

GROUND FISH MANAGEMENT TEAM REPORT ON BIENNIAL HARVEST
SPECIFICATIONS FOR 2027-28 INCLUDING OVERFISHING LIMITS AND
ACCEPTABLE BIOLOGICAL CATCHES

Action Item # 1: Harvest Specifications for 2027-2028

Default Harvest Control Rules

The Groundfish Management Team (GMT) recommends the Pacific Fishery Management Council (Council):

1. **Adopt default harvest control rules (HCRs) and their resulting harvest specifications as the preliminary preferred alternative (PPA) for all species in the Groundfish Fishery Management Plan (FMP) (see [Agenda Item F.3, Attachment 1, November 2025](#)), except for petrale sole, shortspine thornyhead, canary rockfish, chilipepper rockfish, rougheye/blackspotted rockfish, yelloweye rockfish, yellowtail rockfish north of 40°10' North latitude (N. lat.), and widow rockfish, as listed in Table 1 and discussed in detail below. With the exception of rougheye/blackspotted rockfish and shortspine thornyhead, the GMT will provide our PPA recommendation for these stocks at the appropriate 2026 meeting, once complete harvest specifications and depletion projections are available.**
2. **Remove Alternative 2 HCR for rougheye/blackspotted rockfishes from the Range of Alternatives (ROA);**
3. **Adopt Alternative 3 HCR for rougheye/blackspotted rockfishes as PPA;**
4. **Adopt Alternative 2 HCR and associated harvest specifications for shortspine thornyhead as PPA.**

Harvest Control Rule Alternatives

At our October meeting, the GMT reviewed the range of HCR alternatives and the resulting annual catch limits (ACL) adopted by the Council in September 2025 for petrale sole, shortspine thornyhead, canary rockfish, chilipepper rockfish, rougheye/blackspotted rockfish, yelloweye rockfish, and yellowtail rockfish north of 40°10' N. lat. In the absence of complete harvest specifications and/or depletion estimates for petrale sole, canary rockfish, chilipepper rockfish, yelloweye rockfish, and yellowtail rockfish north of 40°10' N. lat., the GMT opted to delay providing PPA recommendations for those stocks until March. During overwinter analysis, the GMT will analyze management measures based on the full range of ACL alternatives for these stocks. The GMT understands Northwest Fishery Science Center (NWFSC) staff have prioritized the development of harvest specifications and projections for these stocks. The GMT expects to have these data for our overwinter analytical period and will offer PPA recommendations at the appropriate 2026 Council meeting.

As depletion estimates and complete harvest specifications are available for rougheye/blackspotted rockfish and shortspine thornyhead, the GMT recommends Alternative 3 and Alternative 2 as PPA, respectively. Additionally, the GMT recommends that the Council remove Alternative 2 from the range of alternatives for

rougheye/blackspotted rockfish. The rationale for this recommendation is detailed in the rougheye/blackspotted rockfish section below.

The GMT will provide a recommendation on PPA HCRs for widow rockfish upon Council adoption of default OFLs/ABCs/ACLs, following stock assessment adoption as best scientific information available (BSIA). At that time, the GMT will also contemplate any alternative HCRs for consideration. During our overwinter analysis, the GMT plans to analyze the widest range of ACLs currently expected to be possible (see the widow rockfish section at the end of this report).

Comparing benefits and risks of different harvest strategies

Higher ACLs can provide greater economic benefits but can also increase conservation risks, especially when estimates of spawning biomass (or spawning output) and fraction of unfished biomass (or fraction of unfished spawning output) are uncertain. To inform Council decision-making, stock assessors provide decision tables that allow the Council to compare how alternative harvest strategies (*e.g.*, P^* of 0.45 vs. P^* of 0.40) affect spawning biomass over the next ten years, accounting for any uncertainty in stock size and status. These decision tables describe the risks and trade-offs under future management options and should be carefully weighed in decision making. Table 1 presents alternative harvest specifications and any GMT recommendations (**in bold**) for the Council selection as PPA. Alternative HCRs are typically considered for stocks that have new or updated assessments in the current management cycle.

Table 1. Alternative harvest specifications forwarded by the Council in September 2025 for consideration for 2027-28. Bolded values represent GMT recommendations for PPA.

