Northwest Power and Conservation Council

June 1, 2006

MEMORANDUM

TO: Council members

FROM: Jim Ruff, Manager, Mainstem Passage and River Operations

SUBJECT: NOAA Fisheries Service presentation on the status of the Northern California Current ecosystem and its relationship to Columbia River salmon productivity

John Ferguson, who is Director of the Fish Ecology Division of NOAA's Northwest Fisheries Science Center, and Dr. Ed Casillas, Manager of the Center's Estuarine and Ocean Ecology Program, will present information about the present status of the Northern California Current ecosystem and its relationship to Columbia River salmon productivity (see the attached map of the Northern California Current ecosystem). Since 1997 the Fish Ecology Division of the Northwest Fisheries Science Center has been monitoring the near ocean environment off the coasts of Washington and Oregon, including an assessment of the Columbia River plume and its interaction with the California Current. They will also provide an assessment of how the California Current affects the abundance, distribution and growth of juvenile salmon as a means to assess their survival as they enter the marine environment.

Ocean conditions off the coasts of Oregon and Washington vary greatly, and this affects the survival of salmon migrating out of the Columbia River. Fishery managers recognize the ability to evaluate the many actions taken in freshwater to recover salmon will depend in part on assessing the impact of ocean conditions. Until recently the region has lacked a set of tools to provide information and forecasts of salmon productivity and survival in the ocean environment.

In their presentation, Ferguson and Casillas will discuss the physical and biological metrics of the California Current that the Science Center is evaluating and present their results to date. They will discuss how these metrics will be used annually to communicate the status of the Northern California Current ecosystem in a technical report, as well as posting of this information to the Science Center's web site in real-time. They will also relate how this information could be used in the future to develop a better understanding of the mechanisms and relationships between salmon and their environment through the use of quantitative models, as well as the potential salmon management applications of the data.

See the attached abstract for more information.

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The “cool” and “warm” phases of the Pacific Decadal Oscillation, and its impacts on waters of the Northern California Current