

2025 WEST COAST GROUND FISH STOCK ASSESSMENTS AT-A-GLANCE

The Northwest and Southwest Fisheries Science Centers developed the following summaries to communicate the results from this year's groundfish stock assessments conducted by Northwest and Southwest Fisheries Science Center staff. These draft graphical summaries are a pilot effort to broaden communication on assessment data, models, and results, and how they compare to previous assessments.



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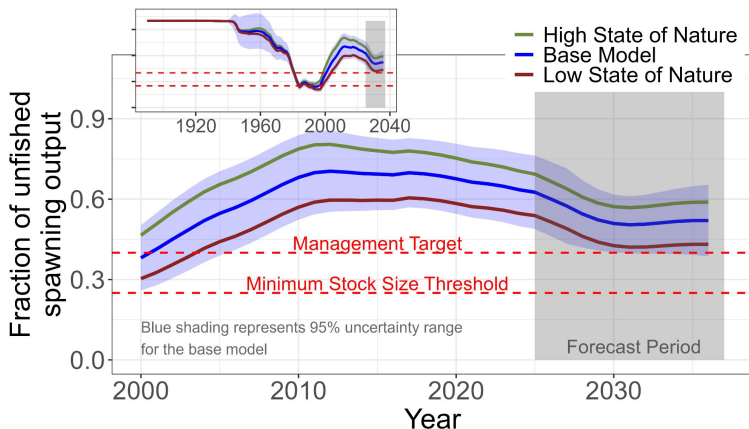
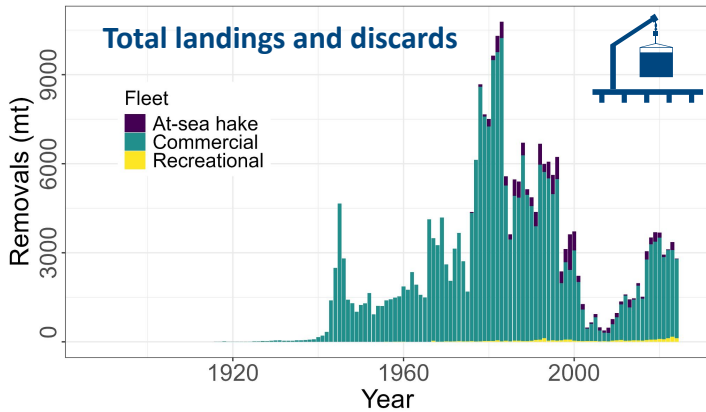
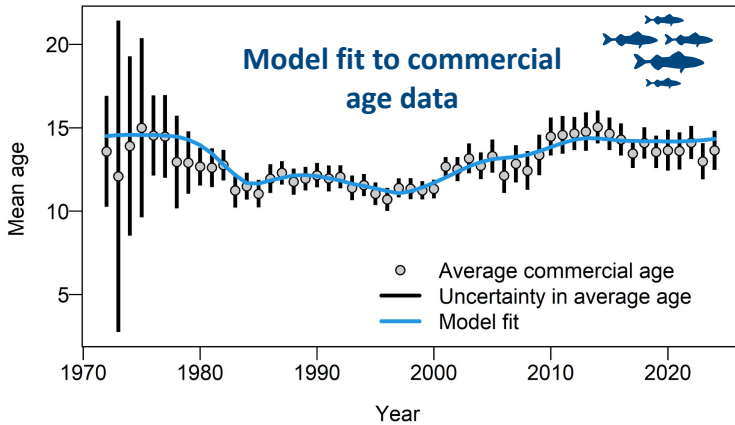
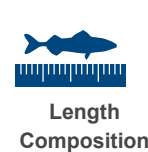
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U.S. West Coast Yellowtail Rockfish in 2025

Data and Stock Assessment Model

This assessment reports the status of the Yellowtail rockfish (*Sebastes flavidus*) resource off the coast of the United States (U.S.) from 40°10' N. Latitude to the U.S.-Canada border using data through 2024.



Key Takeaways

- At the start of 2025, the estimated stock status is 63%, which is **above the target**.
- The **stock is not overfished** and overfishing is not occurring
- Catches increased substantially beginning in 2017 with the rapid development of the midwater trawl fishery, but have been sustainable.
- A new recruitment index was elevated in 2021, indicating the possibility of a strong year class entering the fishery soon. This potential is included in the assessment forecast.

Base Model Removals & Stock Projections

Year	Removals (mt)	Spawning Output (10 ¹² eggs)	Stock Status (target = 40%)
2024	2,802	9.27	63.5%
2025	4,060 ^a	9.13	62.6%
2026	4,066 ^a	8.77	60.1%
2027	4,723 ^b	8.39	57.5%
2028	4,540 ^b	7.95	54.5%
2029	4,445 ^b	7.63	52.3%
2030	4,421 ^b	7.43	50.9%
2031	4,435 ^b	7.36	50.4%

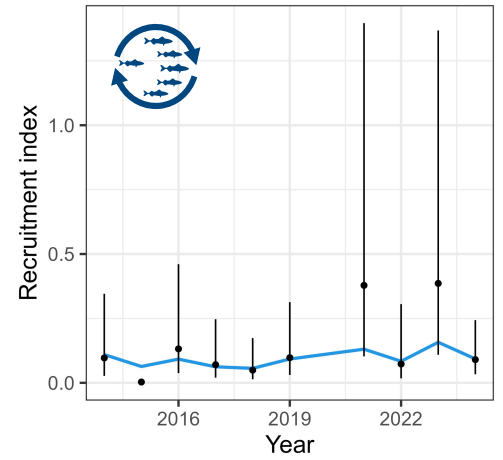
^a Based on Groundfish Management Team recommendations for forecasting

^b Annual Catch Limit (ACL) from the default harvest control rule with sigma = 0.5 and P* = 0.45

Major Changes From Recent Assessments

1. Commercial age and length data were analyzed using best practices that weight an individual length or age sample based on the amount of catch it represents. This means that samples from a trip that collected many samples but had little catch will be weighted less than samples from a trip that caught a lot of fish but collected few samples. *This change in data inputs resulted in a decline in natural mortality and scale.*
2. A new recruitment index based on Standardized Monitoring Units for the Recruitment of Fish collected off the Oregon coast was included from 2014-2024. *This led to high estimates of recruitment in 2021 and 2023 that are propagated into the assessment forecast.*
3. A new nearshore index that combines two hook and line surveys conducted by ODFW and WDFW was included from 2010-2024. This was a new possible source of information on population trends, but *did not significantly impact the results.*
4. Dead discards were added to the landed catch instead of modeled with a complex retention curve that relies on size compositions of discarded fish. This better represents actual discards during the 2000s, but *did not significantly impact the results.*
5. The assessment utilizes a new recreational catch reconstruction for Oregon, and added catches from foreign fleets from 1966-1976. *This led to a slight increase in scale.*

SMURF recruitment index



New recruitment index (points) with 95% confidence intervals (vertical lines) and model fit (blue line).

