

Preliminary NMFS recommendations for 2027 groundfish stock assessments

This report summarizes preliminary National Marine Fisheries Service (NMFS) priorities for 2027 groundfish stock assessments based on rankings from the stock assessment prioritization tool (Table 1), current understanding of ageing and assessment capacity through 2027, and previously stated Pacific Fishery Management Council (Council) priorities for 2027 assessments. Recommendations also reflect ongoing work to balance tradeoffs among the scope and scale of ageing and assessment work with the need to achieve target assessment frequencies to provide timely science advice and meet NMFS mandates. While the stock assessment prioritization tool's rankings provide a useful starting point for the Council to provide guidance to NMFS on assessment priorities for 2027, it is not prescriptive. The preliminary recommended species below are listed in rough priority order for each assessment type. The total number of preliminary recommended assessments (8 benchmark and 2 update assessments) exceeds the anticipated ageing and assessment staff capacity for 2027 assessments (4-6 benchmark and 0-2 update assessments, depending on the species prioritized), but it provides a focused starting point for Council discussion. An updated version of this report will incorporate guidance from Council discussions at the March meeting and be provided for the June Council meeting.

Species recommended for benchmark assessments

Lingcod (#5)

The Science Centers conducted benchmark assessments (2-area models) for lingcod in 2021. Lingcod ranks highly in the 2026 stock assessment prioritization tool because of its high commercial, tribal, and recreational importance. Its target assessment frequency is 4 years, meaning it was due for a new assessment in 2025. In 2024, the Council preliminarily recommended lingcod for assessment in 2027. In 2021, the Scientific and Statistical Committee (SSC) recommended the next assessments for lingcod be benchmarks due to tension among data sources observed in both area models and large differences in estimated productivity parameters in the two areas.

Redbanded rockfish (#8)

Redbanded rockfish has never been assessed. It was initially prioritized for assessment in 2025 but the workload associated with ageing prevented it from moving forward. The high ranking in the assessment prioritization tool is driven by its constituent demand and stock status scores, which reflects its projected high projected attainment and relatively high Productivity Susceptibility Analysis (PSA) score (Cope et al. 2011). NWFSC ageing lab staff have trained on

redbanded in anticipation of a likely upcoming assessment and we expect sufficient ageing work could be conducted to support a 2027 assessment.

Greenspotted rockfish (#3)

Greenspotted rockfish was last assessed in 2011 with a 2-area model in California and Category 3 assessments for Washington and Oregon. Its high ranking in the stock assessment prioritization tool is driven by the age of the last assessment (the target assessment frequency is 8 years) and the stock status score. Substantial ageing work is needed for an age-based assessment, but a length-based approach may be appropriate.

Yellowtail rockfish (#20)

Yellowtail rockfish north of 40° 10' N. latitude was assessed in a 2025 benchmark assessment, however yellowtail rockfish south was not prioritized for assessment at that time. In 2017, benchmark assessments for the northern and southern areas were conducted, however the southern model was not sufficiently robust and was withdrawn for consideration by the stock assessment team. Therefore, yellowtail rockfish south has never been assessed. Because the stock assessment prioritization tool ranks species, not stocks, the rank of 20 for the species underrepresents the need to assess the southern area. The SSC has recommended that when a species is prioritized for assessment, all areas should be assessed, so it would be prudent to assess the southern area as soon as practical. In the 2024 prioritization, it was noted commercial age data collected after 2004 would be needed to provide the model information about the current population age-structure and annual recruitment in recent years. If those data remain limited, a benchmark assessment would be more uncertain than if recent age data were available.

Pacific Spiny Dogfish (#44)

Northwest Fisheries Science Center (NWFSC) conducted a benchmark assessment of Pacific spiny dogfish in 2021. It is not ranked highly in the prioritization tool but the Council preliminarily recommended Pacific spiny dogfish for assessment in 2027 and as a result NWFSC and Washington Department of Fish and Wildlife have been investing ageing resources into this species. Pacific spiny dogfish has a high ecosystem score because of its role as a predator of managed species. The target assessment frequency for Pacific spiny dogfish is 10 years. New research suggests that abundance trends from fishery independent surveys across the Northeast Pacific (U.S. West Coast, British Columbia, and Alaska) are all declining (Davidson et al. 2026).

Widow rockfish (#12)

Widow rockfish was assessed in 2025. The assessment began as an update assessment, but when the SSC referred it to supplemental review, many additional model explorations and changes were undertaken. The current assessment is now much closer to a benchmark assessment. Widow rockfish is ranked highly in the assessment prioritization due to its high commercial importance and high projected attainment. The target assessment frequency for widow rockfish is

6 years, and based upon the 2025 assessment, it would not be due for assessment until 2031. However, in November 2025, the Council requested widow rockfish be assessed again in 2027. Due to the intensive stock assessment work and reviews conducted in 2025-2026, we anticipate a benchmark in 2027 would look very similar to the 2025-2026 model.

