Groundfish Assessment Prioritization to Inform the Selection of Species for Assessment in 2025 and Additional Considerations

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Groundfish Assessment Prioritization Tool

A new webpage, pfmc-groundfish-assessment-prioritization, was developed to present the 2024 overall scoring by species and each factor. The webpage replaces the Excel workbook provided in previous cycles. The webpage allows the user to navigate between the overall and individual rankings by each of the ten factors and access the methodology information.

Potential Species for 2025 Assessments

At the March Pacific Fishery Management Council (the Council) meeting, a preliminary list of species for assessment in 2025 and 2027 was adopted (Agenda Item F.2, March 2024). The list of species considered for 2025 and potential assessment type are provided in Table 1. The number of preliminary species identified by the Council in March intentionally exceeded the anticipated assessment capacity in 2025 providing flexibility in final selection at this meeting. In 2025, planning for three Stock Assessment Review (STAR) Panels appears to align best with the current assessment and ageing capacity. The Scientific and Statistical Committee (SSC) generally recommends a maximum of two model areas (i.e., two coastwide species or two areas for a single

species), in most cases, be reviewed within a single STAR panel. Combining this with assessment capacity, selecting six model areas for benchmark or data-moderate assessment would align with three STAR panels.

All species identified for potential assessment in 2025 have existing category 1 or 2 assessments except for yellowtail rockfish south of 40° 10′ N. lat. (Table 1). The assessment type in Table 1 indicates the types of data that could be included, the level of review, and whether data and model assumptions could be evaluated. A benchmark assessment incorporates catch, indices of abundance, length, and age composition data, all data and modeling decisions can be reconsidered relative to the previous assessment, and are subject to a week-long STAR panel review. A data-moderate assessment is similar to a benchmark assessment in terms of review and the ability to reconsider modeling and data decisions, however, this approach generally only incorporates data on catches, survey indices of abundance, and length composition within the assessment model. However, when appropriate, age data may be included in a data-moderate assessment, which under the current terms of reference (TOR) would require STAR panel review. Finally, an update assessment retains all data and modeling decisions from the previous assessment and adds only the most recent data to the model. Given the more structured framework of update assessments, they are reviewed by the Groundfish Subcommittee (GFSC) of the Scientific and Statistical Committee (SSC).

Table 1. Preliminary list of species identified at the March Council meeting for potential assessment in 2025. For each species being considered for assessment in 2025 the proposed assessment type, anticipated assessment areas, and the year of the most recent assessment and assessment type are provided for reference.

Species	Assessment Type	Potential Model Areas	Last Assessed and Assessment Type
Chilipepper	Benchmark or Data-Moderate	Coastwide	2015 - Update
English sole	Data-moderate	Coastwide	2013 - Data-moderate
Petrale sole	Benchmark	Coastwide	2023 - Benchmark
Quillback rockfish off California	Benchmark	South of 42° N. Lat.	2021 - Data-moderate
Rougheye and blackspotted rockfish	Benchmark	Coastwide	2013 - Benchmark
Sablefish	Benchmark	Coastwide	2023 - Limited Update
Widow rockfish	Update	Coastwide	2019 - Update
Yelloweye rockfish	Benchmark or Update	Coastwide	2017 - Benchmark
Yellowtail rockfish	Benchmark (north only) or Benchmark (south) and Update (north)	North and South of 40° 10′ N. Lat.	2017 - Benchmark north of 40° 10′ N. Lat. only

The number of unread age structures (e.g., otoliths) since the most recent assessment for each species is provided in Table 2 and could be used to evaluate the workload associated with age reading for each species under consideration. For each species, age structures collected in years before the most recent assessment not included in Table 2 could also be considered to fill data gaps if appropriate. These numbers are estimates and represent partial collections in 2023 and do not include any ongoing collections in 2024 that could be considered for a 2025 assessment. Additionally, for each species below, additional age structures could be found in uncataloged collections. For well-sampled species (e.g., petrale sole, sablefish) subsamples of age structures by year and source are commonly relied upon, due to ageing capacity limitations. Species-specific considerations for each species are provided below to inform Council decision-making at this meeting.

