

**Bering Sea Fishermen's Association - Improve Stock of  
Origin Analysis of Western Alaska Salmon**

**FY2024 Request:  
Reference No:**

**\$0  
65059**

**AP/AL:** Appropriation

**Category:** Development

**Project Type:** Energy

**Recipient:** Bering Sea Fishermen's  
Association

**Location:** Statewide

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

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

**Contact:** Micaela Fowler

**Estimated Project Dates:** 07/01/2023 - 06/30/2028

**Contact Phone:** (907)465-2506

**Brief Summary and Statement of Need:**

Preserve general funds for savings and fiscal stability.

<b>Funding:</b>	<b>FY2024</b>	<b>FY2025</b>	<b>FY2026</b>	<b>FY2027</b>	<b>FY2028</b>	<b>FY2029</b>	<b>Total</b>
1004 Gen Fund							\$0
<b>Total:</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

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

**Operating & Maintenance Costs:**

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

**Prior Funding History / Additional Information:**

Two years of funding @ \$165,000 direct costs and \$91, 575 UW overhead, per year for a total cost of \$513,150

**Project Description/Justification:**

This project would use naturally occurring strontium isotopes in the otoliths (ear stones) of Chinook and chum salmon caught in marine fisheries combined with genetic data to greatly increase the spatial resolution of natal origin assignments of marine-caught fish. Strontium isotopes vary markedly across the rivers of western Alaska reflecting the different rock origins across the region. Phase 1 of this project would develop a proof-of-concept for combining the strontium isotopes from otoliths with genetic information to achieve the highest spatial resolution possible for assigning fish to their stock of origin. If successful, this approach could be used to distribute Chinook and chum salmon caught in marine fisheries to different stocks throughout western Alaska to better constrain the potential impacts of these fisheries on salmon stocks that support subsistence communities throughout the region.

This project is to support the development of a proof-of-concept of the approach of using combined otolith-strontium data and genetics data to assign stock of origin of western Alaska chum and Chinook salmon. Specific activities include 1) completing the strontium isotope baseline for other rivers in western Alaska (e.g., Togiak, Norton Sound, and Bristol Bay rivers; 2) collecting and analyzing otolith samples from spawning chum salmon from known locations to assess the utility of this approach for assigning natal origins; 3) develop the statistical model for combining otolith strontium data, genetics data, and geomorphic data

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defining suitable habitat for assigning natal origins of Chinook and chum salmon; 4) quantify the performance of this model for assigning fish to stock of origin, with fish sampled from the spawning locations.