# **May 2025 – Yelloweye Rockfish Update Assessment [MAB]**

MAB: It would be helpful for the reader if tables span across pages, to repeat the table header (e.g. Table 2).

~~Table 7 is missing…~~

~~Might be good to have a few decimal places in Table 19 values~~ (and which P\* was used)?

~~Would be good to check bookmarks in file to guide navigation to sections. Missing for Figures?~~

~~Figure 5 and 8 are cut off on right~~

~~Not sure what the 6 is on pg 75~~

~~Figure 73 can just have the year in the legend if that makes it easier to fit to page~~

I like the Acronyms page – if you wish, that could be moved up to earlier in the document, perhaps between Disclaimer and prior to Exec Summary?

# **Appendix C: Check List of Elements to be included in Full/Update/Data-Moderate Assessment Documents**

| Section | Element description |
| --- | --- |
| A | STAT names and affiliations |
| A | Citation instructions, following the title page. |
| B | Executive Summary |
| B | Exec. Summ., Stock description: Species and area; basis for regional management. |
| B | Exec. Summ., Catches: Table with last 10 years;  graph with long term information. |
| B | Exec. Summ., Data & assessment: Date and type of last assessment, model type, … |
| B | Exec. Summ., Stock biomass and dynamics: Trends and current levels relative to unfished; . . .  table with last 10 years;  graph with long term information. |
| B | Exec. Summ., Recruitment: Trends and current levels relative to unfished; . . . table with last 10 years; graph with long term information. |
| B | Exec. Summ., Exploitation status: Exploitation rates . . . ;  table with last 10 years;  Kobe (phase) plot with long term information. |
| B | Exec. Summ., Ecosystem considerations: Summary of relevant environmental and ecosystem factors . . . |
| B | Exec. Summ., Reference points: |
| B | Exec. Summ., Management performance: Catches compared to OFLs, ABCs, . . .  table with values for last 10 years. (Harvest specifications to be provided by Council staff). |
| B | Exec. Summ., Unresolved problems and major uncertainties: Special issues that complicate the assessment . . . |
| B | Exec. Summ., Decision table and projections (**No decision table needed in draft assessments undergoing review;** however harvest projection tables should be included for the candidate base model [with default harvest control rules]): Projected yields (OFL/ABC/ACL), spawning biomass / output, depletion . . .~~MAB: The decision Table viii (and Table 20) indicates three management scenarios (A/B/C) but only describes two, one with P\*=0.45 and a second with P\*=0.40, what is the third one? Also the formatting is off as it spans the space available. Shouldn’t it also indicate that 2025 and 2026 catches are fixed to ACLs (not 23-24)?~~ |
| B | Exec. Summ., Scientific uncertainty: Sigma and how calculated. ~~MAB: Same QAQC check of those values and what they represent?~~ |
| B | Exec. Summ., Research and data needs: Identify information gaps . . . |
| B | Exec. Summ., Rebuilding projections: Reference to principal results from the rebuilding analysis (if applicable) . . .MAB: Is it possible to provide any narrative that the current projections would put the stock above B40 in 2027 and thus this would no longer be in the precautionary zone (i.e. when is it projected to be rebuilt and should the reader anticipate further rebuilding projections based on the proposed model?) |
| C | Introduction: 1. Scientific name, distribution, choice of stock structure, . . . |
| C | Introduction: 2. A map showing the scope of the assessment . . . **\*Not required for update assessments. May refer to the most recent full assessment for additional information.** |
| C | Introduction: 3. Important features of life history . . . **\*Not required for update assessments. May refer to the most recent full assessment for additional information.** |
| C | Introduction: 4. Ecosystem considerations . . . **\*Not required for update assessments. May refer to the most recent full assessment for additional information.** |
| C | Introduction: 5. Important features of current fishery . . . **\*Not required for update assessments. May refer to the most recent full assessment for additional information.** |
| C | Introduction: 6. Summary of management history. **\*Not required for update assessments. May refer to the most recent full assessment for additional information.** |
