



AYK SUSTAINABLE SALMON INITIATIVE

Project Synopsis

AYK REGION-WIDE



(Mike Dinneen)

WORK-IN-PROGRESS ESCAPEMENT GOAL SETTING TO ENSURE SUSTAINABLE FISHERIES

PROJECT 902

PRINCIPAL INVESTIGATOR

Mike Jones
*Michigan State
University*

CONTRIBUTING ORGANIZATIONS

*Alaska Department
of Fish and Game*
*Bering Sea Fishermen's
Association*
Bue Consulting, LLC
*University of Alaska
Fairbanks*

RESEARCH PERIOD

June 2009 -
March 2011

BUDGET

\$276,227.00

ENSURING SUSTAINABLE FISHERIES

A pressing need exists for new and continued research on AYK salmon stocks, and for the integration and coordination of research and assessment programs across government agencies, scientific disciplines, and biological boundaries to advance research and achieve sustainable salmon management. Through implementation of this Research Priority, the AYK SSI will contribute to shaping management measures for the future. This project seeks to maximize its impact on future research programs through broad, effective communication across all research sectors—state, federal, local communities, fishers, and academia.

The AYK SSI Steering Committee, with guidance from the Scientific Technical Committee, convened an Expert Panel for the purpose of addressing Research Priority #8, from the AYK SSI Salmon Research & Restoration Plan (RRP): *“Escapement goal setting to ensure sustainable fisheries can best be accomplished by using stock-recruitment models in combination with life-history and habitat-based modeling.”*

Research Priority #8 was drawn from Research Framework #3: *Synthesis and Prediction: Development of Ecosystem and Fishery Management*; and Theme #4: *Evaluation of Management Approaches and Tools*. Theme #4 focuses on influences of human institutions and their policies through management actions to regulate harvest of AYK salmon. Some of the changes in salmon production result from natural causes and are inevitable, and potential threats exist (e.g., habitat destruction due to development) which can be addressed through policy and decision-making.

**RESEARCH
FRAMEWORK:**
SYNTHESIS &
PREDICTION –
PRIORITY #8

SNAPSHOT

The AYK Sustainable Salmon Initiative will convene an Expert Panel to support the research priority concerned with setting management goals.

This panel will offer advice on the most appropriate research approaches and management efforts.



(John Hilsinger)



(Jeffrey B. Olsen)

***AYK SSI Mission:** To collaboratively develop and implement a comprehensive research plan to understand the causes of the declines and recoveries of AYK salmon.*

ARCTIC-YUKON-KUSKOKWIM SUSTAINABLE SALMON INITIATIVE

BERING SEA FISHERMEN'S ASSOCIATION
 110 W. 15TH AVENUE
 ANCHORAGE, AK 99501
 (907) 279-6519

The Expert Panel, appointed to implement this task, will address and advance this research hypothesis by undertaking quantitative analysis and providing advice on appropriate methods and strategies for establishing effective harvest policies for AYK salmon stocks.

Improved understanding of the dynamics of salmon populations over time will help fishery managers understand causes of declines and recoveries of western Alaska salmon stocks, anticipate changes in salmon abundance, and ensure management strategies provide for sustainable salmon management.

OUR OBJECTIVES

Organize an Expert Panel to assist with addressing this research priority by providing advice on appropriate methods for establishing and evaluating escapement goals that support effective harvest policies for AYK salmon stocks.

Account for possible management regimes and their effects, such as: the influence of uncertainty and risk; the quantity and quality of available data; and the potential influences of future environmental changes.

Consider both empirical stock-recruitment analysis methods and approaches that predict recruitment or production based on environmental factors.

HOW WE WILL DO IT

We plan to ensure that the panel has access to relevant data, has knowledge of the AYK regional salmon management context, is familiar with current research, and can effectively coordinate with data collection organizations. The panel will consider the range of approaches and analytical frameworks such as: What are the best methods for dealing with data limited situation? What methods exist for determining escapement goals and which are best to use in different drainage systems? What is the best model for establishing escapement goals in subsistence dominated fisheries? We will also develop techniques to incorporate uncertainty and risk into management evaluation, and disseminate results among fisheries managers, researchers, and policy makers.

REPORT COMPLETION

March 2011