

Additional Short-term Requests from the Science Panel – March 26, 2012

NOTE: These requests are predominantly directed to Eric Ward.

1. Provide details of the "autocorrelated random walk" that Eric used to model variation in abundance of Chinook. We would like to see just how he simulated variation in Chinook abundance and we were both concerned that results were "odd" when he used a "CV of 20%". We'd like to know just what he meant by "odd" and just what he means when he says "CV of 20%". We have some reasonable conjectures concerning just what Eric did here, but we would like to know for certain.
2. We'd like to see the logistic regression analyses expanded so that they not only include an assessment of whether or not chum salmon abundance, by itself, or in combination with Chinook, is a significant explanatory variable, but we would also like to see pinniped abundance (a weighted average of harbor seal and sea lion abundance, weighted by guesstimated average daily consumption of Chinook per individual) included in these analyses. Assuming that fecundity and/or survival of SWKR are related to abundances of chum and Chinook salmon (alternative prey items) and pinnipeds (competitor), we'd like to see Eric drive his simulated 30 year trajectories assuming high (current) pinniped abundance and mean (?) chum abundance, allowing only Chinook abundance to vary, to see how results compare to those based on logistic regression fits against Chinook abundance alone.
3. We'd like Eric to have discussions with Robert Kope and Larrie LaVoy to get a better average figure for the increase in relevant terminal run size of Chinook salmon that would result if fishing were curtailed. It is inappropriate to directly compare catch to catch + escapement because the catch consists of both immature and maturing fish whereas the escapement is of mature fish only. Not all of the fish that are not caught would be expected to return in the terminal run where they would be available to SRKW due to (a) incomplete maturation, and (b) ocean mortalities due to other causes of mortality (competing risks argument). Member of the Panel contacted Larrie and Robert on this point and they both agreed that the 20% "improvement" in abundance was probably too high, though it would take some calculating to provide a more reasonable value.