

ERRATA REGARDING THE REVISED PACIFIC SARDINE REBUILDING PLAN ANALYSIS

In preparation for the November 2024 Pacific Fishery Management Council (Council) meeting, Council staff discovered an error in [Agenda Item J.2, Attachment 1](#) (Attachment 1) that may impact the Council’s consideration of a final preferred alternative.

Explanation of Error

Attachment 1 relied on data from the previous analysis for Amendment 18 and PacFIN to report annual landings of Pacific sardine. Landings data from prior to 2019 in the [original Amendment 18 analysis](#) were provided by the states. In Tables 2 and 4 of Attachment 1, landings data were reported from PacFIN, mistakenly by *CALENDAR YEAR* rather than *FISHING YEAR*. In Table 1 of Attachment 1, landings were correctly reported from PacFIN, and therefore differed from those reported in Tables 2 and 4. These discrepancies in Tables 2 and 4 led to inaccuracies in reporting minimum and maximum landings in given fishing years throughout the document, particularly in Sections 2.5, 3.2.2, and 3.4.2, as Tables 2 and 4 were utilized as the basis of the analysis. In order to provide the best estimate of mortality, Tables 1, 2, and 4 have been updated to reflect accurate annual Pacific sardine landings by fishing year based on the 2024 benchmark assessment (Kuriyama, Akselrud, Zwolinski & Hill 2024) for the 2015-2016 season through the 2018-2019 season and PacFIN reported landings for the 2019-2020 season through the 2023-2024 season. Table 2a is new from Attachment 1 and provides the difference between the corrected values and those in Attachment 1. PacFIN landings do not include live bait landings prior to 2019, hence the split in data sources. PacFIN data was pulled to report in this errata on November 7th, 2024, and any minor updates have been added to Table 1.

Additional note: The caption for Table 5 in Agenda Item J.2, Attachment 1, Appendix A should state that the table compares Alternatives 3 and 6, not Alternative 3 and 5. The values and headers in the table are correct.

Updated Landings Metrics

Fishing Years 2015-2016 through 2023-2024

Minimum – 1,619 mt

Maximum – 2,498 mt

Average – 1,956 mt

Impact to the Presented Analysis

Alternative 4

Alternative 4, the constant catch alternative of 2,200 mt, was analyzed under the original rebuilding plan as a more “realistic” projection of what catches would be under status quo (Alternative 1/No Action in Attachment 1). With the updated landings information presented in this report, the hindsight effects of this alternative are smaller in scale than described in Attachment 1. The average landings since the closure of the directed fishery, from 2015 to 2024 (1,956 mt) would be covered by the proposed Alternative. However, there would still be two fishing years (2018-2019

and 2020-2021) where landings would have exceeded the proposed annual catch limit (ACL) under Alternative 4. Therefore, the conclusions surrounding Alternative 4 and its potential impact to the fishing industry remain accurate in terms of rationale but have potentially changed in scale as discussed further below.

Alternative 5

Alternative 5, the modified constant catch alternative of 3,200 mt, was built upon the premise that a value of 2,200 mt (Alternative 4) would not account for maximum recent annual landings in the original analysis (2,865 mt, 2020-2021 fishing year) and therefore a higher constant catch value of 3,200 mt would be required to meet the needs of fishing communities while rebuilding in the necessary timeframe (Tmax). Given the information presented in this report, the current Alternative 5 constant catch value provides a larger buffer than originally described as the corrected maximum annual landings value is 2,498 mt (2020-2021 fishing year) — about 700 mt less than the proposed 3,200 mt ACL. Although Alternative 5 still is expected to rebuild the stock in the statutory timeframe, the Council could consider a modified constant catch value lower than 3,200 mt, but higher than Alternative 4 (2,200 mt). Such an alternative could maintain some of the benefits described under Alternative 5, allowing for an interannual variation in landings around the recent average. If the Council were to select a value that covers the maximum catch with a buffer as proposed by Alternative 5 (such as 2,600 or 2,700 mt), impacts of such an alternative on target species and rebuilding time would likely resemble those expected under Alternative 4. Impacts to the fishing industry relative to Attachment 1 are discussed in the next section.

Fishing Industry Impacts

Section 3.4.2 of Attachment 1 describes impacts to the fishing industry under the implementation of each rebuilding strategy. Based on the corrected landings data, socioeconomic impacts to the industry expected under Alternative 4 as described in Attachment 1 are likely smaller in scale. Given that the maximum landings in a given fishing year were 2,498 mt, not 2,865 mt (as described in Attachment 1), a 2,200 mt constant catch ACL would not be as restrictive as previously believed. However, actual landings, as corrected, still oscillated above 2,200 mt, with landings in the 2018-2019 and 2020-2021 fishing years exceeding 2,200 mt (See Table 4). The expected impacts analyzed for Alternative 5, particularly those on the fishing industry, therefore may be different than initially described based on the corrected information. A modified constant catch alternative would likely still incur some socio-economic benefits as described under Alternative 5 in Attachment 1, but potentially on a different scale. The general impacts to the fishing industry under Alternative 6, as described in Attachment 1, still hold based on corrected data. Proposed ACLs under Alternative 3 would have still restricted catch in all completed fishing years since the 2019-2020 fishing year (see Table 4). It remains accurate that actual landings only exceeded the ACL proposed under Alternative 6 in the 2020-2021 fishing year, but by a smaller amount (see Table 4).