Table 2. The total number of unread age structures for each species being considered for assessment in 2025 since the most recent assessment year for each species through 2023 collected from the commercial (com.), recreational (rec.) fisheries, the Northwest Fisheries Science Center (NWFSC) West Coast Groundfish Bottom Trawl (WCGBT) survey, NWFSC Hook-and-Line (HKL) survey, or other various sources. The total number of age structures collected in 2023 is incomplete and any otoliths collected in 2024 would also be considered for age reading.

Species and Age Structure Years Summarized	Number of Age Structures by Data Source				
	Com.	Rec.	NWFSC WCGBT	NWFSC HKL	Other
Chilipepper (2015-2023)	7,735	4	4,766	1,563	124
English sole (2013-2023)	13,946	1	6,708	0	0
Petrale sole (2023)	2,461	0	777	0	0
Quillback rockfish - California (2021-2023)	262	135	0	0	147
Rougheye and blackspotted rockfish (2013-2023)	19,430	0	931	0	0
Sablefish (2021-2023)[1]	13,909	105	1,758	0	13
Widow rockfish (2019-2023)	14,152	1,155	446	132	17
Yelloweye rockfish (2017-2023)	1,384	210	299	103	446
Yellowtail rockfish - north (2017-2023)	8,165	20	2,705	0	0
Yellowtail rockfish - south (2000-2023) [2]	422	419	175	1,503	652

[1] A limited update assessment was conducted for sablefish in 2023 that did not include recent commercial age data so the age structures were summarized starting in 2021, the year of the previous update assessment.

[2] To date yellowtail rockfish south of 40° 10′ N. lat. has not been assessed and age structure totals include totals from 2000-2023.

Chilipepper

The most recent assessment of chilipepper off the U.S. West Coast was conducted in 2015 as an update of the 2007 benchmark assessment. The assessment prioritization estimated a target assessment frequency for chilipepper every four years based on life history. In 2025 it will be ten years since the most recent assessment; six years beyond the target frequency. In 2025 either a benchmark or a data-moderate assessment type is being considered for chilipepper. Each of these assessment types would permit reconsideration of data and modeling assumptions. However, a data-moderate assessment would not include age-composition data since the previous assessment nor would be expected to include existing fishery-dependent indices given the groundfish assessment TOR.

The 2015 assessment of chilipepper included one fishery-dependent index of abundance from the historical commercial trawl fishery (1980-1996) and the central California recreational fishery (1987-1998), and multiple fishery-independent indices from the NWFSC/Alaska Fisheries Science Center (AFSC) Triennial survey (1980-2004), the NWFSC WCGBT survey (2003-2014), and the Southwest Fisheries Science Center (SWFSC) juvenile rockfish survey (2001-2014). The NWFSC WCGBT and SWFSC juvenile rockfish surveys could be extended for either a new benchmark or data-moderate assessment.

The 2007 and 2015 assessments of chilipepper included time-varying changes in growth (i.e., *k*) estimated within the model to account for changes in observed growth across time. A benchmark assessment would incorporate recent age data required to support the reconsideration of time-varying growth and support estimates of recent growth patterns. In contrast, a data-moderate assessment would likely only include the historical ages (i.e., ages from 2014 and earlier) and not include recent age data. This would require revising the assessment to either extend the final growth parameterization for recent years or potentially remove time-varying growth from the model if it was determined to be beyond the scope of a data-moderate assessment. If the historical age data were included in a data-moderate assessment for chilipepper then this assessment would need to be reviewed within a STAR panel per the draft TOR for 2025-26 ([Agenda Item F.3, Supplemental Attachment 6, March 2024](#)). It should be noted too that the SWFSC is evaluating chilipepper as a strong candidate species for more rapid age determination using Fourier-Transformed Near-Infrared Spectroscopy (FT-NIRS), a new age reading methodology, although it is not clear that data using that approach would be ready in time for a 2025 assessment. Given both the availability and the highly informative nature of the age data in this model, a data-moderate assessment does not appear to be an ideal alternative for this stock, particularly if it does not eliminate the need for a STAR panel to review the model.