| C | Introduction: 7. Management performance, including a table with OFLs, ABCs, ACLs, HGs, landings, and catch . . . |
| C | Introduction: 8. Description of fisheries for this species off Canada, Alaska and/or Mexico . . . **\*Not required for update assessments. May refer to the most recent full assessment for additional information.** |
| D | Data: 1. Fishery-dependent data: Commercial fisheries landings by state, year and gear … Table with sample size information for length- and age-composition data...including both the number of trips and fish sampled. ~~MAB: For removals it is still helpful to actually have the year range of data rather than post-2016; for example are the landings through 2024 but discards through 2023? Any difference in year range for commercial vs recreational? I realize now you have more detail below in the individual sections, which answered my question.~~ |
| D | Data: 2. Fishery-independent data: Description of surveys used . . . Table with sample size information for length- and age-composition data . . . , including both the number of tows and fish sampled. |
| D | Data: 3. Sources used to estimate biological parameters (e.g., natural mortality) . . . |
| D | Data: 4. Environmental or ecosystem data used. ~~MAB: This section was missing from the document, please include it even just to say that you didn’t use any of this data…~~ |
| E | Model: 1. History of modeling approaches used for this stock. **\*Not required for update assessments. May refer to the most recent full assessment for additional information.** |
| E | Model: 2. Response to most recent past STAR panel recommendations . . . **\*Not required for update assessments. May refer to the most recent full assessment for additional information.** |
| E | Model: 3. (Groundfish updates only) Response to SSC Groundfish Subcommittee recommendations from the previous assessment accepted for management~~. MAB: This section should be included, as it is required in the TOR. Please let me know if you need the prior GFSC report, etc.~~ |
| E | Model: 4. Bridging analysis, including description of new modeling approaches and other changes from the last assessment. **\*Not required for update assessments. May refer to the most recent full assessment for additional information.** |
| E | Model: 5. General model specifications: assessment program, model structure, area and fleet definitions, initial conditions. |
| E | Model: 6. Model parameters: estimated and fixed parameters, parameter constraints, priors, selectivity assumptions, … |
| F | Base model selection: 1. Evidence of search for balance between model realism and parsimony . . . **\*Not required for update assessments. May refer to the most recent full assessment for additional information.** |
| F | Base model evaluation: 2. Evaluation of model parameters. Likelihood profile for natural mortality; Likelihood profile for steepness; Likelihood profile for R0. |
| F | Base model evaluation: 3. Residual analysis, residual plots, time-series of observed and predicted values. MAB: Is it common to cite a GitHub repository for the residual plots or should they be included in the document? Should be a question for the SSC to consider… |
| F | Base model evaluation: 4. Convergence status and convergence criteria, randomization runs. |
| G | Base-model results: 1. Table with all explicit parameters in the base model and associated SDs. |
| G | Base-model results: 2. Table with population numbers at age × year × sex, which may be included as a text or spreadsheet file. **\*Not required in a draft assessment undergoing review.** |
| G | Base-model results: 3. Table with time-series of total biomass, summary biomass, spawning biomass, depletion, recruitment, . . . |
| G | Base-model results: 4. Selectivity estimates (if not included elsewhere). |
| G | Base-model results: 5. Stock-recruitment relationship. |
| G | Base-model results: 6. Clear description of units for all outputs. |
| G | Base-model results: 7. Description of how discard is included in yield estimates. |
| H | Evaluation of uncertainty: 1. Sensitivity runs to evaluate assumptions about model structure. |
| H | Evaluation of uncertainty: 2. Sensitivity to data set choice and weighting schemes: removal of data sources; alternative weighting methods for compositional data. |
