

# Habitat Restoration in the Lower Columbia River and Estuary Under the Council's Fish and Wildlife Program

James D. Ruff

Fish and Wildlife Division  
Northwest Power and Conservation Council  
851 SW Sixth Avenue -- Suite 1100  
Portland, OR 97204  
(503) 222-5161; jruff@nwcouncil.org

## Abstract

As part of the habitat strategies identified in the Council's 2000 Columbia River Basin Fish and Wildlife Program (Program), the estuary is an important ecological feature that is negatively affected by upriver management actions and local habitat changes. For example, the storage, release and impoundment of water in upstream storage projects has altered the natural hydrograph and water temperatures of the Columbia River, as well as changed the characteristics of the estuary.

The Council's Program acknowledges that less is known about the potential for habitat improvement in the estuary than is known about the potential for improvement in other parts of the Columbia River Basin. However, there are indications that substantial habitat improvements are possible and that these improvements may benefit most of the anadromous fish populations. Accordingly, the Columbia River estuary is included as one of the planning units in the Program,<sup>1</sup> and subbasin plans have been developed and incorporated into the Program for both the estuary and Lower Columbia River reach below Bonneville Dam.

In 2003, the Council adopted Mainstem Amendments to the Fish and Wildlife Program. These amendments included a measure to identify, protect and restore ecosystem functions in the Columbia River estuary and near-shore ocean discharge plume that are affected by actions taken upstream within the Columbia River hydrosystem. This includes evaluating flow effects, river operations and habitat changes in the estuary, as well as local effects from activities such as dredging and pollution from urban areas. The goal of this measure is to better understand and improve the relationship between the estuary and near-ocean plume characteristics and the productivity, abundance, and diversity of salmon and steelhead populations that migrate through and/or utilize these habitats. The 2003 amendments also call on the federal action agencies to manage river flows, consistent with the mainstem plan's flow and reservoir operations, to protect, improve and expand the spawning, rearing and resting habitat in the mainstem Columbia River and estuary.

The Council's Fish and Wildlife Program is currently undergoing an amendment process during 2008. I will summarize the relevant Program recommendations the Council has received from the salmon managers and other parties concerning the Lower Columbia River and estuary areas.

---

<sup>1</sup> The freshwater plume and the ocean itself are also identified as important habitats for salmon and are addressed in the Ocean Conditions section of the Program.