[View all groundfish stock assessments](#)



Risk Table: ecosystem and assessment factors influencing scientific uncertainty

NEUTRAL: Ecosystem & Environmental Conditions	NEUTRAL: Stock Assessment Data Inputs	FAVORABLE: Stock Assessment Model Fits & Structural Uncertainty
<p>Recruitment: Young-of-year and oceanographic conditions indicate average recruitment in 2021 and 2024, and below average recruitment in 2022</p>	<p>Catch: Catch reconstruction is reliable for a rockfish. Generally a target species with only limited bycatch</p>	<p>Composition data fits: Age data are generally fit well with simple selectivity assumptions. Some mild issues with commercial shoreside length data.</p>
<p>Habitat: Kelp cover in WA is near the long-term average, and below average in OR</p>	<p>Survey: Bottom trawl survey may not be reliable way to generate index for midwater rockfish</p>	<p>Index data fits: Model generally misses an increase in the WCGBTS from 2014-2019.</p>
<p>Prey: Most available evidence suggests adequate forage in recent years. Caveat: low krill in 2023 acoustic surveys.</p>	<p>Recruitment: New recruitment survey from SMURFs in Oregon.</p>	<p>Life history: Steepness fixed at meta-analysis prior. Well-informed sex-specific estimates of natural mortality, unfished recruitment, and growth</p>
<p>Predators: No trend in abundance for 6 of 7 predators in the last 5 yrs</p>	<p>Composition data: More age data than almost any groundfish. Shoreside age data dating back to the 1970s. Ages available for all three fishing fleets.</p>	<p>Model stability: Very numerically stable model. Similar estimates provided by multiple estimation methods</p>
<p>Competitors: Some potential for hake competition for krill, but highly uncertain.</p>	<p>Biology: Species-specific maturity and fecundity; maturity data collected over the last ~10 years</p>	

Risk tables are a pilot effort to combine information about environmental and ecosystem conditions not included in the assessment with data and modeling considerations to inform scientific uncertainty decisions by the Council's Scientific and Statistical Committee. Score categories include unfavorable, neutral, or favorable for each column.





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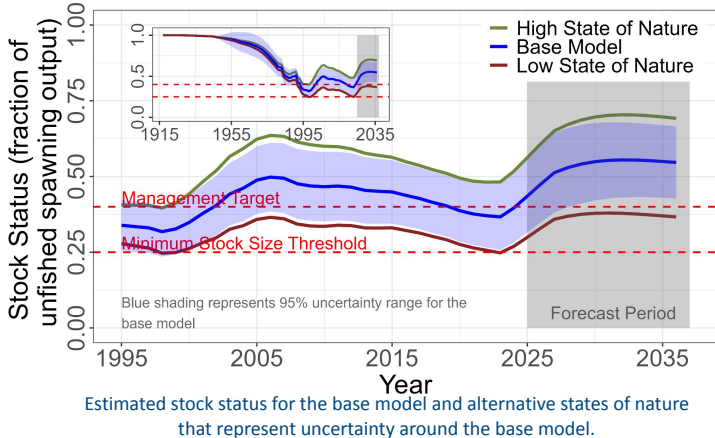
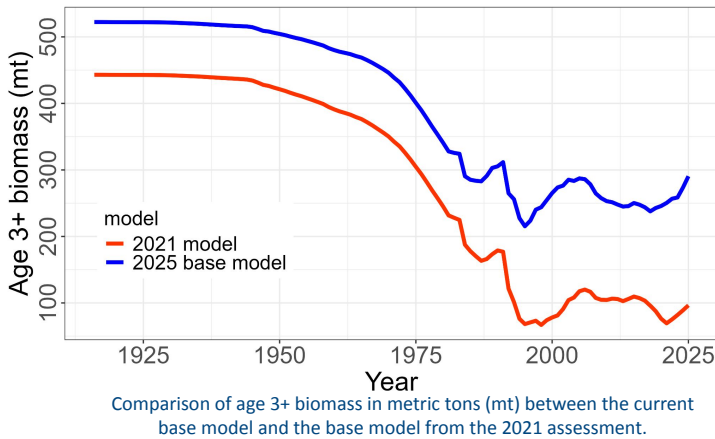
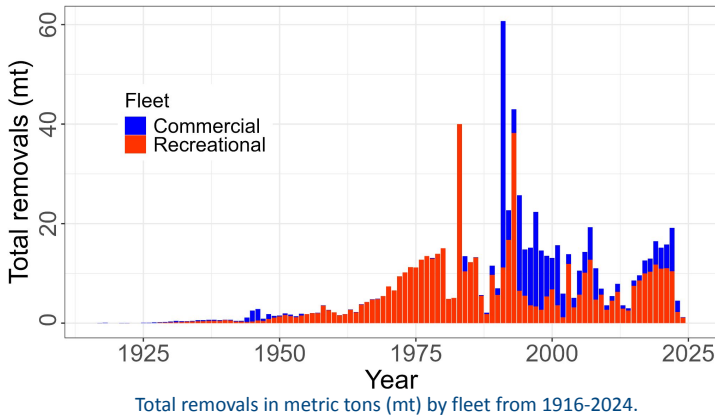
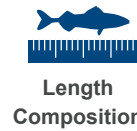
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California Quillback Rockfish in 2025

Data and Stock Assessment Model

This assessment reports the status of the quillback rockfish (*Sebastes maliger*) resource off the coast of California using data through 2024.



Key Takeaways

- At the start of 2025 the estimated stock status is 43.5%, which is **above the management target**
- New California-specific samples were collected to inform biological relationships
- Newly collected age data provided updated information about productivity of the stock, **leading to a changed understanding** of stock status compared to the 2021 assessment.
- Collection of age and length data across the range of the fisheries **remain important data needs**

Base Model Removals & Stock Projections

Year	Removals (mt)	Age 3+ Biomass (mt)	Stock Status (target = 40%)
2024	1.10	273	39.6%
2025	1.30 ^a	291	43.5%
2026	1.50 ^a	306	47.5%
2027	11.60 ^b	320	51.3%
2028	11.93 ^b	324	53.0%
2029	12.16 ^b	326	54.3%
2030	12.27 ^b	327	55.1%
2031	12.27 ^b	326	55.6%

^a Based on Groundfish Management Team Recommendations for Forecasting
^b Annual Catch Limit (ACL) from the default harvest control rule with P* of 0.45, sigma of 0.75

Major Changes from Recent Assessments

The previous assessment in 2021 estimated the stock to be overfished, thereby triggering a rebuilding analysis. The 2025 assessment results indicate the stock is above target. **What changed?**

1. A large number of age and biological samples were collected since the last assessment and provide California-specific relationships. This information was not available in the last assessment. *New biological information, particularly about growth, updated our understanding of quillback dynamics, leading to higher estimates of population size and stock status.*
2. A new assumption for natural mortality was used based on a new synthesis of available age data from California to Alaska. The value of natural mortality remains an important uncertainty, and is the basis for the decision table. *The new assumption for natural mortality led to a slightly more optimistic view of population size and stock status.*
3. Three new indices were included in the base model: the CCFRP, ROV, and a recreational index. These indices align with the population trajectory but show limited contrast, and overlap with one another only in the most recent years. *Information in the age data influence model estimates more than index data.*
4. Age data influenced recruitment patterns, with the increase in abundance in the 2000s being driven by a large recruitment pulse during 1993-1995. Recent recruitments during 2016-2019 have been large but uncertain and will become better informed with continued age and length samples. *Continued representative collection of age and length samples is needed.*

Changes to Data and Model Parameters

Value	2021 model	2025 model
Max Age	95 yr	80 yr
Natural Mortality	0.057 yr ⁻¹	0.068 yr ⁻¹
Steepness	0.72	0.72
Growth	Fixed	Estimated
Fecundity	Canadian data	California data
Maturity	Oregon data	California data
Available Age Samples	21 → 143 in reviews	1038