English sole

The most recent assessment of English sole was conducted in 2013 using only catch and survey indices. The assessment prioritization estimated a target assessment frequency for English sole of every four years based on life history. In 2025 it will be twelve years since the most recent assessment; eight years beyond the target frequency. English sole are well observed by the NWFSC WCGBT survey which would be incorporated in a data-moderate to inform estimates of abundance and stock status. Prior to the 2013 assessment, which was a catch and index-only data-moderate, there had been multiple assessments of English sole that incorporated catch, index of abundance, length, and age-composition data. Given that, a large amount of historical age data are available for use with or inclusion in a data-moderate assessment of English sole (i.e., since 2000 there are 11,497 commercial and 898 NWFSC WCGBT survey read ages). Consequently, there is some uncertainty regarding the approach that should be taken, relative to inclusion of prior age data. One alternative would be to attempt to develop a length-based data-moderate model, using prior age data only to estimate a growth curve, externally, for use in the model. If the historical ages were deemed insufficient in terms of size or coastwide coverage limiting additional ageing may be conducted. Alternatively, the historical (but possibly not more-recent) age data could be included within the model for English sole, however, this approach would need to be reviewed within a STAR panel. Effectively, this approach would result in an assessment akin to a benchmark in terms of review but lacking recent age data.

Recent attainment of English sole has been low relative to Annual Catch Limits (ACLs, Table 3). Current harvest specifications for English sole are based on a 2019 catch-only projection of the 2013 assessment with those projections ending in 2026. If English sole is not assessed in 2025, a decision will need to be made on how to develop harvest specifications for the 2027-28 management cycle (e.g., request new projections using the 2013 assessment or revise the assessment to category 3 with fixed harvest specifications). To date, the SSC has yet to establish clear criteria for determining when the results from an assessment should no longer be regarded as reliable to have projections inform catch limits.

Petrale sole

Petrale sole was last assessed in 2023. The assessment prioritization estimated a target assessment frequency for petrale sole of every six years based on life history. In 2025 it will be only two years since the most recent assessment. Relative to previous assessments, the 2023 assessment estimated a reduced population size due to revisions in the catch history, lower within-model estimates of discards, and minor changes in sex-specific natural mortality, steepness, and other biological parameters (Supplemental Information Report 9, November 2023). This resulted in a decrease in the estimated Overfishing Limit (OFL) and Acceptable Biological Catch (ABC) relative to the prior update assessment of petrale sole conducted in 2019 (i.e., update of the 2013 benchmark assessment) with the ABCs for 2025-26 being lower than recent average catches.

The data summary report (Agenda Item F.3, Attachment 2 June 2024) provides new indices of abundance through 2023 from the NWFSC WCGBT survey and estimated juvenile indices based on observations of small juvenile petrale sole in the survey. The 2023 data point for the index of abundance is in line with the estimates from 2021 and 2022, indicating a flat stock trajectory in recent years. A juvenile index of abundance through 2023, corresponding approximately to fish age 2 and younger, does not indicate strong recruitments in recent years. However, the selectivity of age 1 petrale sole is limited in the NWFSC WCGBT survey, and detecting recent recruitment events may require subsequent observations. In addition to 2023 data, a 2025 benchmark assessment of petrale sole would also include observations by the NWFSC WCGBT in 2024, which would provide additional information on recent recruitment.

Preliminary results of the ongoing effort to develop a new environmental index of petrale sole recruitment were evaluated as a part of a sensitivity included in the 2023 assessment of petrale sole. In conjunction with the climate, ecosystem, and fisheries initiative (CEFI) and the Inflation Reduction Act (IRA), NWFSC scientists and contractors are actively exploring best practices for developing environmental recruitment indexes and specifying them in stock assessment models (e.g., Oken et al. presentation at the 2024 World Fisheries Congress, When do environmental drivers improve estimates from stock assessment models?). An environmental index for a 2025 benchmark assessment of petrale sole would be based on these rapidly developing best practices and should not be expected to match the advice from the sensitivity included in the 2023 assessment relative to the 2023 base model. An additional recent review by NWFSC staff identified issues with this index's development and modeling, indicating that the sensitivity included in the 2023 assessment document was incorrect. These issues would be addressed for any future groundfish assessments. Generally, environmental recruitment indices aim to inform recruitment estimates at the end of the time series where little to no data on small fish are available with the goal of improving projections of future spawning output.

