

## FY15 PROJECT PROPOSAL SUMMARY PAGE

### New Project

*Proposals are due to the EVOSTC office by September 2, 2014. Please note that the information in your proposal and budget form will be used for funding review. Late proposals, revisions or corrections may not be accepted.*

**Project Title:** Update of the Status of Subsistence Uses in Exxon Valdez Oil Spill Area Communities 2014

**Project Period:** February 1, 2015 – January 31, 2016

**Primary Investigator(s):** James A. Fall, Alaska Department of Fish and Game, Division of Subsistence

**Project Website** (if applicable): N/A

#### **Abstract\*:**

Subsistence uses are a vital natural resource service that was injured by the Exxon Valdez oil spill (EVOS). In the years following the spill, harvest levels and participation rates declined markedly, and transmission of cultural skills and values was disrupted. The EVOS Trustee Council (EVOSTC) has adopted the following recovery objective for subsistence:

“Subsistence will have recovered when injured resources used for subsistence are healthy and productive and exist at pre-spill levels. In addition, there is recognition that people must be confident that the resources are safe to eat and that the cultural values provided by gathering, preparing, and sharing food need to be reintegrated into community life.”

The last update of subsistence harvests, pertaining to 2003, concluded that “recovery is incomplete and the future direction of change is uncertain” (Fall 2006:396). The EVOSTC considers the status of subsistence as “recovering” but not recovered. The purpose of this project is to collect, analyze, and report information about current subsistence uses of fish and wildlife in a subset of EVOS area communities that is comparable with previous research results and that can be applied to evaluate the status of subsistence uses in light of the EVOS TC recovery objective.

*\*The abstract should provide a brief overview of the overall goals and hypotheses of the project and provide sufficient information for a summary review as this is the text that will be used in the public work plan and may be relied upon by the PAC and other parties.*

#### **Estimated Budget:**

**EVOSTC Funding Requested\*** (must include 9% GA):

FY15	FY16	FY17	FY18	FY19	TOTAL
\$281,969					\$281,969

#### **Non-EVOSTC Funds to be used:**

FY15	FY16	FY17	FY18	FY19	TOTAL

*\*If the amount requested here does not match the amount on the budget form, the request on the budget form will be considered to be correct.*

**Date: October 1, 2014**

## **I. EXECUTIVE SUMMARY**

Subsistence uses are a vital natural resource service that was injured by the Exxon Valdez oil spill (EVOS). In the years following the spill, harvest levels and participation rates declined markedly, and transmission of cultural skills and values was disrupted. The EVOS Trustee Council (EVOSTC) has adopted the following recovery objective for subsistence:

Subsistence will have recovered when injured resources used for subsistence are healthy and productive and exist at pre-spill levels. In addition, there is recognition that people must be confident that the resources are safe to eat and that the cultural values provided by gathering, preparing, and sharing food need to be reintegrated into community life.

The last update of subsistence harvests, pertaining to 2003, concluded that “recovery is incomplete and the future direction of change is uncertain” (Fall 2006:396). The EVOSTC considers the status of subsistence as “recovering” but not recovered. The purpose of this project is to collect, analyze, and report information about current subsistence uses of fish and wildlife in a subset of EVOS area communities that is comparable with previous research results and that can be applied to evaluate the status of subsistence uses in light of the EVOS TC recovery objective. Principal data collection methods will be a systematic household survey and key respondent interviews.

The proposed communities to be surveyed are Chenega Bay (population 63 in 2013), Tatitlek (87), and Cordova (2,302), all in Prince William Sound. In a separate study (not funded by the EVOSTC), surveys will be conducted in the lower Cook Inlet communities of Nanwalek, Port Graham, and Seldovia. Contingent upon study findings, additional phases of research could occur in subsequent years in Kodiak Island Borough communities.

## **II. COORDINATION AND COLLABORATION**

### **A. Within a EVOTC-Funded Program**

N/A

### **B. With Other EVOSTC-funded Projects**

N/A

### **C. With Trustee or Management Agencies**

N/A

## **III. PROJECT DESIGN**

### **A. Objectives**

The purpose of the project is to collect, analyze, and report information about current subsistence uses of fish and wildlife in a subset of EVOS area communities that is comparable with previous research results and that can be applied to evaluate the status of subsistence uses in light of the EVOS TC recovery objective.

Objectives include the following for a census sample of households in Chenega Bay (approximately 26 households) and Tatitlek (approximately 36 households), and a stratified random sample of 150 households in Cordova, supplemented by approximately five key respondent interviews in each study community.