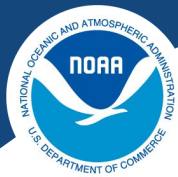


Risk Table: Ecosystem and assessment factors influencing scientific uncertainty

UNKNOWN: Ecosystem & Environmental Conditions	UNFAVORABLE: Stock Assessment Data Inputs	NEUTRAL: Stock Assessment Model Fits & Structural Uncertainty
<p>Insufficient information is available on environmental factors affecting quillback recruitment, habitat, prey and predators, and competitors.</p>	<p>Catch: Catch estimates are uncertain in some years due to periods of high and low estimates of sampled catch rates and when rockfish were not sorted to species.</p> <p>Survey: Not captured in bottom trawl surveys. Used both fishery-dependent and fishery-independent sources. Limited effect on estimated population trends</p> <p>Ages: Limited in scope and primarily from most recent 5-10 years. Few samples of young fish.</p> <p>Lengths: Fewer samples in recent years, and collection across space is patchy.</p> <p>Biology: Species-specific fecundity and maturity from area of assessment.</p>	<p>Model fits: Length and age data fit well.</p> <p>Recruitment: Uncertainty in recruitment strength in certain years. Recruitment driven by information in age samples.</p> <p>Parameters: Recruitment and growth estimated internally. Natural mortality and steepness based on priors.</p> <p>Uncertainties: Uncertainty in natural mortality due to variable longevity across range and limited information by which to estimate value within model.</p> <p>Model stability: Profiles and jitters indicate the model is stable and parameters are well estimated. Presence of retrospective patterns.</p>

Risk tables are a pilot effort to combine information about environmental and ecosystem conditions not included in the assessment with data and modeling considerations to inform scientific uncertainty decisions by the Council's Scientific and Statistical Committee. Score categories include unfavorable, neutral, or favorable for each column.





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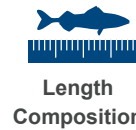
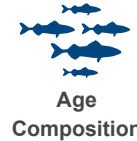


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U.S. West Coast Chilipepper Rockfish in 2025

Data and Stock Assessment Model

This assessment reports the status of the Chilipepper Rockfish (*Sebastes goodei*) resource off the coast of the United States from California to Washington using data through 2024.



Key Takeaways

- At the start of 2025 the chilipepper rockfish stock was at 83% of unfished biomass. This stock status is **above target**, where the target is 40% of unfished biomass.
- Annual catch limits (ACLs) will **temporarily** exceed long-term maximum sustainable yield (estimated at roughly 2,100 mt per year) and **are expected to decline** as the stock is fished down to the target level.
- The stock is **not overfished** and **overfishing is not occurring**.
- The abundance of **recently recruited cohorts** is uncertain, and will be known with greater certainty as additional age and length data become available.

Base Model Removals & Stock Projections

Year	Removals (mt)	OFL (mt)	Stock Status (target = 40%)
2025	1,599 ^a	3,364	83%
2026	1,522 ^a	3,171	79%
2027	3,204 ^b	3,434	77%
2028	3,080 ^b	3,319	74%
2029	2,998 ^b	3,252	72%
2030	2,934 ^b	3,213	71%
2031	2,885 ^b	3,166	69%
2032	2,801 ^b	3,095	67%

^a Based on Groundfish Management Team Recommendations for Forecasting

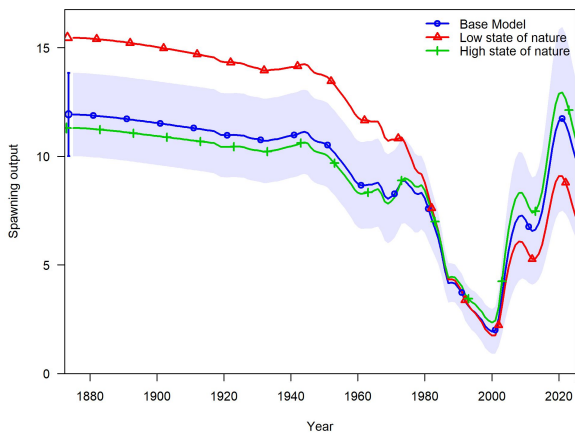
^b Annual Catch Limit (ACL) from the default harvest control rule with $P^* = 0.45$, $\sigma = 0.5$

Major Changes from Recent Assessments

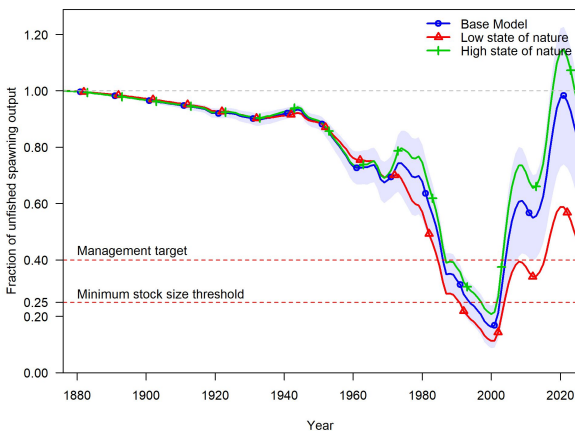
1. This was the first “benchmark” assessment since 2007. All available data sources were re-evaluated.
2. Added a new, fishery-independent index of spawning output (CalCOFI) for a total of four fishery-independent indices. All indices were standardized using a spatio-temporal modeling framework.
3. Removed two fishery-dependent indices of abundance. Both indices were among the best available data sources in 2007, but current fishery-independent surveys are better designed to inform this assessment.
4. Growth is no longer time-varying in the assessment model. A detailed analysis of growth led to a recommendation for further research into effects of time-varying growth.
5. Age data were converted to a “conditional age-at-length” format to better inform estimates of growth.
6. Key productivity parameters were based on the latest meta-analyses (steepness) or estimated in the model (natural mortality).
7. “Fleets as areas” approach was used to model differences in fish length for catches along the west coast.
8. For the first time, bycatch from the at-sea hake fishery was included in the model, and trawl discards were modeled in a way that better reflects the size of discarded fish.
9. Reproductive biology parameters were updated to account for size-dependent multiple brooding.

Read more about this and other groundfish stock assessments online:

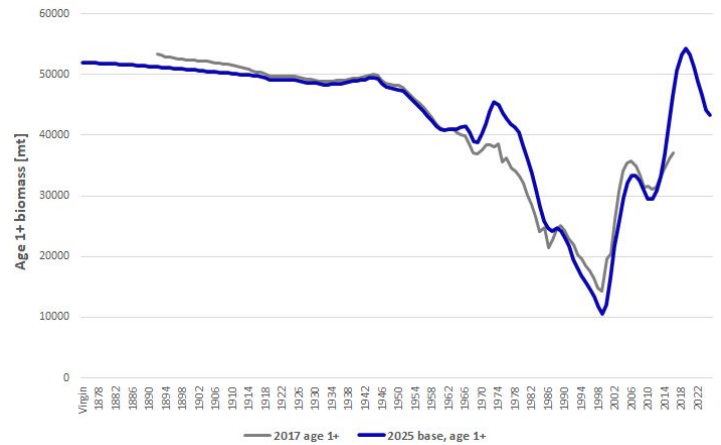




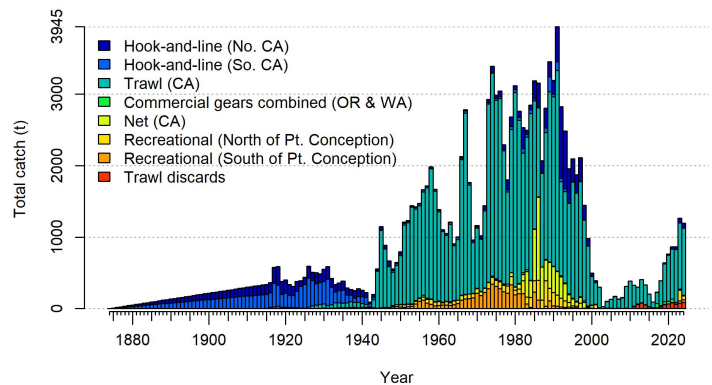
Estimated spawning output (in trillions of eggs) under three alternative states of nature for chilipepper, 1875-2024