Quillback rockfish off California

Quillback rockfish off the coast of California (referred to as California quillback rockfish hereafter) was last assessed in 2021, estimating the stock to be below the minimum stock size threshold for rockfish resulting in the stock being declared overfished. The assessment prioritization estimated a target assessment frequency for quillback rockfish of every ten years based on life history. In 2025, it will be four years since the most recent assessment. A 2025 benchmark assessment for California quillback rockfish could incorporate additional data collected since the 2021 assessment and additional data sources (e.g., California Collaborative Fisheries Research Program [CCFRP]) to inform estimates of population size and status.

Since the 2021 assessment, there have been targeted efforts to collect additional data for California quillback rockfish to inform estimates of growth, maturity, and fecundity. The Cooperative Ageing

Program (CAP) in Newport Oregon has been conducting age reads of California quillback rockfish age structures as they have arrived at the lab over the last few years. As of April 11, 2024, the CAP lab has additional age structures from the following data sources that are not included in the data totals in Table 2: 138 age structures from the CCFRP survey collected through 2023, 119 research age (e.g., Jeff Abrams research project), and 23 age structures from various SWFSC data collection efforts to date. A detailed summary of the length distribution for the collections early this year is available in the [Informational Report, March 2024](). Additional samples have been and continue to be collected in 2024, and these could be sent to the CAP lab and subsequently available for use in a 2025 assessment.

Rougheye and blackspotted rockfish

Rougheye rockfish and blackspotted rockfish are a cryptic species pair, meaning they are genetically two different species, but they cannot be identified easily by sight with 100 percent accuracy. In this situation, the cryptic species pair is assessed together. Rougheye and blackspotted rockfish were subject to a benchmark assessed for the first time in 2013 and are managed in the minor slope rockfish complex north and south of 40° 10′ N. lat. Catch in the minor slope complex north has been well below the species-specific ACL contribution between 2020-2022 (e.g., between 48 to 61 percent) but catches in the two years before that period, 2018 and 2019, were 123 and 112 percent of the species-specific ACL contribution to the complex, respectively. The assessment prioritization estimated a target assessment frequency for rougheye and blackspotted rockfish of every ten years based on life history. In 2025 it will be twelve years since the most recent assessment; two years beyond the target frequency.

Rougheye and blackspotted rockfish are extremely long-lived rockfish living well beyond 100 years of age, with age structures that are particularly challenging to age. STAR panel reviewers of the 2013 assessment cited the need for additional ages to not only inform population dynamics but to also better inform the assumption of longevity. There have been substantial age structure collections from the commercial fisheries in Washington and Oregon where rougheye and blackspotted rockfish are more prevalent (Table 2). Based on the difficulty in reading age structures of rougheye and blackspotted rockfish, traditional age reading (e.g., break and burn) is expected to be time-consuming, limiting the number of new ages available for a new assessment. Researchers at the NWFSC are currently exploring FT-NIRS to develop age reads from otoliths, with an SSC review workshop scheduled for later this year. However, it is not clear whether methodologies and data would be ready for a 2025 assessment. If approved, species like rougheye and blackspotted rockfish may be ideal candidates for such types of age reading methodology.

Substantial research has been conducted to understand the proportion of rougheye rockfish and blackspotted rockfish observed off the West Coast using genetic samples from the NWFSC WCGBT survey and multiple fishery collections and the biological differences between the two species. Rougheye rockfish make up the majority of observations off the West Coast ranging

between approximately 78 to 94 percent of the genetic samples by data source. This work has also identified species-specific differences in growth and maturity. This new research and information could be used to inform a future assessment of rougheye and blackspotted rockfish, and a reconsideration of the "Category" assignment for this assessment.

