

Examining Existing Information and Present Maps in the Northwest Arctic Borough Subsistence Mapping Project

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A Four Year Project...

The trail ahead – Year One

2011

1. Gather existing information on subsistence in the Northwest Arctic Borough and identify gaps in western knowledge.
2. Collect new subsistence harvest information from a community in the Northwest Arctic Borough.
3. Create a regional clearinghouse of existing data, maps, traditional knowledge and studies.
4. Engage borough communities in the documentation of past through current local and traditional knowledge.

The trail ahead – Year Two

2012

1. Complete documentation of new local and traditional knowledge into the geographic information system (GIS) database, identify important ecological areas (IEAs), and create subsistence use maps (by species).
2. Update subsistence use maps to help ensure subsistence resources are conserved and protected. The Borough will use maps in its zoning and permitting.

The trail ahead – Years Three and Four

2013-2014

1. Complete an expert review of the GIS database layers by Elders and experienced subsistence users and identify both Important Ecological Areas (IEAs) and Potential Resource Development Areas of the region.
2. Publish an atlas of identified IEAs and supporting ecological information.
3. Share data of IEAs and supporting ecological information with Borough communities and others as appropriate.

Milestones: January 2009 to March 2011

Date	Event
1/09	Assembly approved Resolution 09-01 approving submission of the NWAB CIAP program.
11/09	State of Alaska comment period for the state CIAP program
1/26/10	Assembly approved Resolution 10-04 accepting Oak Foundation funding for the project
1/29/10	Assembly approved Ordinance 09-08 approving the MOA with the State of Alaska to gather subsistence information
11/22-23/10	Ordinance 10-13 for an MOU with Oceana introduced to the Assembly
11/29/10	BOEMRE completed the final grant award
1/10/11	Project coordinator Zach Stevenson hired
1/24-26/11	2 nd reading of Ordinance 10-13
1/14/11	Cooperative Agreement with ADFG signed
2/14/11	Article about the project published in the Arctic Sounder
2/18/11	NWAB-Kotzebue Joint Planning Resolution 11-01 passed supporting the project
2/28-3/1/11	Assembly continued discussion on Ordinance 10-13
3/31/11	ADFG completed initial draft bibliography and draft survey instrument

Milestones: April 2011 to August 2011

4/19 – 4/20/11	1 st Project Team Meeting in Kotzebue Quarterly Project Team Meeting in Kotzebue
	John Goodwin hired as Traditional Knowledge Specialist
	Alvin Ashby hired as intern representing Noatak and Kivalina
	Brandon Chapman hired as the project's social anthropologist
5/6/11	John Chase gave an overview of the project at the annual Alaska Coastal Management Program conference in Anchorage
6/1/11	Annual project presentation to the Assembly. Assembly approved Cooperative Agreement for Oceana and the FY12 contract for Glenn Gray and Associates.
6/2/11	2 nd FY11 Quarterly Project Team Meeting in Kotzebue
6/6/11	Anne Henshaw of the Oak Foundation visit to Kotzebue
6/10/11	Monitoring and Evaluation Plan Revised
6/14/11	Zach Stevenson and Alvin Ashby met with the community of Noatak about the project, including the openings on the Advisory Committee
6/30/11	Oceana provided an update on the project to the Joint Planning Commission meeting in Barrow; Initial GIS database developed.
7/1/11	Project staff met with the North Slope Borough Wildlife Department
7/30/11	Oceana prepared written description of the Draft Information Database
8/9/11	Zach Stevenson and Brandon Chapman attend meetings in <u>Selawik</u> with the City and Tribe about the project and recruitment for project intern and advisory committee members
8/9/11	Selawik IRA approved ADF&G proposal to conduct a subsistence survey in October

Milestones: August 2011 to November 2011

8/11/11	Zach Stevenson and Brandon Chapman attend meetings in <u>Deering</u> with the City and Tribe about the project and recruitment for project intern and advisory committee members
8/15/11	GIS Training in Kotzebue by Oceana GIS Analyst Debra Fischman; GIS PowerPoint prepared by Project Coordinator
8/18/11	Glenn Gray and Zach Stevenson met by telephone to discuss project progress
8/19/11	Zach Stevenson and Brandon Chapman attend meetings in Noorvik with the City and Tribe about the project and recruitment for project intern and advisory committee members
8/24/11	First project applicant table prepared
8/29/11	Meeting with the City of <u>Kivalina</u> and Tribe
8/11	Staff reviewed 22 applications for two subsistence mapping intern positions for Deering/Buckland and Selawik/Noorvik and interviewed top candidates 8/29-8/30
8/30/11	Draft Social Science Methods presentation by Brandon Chapman in the Assembly Chambers
9/1/11	Oceana submitted a document about criteria used for determining IHAs
9/15/11	Project staff discussion on intellectual property rights
9/28/11	1 st Quarter FY12 Project Team Meeting in Kotzebue
9/29/11	Annual Project Presentation to the Planning Commission
11/2 – 11/4/11	2011 Subsistence mapping Conference

Objectives



Focal Questions...

Enhance our understanding of the Borough Project.