Estimated spawning output (relative to the unfish level) under three alternative states of nature for chilipepper, 1875-2024



Comparison of age 1+ biomass from the 2025 and 2017 chilipepper assessments



Total removals in metric tons (mt) by gear and area from 1875-2024 for chilipepper

Risk Table: ecosystem and assessment factors influencing scientific uncertainty

FAVORABLE: Ecosystem & Environmental Conditions

Larval production and condition: Environmental indicators suggest neutral to unfavorable in 2024-2025, but signals are mixed

Recruitment: Index used in assessment. High diversity and abundance of young-of-year (YOY) groundfish assemblage community in 2024 consistent. Environmental conditions are favorable for 2025 (minty/subarctic), high preliminary survey catch rates. Overall, favorable f

Prey: Most evidence suggests abundant forage, favorable conditions, positive

Predators: Ongoing long-term increases in abundance, but no evidence of recent sharp increases, neutral

Growth: Recent years potentially unfavorable in near term (based on autocorrelation in growth variability), neutral

FAVORABLE: Stock Assessment Data Inputs

Historically and currently among most important commercial species in California, **catch reconstruction and recent catch data** are reliable, favorable

Robust **age data** to inform assessment, modest aging error concerns need resolution, neutral to favorable

Robust information on **reproductive ecology**, but better data on functional maturity and role of multiple brooding would be helpful, neutral to favorable

Several informative **fishery independent indices** that span life history stages, including larval production/spawning output (CalCOFI), settled juvenile and mature adult biomass (WCGBTS), and pelagic YOY abundance (RREAS), favorable

NEUTRAL: Stock Assessment Model Fits & Structural Uncertainty

Good fits to age and length **composition data**. Generally good fits **fishery-independent survey data**, particularly in more recent years, favorable

Several **abundance indices** help inform recent recruitment and population forecasts (e.g., WCGBTS, RREAS), favorable

Selectivity functions are not always well behaved, there appears to be a mismatch between survey abundance estimates and population scale, unfavorable

Evidence for **time-varying growth** in data, but growth assumed to be time-invariant within the model, neutral

Likelihood profiles indicate that **natural mortality** is well informed, but **steepness** is not well informed. Steepness provides axis of uncertainty for decision table, neutral

Risk tables are a pilot effort to combine information about environmental and ecosystem conditions not included in the assessment with data and modeling considerations to inform scientific uncertainty decisions by the Council's Scientific and Statistical Committee. Score categories include unfavorable, neutral, or favorable for each column.





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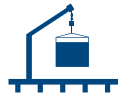
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U.S. West Coast Sablefish in 2025

Data and Stock Assessment Model

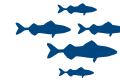
This assessment reports the status of the sablefish (*Anoplopoma fimbria*, or 'black cod') resource off the coast of the United States (U.S.) from southern California to the U.S. - Canadian border using data through 2024.



Landings & Discards



Survey Indices



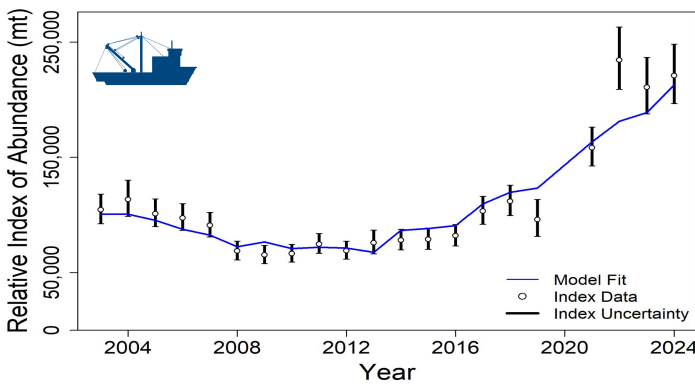
Age Composition



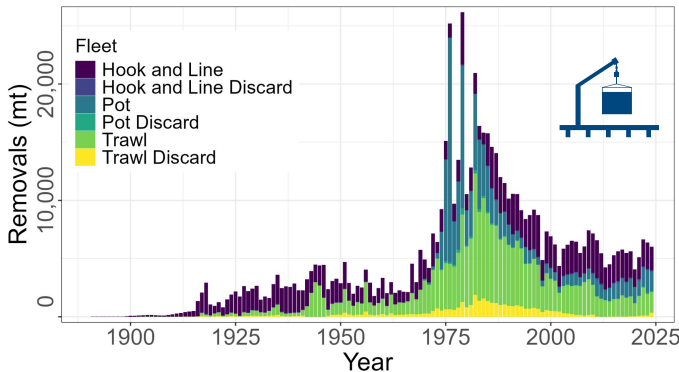
Weight-at-Age



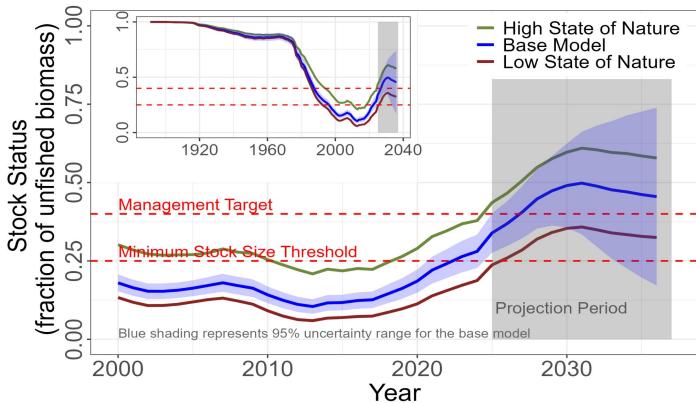
Recruitment Index



Relative index of abundance from the West Coast Groundfish Bottom Trawl Survey for sablefish and the assessment model fit to the index.



Total removals in metric tons (mt) by gear type from 1892-2024 for sablefish.



Estimated stock status for the base model and alternative states of nature that represent the uncertainty around the base model for sablefish.

Key Takeaways

- At the start of 2025 the estimated stock status is 34%, the stock is in the **precautionary zone**.
- The **stock is not overfished** and overfishing is not occurring.
- Several very high **recent recruitment cohorts are approaching maturity**, but most are not yet contributing to spawning stock.
- Stock size and status is **projected to increase over the next seven years**, reaching the management target by 2027, even with projected catch considerably higher than recent average catch.