In 2025 it will be twelve years since the most recent assessment of rougheye and blackspotted rockfish. A catch-only projection was done in 2019 that provided updated projections from the 2013 assessment through 2030. However, it is unclear if these projections will be used to inform harvest specification through the 2029-30 management cycle or whether the stock, in the absence of a new assessment, would be designated as a category 3 assessment at some point between 2025 and 2030. To date, the SSC has yet to establish clear criteria for determining when the results from an assessment should no longer be regarded as reliable to have projections inform catch limits.

Sablefish

The most recent benchmark assessment for sablefish was conducted in 2019 with an update assessment in 2021 and a limited update assessment that added recent catch and survey data only (i.e., no new fishery data) in 2023. The most recent assessment in 2023 estimated multiple strong recruitments in 2020 and 2021, and resulted in a dramatic increase in the estimated OFL. The NWFSC WCGBT survey selects age-0 sablefish, especially in the tows conducted in late summer and early fall, and the most recent data collected indicates another potential strong recruitment event in 2023 (Agenda Item F.3, Attachment 2, June 2024).

The assessment prioritization estimated a target assessment frequency for sablefish every six years based on life history. In 2025, it will be only two years since the most recent limited update assessment (and four from the most recent update), with the stock being assessed each cycle since 2019. This increased assessment frequency has partially been driven by strong recruitment that led to sharp increases in bycatch of small young sablefish across the fishery. Conducting a benchmark assessment for sablefish in 2025 could provide the opportunity to address issues identified in the 2019 assessment (the last benchmark assessment), specifically the ability to better account for observed time-varying growth which can be observed during periods of strong recruitment or environmental conditions.

Widow rockfish

An update assessment was conducted for widow rockfish in 2019, with the previous benchmark assessment conducted in 2015. The assessment prioritization estimated a target assessment frequency for widow rockfish every four years based on life history. In 2025 it will be six years since the most recent assessment; two years beyond the target frequency. In recent years, following the completion of rebuilding for widow rockfish (2011), canary rockfish (2015), and Pacific ocean perch (2017), widow rockfish has had high ACL attainment as a primary target of the midwater

rockfish fishery. Given the large catches of widow rockfish in recent years, the importance to the fishery, and the time since the last assessment, an assessment in 2025 may be appropriate. Although the midwater trawl fishery has grown substantially in recent years, the data sources that would inform a new assessment have remained the same (i.e., no new data sources) since the last benchmark assessment in 2015, which would support an update assessment.

At the NWFSC there is ongoing research examining the ability of environmental DNA (eDNA) from water samples to inform the species occurrence and provide an index of relative abundance. Initial work has shown concentrations of eDNA from widow rockfish in the mid-water column for years with samples. This work shows promise and in the future, an eDNA relative index of abundance may be available for consideration in future assessments of widow rockfish. The anticipated conclusion of this work is not expected until after 2025. If this data source becomes available and methods for incorporating abundances derived from eDNA are endorsed for use, a benchmark assessment for widow rockfish should be prioritized shortly thereafter. Consequently, an update may be more pragmatic in the near term while these methods are refined.

Yelloweye rockfish

Yelloweye rockfish was last assessed in 2017 and had a catch-only projection update conducted in 2023 that projected a 50 percent probability of rebuilding in 2028. The assessment prioritization estimated a target assessment frequency for yelloweye rockfish of every ten years based on life history. In 2025 it will be only eight years since the most recent assessment. Historically, assessments of yelloweye rockfish have been data-limited in recent years due to restrictions on catches and the resulting biological samples during rebuilding. As the population abundance has grown, catches under rebuilding have slowly increased, facilitating additional data collection opportunities. There has been a notable increase in the number of age structures collected across sources in recent years (2017-2023), particularly relative to the average collections between 2000-2016, that could support a future assessment, benchmark, or update, of yelloweye rockfish (Table 2). In previous assessments, the International Pacific Halibut Commission (IPHC) survey has been a key data source providing indices of abundance in Washington state waters. This survey is being discontinued in the stations off Washington, leaving a data gap to further track future rebuilding. The most recent index appears to provide supporting evidence for a growing population off Washington, consistent with rebuilding.

