

There seems to be way too much real-world information that points to the draft assessment and its downgrades of widow biomass and productivity as being improbable. Here are my top pieces of evidence (some from November GAP report) that contradict or call into question the negative picture of the widow draft assessment and demonstrate very high model sensitivity to relatively small changes in data:

1. Annual fishing mortality is about 10,000 mt over the last eight years, with fishing catch per unit of effort (CPUE) still robust in 2025 and still concentrated in the two locations, while there are vast other known widow aggregations in several coastal areas that are lightly fished or not fished at all.
2. Widow estimates 50% maturity at 5.47 years and most of its range is not fished hardly at all.
3. The previous two points don't seem to point to a result shown in the draft stock assessment of a 40% coastwide reduction in spawning biomass from 2017 to the end of 2026.
4. The draft stock assessment asserted that a proportional increase of older fish (15 & above) in 2019-2024 bottom trawl survey data signaled lower natural mortality and therefore a less productive stock than previously thought. The impact of this age data was so much that if this age composition data from the bottom trawl survey was removed from the draft assessment model that the 2027 OFL would increase by 74%. This model result does not seem logical.
5. Much has been made in the stock assessment documents about changes in recruitment estimations. Assessment documents argue recent information about recruitment including correcting a mistake (by removing hook and line discards from the model) in the 2019 assessment has reasonably changed the estimation of widow to a less productive stock than previously thought. I contend there are two major problems with this assertion:
 - a) The downgrading of recruiting classes from the early & mid 2010's may have technical merit within standards of performing stock assessments, but the real-world evidence points to those classes being very robust as they have been feeding a fishery in the last five to six years that has maintained high CPUE while only having to fish on a small portion of the range of the stock.
 - b) The draft stock assessment's characterization of "recent below average recruitment" seems to be based in part on three low years 2018-2020. However, if we look at the Figure iv: "Time-series of estimated recruitments" from the draft stock assessment on page viii linked [here](#) it shows some relatively high recruit class in ten years prior (2008-2017) and the next five years (2021-2025). Each of the five years of recruits, 2021-2025, is above the previous 50 year (1971-2020) median value, as 29 of those 50 years are below all of the 2021-2025 values. A fishery that has current robust CPUE with five successive above median value recruit value years starting to come into the fishery does not seem to suffer from recruitment issues.
6. The move from weight-based fecundity to length-based fecundity is understandable in its rationale, although it does result in a 9% reduction in 2027 ACL. The importance of length on fecundity is explained in [responses document](#) in request 6 starting on page 17 and explains on page 18 that *"spawning output is more dependent on larger fish (over 40 cm) which are disproportionately removed from the population due to selective fishing on larger sizes."* This is displayed in figure on page 18. So the lack of older fish limits widow productivity in the model. However, when we look at the 72% gain in 2027 OFL had it not been for older fish in the bottom trawl survey age composition data, we see that the model sets up widow for a lose-lose situation. More older fish in data increases fecundity but drives

down natural mortality & therefore productivity. Less older fish in data decreases fecundity. Unless I'm missing something, the model predestines widow to mediocre productivity. This does not seem to reflect a stock that has widespread numbers of large congregations on the west coast, with many of them unfished, the few fished congregations holding up on CPUE, essentially protected congregations of both spawners and juveniles, and an estimated 50% maturity at 5.47 years. Something seems quite off in the model. With the current model, we are simultaneously being told widow productivity is suffering from lack of old (large) fish because of fecundity and widow productivity is suffering from too many old fish because of natural mortality.

7. Changes in fleet structure described in [responses document](#) in "Response 3" from pages 5-10 show in table on page 9 that simply adding bottom trawl discard data to bottom trawl catch lowers 2027 ACL by 20% (from 3937 to 3146 mt). The model seems extremely sensitive to seemingly small changes, and often to the downside. There are adjustments to the upside like with the Francis weighting, but the bulk of model changes have seemed negative and impactful. It sets up a model that makes one wonder if we are destined for low productivity / biomass / stock status no matter the data input given the state of current available data from an insufficient bottom trawl survey and an efficient, somewhat narrowly focused midwater trawl fishery.
8. Another example of how stock assessment and modeling choices produce huge swings in results: Responses document table on page 17 shows "B2025 trillions of eggs per thousand mt" varies from 10.6 in January 2026 model to 54.8 in 2019 model HKL data corrected. That is a huge swing that almost doubles the projected 2027 ACL.