Base Model Removals & Stock Projections

Year	Removals (mt)	Spawning Output (mt)	Stock Status (target = 40%)
2024	6,030	61,505	28%
2025	19,114 ^a	74,409	34%
2026	19,082 ^a	80,877	37%
2027	13,964 ^b	88,838	41%
2028	15,103 ^b	98,185	45%
2029	14,720 ^b	103,869	47%
2030	14,094 ^b	107,603	49%
2031	13,437 ^b	109,277	50%

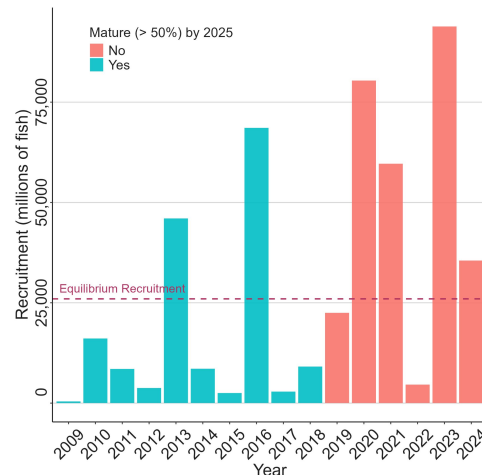
^a Based on Groundfish Management Team Recommendations for Forecasting

^b Annual Catch Limit (ACL) from the default harvest control rule with P* of 0.45, sigma = 0.5

Major Changes from Recent Assessments

Despite the overall scale of the population increasing by 18% in this assessment compared to the 2023 assessment, estimates of stock status are lower than what was projected by the 2023 assessment. **Why?**

1. The identification and use of many additional historical ages collected from the commercial fishery between 1983-2000, primarily collected in Oregon. *This changed the historical stock trajectory and resulted in a lower estimate of stock status.*
2. Restricted the flexibility in the model to estimate annual recruitment strength prior to informative age data (pre-1975) and increased flexibility since then to estimate low and high recruitment years. *This resulted in an increase in estimated stock size.*
3. Based upon additional data, the 2020 and 2021 recruitments are estimated to be large but smaller than the estimates from the 2023 assessment. This assessment also estimates a large but uncertain 2023 recruitment. *This reduced the projected harvest limits compared to the previous assessment.*
4. Switched from estimating constant growth by sex to the use of empirical weight-at-age data to directly account for variable growth by age, sex, year, and area across the West Coast. *This improved model stability and had negligible effects on stock size and status.*
5. The ability of the West Coast Groundfish Bottom Trawl Survey to sample fish of different ages when present (i.e., selectivity) was updated with new data, suggesting approximately 80% of age-2 and older sablefish are captured when encountered. *This resulted in a lower estimate of stock status.*



Recruitment by year for 2009-2024. The five largest recruitment events across the time series have occurred since 2013, three of which (2020, 2021, and 2023) have yet to reach maturity.

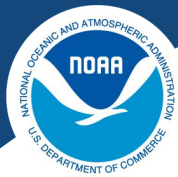


Risk Table: ecosystem and assessment factors influencing scientific uncertainty

NEUTRAL: Ecosystem & Environmental Conditions	FAVORABLE: Stock Assessment Data Inputs	FAVORABLE: Stock Assessment Model Fits & Structural Uncertainty
<p>Recruitment: Index accounted for under assessment data. [Not Scored]</p> <p>Habitat: Sablefish distribution shifted 2° N, related to recruitment. [Unknown]</p> <p>Prey: Indicators for adequate forage for sablefish in recent years. [Favorable]</p> <p>Predators: Main groups not changing much (on average) but sea lions increasing in recent years. [Neutral]</p> <p>Competitors: Some competition between Pacific hake and sablefish for euphausiids. Recent large recruitments increase the chance for competition among other sablefish cohorts. [Unfavorable]</p>	<p>Catch: Reconstructions are generally reliable. [Neutral]</p> <p>Survey: Confident in design of WCGBTS to monitor population well. [Favorable]</p> <p>Recruitment: Informative but uncertain environmental index available for recent 5 years. [Neutral]</p> <p>Ages: Well sampled and data available beginning at age 0. Known challenges and uncertainty in ageing. [Favorable]</p> <p>Biology: Time-varying growth used with empirical weight-at-age data integrated across spatial domain of stock. New estimates of function maturity available. [Favorable]</p>	<p>Ages: Fit well with realistic selectivity assumptions. Estimates of recent recruitment is based on age data and recruitment index. [Favorable]</p> <p>Life history: Natural mortality estimated, steepness fixed, and latitudinal variation in maturity, growth, and other biological processes partially captured. [Neutral]</p> <p>Spatial structure: Uncertainty with biological stock boundaries, including movement across the Northeast Pacific. [Unfavorable]</p> <p>Model stability: Improved with consistent performance across many data and structural changes. [Favorable]</p>

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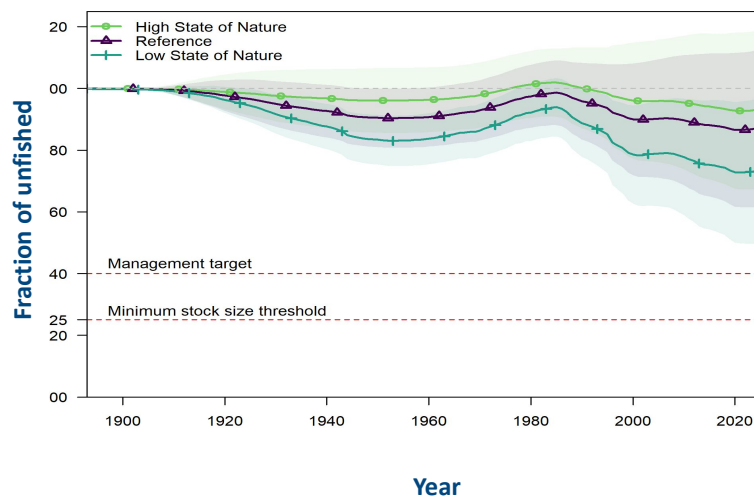
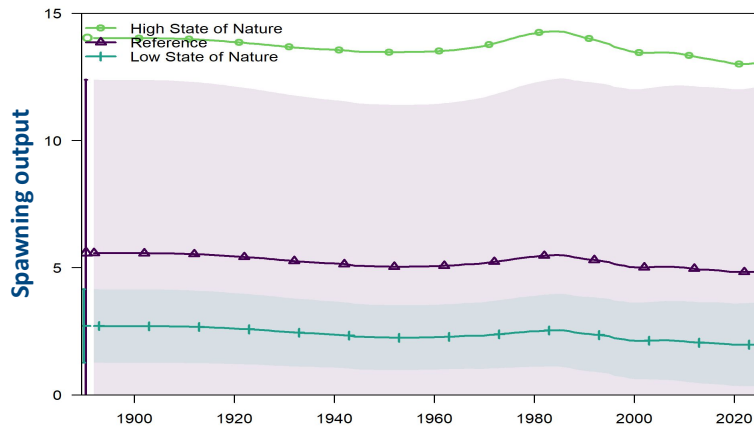
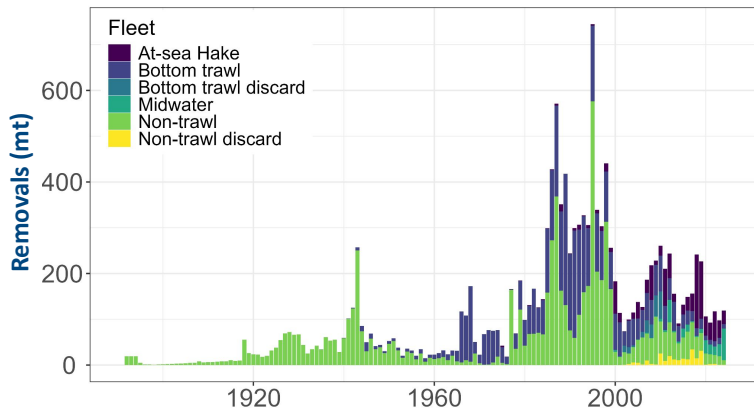
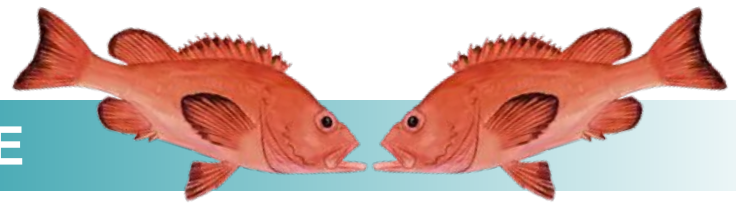
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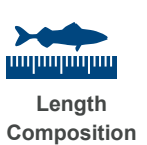
U.S. West Coast Rougheye and Blackspotted Rockfishes in 2025

