



Source: R. Reisenbichler and G. Brown. 2003. Assessing Extinction Risk for West Coast Salmon. NOAA Technical Memorandum NMFS-NWFSC-56

Experiments in the Pacific Northwest have shown that survival of salmonids can be reduced almost 50% after two generations of hatchery reproduction, and by 90% after 6 generations. All experiments were carried out at steelhead (*Onchorhynchus mykiss*) hatcheries. In Washington's Kalama River, survival from eggs to adults of hatchery steelhead was compared to survival of wild fish for four years (1979-82). The survival of the hatchery fish was only 10% of wild fish survival, on average. In the Deschutes River in Oregon and the Clearwater River in Idaho, survivals of hatchery fish were tracked from embryo to fry stages, and found to be much lower than wild fish in their rivers of origin. The points above are extrapolations to the adult phase, assuming that they follow a similar trend to the Kalama River. The likely explanation for this observed reduction in survival is that selection for fish that survive well in hatchery conditions produces fish that survive poorly in wild.