RRS Project Review

**Project ID:** 2003-050-00 (closed 2012)¹

**Title:** Genetic Monitoring and Evaluation (M&E) Program for Salmon and Steelhead

**Short Description:** Evaluate the individual reproductive success of naturally spawning hatchery steelhead relative to that of native wild steelhead using genetic tools and methods. Project ran from winter 1995 to 2012.

**Sponsor:** University of Washington

**BiOp association:** 2008 FCRPS

- RPA 62.5 Investigate feasibility of genetic stock id techniques,
- RPA 64.2 Determine if artificial production contributes to recovery,
- RPA 64.1 Estimate relative reproductive success (RSS) of hatchery

**Is this an Accord project?** No

**Budget (2008-2012):**

- **BPA** Total $809,322
- Cost Share No cost share

**Proposal from last Categorical Review:**

https://www.cbfish.org/Proposal.mvc/Summary/RMECAT-2003-050-00

**Most recent Council recommendation:**

https://www.cbfish.org/Assessment.mvc/CouncilRecommendationAssessmentSummary/Assessment/2003-050-00-NPCC-20110125

**Date of most recent annual report available on Pisces/cbfish?** March 22, 2012

“Evaluation of the Reproductive Success of Wild and Hatchery Steelhead in Hatchery and Natural Environments”


**Short summary of project reporting compliance:** Reporting compliance was good, and all deliverables were completed. Project published 13 peer-reviewed publications during its run – these are described in the publication shown above.

¹ This is one of the six exclusively RRS projects in the program.
Summary of the scope of the project as it was reviewed by Council: The project was designed to evaluate relative reproductive success of natural and segregated-hatchery steelhead in both hatchery and natural environments. The project was especially of interest because during two years early in the program (late 1990s) hatchery-origin adults were permitted to escape to spawn naturally, but a policy decision was subsequently made to intercept hatchery-origin adults. This provided a natural experiment to evaluate the fate of a pulse of hatchery contribution to natural production through time. Adults and smolts of the winter steelhead population in Forks Creek, a Willapa River tributary, were sampled over the duration of the project.

The project had several primary objectives: evaluate variation in reproductive success of families in the hatchery environment; evaluate effective population size and inbreeding accumulation in the hatchery environment; estimate selection on life-history traits in the hatchery and natural environment; and evaluate relative reproductive success of natural fish with different levels of segregated hatchery parents in their pedigree.

Summary of the scope of the project now: Project is closed.

Did the scope of this project change significantly after it was reviewed? No

Link to ISRP/AB Critical Uncertainties Appendix D review:

This project was not reviewed during the recent Critical Uncertainties update.

Comments: This project could be used as a model ‘research’ example, because it had a clear start and end date, and yielded peer-reviewed publications. For an unknown reason, it was not reviewed as part of the 2016 ISRP/AB Critical Uncertainties update.

Questions to all project sponsors with RRS studies:

- How did this project inform (1) the Council’s Research Plan and (2) the Council’s Fish and Wildlife Program objectives?
- Were any results from this study be extrapolated to other geographic locations or other populations?
- How did the Idaho Supplementation Study inform this project?
- Did this project have any of the following elements:
  - A scientific question
  - A hypothesis
  - A specific time frame within which to answer the question posed
- How was it determined which species or geographic area to study?
- How did this effort work or collaborate with other RRS projects on aspects of the study (methodology, data and conclusions)?
- How did density dependence factor in to this study moving forward?
Questions relative to this project:

- This project is complete - what are the significant results of this project?