| H | Evaluation of uncertainty: 3. Parameter uncertainty . . . Uncertainty estimates for parameters and derived quantities; basis for sigma; Likelihood profiles (tabular format) for *M,* *h*, and R0 . . . |
| H | Evaluation of uncertainty: 4. Retrospective analysis, . . . |
| H | Evaluation of uncertainty: 5. Historical analysis . . . |
| H | Evaluation of uncertainty: 6. If a range of models runs for characterizing uncertainty . . . information on their relative probability. |
| H | Evaluation of uncertainty: 7. Ranges depicting uncertainty should include at least three runs . . . for use in the decision table. |
| H | The following model runs in the table below are required.   |  |  |  |  | | --- | --- | --- | --- | | **Parameter(s) / Issue** | **Base Model Run** | **Sensitivity Model Run** | **Notes** | | Natural mortality (*M*) Prior | Use natural mortality prior (Hamel, 2015; Then et al. 2015). This prior is defined as a lognormal distribution with median value (corresponding to the mean in log-space) = 5.40/maximum age and log-scale sigma. Both parameters should include three significant digits. | None Required, though exploration of the Lorenzen *M* for age-varying *M* is recommended where appropriate. | The maximum age values on which *M* priors are based should be from fish caught within the area of the assessment, not from Alaska, for example. If the prior for *M* is used to provide a fixed value for *M*, the fixed value should be set equal to the median value of the prior (5.40 / maximum age). | | Age- or sex- specific *M* | If: Sex-specific *M* | Then: Single *M* |  | | Weighting of compositional data | Francis (2011) | McAllister and Ianelli (1997) harmonic mean | STATs may also explore the Thorson et al. (2016) Dirichlet multinomial likelihood. | | Selectivity | If: All dome shaped | Then: One fleet asymptotic |  | | Rockfish fecundity | Use fecundity relationships from the meta-analysis in Dick et al. (2017), at the appropriate taxonomic scale, if better species-specific relationships are not available. | None required. |  | | Rockfish steepness | Use SSC-approved steepness prior for rockfish species in 2019 has a mean value of 0.72 and standard deviation of 0.16. If the assessment model does not estimate steepness, the STAT should fix the steepness value at 0.72. | None required. |  | | Confirm convergence | 50-100 jitter model runs with a strong preference for 100 jitter runs when feasible. | NA |  | |
| I | Reference points: 1. Unfished spawning stock biomass, summary age biomass, . . . |
| I | Reference points: 2. Reference points based on B40% for rockfish and roundfish and on B25% for flatfish . . . |
| I | Reference points: 3. Reference points based on SPR proxy . . . |
| I | Reference points: 4. Reference points based on MSY . . . |
| I | Reference points: 5. Equilibrium yield curve showing various BMSY proxies. |
| J | Unresolved problems and major uncertainties: Describe any special issues . . . |
| K | Harvest projections and decision tables : **\* Decision tables not required in a draft assessment undergoing review;** however harvest projection tables should be included for the candidate base model (with default harvest control rules and default removal assumptions). **\*\* Not applicable to assessments rejected by a STAR panel or withdrawn by the STAT.** |
| K | Harvest projections and decision tables: 1. Harvest projections and decision tables should include OFL, ABC, and ACL. |
| K | Harvest projections and decision tables: 2. Information presented should include biomass / spawning output, stock depletion, . . . |
| L | Evaluation of scientific uncertainty. Sigma and how it was calculated. |
| M | Regional management considerations. Discuss biological evidence for a regional management approach and provide the estimates of survey biomass in each management region using the standard survey index standardization software used in the assessment or the adopted allocation method. |
| N | Research and data needs: 1. Describe progress on research and data needs identified in the most recent previous assessment . . . |
| N | Research and data needs: 2. Describe new research & data needs and priority . . . |
| O | Acknowledgments: Include STAR panel members and affiliations . . . **\* Not required in a draft assessment undergoing review.** |
| P | Literature cited: |
| Q | Auxiliary files: A list naming the required text files and any other supplementary electronic files . . . |