**Puget Sound steelhead abundance near the turn of the 20th century estimated from commercial catch record data: Nick Gayeski, Wild Fish Conservancy; Bill McMillan, Wild Fish Conservancy; Patrick Trotter, Consulting Fishery Biologist, Seattle, WA.**

ABSTRACT

We used reported commercial catch data and historical information regarding unreported catches to estimate the abundance of winter steelhead, *Oncorhynchus mykiss*, in Puget Sound rivers in 1895, the year in which the peak commercial catch of steelhead occurred. We employed a Bayesian analysis to address the uncertainties associated with the estimation process and report abundance estimates for four large northern Puget Sound rivers and for the remaining aggregate of rivers and streams in Puget Sound. The central 90% of the posterior distribution of total abundance ranged from 485,000 to 930,000, with a mode of 622,000. Compared with the 25-year average abundance for all of Puget Sound of 22,000 for the 1980–2004 period, our results show that current abundance is likely only 1%–4% of what it was prior to the turn of the 20th century. Loss of freshwater habitat alone can account for this reduction in abundance only if there was an extraordinary decline in productivity. Our estimates of historical abundance should better inform the development of recovery goals for Puget Sound steelhead. The complete details were presented in the Canadian Journal of Fisheries and Aquatic Sciences, vol. 68: 498-510, March 2011.