- Objective 1.** Provide estimates of harvests of fish and wildlife resources for home use and participation rates in 2014
- Objective 2.** Provide supporting demographic and employment data
- Objective 3.** Assess harvests and uses in comparison to other years
- Objective 4.** Provide maps of harvest areas and evaluation of changes in these areas
- Objective 5.** Evaluate food safety, resource availability, and harvest effort
- Objective 6.** Provide information on qualitative aspects of subsistence uses (e.g. involvement of children, role of elders, sharing) that assist in evaluating integration of subsistence back into community life.
- Objective 7.** Obtain a community review and discussion of study findings

## **B. Procedural and Scientific Methods**

The following procedures will address the seven project objects.

### **Project Approvals**

The project will be guided by the research principles adopted by the Alaska Federation of Natives in its Guidelines for Research, and by the National Science Foundation's Office of Polar Programs in its Principles for the Conduct of Research in the Arctic, as well as the Alaska confidentiality statute (AS 16.05.815). These principles stress community approval of research designs, informed consent, anonymity of study participants, community review of draft study findings, and the provision of study findings to each study community upon completion of the research.

Prior to research, meetings will be held in each study community to review project goals and methods and to seek input on research questions. Formal approval of the project in the form of a resolution will be sought from the tribal governments in each community.

### **Sample Goals**

The goal for the household survey will be to interview a knowledgeable representative of all households in Chenega Bay (approximately 26 households) and Tatitlek (approximately 36 households). In Cordova, a stratified random sample will be selected, including 50 households that are members of the Eyak Tribe and 100 other households. These sampling methods are identical to those used in previous rounds of surveys in the study communities.

### **Data Collection Methods: Survey Instrument**

The primary method for collecting information about contemporary subsistence harvests and uses, evaluations of changes over time, community demography, and the kinds of jobs and sources of cash income in the three study communities will be a systematic household survey. The survey will follow procedures established in previous rounds of household interviews in the study communities (Fall 2006). The survey instrument will be modeled after those administered by the Division of Subsistence and its research partners during previous rounds of research in EVOS-area communities, and in approximately 200 other Alaska communities. [See Appendix C in

Fall 2006) for a sample survey instrument]. Information will be collected for a 12-month study year, calendar year 2014.

Key topics for data collection during the household surveys include the following:

1. Subsistence Harvest and Use Information
  - a. Whether the household used, attempted to harvest, harvested, received, or gave away each wild resource
  - b. Harvest quantities in numbers of animals, buckets, gallons, or other appropriate units
  - c. Households' assessments of uses and harvests in the study year compared to other recent years, and reasons for differences
  - d. Harvest locations in the study year
  - e. Individual involvement in subsistence activities, including the involvement of children
2. Demographic Information, including, for each household member, age, sex, ethnicity, birthplace, and length of residency in the community
3. Employment and cash income, including jobs held by household members, occupational type, employer type, earned cash income, and other income
4. A series of questions about subsistence food safety, sharing, the role of elders in the community, the transmission of subsistence skills to young people, the status of traditional harvest areas, and the status of the subsistence way of life (questions asked in previous surveys in EVOS-area communities).
5. Households' comments and concerns: open ended responses.

The survey instrument is not designed for self-administration. Teams of researchers (Division of Subsistence staff and local researchers) will administer the survey in face-to-face interviews in the study communities. A detailed training manual, developed during previous rounds of surveys throughout the state, will guide the orientation of local researchers. Orientation sessions will take place in each study community before the surveys began.

### **Mapping Methods**

During household interviews, the researchers will ask respondents to indicate the locations of their hunting, fishing, and gathering activities during the study year. In addition, interviewers will ask the respondents to mark on the maps the sites of each harvest, the species harvested, the amounts harvested, and the months of harvest. Points are used to identify harvest locations and polygons (circled areas) are used to show harvest effort areas, such as areas searched while hunting deer. Some lines are also drawn in order to depict trap lines or courses taken while trolling for fish, for example, when the harvesting activity does not occur at a specific point.

Harvest locations and hunting and gathering areas will be documented using an application designed on the ArcGIS Runtime SDK for IOS platform; the device used to collect the data is an iPad. The point, polygon, or line is drawn on a U.S. Geological Survey topographic relief map downloaded on the iPad. The iPad allows the user to zoom in and out to the appropriate scale, and the ability to document harvesting activities wherever they occurred in Alaska. Once a feature is accepted, an attribute box is filled out by the researcher that notes the species harvested, amount, method of access to the resource, and month(s) of harvest. The data are then uploaded via Wi-Fi to a server. Once data collection is complete the data are downloaded into an ArcGIS file database. Paper maps will also be available for a reference for respondents as well as use by a local research assist if an ADF&G researcher is not available for the interview.