Stock	Alternative 1: Default HCR (See F.3. Attachment 1, Table 1-1 for mt values)	Alternative 2	Alternative 3
Rougheye/ blackspotted rockfish	ABC = ACL, P^* 0.45	Constant ACL = 519 mt (*remove*)	Constant ACL = 300 mt
Shortspine thornyhead	ABC > ACL, P^* 0.45 (40-10 rule)	Constant ABC = ACL 902 mt	
Yellowtail rockfish north of 40° 10' N. lat.	ABC = ACL, P^* 0.45	Ad hoc phase-in	
Chilipepper rockfish	ABC = ACL, P^* 0.45	Constant ACL = 2,114 mt	
Yelloweye rockfish	ABC = ACL, P^* 0.40	Constant ACL = 85 mt	
Canary rockfish	ABC > ACL, P^* 0.45 (40-10 rule)	ABC = ACL, P^* 0.45, No 40-10 adjustment	
Petrable sole	ABC = ACL, P^* 0.45	Constant ACL = 2,489 mt	
Widow rockfish	ABC = ACL, P^* 0.45	TBD	TBD

1. Rougheye/blackspotted rockfish

Alternatives under consideration:

Alternative 1: ABC = ACL, P^* 0.45

Alternative 2: ~~Constant ACL = 519 mt~~ **(*remove*)**

Alternative 3: **Constant ACL = 300 mt**

Biological Implications

The default HCR for rougheye/blackspotted rockfish is to apply a P^* of 0.45 and to set the ACL equal to the acceptable biological catch (ABC). The 2025 stock assessment raised concerns about the level of risk associated with OFLs/ABCs/ACLs that were projected to be much higher than prior years, particularly given the level of uncertainty in the stock assessment. To reduce the risk of overfishing a long-lived species, the GMT and GAP agreed that additional management precaution is prudent. In September 2025, based on GMT and GAP recommendations, the Council added two alternatives to the range for analysis. Alternative 2 would set a constant catch in 2027-28 at 519 mt, which is the MSY proxy value from the 2025 stock assessment (i.e., the yield at the proxy SPR of 50 percent for rockfishes). Alternative 3 would set a constant catch in 2027-28 at 300 mt, which the GAP recommended be added to take a more precautionary approach while still accounting for expected mortality, which has generally been lower than 200 mt in most years. The 10-year projections provided in Table viii of the 2025 stock assessment (Alternative 1; [Agenda Item G.3, Revised Attachment 4, September 2025](#)) and [Agenda Item F.3, Attachment 2, November 2025](#) (Alternatives 2 and 3) show minimal differences in the stock depletion throughout the time series when comparing the three Alternatives. Under Alternative 1, the stock is projected to start at a stock status in 2027 of 87.7 percent and end in 2036 at 78.6 percent. Under both Alternatives 2 and 3, the stock is projected to start at a stock status in 2027 of 88 percent and end in 2036 at 80 percent.

The GMT will analyze management measures based on the ACLs provided in Table 2. Table 3 provides the estimated mortality from 2022-2024 from the GEMM.

Table 2. The 2027-28 rougheye/blackspotted rockfish ACLs (mt) resulting from an ACL equal to ABC with a P^* of 0.45 and constant ACLs equal to 519 mt and 300 mt.

Year	ABC = ACL, P^* 0.45 (Alt. 1)	Constant ACL = 519 mt (Alt. 2)	Constant ACL = 300 mt (Alt. 3)
2027	844	519	300
2027	844	519	300
2028	826	519	300

Table 3. Recent coastwide estimated rougheye/blackspotted rockfish total mortality in metric tons (mt). Data source: GEMM.

Year	Estimated Total Mortality (mt)
2022	117.9
2023	100.1
2024	120.1

Economic Implications

There are not expected to be any economic differences between the proposed alternatives for rougheye/blackspotted rockfish, given that mortality has never reached or exceeded the proposed ACLs for 2027-28. Rougheye/blackspotted rockfish are not typically targeted and are most often caught incidentally to sablefish. If fishery mortality increases such that the ACLs become a constraint, the Council can revisit the HCR and consider requesting a new stock assessment to inform the HCR re-evaluation.

