

WASHINGTON DEPARTMENT OF FISH AND WILDLIFE REPORT ON CANARY ROCKFISH AND
THE 2027-2028 INITIAL HARVEST SPECIFICATIONS AND MANAGEMENT MEASURE
ACTIONS FOR 2027-2028

In this report, we articulate why the Council should continue evaluating how fishery sectors share the canary rockfish annual catch limit (ACL). We offer two main reasons and also propose an approach for finding win-win solutions.

The first and main reason is that business-as-usual is not working well. When planning seasons, all sectors feel limited by their share of the ACL and see no room to have it further reduced. Then, after the year ends and catches are tallied, we see a surplus and a sizeable one. In hindsight, it looks as if sectors were limited when they did not need to be. This has happened every year since 2011. It looks highly likely to happen again in 2025.

The second reason is that the evaluation of fair and equitable sharing of recovery benefits was intended to be ongoing and was never completed. The change in perception of stock status in the 2023 assessment was more justification for going back to the drawing board than for considering the existing percentage splits to have been comprehensively evaluated and fixed.

The bulk of this report outlines the proposed approach for a win-win solution. The solution would be made possible by stepping back from the implicit assumption inherent in the business-as-usual approach that every share of the canary ACL is 100% likely to be caught every year. The goal is to introduce the concept at this meeting and to begin the discussion in full in November and hold final action in June. The Council has made clear its interest in finding new ways to achieve conservation mandates more cost-effectively and flexibly. WDFW is in full support. The 2027-2028 management measures process should not be overlooked as an opportunity to make progress.

Before outlining the proposed approach in Section C, we elaborate on the two reasons for continuing the evaluation.

A. Why the Evaluation of Fair and Equitable Sharing of Recovery Benefits is incomplete

Section 304(e)(4) of the Magnuson-Stevens Act requires that “restrictions and recovery benefits” be shared “fairly and equitably among sectors of the fishery.” Section 303(a)(14) echoes this and requires conservation and management measures to:

allocate, taking into consideration the economic impact of the harvest restrictions or recovery benefits on the fishery participants in each sector, any harvest restrictions or recovery benefits fairly and equitably among the commercial, recreational, and charter fishing sectors in the fishery.

Canary was probably the Council's most difficult in terms of fair sharing of rebuilding restrictions given how many sectors that catch it. The fair sharing of recovery benefits may have been even more challenging. The evaluation began in 2015 following the new assessment. Given the uncertainty in how catch would respond to the restrictions being relaxed, the Council did not recommend long-term allocations at that time but instead chose to maintain the option of adjusting allocation every two years. Different sectors responded with different approaches and timelines, as is reflected in the catch time series over the last 10 years.¹ When the 2023 assessment brought a major drop to ACLs, some sectors like our state recreational fishery were still in the process of learning how the fishery was responding to the peeling back of restrictions put in place to rebuild the stock. For example, stakeholders in the WA recreational fishery were concerned about going too far, too fast and being shut down.

The effect of this was that the trawl sectors received quota that the recreational sectors did not think they would catch early on, but this was meant as a determination that the recreational sectors would not need more in the future.

In addition, the draft 2025 assessment of yelloweye estimates the stock to be rebuilt. If this result holds, there is even more reason to look at canary. Management of the two have been highly connected, particularly in the recreational fisheries. The fair and equitable sharing of recovery benefits from both should be considered together. The reason that stakeholders in Washington were worried about allowing canary to be retained was partly out of concern that many anglers would confuse the two species.

B. Problems with the current approach

Canary was perhaps the most challenging stock for the Council to rebuild because of how many sectors it affects and because catch is widely variable across many sectors. Even when conditions are largely similar, catch can vary widely from year to year. Under such circumstances, planning for the "average year" may not address the consequences to sectors in years when catch rates jump. Because of this, the Council has tended to set sector amounts at higher-than-average levels. Doing so means that the amounts are less likely to be reached in a given year. And when this is done for multiple sectors, the probability that all reach their amounts in the same year and every year would be expected to be even less likely.

A similar dynamic occurs in the IFQ and co-op programs. Participants in those fisheries are managing their exposure to disaster tows/lightning strikes. These events can eat up a lot of a business' quota, yet they are also relatively infrequent. Business plans for boats and processors have to factor in the risk, but not everyone will experience extreme catch events every year. And with the seasonality of fisheries and markets and the expiration of quota pounds at the end of the year, a substantial amount of quota can go unused.

The overall effect of this is to layer precautionary amounts upon precautionary amounts and a very small chance that the ACL is achieved. And this is problematic because the optimum yield goal of National

¹ [The GMT Report under this agenda item](#) documents the Council's decision on two-year allocations and shows the time series of how sectors differed.

