



**NOAA**  
**FISHERIES**

Alaska Fisheries  
Science Center

# SSC generic assessment requests

Grant Thompson

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# Paraphrased versions of the requests

1. Balance goodness of fit with risk of model over-specification
2. Use a consistent metric to report fish condition
3. Use alternative projection methods that:
  - A. Incorporate uncertainty in model parameters as well as uncertainty in future recruitment
  - B. Provide a distribution of future fishing mortality conditional on the point estimate of future catch
4. Report the following:
  - A. Environmental and fisheries observations that support an inference of impending severe decline in stock biomass
  - B. Ecosystem status and assessment status of each stock
    - (This one was covered under a previous agenda item)

# Developing a plan for responding

- Joint Team co-chairs and coordinators spent lots of time developing a plan for authors to use in responding to these requests, to increase the likelihood that:
  - Authors will notice the requests in time to develop useful responses
  - Responses will be comparable across assessments
- Plan was approved by SSMA and MESA leadership in February
  - Included some requests for clarification by the SSC
- SSC clarified some items in June
- Plan was adjusted accordingly and sent to authors on June 29

# The plan (1 of 5)

1. Balance goodness of fit with risk of model over-specification
  - The SSC clarified its request as follows (6/18): **“In the absence of strict objective guidelines, the SSC recommends that thorough documentation of model evaluation and the logical basis for changes in model complexity be provided in all cases.”**
2. Use a consistent metric to report fish condition
  - A committee was established earlier this year, consisting of all ESR and assessment authors who currently report fish condition
  - The committee agreed that the “weight-length residual” method currently used in the ESR should be the standard
  - Chris Rooper has offered to share his R code for doing the necessary calculations and making plots
  - Note that authors are not required to report fish condition

# The plan (2 of 5)

3. Use alternative projection methods
  - SSMA and MESA leadership has agreed to take the following steps:
    - A. Notify assessment authors that the previous requirements for use of “Proj” and measurement of spawning biomass at the time of peak spawning no longer apply, thereby enabling authors to use Stock Synthesis (SS) or other software to make the projections
    - B. Task one or more individuals with modifying “Proj” so as to accommodate this request for non-SS Tier 3 assessments
    - C. Task the authors of Tier 1 assessments with modifying their projection code so as to accommodate this request for Tier 1
  - Steps B and C above will be undertaken with the understanding that it may not be possible to accomplish them in time for use in 2018

# The plan (3 of 5)

4. A. Environmental and fisheries observations that support an inference of impending severe decline in stock biomass
  - No later than the summer of each year, the lead author of each assessment should review the previous year's ESR and determine whether any factor or set of factors described in that ESR implies an impending severe decline in stock/complex biomass, where "severe decline" means a decline of at least 20% (or any alternative value that may be established by the SSC), and where biomass is measured as spawning biomass for Tiers 1-3 and survey biomass as smoothed by the standard Tier 5 random effects model for Tiers 4-5
  - (continued on next two slides)

# The plan (4 of 5)

4. A. Environmental and fisheries observations that support an inference of impending severe decline in stock biomass, continued
  - If an author determines that an impending severe decline is likely and if that decline was not anticipated in the most recent stock assessment, he or she should summarize that evidence in a document that will be reviewed by the respective Team in September of that year and by the SSC in October of that year, including a description of at least one plausible mechanism linking the factor or set of factors to an impending severe decline in biomass, and also including an estimate or range of estimates regarding likely impacts on ABC
  - (continued on next slide)

# The plan (5 of 5)

4. A. Environmental and fisheries observations that support an inference of impending severe decline in stock biomass, continued
  - In the event that new survey or relevant ESR data become available after the document is produced but prior to the October Council meeting of that year, the document should be amended to include those data prior to its review by the SSC, and the degree to which they corroborate or refute the predicted severe decline should be noted, with the estimate or range of estimates regarding likely impacts on ABC modified in light of the new data as necessary