However, two new potential data sources could be investigated. NWFSC researchers are exploring new methods for developing fishery dependent catch-per-unit effort (CPUE) indices that will be reviewed through the Groundfish Assessment Methodology Review process in fall 2026. Also, a new effort is underway to extract and analyze environmental DNA (eDNA, residual genetic material sampled from water) for widow rockfish collected from the U.S.-Canada Integrated Ecosystem and Acoustic Trawl Survey in 2019, 2021, 2023 and the Integrated West Coast Pelagic Survey in 2025. That work could be ready in time for a 2027 assessment.

Bocaccio (#2)

Southwest Fisheries Science Center (SWFSC) led an update assessment for bocaccio in 2017. The last benchmark assessment was in 2015. Bocaccio has a high ranking from the prioritization tool driven by its commercial importance and the assessment frequency score (the target assessment frequency is 4 years), although catches have been well below Annual Catch Limits (ACLs, as seen in the 2025 catch-only projection). Bocaccio otoliths are very difficult to age. Preparing for an assessment that relied on ages would require new training and efforts to cross-read previously collected ages, which would come at a cost to investing in ageing work for other species.

Species recommended for update assessments

Petrable sole (#1)

NWFSC conducted a benchmark assessment for petrale sole in 2023. Petrale sole is a commercially important species with high projected attainment of 2027-28 ACLs (near 100 percent) based on recent average catches. An update assessment is not expected to differ greatly from the previous benchmark assessment but would allow for updated harvest specifications and reset the time-varying sigma. The target assessment frequency for petrale sole is 4 years. Conducting an update assessment in 2027 would achieve that target assessment frequency.

Vermilion and sunset rockfishes (#6)

Vermilion and sunset rockfishes were last assessed in a 2021 benchmark. Their high ranking in the stock assessment prioritization is driven by their commercial importance and high average Overfishing Limit (OFL) attainment rates. The target assessment frequency for these species is 6 years so they are due for an assessment in 2027. The 2021 benchmark was a 4-area model and relies on multiple indices from recreational fisheries, which makes an update for these species require more assessment capacity compared with petrale sole.

Developing approaches for ageing assessments

There are 15 species for which assessments are more than 10 years old (Table 2). Maintaining up to date assessments is important for providing timely advice to the harvest specifications process and because scientific uncertainty increases with the age of the assessment, which can lead to increased risks of overfishing. Long intervals between assessments are also more likely to result in more substantial changes in the perceived stock productivity and status from one assessment to the next. In cases where attainment is low, simpler assessment methods that would require less ageing, assessment, and review resources may be an efficient way to update science advice. In these cases, the increased scientific uncertainty associated with these methods (Category 2 and Category 3) is less likely to constrain fishing opportunities. For example, greenstriped rockfish, longspine thornyhead, and splitnose rockfish are species with low attainment but likely would not have an informative index of abundance. Alternatively, species like English sole could have informative indices but may not be the highest priority for intensive ageing, assessment, and/or review resources due to their low OFL attainment. As the Terms of Reference for Stock Assessments is being revisited in 2026, NMFS plans to investigate all available options for updating advice for some of these stocks and may explore alternative assessment methods if needed.

Moving towards more regularly scheduled assessments

NMFS is not providing recommendations for assessments for 2029 at this time. As part of an ongoing effort to improve and right-size the NWFSC and SWFSC groundfish stock assessment enterprise and data collection efforts, we are exploring establishing a more regular and predictable schedule of assessments that would allow NMFS, the Council, and its partners to plan farther out than 2-4 years. To that end, we plan to bring a draft schedule in June that would include a draft 10 year outlook. Some agility in scheduling assessments will likely be needed in every cycle, but having some or all of the highest priority stocks on a more regular schedule would provide more predictability in data collection, ageing, and staffing plans for all involved. A more predictable assessment schedule could increase the focus and efficiency of advisory body and Council discussions around groundfish assessment priorities.

References

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Table 1. Overall assessment priority rankings for the top 25 species, the year of the last assessment, the total score, and the score from each of the 10 factors. Nearshore species that include stock areas still under consideration for inclusion or removal from the groundfish Fishery Management Plan are denoted in italics.