Recommendations

Given that there is not a meaningful conservation difference between Alternatives 2 and 3, as demonstrated above, **the GMT recommends removing Alternative 2 from the range of analysis and adopting Alternative 3 as PPA.**

2. Shortspine thornyhead

Alternatives under consideration:

Alternative 1: $ABC > ACL$, $P^* 0.45$ (40-10 rule)

Alternative 2: Constant $ABC = ACL$ 902 mt

Biological Implications

The default HCR for shortspine thornyhead applies a P^* value of 0.45, with the ACL set below the ABC under the 40-10 rule, as the stock remains within the precautionary zone. Applying the 40-10 rule with a P^* of 0.45 results in ACLs of 847 mt and 856 mt for 2027 and 2028, respectively. The most recent stock assessment, a Category 2 assessment completed in 2023, was followed by a catch-only projection in 2025. The adopted 2025 catch-only update, incorporating the “ramp-down” HCR for 2027–2028 ([Agenda Item F.3, Attachment 3, November 2025, Table 1](#)), would set the ACL equal to the 2026 ABC, resulting in a constant ACL of 902 mt (Table 4).

Under the proposed alternative HCR, stock status in 2027 would remain unchanged, and unfished spawning output in 2028 would decline by less than 0.1%. This minor change would not affect the projected recovery trajectory, with the stock still expected to reach the target of 40% unfished spawning output by 2034.

The GMT will analyze management measures based on the ACLs provided in Table 4. Table 5 provides the estimated mortality from 2022-2024 from the GEMM.

Table 4. The 2027-28 shortspine thornyhead ACLs (mt) resulting from an ACL less than the ABC due to a 40-10 adjustment and an ACL equal to the ABC of 902 mt.

Year	ABC > ACL, $P^* 0.45$, 40-10 adjustment (Alt. 1)	Constant ABC = ACL 902 mt (Alt. 2)
2027	847	902
2028	856	902

Table 5. Recent coastwide estimated shortspine thornyhead total mortality in metric tons (mt). Data source: GEMM.

Year	Estimated Total Mortality (mt)
2022	693.3
2023	462.4
2024	587.3

Economic Implications

Historical data show that from 2007 to 2018, annual shortspine thornyhead mortality exceeded all projected 10-year catches under either HCR, reaching as high as 1,681 mt in some years. As such, shortspine thornyhead is expected to continue to constrain the commercial fleets. The alternative

HCR would increase available catch by 55 mt in 2027 and 46 mt in 2028. This increase may allow the fleet to better adjust to lower harvest limits resulting from the 2023 stock assessment without exceeding the OFL.

Recommendations

Recent projections indicate that maintaining a constant ACL of 902 mt for 2027-2028 would preserve stock stability, support continued progress toward management targets, and provide a smoother transition for the fleet under reduced harvest limits. Therefore, **the GMT recommends that the Council adopt a constant ABC = ACL of 902 mt for 2027 and 2028 as the PPA for shortspine thornyhead.**

3. Yellowtail rockfish north of 40° 10' N. lat.

[Agenda Item G.6.a, Supplemental GMT Report 3, September 2025](#) describes an ad hoc phase-in approach for yellowtail rockfish north of 40° 10' N. lat.

Alternatives under consideration:

Alternative 1: Default HCR ABC = ACL, P* 0.45

Alternative 2: Ad hoc phase-in

The GMT will analyze management measures based on the ACLs provided in Table 6. Table 7 provides the estimated mortality from 2022-2024 from the Groundfish Expanded Mortality Multiyear (GEMM).

Table 6. The 2027-28 yellowtail rockfish north of 40° 10' N. Lat. ACLs (mt) resulting from default HCR and ad hoc phase-in approach.

Year	ABC = ACL, P* 0.45 (Alt. 1)	ACL ad hoc phase-in (Alt. 2)
2027	4,723	5,050
2028	4,540	TBD

Table 7. Recent estimated yellowtail rockfish north of 40° 10' N. Lat. total mortality in metric tons (mt). Data source: Groundfish Expanded Mortality Multiyear (GEMM).

Year	Estimated Total Mortality (mt)
2022	3,102.8
2023	3,361.5
2024	2,802.4

4. Chilipepper rockfish

Alternatives under consideration:

Alternative 1: Default HCR ABC = ACL, P* 0.45

Alternative 2: Constant ACL = 2,114 mt

The GMT will analyze management measures based on the ACLs provided in Table 8. Table 9 provides the estimated mortality from 2022-2024 from the GEMM.