In summary, the Council may consider whether to alter the modified constant catch ACL as described under Alternative 5. The Council should also consider the corrected landings data in order to understand the expected socioeconomic impacts of Alternatives 4-6.

Table 1. Landings vs. ABC since implementation of Amendment 18. Includes comparison of incorrectly reported landings in Attachment 1 and corrected landings, per this errata. Corrected data retrieved from the PacFIN data portal reflects updates made to landings data as of November 7, 2024. Values reported in Table 1 differed from those reported in Table 2 in Attachment 1.

Fishing Year	ABC (mt)	OFL (mt)	ACL (mt)	Corrected Landings (mt)	Landings Reported in Attachment 1 (mt)	Difference in Reporting (mt)
2019-2020	4,514	5,816	4,514	2,085	2,085	0
2020-2021	4,288	5,525	4,288	2,498	2,498	0
2021-2022*	3,329	5,525	3,329	1,772	1,769	3
2022-2023	4,274	5,506	4,274	1,619	1,617	2
2023-2024	3,953	5,506	3,600	1,774	1,774	0

* = first year Amendment 18 rebuilding plan was implemented

Table 2. Annual Pacific sardine harvest specifications and landings from fishing years following closure of the primary directed fishery. Landings information is sourced from the Benchmark Stock Assessment for the 2014-2015 through 2018-2019 fishing year and the PacFIN data portal for the 2019-2020 through 2023-2024 fishing years. All weight values in mt.

Fishing Year	Biomass	OFL	ABC	Actual ACL	ACT	(Corrected) Landings	Proposed ACL under Alt 3	Proposed ACL under Alt 4	Proposed ACL under new Alt 5	Proposed ACL under new Alt 6
2014-15	369,506	39,210	35,792	23,293 28,646 [^]	23,293	23,293	18,475	2,200	23,293 28,646 [^]	23,293 28,646 [^]
2015-16	96,688	13,227	12,074	7,000	4,000	1,919	4,834	2,200	3,200	4,834
2016-17	106,137	23,085	19,236	8,000	5,000	1,885	5,307	2,200	3,200	5,307
2017-18	86,586	16,957	15,479	8,000	-	1,775	4,329	2,200	3,200	4,329
2018-19	52,065	11,324	9,436	7,000	-	2,278	2,603	2,200	3,200	2,603
2019-20	27,547	5,816	4,514	4,514	4,000	2,085	1,377	2,200	3,200	2,200
2020-21	28,276	5,525	4,288	4,288	4,000	2,498	1,414	2,200	3,200	2,200
2021-22*	28,276	5,525	3,329	3,329	3,000	1,772	1,414	2,200	3,200	2,200
2022-23*	27,369	5,506	4,274	4,274	3,800	1,619	1,368	2,200	3,200	2,200
2023-24*	27,369	5,506	3,953	3,953	3,600	1,774	1,368	2,200	3,200	2,200
2024-25*+	58,614	5,506	3,953	3,953	3,600	-	2,931	2,200	3,200	2,931

[^]Harvest guideline for primary directed fishery; * Year/specifications after Amendment 18 rebuilding plan implemented; + Interim rule

Table 2a: Differences in reported Pacific sardine landings between calendar year (incorrectly reported in Attachment 1) and corrected landings by fishing year

Fishing Year	Corrected Fishing Year Landings (mt)	Incorrectly Reported Calendar Year Landings in Attachment 1 (mt)	Difference in Reporting (mt)
2014-15	23,293	19,440	3,853
2015-16	1,919	2,329	-410
2016-17	1,885	2,217	-332
2017-18	1,775	2,190	-415
2018-19	2,278	2,505	-227
2019-20	2,085	2,063	22
2020-21	2,498	2,865	-367
2021-22*	1,772	1,750	22
2022-23*	1,619	1,777	-158
2023-24*	1,774	1,713	61

* Year/specifications after Amendment 18 rebuilding plan implemented

Table 4. Recent ACL values compared with ACL values for Alternatives 3-6. Shaded cells show where actual landings would have exceeded the ACL under that alternative. All ACL and landings values in mt. See Table 2a above for discrepancies in reporting.

Fishing Year	Biomass (mt)	Status Quo/Actual ACL	Alt 3 ACL	Alt 4 ACL	Alt 5 ACL	Alt 6 ACL	Actual Landings
2015-2016	96,688	8,000	4,834	2,200	3,200	4,834	1,919
2016-2017	106,137	8,000	5,307	2,200	3,200	5,307	1,885
2017-2018	86,568	8,000	4,328	2,200	3,200	4,329	1,775
2018-2019	52,065	7,000	2,603	2,200	3,200	2,603	2,278
2019-2020	27,547	4,514	1,377	2,200	3,200	2,200	2,085
2020-2021	28,276	4,288	1,414	2,200	3,200	2,200	2,498
2021-2022	28,276	3,329	1,414	2,200	3,200	2,200	1,772
2022-2023	27,369	4,274	1,368	2,200	3,200	2,200	1,619
2023-2024	27,369	3,953	1,368	2,200	3,200	2,200	1,774
2024-2025	58,614	3,953	2931	2,200	3,200	2,931	-