Data and Stock Assessment Model

This assessment reports the status of the Rougheye (*Sebastes aleutianus*) and Blackspotted (*Sebastes melanostictus*) Rockfishes off the coast of the United States (U.S.) using data through 2024.



Data sources



Key Takeaways

- At the start of 2025, the estimated status of the complex is 87% of unfished, which is above the management target.
- Absolute scale of the stock is highly uncertain
- Numerous simulations show no indication that stock is approaching the target of 40% unfished.
- More ages and reducing ageing error may help decrease uncertainty in stock scale.

Base Model Removals & Stock Projections

Year	Removals (mt)	Spawning Output (trillions of eggs)	Stock Status (target = 40%)
2025	155 ^a	4.86	87%
2026	187 ^a	4.87	88%
2027	881 ^b	4.89	88%
2028	866 ^b	4.82	86%
2029	850 ^b	4.75	85%
2030	834 ^b	4.68	84%
2031	818 ^b	4.62	83%

^a Based on Groundfish Management Team Recommendations for Forecasting

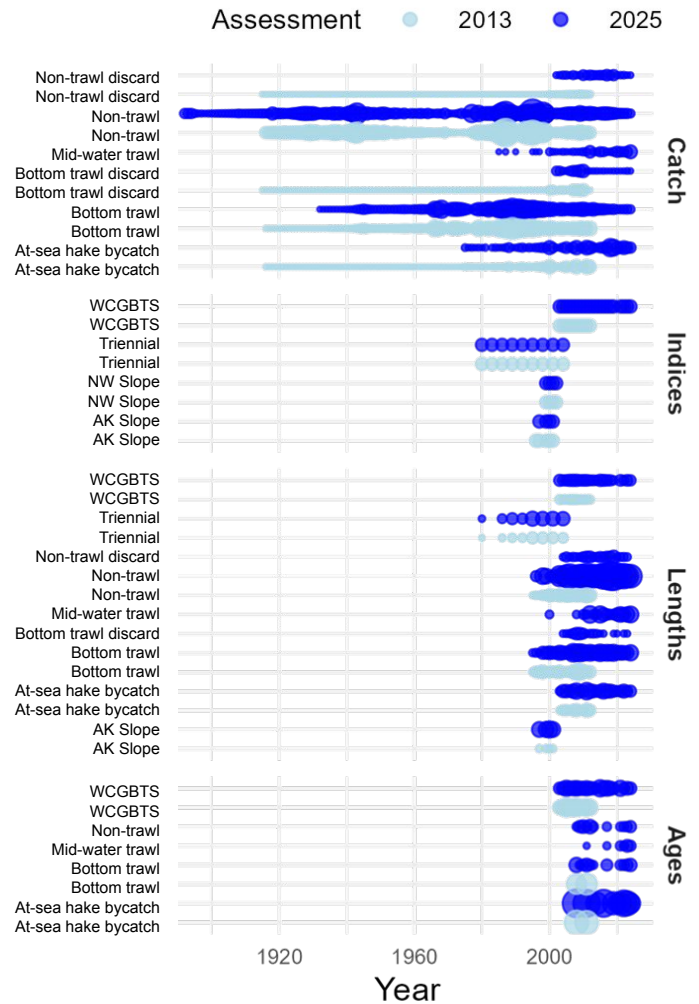
^b Annual Catch Limit (ACL) from the default harvest control rule with P* of 0.45, sigma = 1.0

Major Changes from Recent Assessments

- The last assessment was conducted in 2013.
- Numerous data were added since the last assessment (plot on the right), with thousands of new ages informing increased stock status.
- Stock status and scale increased from the last assessment (plot below).
- Length data and expert knowledge from fishery participants supported dome-shaped selectivity for bottom trawl fleets, which increased the scale and stock status.

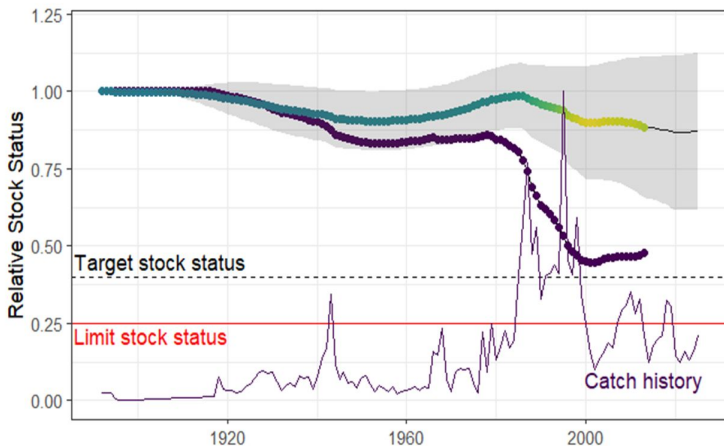
Fleet

Data used in current and 2013 assessment



Comparison with 2013 Assessment

Absolute abundance multiplier of current vs past model values



- Line with uncertainty and longer time series is the 2025 stock assessment.
- Shorter time series is the 2013 stock assessment show lower stock status.
- Catch time series was transformed to be on a [0,1] scale.

Major Sources of Model Sensitivity

- Natural mortality
- Shape of selectivity curves

Ways to reduce uncertainty

- Increase the amount and quality of age data
- Reduce ageing error

View all groundfish stock assessments

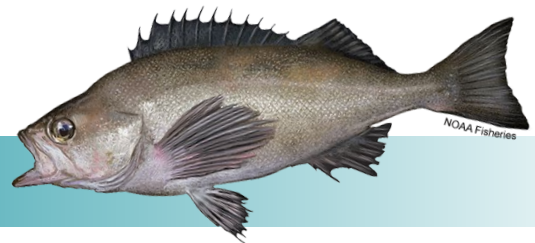


For any questions, please reach out to Jason Cope (jason.cope@noaa.gov) or Vladlena Gertseva (vladlena.gertseva@noaa.gov)



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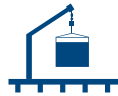


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U.S. West Coast Widow Rockfish in 2025

Data and Stock Assessment Model

This assessment reports the status of the widow rockfish (*Sebastes entomelas*) resource off the coast of the United States (U.S.) from southern California to the U.S. - Canadian border using data through 2024.



