

**Comments on NOAA Fisheries Technical Memorandum: A review of relative fitness of hatchery and natural salmon by B. Berejikian and M. Ford**

The NOAAF literature review is useful but the key issue is how NOAA Fisheries (NOAAF) will specifically utilize some sort of “hatchery fitness” index, derived from a relatively small number of studies, in a broader context for estimating lambda. While we do not disagree with the conclusion that additional studies are warranted for several of the scenarios, we recognize that new study conclusions will probably not be available in the near future. The Technical Memorandum (Memo) only provides NOAA’s anticipated technical use of the hatchery fitness information in a general context, which is not very helpful. A collaborative approach with basin managers in assessing hatchery fitness functions would allow better population-specific perspective in applying this information.

The NOAAF review points out that fitness of hatchery fish in the natural environment is often not directly monitored. We note that there are examples of studies, such as the Idaho Supplementation Studies, where productivity of the treatment population is compared with control streams that have little to no hatchery fish spawning, and this could be considered a form of monitoring fitness of hatchery fish. This type of comparison is also helpful to acknowledge population trends that may be due to largescale environmental effects on productivity. For example, if all types of populations – mixed hatchery/natural, hatchery only, or natural only, are responding in synchrony, then population response is likely driven by productivity factors other than the hatchery composition.