Selecting a benchmark or update assessment in 2025 for yelloweye rockfish comes with the potential risk that the assessment estimates a close to but not yet rebuilt stock. This outcome would likely lead to the desire to schedule an additional assessment(s) in the 2027 and/or 2029 assessment cycle(s). Conducting multiple assessments for yelloweye rockfish across subsequent assessment cycles would be expected to come at the cost of assessments for other grounfish stocks given current assessment capacity limitations.

Yellowtail rockfish

Yellowtail rockfish north of 40° 10′ N. lat. was last assessed in 2017. At that time, the assessment of the population south of 40° 10′ N. lat. was not considered sufficiently robust for use in management and was withdrawn from consideration by the assessment team. The assessment prioritization estimated a target assessment frequency for yellowtail rockfish every four years based on life history. In 2025 it will be eight years since the most recent assessment for the area north of 40° 10′ N. lat.; four years beyond the target frequency.

Given the differences in existing assessments between the two areas, there are multiple options for assessments in 2025 that could be selected for yellowtail rockfish:
- Option 1: Update assessment for the population north of 40° 10′ N. lat. only.
- Option 2: Benchmark assessments for each area north and south of 40° 10′ N. lat.
- Option 3: Benchmark assessment for the population south of 40° 10′ N. lat. and an update assessment for the population north of 40° 10′ N. lat.

The review for each of these options varies. Option 2 would require a dedicated STAR panel to review two potential benchmark assessments. Option 3 would have only the southern model reviewed within a STAR panel allowing additional space for a different species in that same panel. Finally, Option 1, an update assessment for only the northern area, would not require a STAR panel and would be reviewed by the GFSC-SSC.

The 2017 STAR panel identified the lack of fishery age data after 1999 as a critical data need to support the development of a robust model for the population south of 40° 10′ N. lat. The age data in the 2017 model for the southern population included primarily ages from the commercial fishery collected between 1980-2004 (e.g., a total of 7,875 ages) supporting the estimation of growth and historical recruitment strength. Additional age data collected after 2004 would provide the model information about the current population age-structure and annual recruitment in recent years. However, the number of aged fish and unread age structures from the fishery since 2000, commercial or recreational, remains limited relative to the northern portion of the population (Table 2 and Agenda Item F.3, Attachment 2, June 2024).

Potential Workload and STAR Panel Considerations

Similar to recent assessment cycles, a stock assessment training course will be held through the University of Washington (UW). Students will learn how to conduct stock assessments by leading an update assessment (in 2023 the class led the two data-moderate assessments rather than an update assessment). In 2021, the class developed two data-moderate assessments. We have since concluded that the class will generally be better suited to developing updates than more complex assessments. Whether the class would be able to conduct one or two update assessments will depend upon the number of students, which will not be known until December or January. If the

Council selects multiple species for update assessments, a priority ranking should be provided if there is only capacity to conduct a single update assessment within the UW class.

STAR Panel Timing

Historically, STAR panels have been held from late April (more often early May) to late July. Many factors need to be considered when scheduling STAR panels. Some of the key considerations when scheduling STAR panels are listed below:

- <u>All</u> data that will be evaluated for use in an assessment must be available and verified by the collecting agency twelve weeks before the start of the STAR Panel, allowing for nine weeks of model exploration, development, and writing the draft assessment (e.g., a STAR panel beginning May 5th would have a final data deadline of February 10th).
- The SSC-GFSC review of a STAR Panel's review and findings requires that a post-STAR draft assessment and the STAR Panel report be available at least two weeks before that review.
- SSC-GFSC review of assessments entering the Council process in September needs to occur at least four weeks before the week in which a mop-up panel would be held if needed (e.g., two weeks to conduct requested new analyses and two weeks for the SSC-GFSC to review).
- If needed, the mop-up panel should occur at least four weeks before the November SSC meeting (e.g., two weeks to revise the document and two weeks for the SSC to review).
- The closer a STAR panel is to a Council meeting (June or September), the less time there will be for the Council and advisory body to consider the assessment results.
- Panels need to be scheduled around Council meetings and Federal holidays.
- Scheduling STAR Panels in consecutive weeks creates challenges for Council staff and potentially other participants in the review process.