During these interviews, respondents will also be asked to indicate key fishing, hunting, and gathering areas which they no longer use, and to offer explanations for why any changes in these areas have occurred.

## Key Respondent Interviews

In each study community, approximately five interviews with key respondents will be conducted to provide more in depth information about patterns and trends in local wild resource harvests. Respondents will be selected based on survey results and recommendations by other community members. The interviews will be open-ended but will be guided by a protocol. With permission, these interviews will be recorded. Key respondents will receive a modest honorarium.

## C. Data Analysis and Statistical Methods

### Data Analysis

All data will be coded by Division of Subsistence staff following standardized codebook conventions to facilitate data entry. Staff within the division's Information Management Section will set up database structures within an MS SQL Server at ADF&G in Anchorage to hold the survey data. The database structures include rules, constraints, and referential integrity to insure that data are entered completely and accurately. All data will be entered twice, and compared programmatically for inconsistent data entry. Double data entry ensures more accurate transfer of information from the coded survey forms into the database, and is a standard practice with data processing for the Division of Subsistence. After data are entered and confirmed, information will be processed with the Statistical Package for the Social Sciences (SPSS). Initial processing will include the performance of standardized logic checks of the data. Logic checks are often needed in complex data sets where rules, constraints, and referential integrity do not capture all of the possible inconsistencies that may appear. Harvest data collected as numbers of animals, or in gallons or buckets, will be converted to pounds usable weight using standard factors.

SPSS will also be used for analyzing the survey information. Analysis will include review of raw data frequencies, cross tabulations, table generation, estimation of population parameters, and calculation of confidence intervals for the harvest estimates. Missing information will be addressed situationally. The Division of Subsistence has standardized practices for dealing with missing information, such as minimal value substitution or use of an average response for similarly characterized households.

Harvest estimates and responses to all questions will be calculated based upon the application of weighted means (Cochran 1977). These calculations are standard methods for extrapolating sampled data. As an example, the formula for harvest expansion is

$$H_i = \bar{h}_i S_i \quad (1)$$

where:

$$\bar{h}_i = \frac{h_i}{n_i} \text{ (mean harvest per returned survey)}$$

$H_i$  = the total harvest (numbers of resource or pounds) for the community  $I$ ,

$h_i$  = the total harvest reported in returned surveys,

$n_i$  = the number of returned surveys, and

$S_i$  = the number of households in a community.

As an interim step, the standard deviation (SD), or variance ( $V$ ; which is the SD squared), will also be calculated with the raw, unexpanded data. The standard error (SE), or SD, of the mean will also be calculated for each community. This is used to estimate the relative precision of the mean, or the likelihood that an unknown value would fall within a certain distance from the mean. In this study, the relative precision of the mean will be shown

in the tables as a confidence limit (CL), expressed as a percentage. Once the standard error is calculated, the CL will be determined by multiplying the SE by a constant that reflected the level of significance desired, based on a normal distribution. The constant for 95% confidence limits is 1.96. Though there are numerous ways to express the formula below, it contains the components of an SD, V, and SE.

Relative precision of the mean (CL%):

$$C.I.\%(\pm) = \frac{t_{\alpha/2} \times \frac{s}{\sqrt{n}} \times \sqrt{\frac{N-n}{N-1}}}{\bar{x}} \quad (2)$$

where:

$s$  = sample standard deviation,

$n$  = sample size,

$N$  = population size, and

$t_{\alpha/2}$  = Student's  $t$  statistic for alpha level ( $\alpha=.95$ ) with  $n-1$  degrees of freedom.

Small CL percentages indicate that an estimate is likely to be very close to the actual mean of the sample. Larger percentages mean that estimates could be further from the mean of the sample.

The corrected, final data from the household survey will be added to the Division of Subsistence Community Subsistence Information System (CSIS). This publicly-accessible database includes community-level study findings.

Project staff will compile harvest data from other sources for comparisons with the 2014 survey results and for development of time series to help discern harvest trends. These data sets include results of previous household surveys by the Division of Subsistence, which collected comprehensive harvest data for the 3 study communities for multiple study years, and data collection efforts which focus on specific resources, such as salmon, large land mammals, halibut, and marine mammals.

