

# Assessing The Role of the Columbia River Estuary in Growth and Survival of Juvenile Salmon.

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The estuarine environment associated with the Columbia River, is a critical habitat to juvenile salmon. Recent evidence suggests that improvement in survival of the estuarine life history phase of Columbia River salmon may be critical to recovery of endangered stocks. In the case of salmonids originating from the Columbia River Basin, survival success hinges on the complex interaction of juvenile salmon quality and the abiotic and biotic river and ocean conditions at the time they enter into the estuarine landscape and during their first year of ocean existence. I will describe ongoing research that NOAA Fisheries along with our partners from academic institutions (Oregon Science and Health University, Oregon State University, and the University of Washington) and state agencies (Oregon Department of Fish and Wildlife and Washington State Department of Fish and Wildlife) are currently undertaking with regard to evaluating the role of the Columbia River estuary in recovery of depressed salmon stocks. Ongoing studies include (a) defining the role of the estuary in juvenile salmon growth and survival, (b) identifying linkages between the landscape and salmon the characterize salmon habitat, (c) developing applicable new technologies, (d) assessing the impact of human disturbance, and (f) developing approaches to facilitate evaluation of management action scenarios that can be used to restore the Columbia River estuarine habitat to benefit salmon growth and survival.