2023)	ACL	Spawning Output	Stock Status (2023)	Stock Status
2023	—	—	—	—	—	863	724	—	—	2,808.87	0.351	0.351
2024	—	—	—	—	—	860	575	—	—	2,796.91	0.347	0.349
2025	647	—	—	605	—	—	504	571	—	2,783.23	0.342	0.348
2026	655	673	0.930	609	626	—	522	573	593	2,762.25	0.338	0.345
2027	674	695	0.926	624	644	—	—	584	607	2,728.38	0.333	0.341
2028	703	722	0.922	648	666	—	—	601	624	2,686.01	0.328	0.335
2029	737	755	0.917	676	692	—	—	623	645	2,646.71	0.323	0.330
2030	774	790	0.913	706	721	—	—	648	668	2,620.03	0.319	0.327
2031	810	824	0.909	736	749	—	—	674	693	2,613.12	0.318	0.326
2032	843	855	0.904	762	773	—	—	700	718	2,628.04	0.320	0.328
2033	873	883	0.900	785	795	—	—	726	742	2,661.89	0.325	0.332
2034	898	907	0.896	804	813	—	—	749	764	2,709.47	0.331	0.338
2035	—	927	0.892	—	827	—	—	—	784	2,765.57	—	0.345
2036	—	943	0.887	—	837	—	—	—	800	2,825.96	—	0.353

Table 3: Original 2023 projection and alternative catch-only projection in which the 2026 assumed catches are set to 88% of the ABC ( $551 = 0.88 * 626$ ) rather than fixed at the values calculated by the GMT based on the current harvest specifications. See caption of table above for additional details.

Year	OFL (2023)	OFL	Buffer	ABC (2023)	ABC	Actual & Assumed Removals (2023)	Actual & Assumed Removals	ACL (2023)	ACL	Spawning Output	Stock Status (2023)	Stock Status
2023	—	—	—	—	—	863	724	—	—	2,808.87	0.351	0.351
2024	—	—	—	—	—	860	575	—	—	2,796.91	0.347	0.349
2025	647	—	—	605	—	—	504	571	—	2,783.23	0.342	0.348
2026	655	673	0.930	609	626	—	551	573	626	2,762.25	0.338	0.345
2027	674	694	0.926	624	643	—	—	584	606	2,725.46	0.333	0.340
2028	703	721	0.922	648	665	—	—	601	623	2,683.02	0.328	0.335
2029	737	754	0.917	676	691	—	—	623	644	2,643.67	0.323	0.330
2030	774	789	0.913	706	720	—	—	648	667	2,616.94	0.319	0.327
2031	810	823	0.909	736	748	—	—	674	692	2,610.00	0.318	0.326
2032	843	855	0.904	762	773	—	—	700	717	2,624.92	0.320	0.328
2033	873	883	0.900	785	795	—	—	726	741	2,658.81	0.325	0.332
2034	898	907	0.896	804	813	—	—	749	764	2,706.48	0.331	0.338
2035	—	927	0.892	—	827	—	—	—	784	2,762.72	—	0.345
2036	—	943	0.887	—	836	—	—	—	800	2,823.27	—	0.353