## Data Review and Reporting

Following internal data review and cleaning, project personnel will travel to each study community for a preliminary review and discussion of the survey findings.

Following review of the draft final report, it will be revised to be part of the Division of Subsistence *Technical Paper Series*. Reports in the *Technical Paper Series* are available on line at [www.adfg.alaska.gov/sf/publications/](http://www.adfg.alaska.gov/sf/publications/) Survey data at the community level also appear in the Community Subsistence Information System database, online at [www.adfg.alaska.gov/sb/CSIS/](http://www.adfg.alaska.gov/sb/CSIS/).

## D. Description of Study Area

Proposed study communities include Chenega Bay (estimated population of 63 in 2013), Tatitlek (population 87), and Cordova (population 2,302). The three communities are within the Valdez-Cordova Census Area, and their residents use Prince William Sound for subsistence fishing, hunting, and gathering.

## IV. SCHEDULE

### A. Project Milestones

Objective 1. Provide estimates of harvests of fish and wildlife resources for home use and participation rates in 2014

*Fieldwork to collect data completed by April 30, 2015*

*Data analysis to be completed by July 31, 2015*

*Draft report with results to be completed by October 31, 2015*

*Final report to be completed by January 31, 2016*

Objective 2. Provide supporting demographic and employment data

*Fieldwork to collect data completed by April 30, 2015*

*Data analysis to be completed by July 31, 2015*

*Draft report with results to be completed by October 31, 2015*

*Final report to be completed by January 31, 2016*

Objective 3. Assessment of harvests and uses compared to other years

*Fieldwork to collect data completed by April 30, 2015*

*Data analysis to be completed by July 31, 2015*

*Draft report with results to be completed by October 31, 2015*

*Final report to be completed by January 31, 2016*

Objective 4. Provide maps of harvest areas and evaluation of changes in these areas

*Fieldwork to collect data completed by April 30, 2015*

*Data analysis to be completed by July 31, 2015*

*Draft report with results to be completed by October 31, 2015*

*Final report to be completed by January 31, 2016*

Objective 5. Evaluate food safety, resource availability, and harvest effort

*Fieldwork to collect data completed by April 30, 2015*

*Data analysis to be completed by July 31, 2015*

*Draft report with results to be completed by October 31, 2015*

*Final report to be completed by January 31, 2016*

Objective 6. Provide information on qualitative aspects of subsistence uses (e.g. involvement of children, role of elders, sharing) that assist in evaluating integration of subsistence back into community life.

*Fieldwork to collect data completed by April 30, 2015*

*Data analysis to be completed by July 31, 2015*

*Draft report with results to be completed by October 31, 2015*

*Final report to be completed by January 31, 2016*

Objective 7. Obtain a community review and discussion of study findings

*To be met through community meetings by November 30, 2015*

## **B. Measurable Project Tasks**

### **FY 14, 4<sup>th</sup> Quarter (November 1, 2014- January 31, 2015)**

*November: Approval and funding and study design*

*January: Community approvals*

### **FY 15, 1st quarter (February 1, 2015 - April 30, 2015)**

*February-April: Fieldwork*

### **FY 15, 2nd quarter (May 1, 2015-July 31, 2015)**

*May-July Data analysis and draft report preparation*

### **FY 15, 3rd quarter (August 1, 2015 – October 31, 2015)**

*August -September: Data analysis and draft report preparation*

*October Completion of draft report*

### **FY 15, 4th quarter (November 1, 2015- January 31, 2016)**

*November-December Review of draft report*

*December-January Preparation and submission of final report*

## **V. PROJECT PERSONNEL**

See attached resumes for James A. Fall (principal investigator), Davin Holen (regional program manager), and David Koster (information management lead).

## **VI. BUDGET**

### **A. Budget Forms (Attached)**

See attached.

### **B. Sources of Additional Funding**

Up to 2 months of Principal Investigator James Fall's time will be supported through State of Alaska General Funds. The approximate funding is \$30,000 (2 months @ \$15,000/month). Tasks will include overall project design, consultation with field staff, review of all results, consultation with staff preparing the community chapters of the final report, overall editing of the final report, and writing the "conclusions" chapter of the final report.

**EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL  
PROGRAM PROJECT BUDGET PROPOSAL AND REPORTING FORM**

<b>Budget Category:</b>	Proposed FY 12	Proposed FY 13	Proposed FY 14	Proposed FY 15	Proposed FY 16	TOTAL PROPOSED	ACTUAL CUMULATIVE
Personnel	\$0.0	\$0.0	\$0.0	\$179,054.0	\$0.0	\$179,054.0	
Travel	\$0.0	\$0.0	\$0.0	\$52,274.4	\$0.0	\$52,274.4	
Contractual	\$0.0	\$0.0	\$0.0	\$19,859.0	\$0.0	\$19,859.0	
Commodities	\$0.0	\$0.0	\$0.0	\$7,500.0	\$0.0	\$7,500.0	
Equipment	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	
<b>SUBTOTAL</b>	\$0.0	\$0.0	\$0.0	\$258,687.4	\$0.0	\$258,687.4	
General Administration (9% of subtotal)	\$0.0	\$0.0	\$0.0	\$23,281.9	\$0.0	\$23,281.9	N/A
<b>PROJECT TOTAL</b>	\$0.0	\$0.0	\$0.0	\$281,969.3	\$0.0	\$281,969.3	
Other Resources (Cost Share Funds)	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	

**COMMENTS:**

**This summary page provides an five-year overview of proposed funding and actual cumulative spending.** The column titled 'Actual Cumulative' should be updated each fiscal year to provide information on the total amount actually spent for all completed years of the project. On the Project Annual Report Form, if any line item exceeds a 10% deviation from the originally-proposed amount; provide detail regarding the reason for the deviation.

**FY12-16**

**Project Title: Update to the Status of Subsistence  
Uses in the Spill Area 2014  
Primary Investigator: James Fall, ADF&G**

**TRUSTEE AGENCY  
SUMMARY PAGE**

**EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL  
PROGRAM PROJECT BUDGET PROPOSAL AND REPORTING FORM**

<b>Personnel Costs:</b>		Months Budgeted	Monthly Costs	Leave	Personnel Sum	
Name	Project Title					
Jones, Bronwyn	Subsistence Resource Specialist I	1.25	6412.00		8015.00	
Jones, Bronwyn	Subsistence Resource Specialist I	1.50	6732.60		10098.90	
Kukkonen, Malla	Subsistence Resource Specialist II	1.25	7619.00		9523.75	
Kukkonen, Malla	Subsistence Resource Specialist II	0.75	7999.95		5999.96	
Community Liason	Unemployment	0.12	525.00		63.00	
Marchioni, Meredith (PI)	Subsistence Resource Specialist III	1.50	8820.00		13230.00	
Marchioni, Meredith (PI)	Subsistence Resource Specialist III	1.25	9261.00		11576.25	
Holen, Davin	Regional Program Manager	0.75	11322.00		8491.50	
Holen, Davin	Regional Program Manager	1.00	11888.10		11888.10	
Bond, Jenn	Regional Administrative Assistant	0.75	7102.00		5326.50	
Bond, Jenn	Regional Administrative Assistant	0.75	7457.10		5592.83	
Smith, Maegan	Regional Office Assistant	0.75	5269.00		3951.75	
Smith, Maegan	Regional Office Assistant	0.75	5532.45		4149.34	
Krieg, Ted	Subsistence Resource Specialist II	1.00	11882.00		11882.00	
Krieg, Ted	Subsistence Resource Specialist II	0.75	12476.10		9357.08	
Ream, Joshua	Subsistence Resource Specialist I	1.00	6405.00		6405.00	
Ream, Joshua	Subsistence Resource Specialist I	0.75	6725.25		5043.94	
Ream, Joshua	Subsistence Resource Specialist I	0.25	6405.00		1601.25	
Grant, Rosalie	Subsistence Resource Specialist I	0.25	6642.00		1660.50	
Van Lanen, Jamie	Subsistence Resource Specialist II	0.25	8026.00		2006.50	
Lamb, Mary	Publications Technician	1.00	7875.16		7875.16	
Lamb, Mary	Publications Technician	0.50	7875.16		3937.58	
Koster, Dave	Research Analyst IV	0.22	11147.00	366.55	2810.22	
Zimpleman, Garrett	Research Analyst II	0.14	8295.00	171.43	1314.30	
Lemons, Terri	Research Analyst III	0.38	8645.00	489.88	3755.77	
Kostick, Marylynne	Research Analyst II	1.47	6929.00	\$1,524.63	11688.80	
Quiner, Theresa	F&G Program Technician	1.20	5687.00	1027.81	7879.89	
Cunningham, Margaret	Research Analyst I	0.27	6089.00	244.17	1871.96	
Kalalo, Jackson, Dodson	Data Entry Interns	0.65	2756.00	268.33	2057.21	
			Subtotal	219799.9	4092.8	
					<b>Personnel Total</b>	\$179,054.03