Additionally, there are additional species-specific considerations that are made to determine the composition of each STAR panel. If a species is anticipated to have multiple model areas all of those models will be scheduled for review within the same STAR panel. Additionally, the data complexity and workload for each species are considered when determining the STAR panel timing or which species to include in the early versus late review panels. For example, if a species has a large backlog of age structures to be read or the age structures are difficult to age, including those species in later STAR panels allows additional time for age reading.

Reviewing the timing of the first STAR panel held each cycle since 2009, there is only one instance of a STAR panel being held at the end of April (e.g., 2015 for darkblotched rockfish and canary rockfish), three held in the first full week in May (e.g., 2009, 2019, and 2021), one held the second week in May (e.g., 2013), and three held in June (e.g., 2011, 2017, and 2023). The various timing

of the first STAR panel in assessment cycles since 2009 has resulted in only four out of eight assessment cycles where those results were available at the same year's June Council meeting.

In recent assessment cycles, the deadline for data has been clarified and extended. The 2017 stock assessment TOR was the first to specify a data deadline requiring data to be provided to stock assessment teams seven weeks before the STAR panel. In 2019, this deadline was extended to eleven weeks and has been subsequently revised to the current twelve weeks before the STAR panel (which includes 3 weeks for internal and Panel review before the STAR meeting). Additionally, the 2025 TOR now includes a data deadline for all data excluding the final year of December 1st, 2024. Historically, receiving data late in the process has posed extreme challenges to assessment teams. Adherence to the current data deadlines will benefit stock assessments by allowing adequate time for exploration of the data and modeling, improving the final assessments. However, these data deadlines create challenges for holding STAR panels early in the assessment process (e.g., April or May) since they may be before the data would be expected to be finalized by states, particularly for recreational data.

Based on deadlines, Council meetings, and Federal holidays in 2025, a summary of considerations for potential STAR panels are provided below:
- There are no potential weeks that a STAR panel could be held in 2025 that would permit the post-STAR assessment documents to be available by the advanced BB deadline (materials required four weeks before the start of the meeting) for the June meeting. The week of April 28th - May 2nd which corresponds to a data deadline of February 3rd would result in post-STAR panel assessment documents available (material required three weeks after the conclusion of the STAR panel) only two weeks before the start of the June meeting.
- STAR panels held during the three available weeks in May (5th - 10th, 12th- 16th, and 19th - 23rd) correspond to the data deadlines ranging from February 10th - 24th which may pose challenges in delivering finalized data on time to stock assessment teams. All STAR panels held in May would be expected to not have post-STAR panel documents available for GFSC review (given the criteria of having material available two-weeks in advance) at or before the June Council meeting resulting in the results from these panels coming into the September Council meeting.
- The two potential STAR panel weeks in June 2025 (June 2nd - 6th and 23rd - 27th) would either be the week before or the week after the Council meeting which would be expected to create workload challenges for Council staff and participating advisory body members. These STAR panels would correspond to data deadlines of March 10th and March 31st.
- A STAR panel could be held the first full week in July the 7th - 11th but the start date after the July 4th holiday weekend may make this a less desirable week for participating GFSC, Council staff, and advisory body members. A July 7th STAR panel would align with an April 14th data deadline.

- The final three options to hold a STAR panel are July 14th - 18th, 21st - 25th, and 28th - August 1st and would have data deadlines of April 21st, April 28th, and May 8th, respectively. The post-STAR assessment documents would be due on August 1st, August 8th, or August 22nd, potentially resulting in a GFSC review meeting(s) ranging from the end of August to early September prior to the September Council meeting.