Standard 1 and the sustained participation of fishing community goal of National Standard 8 are achieved by attaining high levels of ACL. Business-as-usual is forgoing fishing opportunities. A new approach is needed. The solution WDFW proposes addresses these issues by distinguishing between management response levels and the amounts of catch that are more likely to be caught in most years.

C. A proposal for thinking more probabilistically

As a starting point, we propose the following approach and recommend that discussions of it and any alternatives for achieving the same aims begin at the November meeting and with final preferred recommendations in June:

1. Have the GMT and GAP evaluate the various sector shares of the canary ACL, possibly categorizing them into tiers, with the focus on the likelihood that the sectors will fully use their respective shares in a year, the relative likelihood of various levels of attainment, etc. Based on their evaluations, the GAP and GMT will make recommendations to the Council under step 2.
2. The Council, as a matter of policy, chooses an “attainment factor” for each sector, or possibly based on the tiers/categories. The attainment factors could remain precautionary without needing to be set equal to 1. The burden of proof needed to justify a factor of 1 should be high.
3. The status quo amounts for each sector are then multiplied by the attainment factors to distinguish between: (a) the level at which management response is expected; and (b) the amount to deduct from the ACL, as described below.
4. Step 3 would result in there being surplus quota that could be used to adjust the status quo levels for sectors that would benefit from additional canary.

Iterations between steps 2-4 should result in a fuller, more transparent consideration of the probability that each sector uses their amount and of the “joint probability” that multiple sectors fish their full shares and reach the ACL. It should be possible to increase the management response levels for multiple sectors and to even increase the amount of quota allocated to the IFQ sector, and to do so while keeping the chances that the ACL is exceeded acceptably low. On that, the Council has taken a “risk of exceeding the ACL” perspective toward inseason events in recent years. The purpose here is to expand and improve upon that approach during the planning phase. And the approach could be further developed and refined by the flexibility approaches the Council will be evaluating such as ACL carryover and rolling average based evaluations of the ABC control rules.

More details on each step follow below.

Step 1 – evaluating the sectors.

To illustrate the concept, the GMT and GAP could categorize sectors based on the likelihood of fully using their status quo amounts. For sake of illustration, the following four categories could be used:

- A. Highly likely (> 75% chance).
- B. Likely (50% to 75% chance)
- C. Unlikely (25% to 49% chance)

D. Highly unlikely (< 25% chance)

The starting point would be the status quo amounts for each sector.

Another key part to the discussion would be to focus on how frequently the amounts are expected to be caught. To make real improvements, it will be necessary to be more specific about probability of certain levels being caught. If a quantitative method is available for evaluating the uncertainty in point estimates, like the bootstrap simulation used for the at sea whiting sectors, it could inform the discussion. But in most cases, the evaluation would depend on a mix of qualitative and quantitative information and would rely on the professional judgement of the GMT, GAP, and Council staff as informed by other agency experts and fishery participants. Over time, more quantitative simulation models could be developed as staff capacity and priorities allow. Even where quantitative models are not feasible in the short-term, it should be possible to make qualitative judgments and to differentiate between levels believed to be likely to be caught every year, versus likely to be reached every other year, or 1-in-four years, etc.

The at-sea sectors provide an example. As shown in Tables 1 and 2 of [the GMT Report under this agenda item](#), the at-sea co-ops only reached their 2025 allocation level of 20 mt one time in 10 years. The co-ops could certainly catch many multiples of their existing set aside if they were not diligently avoiding large catches. Yet it would be reasonable to assume the co-ops will perform at similar levels of effectiveness. The probability that they will catch 20 mt is closer to 10% than it is to 100%. This is important to the discussion in step 3 about the levels at which management reaction is expected versus the levels likely to be seen in a typical year. It should be possible, for example, to contemplate that the at-sea sectors will take 20 mt or even more in a one-out-of-10 or one-out-of-5 years type of frequency while accounting that most years are likely to be less than 10 mt.

Inspiration for this proposed approach comes in part from the U.S.-Canada whiting treaty process and how the Joint Management Committee (JMC) has set the Total Allowable Catch (TAC) in recent years. In TAC setting discussions, the industry and the treaty Advisory Panel give the JMC realistic assessments of what they are likely to catch in the upcoming season based on market conditions, North Pacific fishing opportunities, and other circumstances like expected shipyard time. The JMC then uses this information to set the TAC at one level while aiming at a lower amount of fish, chosen based on the stock assessment decision table, they expect to be removed from the population. The focus is on “realized catch” or “fish out of the water” instead of simply on the formal allocations to the sectors. It is this realization that every unit of the TAC is not 100% likely to be fished and the use of professional judgement to assess what attainment percentage is more likely are the two aspects we believe could be helpful to the Council’s planning of canary allocations.

