

2016 Gulf of Alaska Pink Salmon Disaster

FY2020 Request: \$4,500,000
Reference No: 62551

AP/AL: Appropriation **Project Type:** Economic Assistance
Category: Natural Resources
Location: Statewide **House District:** Statewide (HD 1-40)
Impact House District: Statewide (HD 1-40) **Contact:** Sam Rabung
Estimated Project Dates: 07/01/2019 - 06/30/2024 **Contact Phone:** (907)465-6100

Brief Summary and Statement of Need:

On 01/18/2017 the Secretary of Commerce declared the Gulf of Alaska Pink Salmon fishery disasters. This project is the first step in a four step distribution process for the disaster. Disbursement of funds will be prioritized based on the following criteria: 1) funds will be allocated to improve fishery information to better assess and forecast future fishery performance; 2) funds will be allocated to fishery participants directly involved and harmed by the 2016 pink salmon disaster; 3) funds will be disbursed to positively affect the broadest number of people possible; and 4) address losses to primary businesses and infrastructure that directly support pink salmon fisheries and that incurred the greatest losses.

Funding:	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	Total
1108 Stat Desig	\$4,500,000						\$4,500,000
Total:	\$4,500,000	\$0	\$0	\$0	\$0	\$0	\$4,500,000

<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

Prior Funding History / Additional Information:

Project Description/Justification:

\$4,500,000: Research funds will be deducted from the total amount of disaster funds prior to any distribution to the other entities. Disaster funds will be allocated to the following research projects.

Kodiak Pink Salmon Saltwater Marking Sampling Plan

The Kitoi Bay Hatchery (KBH) is focused on providing enhanced common property salmon fishing opportunities for Kodiak Management Area fishermen since 1976. The primary contribution of the KBH is to the Kodiak commercial fishery, but it also contributes to subsistence and recreational fisheries in the area. KBH is located on the southeast coast of Afognak Island and is relatively isolated from the major pink salmon producing areas of the archipelago. Afognak Island wild pink salmon production is estimated to represent about 8% of wild pink salmon production of the Kodiak

Management Area. KBH is managed and operated by the Kodiak Regional Aquaculture Association (KRAA).

The capability to apply and read saltwater otolith marks to pink salmon has recently been developed as part of a collaboration between a private company, Southern Southeast Regional Aquaculture Association, the Sitka Sound Science Center, and KRAA. Pilot marking was completed at the KBH in 2017 and 2018, and the results of the marking to date are positive. Pilot testing indicates a reduction in annual costs to apply saltwater marks, as opposed to thermal marks, of approximately 90%. No thermal marking of pink salmon from KBH has been done to-date. The more efficient, low cost markers make a baseline study on Kodiak pink salmon more feasible. KRAA plans to begin 100% saltwater marking of pink salmon beginning in 2019.

Research is needed to make the KBH consistent with hatchery programs statewide; support certification to improve the Kodiak pink fishery and markets; and examine the proportion of hatchery fish in the harvest. This research project will evaluate saltwater marked otoliths, resulting in the following: 1) estimate of the proportion of hatchery pink salmon in the Kodiak fishery, 2) estimate of the proportion of hatchery salmon in streams, 3) better understanding and tracking of survival trends for pink salmon in the Kodiak area which may help identify factors related to survival, 4) information on migration which may be relevant to management strategies, and 5) test of saltwater marking methods that could provide significant cost savings statewide and effectively increase opportunity in the affected common property pink salmon fisheries. Thus, this research project is intended to both improve environmental and economic performance of the fishery affected by the disaster and improve fishery information.

This evaluation includes 1) stream sampling to detect the presence of hatchery-origin pink salmon in natural, pink salmon-producing streams; and 2) fishery harvest sampling to detect the presence and contribution of hatchery-origin pink salmon in selected Kodiak Management Area pink salmon fisheries. Results of otolith analysis will be informative on the spatial and temporal extent of stray hatchery pink salmon and will provide information to ADF&G management to test current assumptions about relative contributions of hatchery to wild-production. It is anticipated that once a baseline of information is collected, sampling can be substantially reduced to fishery harvest sampling only. This evaluation will be completed over a four-year period, 2019-2022. In years, 2019 and 2020, a partial sampling plan and otolith analysis will be completed to correspond to the pilot marking in 2017 and 2018. In years 2021 and 2022, a full-scale sampling plan and otolith analysis will be completed to correspond to the 100% marking in 2019 and 2020.

Total cost for this four-year project to produce, collect, and evaluate saltwater marked pink salmon at KBH is \$885,000. The cost estimate of the evaluation component is \$680,000 (see attached budget for breakdown by year and line item). KRAA will be responsible for capital and labor costs associated with development and production of marks, collection of samples, and otolith analysis, up to a total of \$435,000. ADF&G will collaborate with KRAA on the development of the sampling plan. Requested funds will go to KRAA. Total funding remaining and requested for this research project is \$450,000.

Alaska Hatchery Research Program

The Alaska Hatchery Research Program was established in 2011 to study the interaction of hatchery fish straying into wild systems for pink and chum salmon in Prince William Sound and for chum salmon in Southeast Alaska. The study is overseen by a science panel composed of current and

retired scientists from ADF&G, University of Alaska, aquaculture associations, and National Marine Fisheries Service. The results of this ambitious project will examine genetic population structure among hatchery and natural fish, determine hatchery proportions in wild systems, and measure differences in fitness between hatchery- and natural-origin fish. This information is a critical element of assessing the impact of hatchery fish on wild production. Previous studies have been conducted on other Pacific salmon species with different life histories in locations outside of Alaska where hatchery practices are significantly different from Alaskan hatcheries and where habitat has been compromised. This makes inferences from those studies to Alaskan circumstances tenuous. To date the available funding has covered the first two components of this project: all the field work associated with the Prince William Sound and Southeast Alaska components. However, available existing funding is only sufficient for laboratory analysis in two of three generations at two of the five pink salmon fitness study streams in Prince William Sound. The program has not secured funding to complete the last generation at two streams and all generations for the remaining three pink salmon fitness study streams. Proposed funding would support the fieldwork, laboratory analyses, statistical evaluations, and reporting necessary to complete this portion of the project. The anticipated cost of the remaining work, and the requested amount of disaster funds is estimated to be \$2.5 million.

Southeast Alaska Coastal Monitoring Survey

The Southeast Alaska Coastal Monitoring (SECM) project has operated since 1997 focusing on primary seaward salmon migration corridors of the Inside Northern Southeast region including Icy Strait and upper Chatham Strait. The results are essential to reliably forecasting Southeast pink salmon harvest. For most years the SECM project has shown a strong relationship between juvenile pink salmon abundance and harvest the following year. Because pink salmon harvest in Southeast has a high interannual variability, information gained from the SECM project is essential in aiding seafood processors prepare for harvest expectations the following year and provides ADF&G managers a tool to evaluate initial fishing time until inseason abundance indices are available. Total cost for the SECM project is approximately \$1.2 million.