<b>FY15</b>	<b>Project Title: Update to the Status of Subsistence Uses in the Spill Area 2014 Primary Investigator: James Fall, ADF&amp;G</b>	<b>TRUSTEE AGENCY SUMMARY PAGE</b>
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**EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL  
PROGRAM PROJECT BUDGET PROPOSAL AND REPORTING FORM**

<b>Commodities Costs:</b>	Commodities
Description	Sum
Community Subtotal	3,000.0
Software	3,000.0
Mapping Hardware: iPad	1,500.0
<b>Commodities Total</b>	<b>\$7,500.0</b>

<b>New Equipment Purchases:</b>	Number of Units	Unit Price	Equipment Sum
Description			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
			0.0
<b>New Equipment Total</b>			<b>\$0.0</b>

**FY15**

**Project Title: Update to the Status of Subsistence  
Uses in the Spill Area 2014  
Primary Investigator: James Fall, ADF&G**

**FORM 4B  
CONTRACTUAL &  
COMMODITIES DETAIL**



**EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL  
PROGRAM PROJECT BUDGET PROPOSAL AND REPORTING FORM**

Date Prepared: xx/xx/xxxx

**EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL  
PROGRAM PROJECT BUDGET PROPOSAL AND REPORTING FORM**

Date Prepared: xx/xx/xxxx

## RESUME

**Name:** James A. Fall

October 2014

### Education:

- University of Pennsylvania, Philadelphia, Pennsylvania  
B.A. May 1973
- University of Wisconsin-Madison, Madison, Wisconsin  
M.A. in Anthropology, June 1977  
Ph.D. in Anthropology, August 1981

### Present Position:

Statewide Program Manager (from April 2007)  
Division of Subsistence, Alaska Department of Fish and Game (ADF&G)  
333 Raspberry Road  
Anchorage, Alaska 99518  
Phone: (907) 267-2359; fax: (907) 267-2450  
E-mail: jim.fall@alaska.gov  
Period of Employment with ADF&G: October 1981 to Present  
Previous Positions: Subsistence Resource Specialist III (1981- 1989); Regional Program Manager (1989 – 2007).

Duties: Plan, organize, and monitor the division's program of applied social science research on patterns of subsistence hunting and fishing in communities in Alaska.

### Teaching Experience:

Alaska Pacific University, Anchorage, Alaska  
Adjunct Professor  
September 1985 to May 1986  
Courses: The Anthropology of Cook Inlet  
The Anthropology of Hunting and Fishing Cultures of Northern North America

University of Alaska Anchorage, Chugiak-Eagle River Extension, Eagle River, Alaska  
Adjunct Lecturer  
May to August 1988  
Course: Anthropology 202. Cultural Anthropology

University of Alaska Anchorage, Anchorage, Alaska  
Department of Anthropology  
Adjunct Faculty  
January 1989 to May 1989; January to May 2006; January to May 2007  
Courses: Anthropology 200. Natives of Alaska  
Anthropology 490. Dena'ina Heritage and Representation in Anchorage

### Publications and Other Reports:

*Recent project publications related to proposed project:*

"Subsistence Harvests and Uses in Eight Communities Ten Years after the *Exxon Valdez* Oil Spill."  
Alaska Department of Fish and Game, Division of Subsistence Technical Paper No. 252. (Final report for EVOS Trustee Council Restoration Project No. 99471.) James A. Fall and Charles Utermohle, compilers.  
Juneau, Alaska. 1999

## **Resume, James A. Fall, continued.**

"Patterns of Subsistence Uses of Fish and Wildlife Resources in the Area of the *Exxon Valdez* Oil Spill." Chapter 2 in "Evaluating and Communicating Subsistence Seafood Safety in a Cross-Cultural Context: Lessons Learned from the *Exxon Valdez* Oil Spill." L. Jay Field, James A. Fall, Thomas S. Nighswander, Nancy Peacock, and Usha Varanasi, editors. Pensacola, Florida: Society of Environmental Toxicology and Chemistry. 1999.

"Changes in Subsistence Uses of Fish and Wildlife Resources Following the *Exxon Valdez* Oil Spill." Chapter 4 in "Evaluating and Communicating Subsistence Seafood Safety in a Cross-Cultural Context: Lessons Learned from the *Exxon Valdez* Oil Spill." L. Jay Field, James A. Fall, Thomas S. Nighswander, Nancy Peacock, and Usha Varanasi, editors. Pensacola, Florida: Society of Environmental Toxicology and Chemistry. 1999.

