

**Stock Identification of Salmon Harvested in South Peninsula Fisheries**

**FY2023 Request: \$0**  
**Reference No: 42050**

**AP/AL:** Appropriation

**Project Type:** Planning

**Category:** Natural Resources

**Location:** Statewide

**House District:** Statewide (HD 1-40)

**Impact House District:** Statewide (HD 1-40)

**Contact:** Sam Rabung

**Estimated Project Dates:** 07/01/2021 - 06/30/2026

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**Brief Summary and Statement of Need:**

The Western Alaska Salmon Stock Identification Program (WASSIP) comprehensively sampled commercial and subsistence chum and sockeye salmon harvested in coastal marine fisheries of western Alaska from 2006 through 2009. This provided reliable information for fisheries decisions made over the last decade by the Department and the Board of Fisheries. Because run sizes and ocean conditions are changing, this project will build on WASSIP to provide updated information for current applications.

<b>Funding:</b>	<u>FY2022</u>	<u>FY2023</u>	<u>FY2024</u>	<u>FY2025</u>	<u>FY2026</u>	<u>FY2027</u>	<u>Total</u>
1004 Gen Fund	\$2,000,000		\$1,890,000	\$1,890,000	\$1,890,000	\$1,890,000	\$9,560,000
<b>Total:</b>	\$2,000,000	\$0	\$1,890,000	\$1,890,000	\$1,890,000	\$1,890,000	\$9,560,000

<input type="checkbox"/> State Match Required	<input type="checkbox"/> One-Time Project	<input type="checkbox"/> Phased - new	<input type="checkbox"/> Phased - underway	<input checked="" type="checkbox"/> Ongoing
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
<b>Totals:</b>	<b>0</b>	<b>0</b>

**Prior Funding History / Additional Information:**

Sec4 Ch30 SLA2007 P94 L6 SB 53 \$1,542,500

SFCS1 moved project to FY23

<http://www.legfin.state.ak.us/BudgetReports/LY2022/Capital/SenateFinanceCS1/CapitalProjectDetailByAgency.pdf>

SFS2 moved project to FY22

<http://www.legfin.state.ak.us/BudgetReports/LY2022/Capital/SenateFinanceCS2/CapitalProjectDetailByAgency.pdf>

**Project Description/Justification:**

1. Retrospective analysis of WASSIP data

Cost: \$45,000 One time

This project will reanalyze the genetic information collected from chum salmon and sockeye salmon harvested in South Alaska Peninsula fisheries as part of the Western Alaska Salmon Stock Identification Program (WASSIP). WASSIP was designed to provide comprehensive stock composition, harvest, and harvest rates in all fisheries from Chignik to Kotzebue Sound. The

reanalysis of the data from this program is intended to provide greater resolution of stock components within aggregate reporting units.

a. Chum salmon – Cost \$0

Chum salmon were sampled for WASSIP in 2007–2009. Samples were also collected in 2006 but were not analyzed due to incomplete sampling in Bristol Bay that year. The *Coastal Western Alaska* reporting group, which includes populations from Norton Sound to Bristol Bay, cannot be further resolved into smaller groups at this time although research continues as resources are available. No additional information can be gained beyond the comprehensive 2007–2009 results from WASSIP.

b. Sockeye salmon – Cost \$45,000 One time

Sockeye salmon were sampled for WASSIP in 2006–2008. Samples were also collected in 2009 but were not analyzed due to insufficient funding. Since the reanalysis of genetic data from 2006–2008 will use existing data, no additional laboratory analysis will be required. The purpose for this reanalysis is to further resolve the aggregate *East of WASSIP* reporting group into *Kodiak/Mainland*, *Cook Inlet (Kenai, Kasilof, Susitna, and 'other Cook Inlet' subgroups)*, and *Prince William Sound/Copper River* reporting groups.

2. Stock identification of fishery harvests

These two projects will involve sampling the commercial fishery catch, stock identification of the samples, and estimation and reporting of the composition of commercial harvests. The projects are designed to answer separate questions and generally have separate geographic scope. For this reason, they can operate independently but cost savings can be achieved if both are funded. The benefit of these studies over retrospective reanalysis is that these studies can be designed to answer specific questions of interest and inform current management, especially in the face of a rapidly changing environment.

a. Stock identification of chum salmon harvests in South Peninsula June commercial fisheries

Cost: \$390,000 Annually

This project is designed to provide stock composition estimates of chum salmon harvested in the South Unimak Island and Shumagin Island areas during the June commercial fisheries when the contribution of western Alaska stocks is greatest. The stock resolution of these estimates will use the reporting groups applied in the WASSIP study<sup>1</sup> with the additional objective of including the *Asia* reporting group in the final analysis.

This project is intended to occur annually to provide ongoing monitoring of the fishery. Funds will support collection and analysis of the samples.

This project has a limited scope, sampling harvests in the South Unimak Island and Shumagin Island areas for four scheduled periods through the month of June. Samples will be taken from the two dominant gear types in each area (Unimak – Seine and Drift; Shumagins – Seine and Set-gillnet).

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This results in a total of 20 time/area/gear strata, requiring staff assigned to two ports (False Pass and Sand Point) to sample delivered harvest for the month of June.

The annual cost for sample collection is \$150,000, which includes 1.5 months for each port sampler. Genetic stock identification will be based on 8,000 fish (400 per stratum). All administrative and logistic coordination will be in-kind from existing staff.

If the sockeye salmon analysis is also funded, the cost of harvest sampling can be reduced significantly.

b. Stock identification of sockeye salmon harvests in western Gulf of Alaska commercial fisheries

Cost: \$1,500,000 Annually

This project is designed to provide a comprehensive assessment of the stock composition of sockeye salmon harvests in western Gulf of Alaska fisheries. The geographic scope of the WASSIP assessment in the Gulf of Alaska was limited to the central and southern areas and did not extend beyond Chignik. Given the lack of complete information to extend the WASSIP stock composition data to the north and east of Chignik, a study designed to comprehensively assess the current stock composition will better answer current management questions.

A three-year study will provide the minimum information required to understand the stock composition of the commercial salmon harvests in western Gulf of Alaska salmon fisheries. Ongoing annual funding would provide yearly harvest information from these mixed stock fisheries improving management and assessment of Gulf of Alaska sockeye salmon stocks. Funds will support collection and analysis of the samples.

This project has a large, geographically extensive scope and is expensive. The department no longer has sampling crews or infrastructure in many ports, so sampling costs reflect the need to reconstitute these programs. The sampling design will mirror the original WASSIP (2006-2008), Southeast District Mainland (SEDM; 2010-2012), and Kodiak (2014-2016) studies. This results in a total of approximately 80 time/area strata. This will support existing positions including eight Fish & Wildlife Technicians (FWT) 2s, eight FWT 3s, and two Fishery Biologists 1s. Each port will be sampled for the duration of the sockeye run, which is typically about three months. Genetic stock identification will be based on 32,000 fish (400 per stratum).

1 WASSIP chum salmon reporting groups included: *Kotzebue Sound, Coastal Western Alaska* (Yukon River to Bristol Bay), *Upper Yukon River, North AK Peninsula* -Northern District, *North AK Peninsula* -Northwestern District, *South AK Peninsula, Chignik, and East of Kodiak.*