Title:
Non-target Taxa Monitoring

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Abstract:
Release of large numbers of hatchery origin salmon has the potential to negatively impact other taxa (non-targettaxa, NTT). To determine changes in NTT status that could be related to hatchery smolt releases, we compared the abundance, size structure, and distribution of 14 non-target taxa before and seven years after annual spring releases of about 1 million yearling smolts (coho and Chinook) in the Yakima River, Washington. We compared any observed changes in status to predetermined containment objectives that were judged to reflect acceptable levels of impact. We utilized detection strategies that would balance our ability to detect changes and the chances of falsely associating a change with supplementation. With the exception of steelhead size, all of the changes we observed were within the containment objectives established for the project. The main stem Yakima River steelhead size index has decreased through the post-supplementation period although the decrease was not significant (-1%, $P>0.05$). Our analysis suggests that the depressed size of the steelhead size index was not related to supplementation activities. For instance, we could not detect any differences in the sizes of rainbow trout between areas of high and low spring Chinook abundance. Results from status monitoring of 14 NTT after seven years of hatchery releases suggest that risk containment actions are not necessary at this time.