"Long Term Consequences of the *Exxon Valdez* Oil Spill for Coastal Communities of Southcentral Alaska." Alaska Department of Fish and Game, Division of Subsistence Technical Paper No. 264. (US Minerals Management Service OCS Study MMS 2001-032). James A. Fall, Rita Miraglia, William Simeone, Charles J. Utermohle, and Robert J. Wolfe. Anchorage. 2001.

"Update of the Status of Subsistence Uses in *Exxon Valdez* Oil Spill Area Communities, 2003." Alaska Department of Fish and Game, Division of Subsistence Technical Paper No. 312. ((Final report for EVOS Trustee Council Restoration Project No. 040471.) James A. Fall, editor. Juneau. 2006.

### *Selected other publications*

"The Division of Subsistence of the Alaska Department of Fish and Game: An Overview of Its Research Program and Findings: 1980 - 1990." *Arctic Anthropology* 27(2):68-92. 1990.

"The Round Island Walrus Hunt: Reviving a Cultural Tradition." (Co-author with Molly Chythlook). *Cultural Survival Quarterly* 22(3):59-62. 1998.

"Continuity and Change in Subsistence Harvests in Five Bering Sea Communities: Akutan, Emmonak, Savoonga, St. Paul, and Togiak. *Deep-Sea Research II*: 94:274-291. James A. Fall, Nicole S. Braem, Caorline L. Brown, Lisa B. Hutchinson-Scarborough, David S. Koster, and Theordore M. Krieg. 2013.

"*Dena'inaq' Huch'ulyeshi*: The Dena'ina Way of Living." Suzi Jones, James A. Fall, and Aaron Leggett, editors. University of Alaska Press in association with the Anchorage Museum. 2013.

### **Recent or Ongoing Collaborations**

Henry Huntington. Pew Charitable Trusts, Anchorage.

Suzi Jones. Anchorage Museum

Aaron Leggett. Anchorage Museum

## DAVIN HOLEN

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## EDUCATION

2008-Present – PhD Candidate, Anthropology, University of Alaska Fairbanks

2002 MA – Applied Cultural Anthropology, University of Alaska Anchorage

1995 BA – History, University of Alaska Anchorage

## SOCIAL AND NATURAL SCIENCE EMPLOYMENT

2010 – Present ***Subsistence Program Manager, Southern Region***, Division of Subsistence, Alaska Department of Fish and Game

2009-2010 – ***Subsistence Resource Specialist III***

2003-2009 – ***Subsistence Resource Specialist II***

2002-2003 – ***Subsistence Resource Specialist I***

2000-2001 – ***Graduate Intern***

- Identify, design, and direct complex research projects to collect historical, ethnographic, and subsistence harvest data in Southwest, Southcentral, Southeast, and Interior Alaska.
- Use cross-cultural communication skills to work closely with community and tribal organizations, as well as the general public.
- Work directly with other agencies and research firms to design, budget, and implement projects.
- Create GIS databases and applications to document subsistence harvest patterns and use.
- Author reports, papers, and posters documenting research conducted by the agency (see publications).
- Prepare and present materials for Fish and Game regulatory and advisory bodies.

2003 – Present ***Adjunct Professor***, Department of Anthropology, University of Alaska Anchorage

## PUBLICATIONS

### Selected Recent Journals and Books

2014 Holen, Davin. *Fishing for community and culture: the value of fisheries in rural Alaska*. Polar Record. Cambridge University Press. doi:[10.1017/S0032247414000205](https://doi.org/10.1017/S0032247414000205).

2011 Holen, Davin. *"We all drink this water:" The contemporary context of salmon fishing in Southwest Alaska.* In Humanizing security in the Arctic. D. Michelle, F. Levesque, and J. Ferguson, eds. Pp. 191-208. Edmonton: Canadian Circumpolar Institute.

2009 Holen, Davin. *A Resilient Subsistence Salmon Fishery in Southwest Alaska: A Case study of Fish Camps in Nondalton.* Journal of Northern Studies. Vol. 2. Pp. 99-113.

2009 Holen, Davin. *Subsistence in Alaska* In Chapter 7. Interdependency of subsistence and market economies in the Arctic. The Economy of the North. 2<sup>nd</sup> Edition. Glomsrod, S. and Aslaksen, I., eds. Oslo. Statistics Norway.

2009 Holen, Davin L. The Dynamic Context of Cultural and Social Sustainability of Communities in Southwest Alaska. Journal of Enterprising Communities. Vol 3. Issue 3.

