

Wild/Hatchery Salmon Management Tools**FY2013 Request: \$2,500,000****Reference No: 54419****AP/AL:** Appropriation**Project Type:** Research / Studies / Planning**Category:** Natural Resources**Location:** Statewide**House District:** Statewide (HD 1-40)**Impact House District:** Statewide (HD 1-40)**Contact:** Jeff Regnart**Estimated Project Dates:** 07/01/2012 - 06/30/2017**Contact Phone:** (907)267-2350**Brief Summary and Statement of Need:**

To continue economic benefits provided by large-scale hatchery production, the state must ensure wild salmon stocks are managed for sustained yield as required by statute. Research on possible interactions between wild and hatchery fish is required that will improve this knowledge in Southeast Alaska (SE) and Prince William Sound (PWS). Project results will help determine if wild stocks are surviving at levels commensurate with manager's expectations at current hatchery production levels. Benchmark information will also be provided for consideration of increases in hatchery production.

Funding:	<u>FY2013</u>	<u>FY2014</u>	<u>FY2015</u>	<u>FY2016</u>	<u>FY2017</u>	<u>FY2018</u>	<u>Total</u>
CFEC Rcpts	\$2,500,000						\$2,500,000
Total:	\$2,500,000	\$0	\$0	\$0	\$0	\$0	\$2,500,000

<input type="checkbox"/> State Match Required	<input checked="" type="checkbox"/> One-Time Project	<input type="checkbox"/> Phased - new	<input type="checkbox"/> Phased - underway	<input type="checkbox"/> On-Going
0% = Minimum State Match % Required		<input type="checkbox"/> Amendment	<input type="checkbox"/> Mental Health Bill	

Operating & Maintenance Costs:

	<u>Amount</u>	<u>Staff</u>
Project Development:	0	0
Ongoing Operating:	0	0
One-Time Startup:	0	0
Totals:	0	0

Additional Information / Prior Funding History:

This is the first year for the project.

Project Description/Justification:

Jointly with hatchery operators, the department has identified three priority questions:

- (1) What is the genetic stock composition of pink and chum salmon in each region?
- (2) What is the extent and annual variability in straying of hatchery pink salmon in PWS and chum salmon in PWS and SE Alaska?
- (3) What is the impact on fitness (productivity) of wild pink and chum salmon stocks due to straying of hatchery pink and chum salmon?

Through use of marks on hatchery salmon otoliths (ear bones) and state-of-the-art genetic techniques, the department can now determine the relative differences (if any) between wild and hatchery fish when spawning in the wild. A group of research projects in each region would sample adults and juveniles from a set of streams and determine if there are differences in survival of fry from wild and hatchery parents, and if there are changes in fitness. In addition to its application in the aforementioned areas, the results would inform likely interactions in other areas with hatchery programs. Field work would be undertaken by a third party through contracts.

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The private-non-profit (PNP) hatcheries in these regions annually take 1.8 billion eggs, release 1.5 billion juveniles, and provide 45 million adult salmon to harvest, primarily pink salmon in PWS and chum salmon in SE Alaska. In 2008, the wholesale value of hatchery fish harvested in the commercial sector was nearly \$200 million in PWS and \$100 million in SE (McDowell Group 2010). In some years and in some areas, Alaska hatcheries have provided harvest opportunity to the fishing industry when wild stocks could not.

This project is consistent with the Governor's permitting initiative and will help improve relationships with the PNP hatcheries. In the past, the permitting process has been difficult and contentious at times. The state has formed a partnership with the PNP operators and fish processors, who have collectively agreed in concept to each fund one-third of the costs of the research projects over a five-year period.

This project is consistent with the Division of Commercial Fisheries core services of Harvest Management and Aquaculture Permitting. The results of this research will enable the department to better manage hatchery and wild stocks, while contributing to the economic benefits and jobs provided by hatchery programs. It will also provide stronger scientific information on which to base future decisions on hatchery permitting.