

ECOSYSTEM ADVISORY SUBPANEL REPORT ON RISK MANAGEMENT FRAMEWORK – RISK TABLES AND OTHER APPROACHES

To summarize the following report, the Ecosystem Advisory Subpanel (EAS):

- Broadly supports the development of risk tables to inform Council fishery management decisions across multiple fishery management plans to compare and improve the utility of the risk table as a tool for management;
- Supports building upon the information in the salmon stoplight tables to translate the status of ecosystem indicators to characterize risk to salmon returns (and future brood years) using indicator-based outlooks;
- Sympathizes with the challenges associated with reduced staff capacity and competing salmon fishery priorities; and
- Encourages continuing the dialogue among California Current Integrated Ecosystem Assessment (CCIEA) scientists, the Salmon Technical Team (STT), and Habitat Committee (HC) about how ecosystem information can best be additive to the salmon fishery management process.

The EAS received a briefing from Ms. Gilly Lyons and Ms. Angela Forristall on Agenda Item G.3, Risk Management Framework for Salmon, at our virtual meeting on September 3, 2026. The EAS appreciates the progress report on salmon risk tables described in Attachment 1 ([Agenda Item G.3, Attachment 1, September 2026](#)), which was the primary focus of our discussion.

Over the past few years, the EAS has expressed broad support for the development of risk tables to inform Council fishery management decisions for various reasons. The EAS recognizes that the annual salmon fishery management process is intense and compressed into a short timeframe. Our intent is not to complicate or hinder the process, but rather to improve the information available for Council decision-making.

In general, we see value in developing risk tables across multiple fishery management plans for comparison and refinement of the tool itself. Given species life history and relevant indicators for a particular stock or stock group, there are likely differences in the kinds of information that could be included and in how risk tables could be informative. Specific to salmon, the EAS has supported CCIEA scientists working with others, such as the STT and the HC, to build upon the information in the salmon stoplight tables to translate the status of ecosystem indicators, which range from red (poor conditions) to blue (favorable conditions), to characterize risk to salmon returns (and future brood years) using indicator-based outlooks.

Salmon stoplight tables, which are presented in the annual California Current Ecosystem Status Report (ESR) ([Agenda Item E.1.a, CCIEA Report 1, March 2026](#)), summarize many indicators relevant to salmon returns, including the Pacific Decadal Oscillation (PDO), sea surface temperature, deep temperature, deep salinity, copepod richness, and juvenile salmon catch. More recently, CCIEA scientists worked with the STT and HC to develop a comprehensive stoplight table for Central Valley spring Chinook salmon, Sacramento River fall Chinook salmon, and

Klamath River fall Chinook salmon that includes indicators from throughout the stocks' life histories, spanning the 1983-2024 brood years. As described in the ESR, indicators related to spawning, incubation, and outmigration conditions lead adult returns by two to three years; therefore, indicator-based outlooks can be made two years in advance. As such, the EAS sees value in exploring the extent to which these indicator-based outlooks could help inform future salmon fishery management decisions (i.e., one to two years later).

As described in Attachment 1, the development of salmon risk tables remains an unfinished item under Fishery Ecosystem Plan Initiative 4, despite significant progress being made, “due in part to competing priorities under the salmon FMP and staffing losses and changes at the Science Centers, which have reduced the capacity to advance this work.” While the EAS understands and sympathizes with these challenges, we are also deeply concerned about West Coast salmon stocks, some of which have been listed under the Endangered Species Act for decades and have shown little progress toward recovery. Given the changing conditions being observed in the Pacific Ocean and the potential effects on salmon, the EAS stresses the importance of continuing the dialogue among CCIEA scientists, the STT, and the HC about how ecosystem information can best be additive to the salmon fishery management process.

PFMC
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