

APPLICATION OF THE ECOSYSTEM DIAGNOSIS AND TREATMENT METHOD TO
COHO SALMON IN THE HOOD CANAL WATERSHED

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EXECUTIVE SUMMARY

This report presents the results of a comparative analysis of coho salmon habitat in watersheds of the Hood Canal Basin in Western Washington. The purpose of the analysis is to improve understanding of how land and water uses within the basin have affected coho salmon habitat, and, as a consequence, have altered the potential for natural production and sustainability of this species in the basin.

An improved understanding of the cumulative effects of all human related actions is needed if coho salmon populations are to be sustained at levels beneficial to both tribal and non-tribal communities. This analysis is designed to assess cumulative effects. The focus is on diagnosing how changes in freshwater habitat in the Hood Canal basin are contributing to loss in production and sustainability.

To effectively assess cumulative effects in a geographic setting such as the Hood Canal basin, it is necessary that we gain a comprehensive view of the entire relevant landscape. For Hood Canal, this requires a view that examines the mosaic of conditions that exist within each of the watersheds in the basin, and how these conditions have been changed through land and water uses. Our diagnosis of these conditions is made from a coho salmon life history perspective.

The objectives of the analysis presented in this report are to:

1. Diagnose conditions within each watershed in the Hood Canal basin as they relate to the existing potential for production and sustainability of coho salmon, and assess how these conditions have been shaped through land and water use activities.
2. Formulate a basin wide diagnosis, comprised of the individual watershed diagnostic summaries, that describes general patterns of production and sustainability within the basin and how these patterns have been affected by land and water uses.
3. Formulate a set of guidelines for developing strategic priorities for maintaining, and rehabilitating (or restoring) where feasible, habitat quality and quantity within the basin relevant to the production and sustainability of coho salmon.
4. Provide recommendations for applying the diagnostic findings of this analysis to on-going or developing management forums relevant to Hood Canal coho salmon.

Approach

Our analysis has been performed using an approach referred to as the Ecosystem Diagnosis and Treatment (EDT) Method, as described in Lichatowich et al. (1995) and Lestelle et al. (1996). The method provides a systematic way of analyzing, or diagnosing, the conditions of the environment, related to the current potential for Hood Canal coho