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| **Managing ESA listed *Oncorynchus mykiss* in the presence of multiple life history strategies** |

The factors that influence the degree of anadromy in *Oncorynchus mykiss* have been well studied and are thought to be driven, in large part, by the presence of migratory barriers, gene expression and freshwater vs. ocean productivity. In Puget Sound, poor early marine survival has been identified as a primary impediment to recovery of ESA listed steelhead populations. At the same time, it appears that some populations of wild resident rainbow trout are thriving in associated freshwater environments. While the factors that drive rainbow trout to “pass up” the opportunity to go to sea are becoming more clearly understood, the importance of rainbow trout to the management and recovery of steelhead is rarely considered among policy-makers. In the Nisqually River, the southernmost steelhead-bearing stream in Puget Sound, the large number of outmigrating juvenile steelhead relative to returning adults indicate that the population experiences extremely poor marine survival. Furthermore, it seems plausible that a robust rainbow trout population is contributing to smolt production in the Nisqually River. This hypotheses has motivated managers and researchers to investigate the relationship between andadromous and resident life history strategies in the basin. Specifically, we have used otolith microchemistry to evaluate whether juvenile migratory steelhead (i.e., smolts) had anadromous or resident mothers. Preliminary results from this work and implications for managing rainbow trout fisheries in the presence of ESA listed steelhead will be discussed.

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