## SALMON TECHNICAL TEAM REPORT ON THE SALMON ENDANGERED SPECIES ACT CONSULTATION PROCESS

The Salmon Technical Team (STT) has reviewed National Marine Fisheries Service (NMFS) Report I under Agenda Item I.1.a, "Alternatives for Salmon Bycatch Management in the Pacific Coast Groundfish Fisheries" and heard a presentation on the content of this report by Ms. Susan Bishop of the NMFS West Coast Region. The report contains a substantial analysis of Chinook salmon bycatch taken in various sectors of the groundfish fishery, including estimates of bycatch parsed to the level of individual Evolutionarily Significant Units (ESUs). We understand there are data limitations that likely preclude a more in-depth, stock-specific assessment of the impacts of salmon bycatch, yet the information presented here is an improvement of our knowledge of the extent and magnitude of salmon bycatch in groundfish fisheries.

The STT notes however, that there are some shortcomings in the analysis that make it difficult to assess the impact of bycatch in groundfish fisheries. In particular, it is difficult to assess stock (or ESU) specific impacts because there was no linkage between stock-specific bycatch with the abundance of those individual stocks. For many stocks, particularly those that are Endangered Species Act (ESA)-listed, a very small number of individuals caught as bycatch could constitute a substantial impact on the population. Conversely, for more abundant stocks, the bycatch levels could constitute a trivial impact.

An analysis of the relationship between Chinook bycatch and aggregate measures of Chinook abundance found weak correlation. This suggests that there is the potential for high bycatch levels in years of low aggregate abundance. Furthermore, the report noted that a large proportion of the bycatch can occur in a very small number of tows. These results are troubling because they suggest that there is little promise of making credible predictions of Chinook bycatch in groundfish fisheries.

Finally, bycatch rates are anticipated to increase due to an increase in non-whiting fishing opportunity. The STT notes that this expansion is occurring at a time while the abundance of many salmon populations is declining.

PFMC 03/10/17