Catch-Only Projections for 2025

At the April Council meeting, there was considerable discussion about species where catches have been lower than the corresponding ACLs, specifically Dover sole. Projections provided within assessments and used by management are, generally, predicated upon the assumption of full removal of each year's ACL. For many species in the groundfish fishery, annual catches have been below the ACL (e.g., attainment) by 50 percent or more due to various factors. Generally, if the catch is low and is expected to remain well below the ACL, the assumption of full attainment within projections likely has little to no impact on management (e.g., constraints to fishing sectors).

However, much of the discussion at the April Council meeting focused on concerns about using ACLs in management that were projected under assumptions where removals did not match actual catch over a number of years. Every category 1 and 2 groundfish assessment has relied upon assumptions about catches during the projection period that have not matched the true catches. This applies even to species assessed in 2023 (or 2023 catch-only projections) with new projections since the true catches in 2023-24 are expected to differ from the assumed values. As time since the last assessment increases, potential constraints to the fishery can arise if the ACLs are projected to decrease over time based on the assumptions of full attainment. In this situation, catch-only projections have been used in increasing frequency to "reset" projections based on the actual caches. Catch-only projections have proven to be a useful tool for developing updated projections with clear requirements for documentation to provide transparency on how they have been conducted and the assumptions made. Additionally, the required SSC review ensures that they are done accurately.

Generally, the number of catch-only projections requested across recent assessment cycles (e.g., two to five per cycle) poses little impact on workload capacity. If the number of catch-only projections requested each cycle increased to include all species with low attainment, this would increase the assessment workload. Table 3 lists 23 species where projected attainment is anticipated to be 50 percent or less based on the coastwide average catch between 2018-2022 compared to the Final Preliminary Alternative (FPA) 2025 coastwide ACLs (i.e., for species managed within complexes, both the catch and species-specific ACL contributions are summed coastwide). It is important to note that the cut-off criteria of 50 percent was arbitrary and the list would increase if all species with anticipated under-attainment were included. Conducting catch-only projections for all or a large portion of the species in Table 3 could be scheduled for 2025.

However, dramatically increasing the number of catch-only projections in 2025 would be expected to come at the cost of other assessment-related activities.

To limit the negative impacts on other assessment-related activities, the selection of species for catch-only projections should not only consider the degree to which cumulative catches may have differed from the removal assumptions but also the potential for future ACLs (and allocations thereof) to constrain fishery participants if new catch-only projections are not conducted. Particularly in cases where ACL attainment has been less than 20 percent, unless fishery catches are expected to increase dramatically, relative to recent years, and/or some fishery sectors have a much higher rate of allocation attainment, there would seem to be little tangible benefit to conducting a catch-only projection.

Table 3. Species with category 1 or 2 assessments where coastwide average percent attainment between 2018-2022 has been less than 50 percent of the anticipated 2025 ACL, the year of the last benchmark or update assessment, and the year of the most recent catch-only projection (COP).

Species	Attainment %	Last Assessment	Last COP
English sole[1]	3	2013	-
Arrowtooth flounder	8	2019	2021
Cowcod	8	2019	-
Longspine thornyhead	8	2013	2019
Splitnose rockfish	9	2009	-
Kelp greenling	10	2015	-
Rex sole	10	2023	-
Dover sole	10	2021	-
Pacific ocean perch	13	2017	-
Sablefish	15	2023	-
Sharpchin rockfish[1]	15	2013	-
Big skate	15	2019	-
Cabezon	24	2019	-
Chilipepper	24	2015	2023
Bocaccio	27	2017	-
Lingcod	29	2021	-
Blackgill rockfish	29	2017	2019

Aurora rockfish	41	2013	-
Longnose skate	41	2019	-
Yelloweye rockfish	43	2017	2023
California scorpionfish	46	2017	-
Darkblotched rockfish	47	2017	2021
Yellowtail rockfish	49	2017 (north only)	2023 (north only)

[1] A new COP could be conducted for these assessments but would be technically challenging given the previous assessment methodology. Additionally, it will be twelve years since the 2013 assessments and the SSC may need to consider whether new projections to determine catch limits would be appropriate.