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"
https://pisces.bpa.gov/release/documents/DocumentViewer.aspx?doc=P125769

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.

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[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) A scientific question
  - (b) A hypothesis
  - (c) 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?