Landings & Discards



Survey Indices



Age
Composition

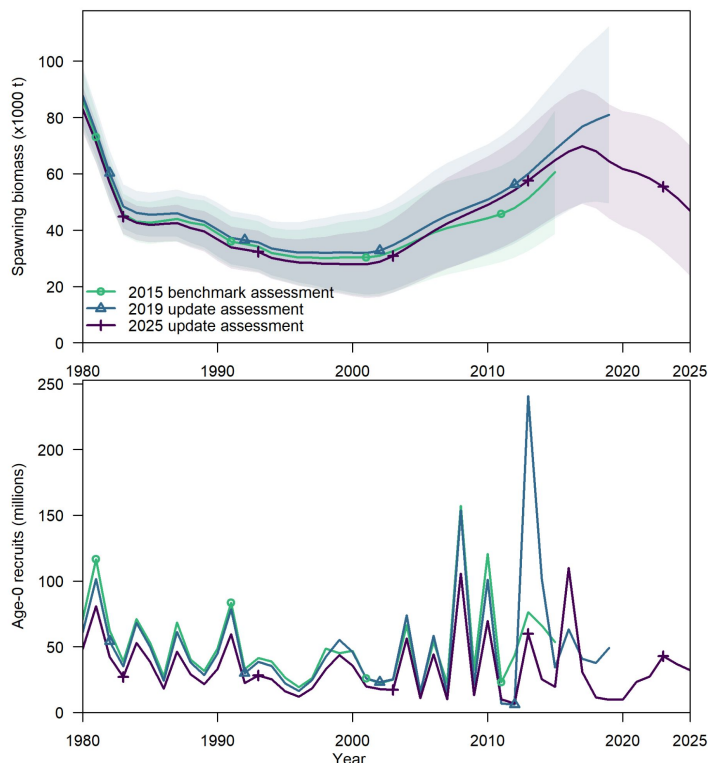
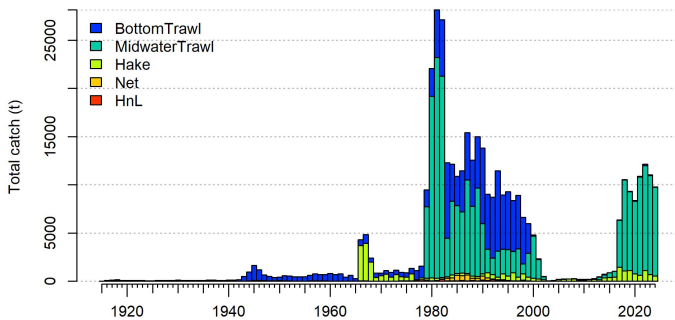


Length
Composition



Recruitment
Index

Note: these results are current as of August 2025. Additional research on the widow rockfish data and assessment model are ongoing in preparation for a supplemental review meeting in October 2025.



Key Takeaways

- At the start of 2025 the estimated stock status is **55%**, which is **above the management target**.
- **Catches increased** since 2017 to a similar level as the 1980s and 1990s, **resulting in a decrease of the stock biomass** in recent years.
- Biomass estimates are similar to past results **but catch limits are significantly lower** due to new estimates of natural mortality and recent recruitment.
- Estimated fishing intensity exceeds the new estimated target in recent years, suggesting **catch limits could be too high**.

Base Model Removals & Stock Projections

Year	Removals (mt)	Spawning Output (mt)	Stock Status (target = 40%)
2024	9,764	51,498	60%
2025	10,669 ^a	46,934	55%
2026	9,824 ^a	41,475	49%
2027	4,238 ^b	36,918	43%
2028	4,349 ^b	36,217	42%
2029	4,677 ^b	36,388	43%
2030	5,004 ^b	36,993	43%
2031	5,213 ^b	37,635	44%

^a Based on Groundfish Management Team Recommendations for Forecasting

^b Annual Catch Limit (ACL) from the default harvest control rule with $P^* = 0.45$, $\sigma = 0.5$

View all groundfish stock assessments

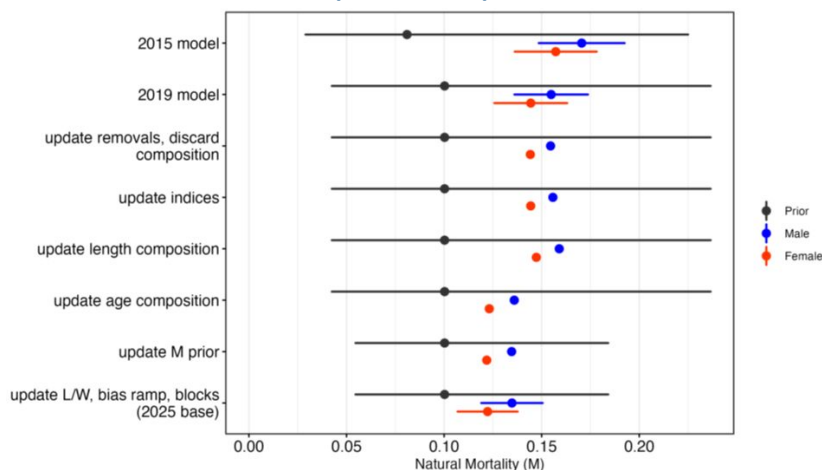


Major Changes from Recent Assessments

Stock scale and trajectories are generally consistent with previous assessments during overlapping time periods, but projected catch limits from the 2025 assessment are substantially lower. **Why?**

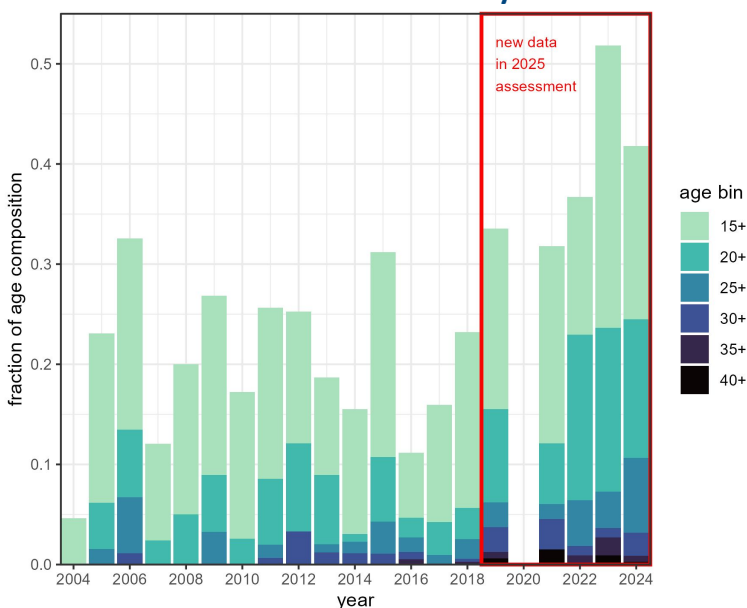
1. Recent data from multiple sources do not support the previously estimated very high 2013 recruitment. In 2019, that estimate was disproportionately influenced by limited hook-and-line discard length data.
2. The bottom trawl survey has observed more old fish from 2019 to 2024 than ever seen before, providing new information about longevity of the species, leading to the lower estimates of natural mortality.
3. The combination of lower estimates of natural mortality, lower estimates of recent recruitment, and large recent catches lead to lower estimates of productivity and stock status, which translates to lower projected catch limits.
4. There remains a mismatch between age composition patterns in the survey and fisheries. In recent years, the proportion of old fish in the midwater trawl fishery has been declining, while it was increasing in the survey.