Step 2 – Choosing the attainment factors

Whatever shape the evaluation takes in step 1, its purpose is to inform the Council’s choice of the attainment factors. Business-as-usual implies attainment factor of 1.0. The primary need is to break away

from the business-as-usual assumption that every unit of the ACL has a 100 percent chance of being fully used each year.²

To illustrate the possible thought processes, the IFQ fishery is perhaps the most interesting example. The dynamics created by individual accountability and businesses seeking quota pounds (QP) to cover the risk of disaster tows has meant that 100 percent use of QP is highly unlikely. The informational item in the [June inseason report from the GAP](#) is much in line with the type of discussion that could inform the choice of an attainment factor. And for sake of example, say future discussions pointed toward the sector using 75% of the QP in the years being planned for. The Council could choose an attainment factor of 0.75 or something more conservative like 0.80.³

Steps 3 and 4 – Differentiating and better aligning of the level at which the management response is expected from likely levels of catch

A major focus of this proposed approach is to consider this discrepancy caused by setting allocation amounts at levels that are not likely to be seen and yet deducting the amount from the ACL as if they are highly likely. As noted above, the trawl sectors are using a large share of the ACL while showing a low probability of catching it, and again, to no fault of the businesses in those fisheries. And we do not think the recreational sectors have yet been fully considered for their fair and equitable shares of canary's recovery benefits. The possibility of the win-win comes from the alignment that would happen during these steps and by recognizing that the level that management response is called for does not need to be the same as the amount deducted from the ACL.

The proposal would be to include the management response levels in regulation or where appropriate and to make clear that the full amount is not being deducted from the ACL. The tribal amount is a special case that illustrates the point. The tribes are managing to the 50 mt using their sovereign authorities. Like the at-sea sector, the Washington treaty tribes could take many multiples of their 50 mt set aside if they were not taking measures to avoid it. The proposed approach would recognize the effectiveness of their management by not deducting the full 50 mt from the ACL, while at the same time, recognizing that discussions on adjustments would not be needed unless the 50 mt was reached or called for by other circumstances.

Using the at-sea sectors to illustrate further, the management response associated with at-sea set asides is still a topic for refinement. Yet if a set aside is exceeded, the expectation is that the Council will evaluate why catch was high and discuss whether changes are necessary. No action is required unless other circumstances, like a risk of exceeding the ACL, call for it. The Council went away from hard caps

² By assuming that each sector has a 100% chance of fishing its allocation, it follows that the joint probability of all sectors doing so in the same year is 100% as well. Even when the ACL was less than 100 mt, the joint probability of all sectors hitting their allocations in the same year was less than 1.0.

³ As of Sep. 9, 2025 the IFQ fishery had caught 210,852 pounds of canary, which is only 27.5% of the sector's 767,208 lb allocation of canary (the sector also received 63,425 lbs of carryover from 2024). Catch will hopefully pick up in the last 3.5 months of the season. Yet an attainment factor of 0.8 would appear to have been very conservative for this year.

because the incentive for the co-ops to avoid canary and other species remains strong enough without them. As noted above, the current at-sea set aside of 20 mt was seen only one time in 10 years.

To prompt the type of discussion hoped for, we illustrate how an attainment factor of 0.5 could be used for the at-sea sectors. Instead of 20 mt being deducted from the ACL, the factor of 0.5 would make it 10 mt. Other than the one year over 20 mt, catch was between 5.0 mt and 6.6 mt and no higher in five of the ten years, 2015-2024. So, 10 mt would cover those levels seen 50% of the time with some room to spare.⁴ This could then be paired with a more explicit management response trigger. For example, the trigger could be catch exceeding 20 mt more than once over a five-year period. Again, the goal is to maintain the incentive for co-ops to continue avoiding canary while giving flexibility for years when catch is higher than expected. It would be a question to evaluate as well, yet the room for experiencing more than one year above 20 mt would come from the joint probability of multiple sectors being over their allocations in the same year remaining low.

The IFQ fishery would be a major focus of this proposed approach. The management response for this sector comes from the individual accountability created by the quota pound (QP) rules and other measures like the vessel use caps. There are few ways for catch to exceed the IFQ allocation, and they are unlikely. The discrepancy between the amount of quota pounds issued and the amount expected to be used can be addressed with even more confidence that catch will remain below the amount allocated.