### Selected Recent Technical Publications

2014 Davin Holen; Sarah M. Hazell; James M. Van Lanen; Joshua T. Ream; Sean P. A. Dejardins; Bronwyn Jones; Garrett Zimpelman. The harvest and use of wild resources in Cantwell, Chase, Talkeetna, Trapper Creek, Alexander/Susitna, and Skwentna, Alaska, 2012. ADF&G Division of Subsistence, Technical Paper No. 385.

2013 Sarah Evans; Malla Kukkonen; Davin Holen; David S. Koster. Harvests and uses of wild resources in Dillingham, Alaska, 2010. ADF&G Division of Subsistence, Technical Paper No. 375.

2013. Lauren A. Sill and Davin Holen. Options for amounts reasonably necessary for subsistence uses of deer: Game Management Unit 1A. Alaska Department of Fish and Game Division of Subsistence, Special Publication No. -001.

2012 Davin Holen; Sarah M. Hazell; David S. Koster. Subsistence harvests and uses of wild resources by communities in the eastern Interior of Alaska, 2011. ADF&G Division of Subsistence, Technical Paper No. 372.

2012 Holen, Davin, Jory Stariwat, Theodore M. Krieg, and Terri Lemons. *Subsistence harvests and uses of wild resources in Aleknagik, Clark's Point, and Manokotak, Alaska, 2008.* ADF&G Division of Subsistence, Technical Paper No. 368.

### Recent or Ongoing Collaboration:

Tobias Schwoerer, Research Associate, Institute of Social and Economic Research, Anchorage

Peter Schweitzer, Professor, University of Alaska Fairbanks and University of Vienna, Austria

Courtenay Gomez, Director of Natural Resources, Bristol Bay Native Association, Dillingham

Iulie Aslaksen, Senior Researcher, Statistics Norway

David Albert, The Nature Conservancy, Juneau

Jennifer Burns, Professor, University of Alaska Anchorage, Department of Biological Sciences

## DAVID KOSTER

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## EDUCATION

2001 BS – Computer Science, University of Alaska Fairbanks

## EMPLOYMENT

2006 – Present – **Research Analyst IV**, Division of Subsistence, Alaska Department of Fish and Game

2004-2006 – **Programmer / Analyst III/IV**, Division of Subsistence, Alaska Department of Fish and Game

- Design, implement, and maintain data processing scripts and routines for subsistence harvest survey data.
- Design, implement, and maintain databases and user interfaces for entering household survey information into division data systems.
- Develop and review data analysis practices and procedures for a variety of subsistence harvest surveys.
- Respond to public data inquires related to subsistence harvests in Alaska.
- Review and validate subsistence harvest survey data entry

2008-2009 – **Business information systems instructor, Charter College Wasilla**

2002-2004 – **Programmer / Analyst II**, Division of Motor Vehicles

2001-2002 – **Computer Scientist**, Department of Defense

## PUBLICATIONS

Sarah Evans; Malla Kukkonen; Davin Holen; David S. Koster. 2013. Harvests and uses of wild resources in Dillingham, Alaska, 2010. ADF&G Division of Subsistence, Technical Paper No. 375.

James A. Fall; David S. Koster. 2013. Subsistence harvests of Pacific halibut in Alaska, 2011. ADF&G Division of Subsistence, Technical Paper No. 378.

Davin Holen; Sarah M. Hazell; David S. Koster. 2012. Subsistence harvests and uses of wild resources by communities in the eastern Interior of Alaska, 2011. ADF&G Division of Subsistence, Technical Paper No. 372.

James S. Magdanz, Hazel Smith, Nicole Braem, Patricia Fox, David S. Koster. 2011. Patterns and Trends in Subsistence Fish Harvests, Northwest Alaska, 1994–2004. ADF&G Division of Subsistence, Technical Paper No. 366.

Theodore M. Krieg, Davin L. Holen, and David Koster. 2009. Subsistence harvests and uses of wild resources in Igiugig, Kokhanok, Koliganek, Levelock, and New Stuyahok, Alaska, 2005. ADF&G Division of Subsistence, Technical Paper No. 322.

**Recent or Ongoing Collaboration:**

Mary Mahaffy, Science Coordinator, Landscape Conservation Coalition, Anchorage, AK

Joel Reynolds, Science Coordinator, Western Alaska Landscape Conservation Coalition, Anchorage, AK

Philip Martin, Science Coordinator, Arctic Landscape Conservation Coalition, Fairbanks, AK