Species	Rank	Last Assess	Total Score	Comm Imp	Rec Imp	Tribal Imp	Const Dem	Rebuild	Stock Status	Fish Mort	Eco Imp	New Info	Asses Freq
Petrale sole	1	2023	5.00	2.10	0.39	0.50	0.73	0	0.34	0.40	0.04	0.36	0.14
Bocaccio	2	2017	5.00	1.61	0.73	0.24	0.18	0	0.34	0.24	0.05	0.36	1.24
Greenspotted rockfish	3	2011	4.92	1.12	0.57	0.08	0.18	0	0.69	0.40	0.00	0.36	1.53
Canary rockfish	4	2023	4.71	1.56	0.74	0.39	0.73	0	0.69	0.24	0.00	0.22	0.14
Lingcod	5	2021	4.60	1.84	0.90	0.45	0.18	0	0.34	0.16	0.17	0.29	0.27
Vermilion/Sunset rockfish	6	2021	4.57	1.62	0.79	0.00	0.73	0	0.34	0.72	0.01	0.36	0.00
Sablefish	7	2025	4.55	1.86	0.24	0.49	0.37	0	0.57	0.40	0.48	0.00	0.14
Redbanded rockfish	8	-	4.33	1.11	0.00	0.37	0.73	0	0.80	0.40	0.00	0.36	0.56
<i>Black rockfish</i>	9	2023	4.30	1.59	0.88	0.21	0.55	0	0.34	0.40	0.05	0.29	0.00
Greenstriped rockfish	10	2009	4.18	0.72	0.34	0.23	0.55	0	0.11	0.08	0.00	0.36	1.80
Longspine thornyhead	11	2013	4.02	1.20	0.00	0.25	0.37	0	0.23	0.08	0.01	0.36	1.53
Widow rockfish	12	2025	3.98	1.67	0.24	0.23	0.92	0	0.34	0.56	0.03	0.00	0.00
Stripetail rockfish	13	-	3.85	0.54	0.00	0.00	1.10	0	0.57	0.72	0.00	0.36	0.56
Bank rockfish	14	-	3.81	1.15	0.37	0.14	0.37	0	0.80	0.08	0.00	0.36	0.56
California scorpionfish	15	2017	3.79	0.98	0.72	0.00	0.18	0	0.34	0.24	0.02	0.07	1.24
Shortspine thornyhead	16	2023	3.77	1.81	0.00	0.39	0.37	0	0.46	0.16	0.10	0.36	0.14
<i>Quillback rockfish</i>	17	2021	3.76	0.78	0.39	0.23	1.10	0	0.46	0.80	0.00	0.00	0.00
<i>Blue/Deacon rockfish</i>	18	2017	3.75	1.08	0.65	0.06	0.00	0	0.46	0.24	0.00	0.29	0.97
Starry rockfish	19	-	3.68	0.92	0.53	0.00	0.18	0	0.80	0.40	0.00	0.29	0.56
Yellowtail rockfish	20	2025	3.65	1.41	0.55	0.35	0.55	0	0.23	0.24	0.10	0.07	0.14
Longnose skate	21	2019	3.62	1.52	0.01	0.34	0.18	0	0.34	0.24	0.07	0.36	0.56
Pacific sanddab	22	-	3.44	1.21	0.48	0.05	0.37	0	0.34	0.08	0.01	0.36	0.56

Species	Rank	Last Assess	Total Score	Comm Imp	Rec Imp	Tribal Imp	Const Dem	Reb uild	Stock Status	Fish Mort	Eco Imp	New Info	Asses Freq
English sole	23	2013	3.38	1.04	0.00	0.06	0.18	0	0.11	0.08	0.01	0.36	1.53
Splitnose rockfish	24	2009	3.33	0.83	0.00	0.07	0.00	0	0.23	0.16	0.01	0.50	1.53
<i>China rockfish</i>	25	2015	3.26	1.23	0.33	0.06	0.00	0	0.34	0.24	0.00	0.07	0.97

Table 2. Species with assessments that will be 10 more years old as of 2027. The year of the most recent assessment, assessment type, the overall rank in the stock assessment prioritization, and the average attainment relative to the average species-specific OFL or OFL contribution to the management complex between 2020-2024. Nearshore species that include stock areas still under consideration for inclusion or removal from the groundfish Fishery Management Plan are denoted in italics.

Species	Year	Assessment	Rank	Average OFL Attainment %
Greenstriped rockfish	2009	benchmark	10	5%
Splitnose rockfish	2009	benchmark	24	20%
Greenspotted rockfish	2011	benchmark	3	52%
Aurora rockfish	2013	benchmark	29	27%
English sole	2013	data-moderate	23	2%
Longspine thornyhead	2013	benchmark	11	2%
<i>China rockfish</i>	<i>2015</i>	<i>benchmark</i>	<i>25</i>	<i>42%</i>
Arrowtooth flounder	2017	update	28	5%
Blackgill rockfish	2017	update	38	24%
<i>Blue/Deacon rockfish</i>	<i>2017</i>	<i>benchmark</i>	<i>18</i>	<i>39%</i>
Bocaccio	2017	update	2	29%
California scorpionfish	2017	benchmark	15	40%
Darkblotched rockfish	2017	update	30	38%
Pacific ocean perch	2017	benchmark	36	9%