Using the 2025 example from the previous section, the allocation to the IFQ fishery is 347.6 mt. Applying an attainment factor of 0.80 to that amount would result in 278.1 mt. This equates to a difference of 69.5 mt between the amount that would be deducted off the ACL and the amount of the allocation expected to be used.

What could be done with that 69.5 mt difference would be considered together with those of all sectors, and the discussion would likely require some iteration. In the at-sea example just noted, there would be another 10 mt not being deducted from the ACL compared to status quo. Table 1 shows a hypothetical example where the recreational sectors have attainment factors of 0.9, at-sea's is set to 0.5, and all others to 0.8. In this scenario, there would be 111.2 mt to be evaluated.

Table 2 provides an example of where the next step could go following from the numbers in Table 1. In this scenario, the recreational sectors have their management response levels increased by 50%, and in turn, their attainment factors adjusted down to 0.8 to reflect that the higher levels are less likely to be seen in the typical year. The scenario also increases the amount of quota pounds issued to the IFQ fishery by 25%. As shown, the adjusted total still 14.8 mt lower than the ACL. Scenarios like this would then be evaluated for the risk of exceeding the ACL in total, by further considering whether the factors are appropriate for each sector and by considering the joint probability of multiple sectors reaching their management response levels in the same year.⁵

⁴ The question could be looked at more thorough with the GMT's bootstrap simulation. It would likely show 0.5 to be a conservative choice.

⁵ If and when multi-year approaches like carryover and multi-year ABC control rules are implemented, they would be important factors to consider as well.

On the 25% increase for the IFQ fishery, this is made possible because the QPs are not expected to have a 100% probability of being used. Instead, the attainment factor of 0.8 used in the scenario would represent the Council's policy/risk call that a probability of 80% is more rational and consistent with National Standard 8 than 100%. Again, much focus would be spent on what the appropriate attainment factors should be. But based on catch to date, the scenario's use of 0.8 would be on the conservative side for 2025. And using that, the Council could have converted the 767,208 lbs allocated to the IFQ program in 2025 to 959,010 QP—a 25% increase—and had a high degree of confidence that neither the trawl allocation nor ACL would be exceeded.⁶ This approach could also have been beneficial under the higher ACLs of 2017-2024. Looking back to 2024, it would have been reasonable to use an attainment factor of 0.6 for the IFQ fishery based on the pattern seen since 2017. An attainment factor of 0.6 would have translated into more than 1.2 million extra QP in circulation in 2024.⁷

⁶ To calculate this, you divide the IFQ allocation of 767, 208 lbs by the attainment factor of 0.8. Thought of in reverse, an expected attainment of 80% means that 959,010 in QP translates to 767, 208 lbs of realized catch.

⁷ The hope would be that increasing the amount of QP in circulation would also increase the rate of trading and lead to higher rates of attainment. The possibility of this dynamic would need to be factored into the choice of the attainment rate. However, we saw attainment percentages of less than 60% when the ACL was higher. So it could be more likely that the attainment percentage would decrease if QP were increased.

Table 1. Hypothetical example of applying attainment factors to the 2025 allocations of canary

Allocation/Share	Attainment factor	2025 Adopted Allocation (mt)	Adjusted	Difference
Tribal	0.8	50	40.0	10.0
Research	0.8	10.1	8.1	2.0
Incidental	0.8	2.8	2.2	0.6
At-Sea	0.5	20	10.0	10.0
Shorebased IFQ	0.8	347.6	278.1	69.5
Comm. Non-Trawl	0.8	50.7	40.6	10.1
Washington Rec.	0.9	17.3	15.6	1.7
Oregon Rec.	0.9	26	23.4	2.6
California Rec.	0.9	46.73	42.1	4.7
Total		571.23	460.0	111.2

Table 2. Hypothetical next step following the Table 1 evaluation that increases the recreational amounts by 50%, reduces their attainment factors to 0.8, and increases the amount of IFQ quota pounds issued by 25%. As noted above the management response levels will sum to more than the ACL. The amount deducted from the ACL is equal to the management response level multiplied by the attainment factor.

Allocation/Share	Attainment factor	Deducted From ACL (mt)	Management Response Level (mt)
Tribal	0.8	40.0	50.0
Research	0.8	8.1	10.1
Incidental	0.8	2.2	2.8
At-Sea	0.5	10.0	20.0
IFQ	0.8	347.6	434.5
Comm. Non-Trawl	0.8	40.6	50.7
Washington Rec.	0.8	20.8	26.0
Oregon Rec.	0.8	31.2	39.0
California Rec.	0.8	56.1	70.1
Total		556.5	