

**Assessment of Pacific Salmon Resources in AYK, Northern Region** **FY2010 Request: \$250,000**  
**Reference No: 45368**

**AP/AL:** Appropriation **Project Type:** Research / Studies / Planning  
**Category:** Natural Resources  
**Location:** North Slope Borough **Contact:** John Hilsinger  
**House District:** Arctic (HD 40) **Contact Phone:** (907)267-2324  
**Estimated Project Dates:** 07/01/2009 - 06/30/2014

**Brief Summary and Statement of Need:**

The purpose of this study is to evaluate the distribution and abundance of Pacific salmon in Arctic freshwaters north and east of Point Hope. Because continued climatic change will have important impacts on Arctic ecology generally and Pacific salmon distributions specifically, it is important that these resource evaluations be updated.

<b>Funding:</b>	<u>FY2010</u>	<u>FY2011</u>	<u>FY2012</u>	<u>FY2013</u>	<u>FY2014</u>	<u>FY2015</u>	<u>Total</u>
Gen Fund	\$250,000						\$250,000
<b>Total:</b>	\$250,000	\$0	\$0	\$0	\$0	\$0	\$250,000

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

**Additional Information / Prior Funding History:**

\$150,000 was allocated in FY09.

**Project Description/Justification:**

The purpose of this study is to evaluate the distribution and abundance of Pacific salmon in Arctic freshwaters north and east of Point Hope. The study would be the first comprehensive survey in this area of Alaska and results have direct bearing on the proposed Polar bear listing by assessing possible food resources for bears which may be temporarily stranded on land due to changing sea ice conditions. Published studies and local observations over the last several decades suggest that Pacific salmon species have been extending their ranges and increasing abundance in Arctic waters. This is partly a response to warming temperatures in the Arctic and if climatic model predictions are correct, this trend should continue.

Most information on salmon distribution north and east of Point Hope is found as part of general surveys of freshwater fishes conducted in the mid 1980's. Because continued climatic change will have important impacts on Arctic ecology generally and Pacific salmon distributions specifically, it is important that these resource evaluations be updated. Salmon resources in Northern Arctic waters are a recognized supplement to subsistence economies of some North Slope communities and increasing abundance may offer limited commercial opportunity as well. Climate induced changes of species distributions may also impact food webs and may have important bearing on discussions regarding polar bear ecology in the face of rapidly changing ice pack dynamics.

The goal of this project is to update the department's assessment of salmon resources in the Alaskan Arctic (north and east of Point Hope). Over a three-year period, the department will address four objectives: 1) document species presence across a range of index rivers from Point Hope to the Canadian border using survey methods and interviews with local residents of North Slope communities, 2) estimate abundance where possible using aerial survey and qualitative capture techniques, 3) determine whether juvenile salmon are present in streams as an indicator of sustaining populations and 4) establish a suite of index streams which will form the basis of continued monitoring for changes in species distribution and abundance. An updated assessment of Pacific salmon in the Alaskan Arctic may represent a valuable proxy for climate change in the Arctic.