Estimates of Natural Mortality (2019-2024)



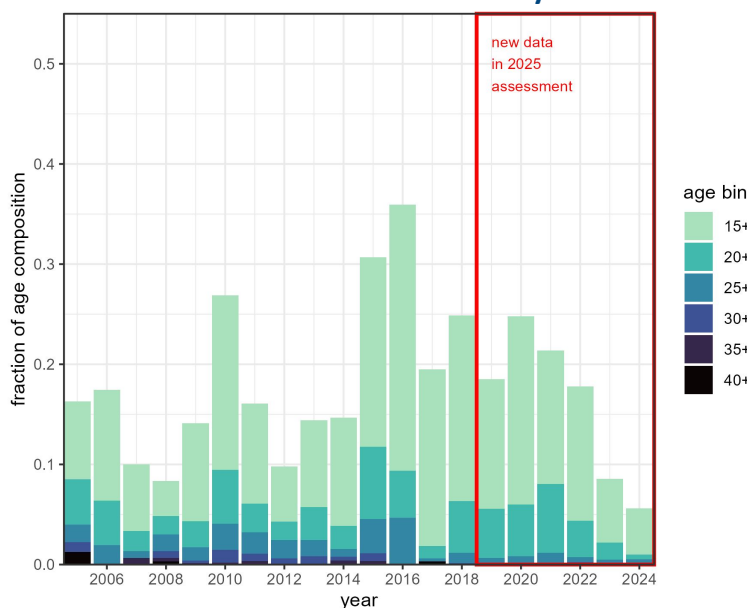
The prior for natural mortality (black) and the estimated M for females (red) and males (blue) from the 2015 base model, 2019 base model, and selected intermediate models bridging to the 2025 base model. Horizontal lines are 95% intervals.

Proportion of old widow rockfish in the bottom trawl survey



The fraction of older fish in the sampled ages from the West Coast Groundfish Bottom Trawl Survey (WCGBTS). The data from 2019 to 2024 are new since the previous assessment. No survey was conducted in 2020 due to the COVID-19 pandemic.

Proportion of old widow rockfish in the midwater trawl fishery



The fraction of older fish in the sampled ages from the commercial midwater trawl fishery. The data from 2019 to 2024 are new since the previous assessment.



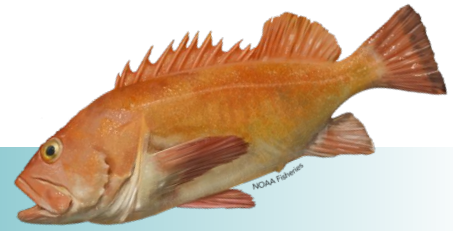


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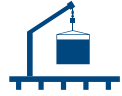
U.S. West Coast Yelloweye Rockfish in 2025



Data and Stock Assessment Model

This update assessment reports the status of the Yelloweye Rockfish (*Sebastes ruberrimus*) resource off the coast of the United States (U.S.) using data through 2024.

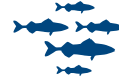
View all groundfish stock assessments



Landings & Discards



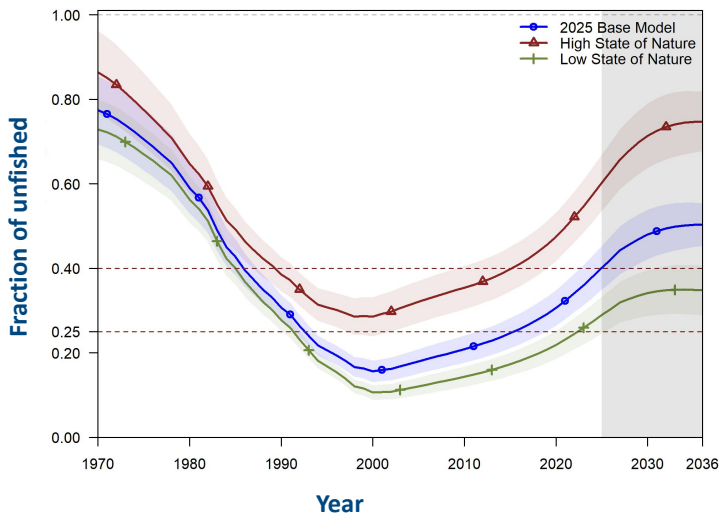
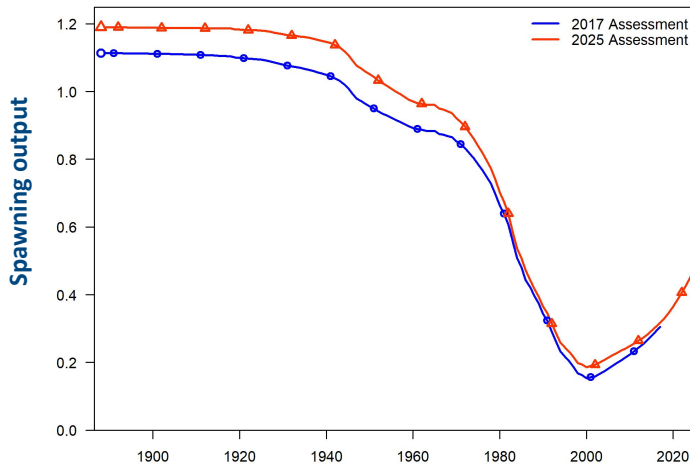
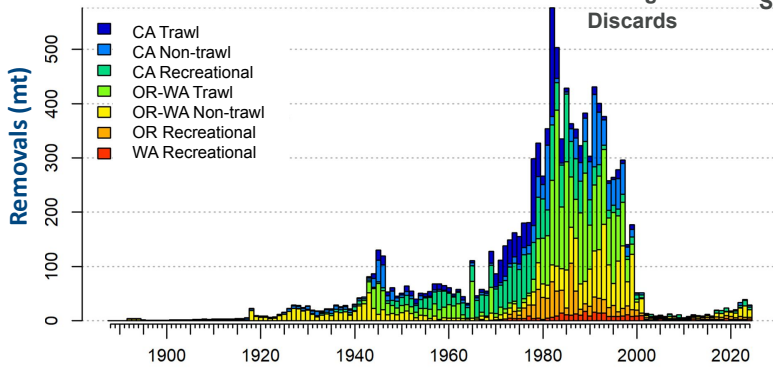
Survey Indices



Age Composition



Length Composition



Key Takeaways

- At the start of 2025, the estimated stock status is 40.1%, **at the target of 40%** of its unfished condition.
- Stock trend is **consistent with 2017 benchmark assessment** and rebuilding analysis.
- Assessment model is **sensitive to natural mortality**, with alternative states of nature estimating 2025 fraction unfished between 29% and 60%, for low and high state respectively.

Base Model Removals & Stock Projections

Year	Removals (mt)	Spawning Output (billions of eggs)	Stock Status (target = 40%)
2025	45.7 ^a	478	40%
2026	46.4 ^a	502	42%
2027	112.9 ^b	527	44%
2028	113.1 ^b	544	46%
2029	113.0 ^b	558	47%
2030	112.6 ^b	571	48%
2031	111.8 ^b	581	49%
2032	110.9 ^b	588	49%

^a Based on Groundfish Management Team Recommendations for Forecasting

^b Annual Catch Limit (ACL) from the default harvest control rule with $P^* = 0.4$, $\sigma = 0.5$

Johnston, M. et al. 2025. Status of Yelloweye rockfish off the U.S. West Coast in 2025