Table 8. The 2027-28 chilipepper rockfish ACLs (mt) resulting from the default HCR of ABC equal to ACL and a constant ACL of 2,114 mt.

Year	ABC = ACL, P* 0.45 (Alt. 1)	Constant ACL = 2,114 mt (Alt. 2)
2027	3,211	2,114
2028	3,086	2,114

Table 9. Recent estimated chilipepper rockfish total mortality in metric tons (mt). Data source: GEMM.

Year	Estimated Total Mortality (mt)
2022	877.4
2023	1,270.5
2024	1,185.0

5. Yelloweye rockfish

Alternatives being considered:

Alternative 1: Default HCR ABC = ACL, P* of 0.40

Alternative 2: Constant ACL = 85 mt

The GMT will analyze management measures based on the ACLs provided in Table 10. Table 11 provides the estimated mortality from 2022-2024 from the GEMM.

Table 10. The 2027-28 yelloweye rockfish ACLs (mt) resulting from an ACL equal to ABC with a P* of 0.40 and constant ACL equal to 85 metric tons (mt).

Year	ABC = ACL, P* 0.40 (Alt. 1)	Constant ACL = 85 mt (Alt. 2)
2027	113	85
2028	113	85

Table 11. Recent coastwide estimated yelloweye rockfish total mortality in metric tons (mt). Data source: GEMM.

Year	Estimated Total Mortality (mt)
2022	36.0
2023	39.9
2024	25.0

6. Canary Rockfish

Alternatives under consideration:

Alternative 1: Default HCR ABC > ACL, P* of 0.45, 40-10 HCR applied

Alternative 2: ABC = ACL, P* of 0.45, no 40-10 adjustment

The GMT will analyze management measures based on the ACLs provided in Table 12. Table 13 provides the estimated mortality from 2022-2024 from the GEMM.

Table 12. The 2027-28 canary rockfish ACLs (mt) resulting from an ACL less than the ABC due to a 40-10 adjustment and an ACL equal to the ABC without the 40-10 adjustment.

Year	ABC > ACL, P* 0.45, 40-10 adjustment (Alt. 1)	ABC=ACL, P* of 0.45, no 40-10 adjustment (Alt. 2)
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2027	606	643
2028	623	TBD

Table 13. Recent coastwide estimated canary rockfish total mortality in metric tons (mt). Data source: GEMM.

Year	Estimated Total Mortality (mt)
2022	716.5
2023	720.7
2024	580.3

7. Petrale sole

Alternatives under consideration:

Alternative 1: ABC = ACL, P* 0.45

Alternative 2: Constant ACL = 2,489 mt

The GMT will analyze management measures based on the ACLs provided in Table 14. Table 15 provides the estimated mortality from 2022-2024 from the GEMM.

Table 14. The 2027-28 petrale sole ACLs (mt) resulting from an ACL equal to the ABC and a constant ACL of 2,489 mt.

Year	ABC = ACL, P* 0.45, (Alt 1)	Constant ACL = 2,489 mt (Alt. 2)
2027	2,449	2,489
2028	2,423	2,489

Table 15. Recent coastwide estimated petrale sole total mortality in metric tons (mt). Data source: GEMM.

Year	Estimated Total Mortality (mt)
2022	3,097.2
2023	2,914.3
2024	2,839.5

8. Widow rockfish

Alternatives under consideration:

Alternative 1: ABC = ACL, P* 0.45

Alternative 2: TBD

The GMT will analyze management measures based on the ACLs provided in Table 16. Table 17 provides the estimated mortality from 2022-2024 from the GEMM. For widow rockfish, the ACLs in Table 16 are considered lower and upper bounds, as the stock assessment and resulting OFLs are still being reviewed for designation as BSIA, and exact values may change depending on the results of the review.

Table 16. The 2027-28 widow rockfish ACLs (mt) to be analyzed overwinter.

Source:	2025 “new widow rockfish base model”, Agenda Item F.2, Attachment 3, November 2025 (ABC = ACL, P* 0.45)	2023 Catch-only Projection (ABC = ACL, P* 0.45)
Year	Lower Bound	Upper Bound
2027	4,796	9,754
2028	4,998	9,255

Table 17. Recent coastwide estimated widow rockfish total mortality in metric tons (mt). Data source: GEMM.

Year	Estimated Total Mortality (mt)
2022	12,142.8
2023	11,034.0
2024	9,733.7

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