

Modeling summer Chinook reintroduction

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The most current summer Chinook reintroduction EDT diagnosis (current and historic) was completed in the spring of 2008 for the Yakima Subbasin. This diagnosis was fairly simplistic and included too few potential life history patterns (both juvenile and adult). In order to characterize the life history patterns most suitable to environmental conditions in the Yakima Subbasin, the existing Yakima summer Chinook database was expanded to include all summer Chinook freshwater adult and juvenile life history patterns documented in the donor stock populations residing in the Upper Columbia. All biologically plausible combinations of life history patterns were combined to evaluate critical uncertainties concerning the biological responses to anticipated temporal and spatial characteristics of the environment. The results of the analysis hypothesize the suitable characteristics of a summer Chinook population adapted to the Yakima Basin, the feasibility of summer Chinook reintroduction, and estimate the natural production potential of the Yakima Subbasin. This information will assist future planning efforts with artificial production strategies through multiple phases of the reintroduction process.