- **What information do we have?**
- **How was information collected?**
- **How will information be stored?**
- **What have we learned?**

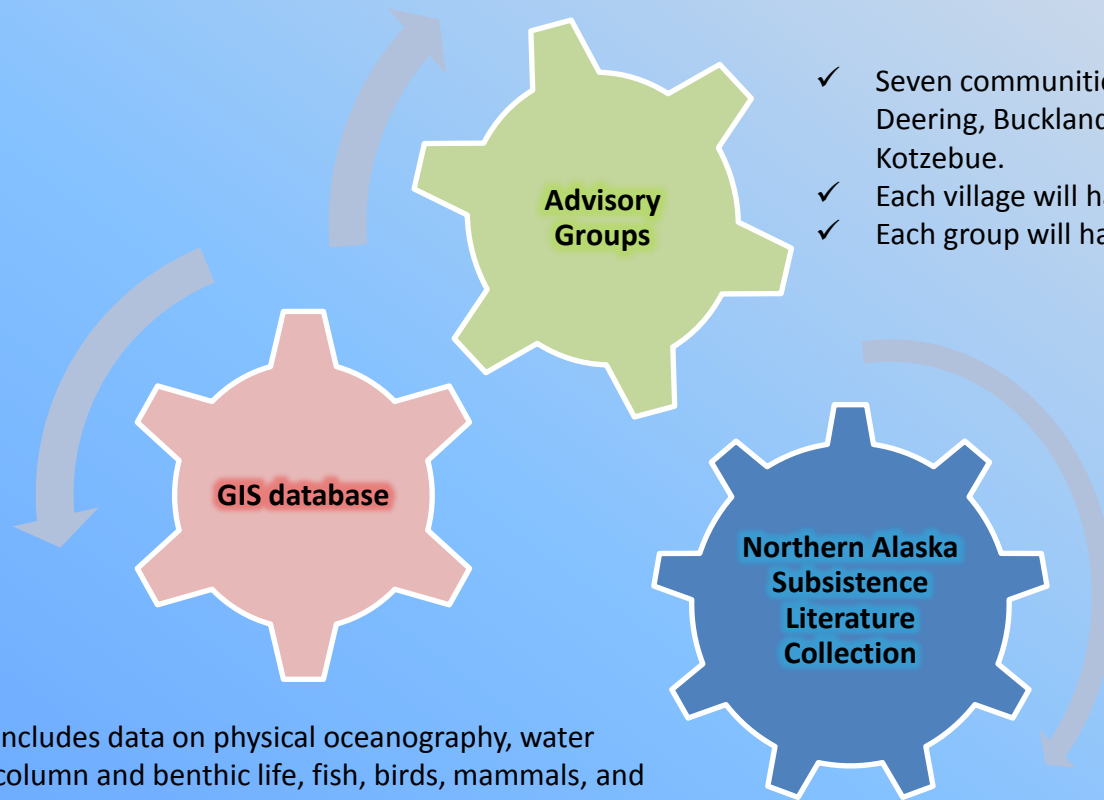
Share Existing Information.

- **What is the status of the Advisory Groups?**
- **What literature has been collected so far?**
- **What maps do we have?**
- **What's missing?**

Provide Tools to Get Involved in the Mapping Process

- **Will we consider other maps?**
- **How will we bridge traditional and local knowledge and western knowledge?**
- **How will you manage all this information?**
- **Can I help make the maps?**

What information do we have?



- ✓ Includes data on physical oceanography, water column and benthic life, fish, birds, mammals, and people from the Arctic Marine Synthesis produced by Oceana and Audubon Alaska (2010)..
- ✓ Will include data other reports and maps.
- ✓ The GIS database is strong in biological information. GIS subsistence data is out of date and incomplete.

- ✓ Seven communities including Noorvik, Selawik, Deering, Buckland, Noatak, Kivalina, and Kotzebue.
- ✓ Each village will have an Advisory Group.
- ✓ Each group will have 7 members.

- ✓ 2,000 peer reviewed articles on subsistence and growing.
- ✓ Grouped by author and subject.
- ✓ Grouped by relevance and importance.
- ✓ The collection is strong in subsistence topics, and less complete in biological topics. ADF&G recently added many papers to the library, and some duplication can be seen.

How was information collected?

Advisory Groups

Noorvik

- ✓ There are seven (7) individuals interested in serving as Advisory Group Members in Noorvik.
- ✓ John Goodwin, Sr., Lee Ballot, Sr., Brandon Chapman, and Zach Stevenson were in Noorvik on Oct. 20, 2011.
- ✓ The team provided the Council with a project update, answered questions, and requested completed Advisory Group Member Applications from three individuals.
- ✓ The team awaits approval of the Advisory Group Applicants.

Selawik

- ✓ There are seven (7) individuals interested in serving as Advisory Group Members in Selawik.
- ✓ Seven Advisory Group Applicants were approved by the Selawik IRA Council.
- ✓ The Council prepared a memo for the Borough indicating their support of the applicants.
- ✓ The Borough is reviewing this letter of support.

How was information collected?

Deering

- ✓ There are five (5) individuals interested in serving as Advisory Group Members in Deering.
- ✓ Raymond Lee is working to obtain a signed Advisory Group Member Application for one individual.
- ✓ Mr. Lee is also working on recruiting two additional Advisory Group Members.

Buckland

- ✓ There are seven (7) individuals interested in serving as Advisory Group Members in Buckland.
- ✓ Raymond Lee is working to obtain signed Advisory Group Member Applications for each individual.
- ✓ With the signed applications received, the list of applicants will be presented to the Buckland IRA Council for review and approval.

How was information collected?

Noatak

- ✓ There are seven (7) individuals interested in serving as Advisory Group Members in Noatak.
- ✓ John Goodwin, Sr., Alvin Ashby, Brandon Chapman, and Zach Stevenson were in Noatak on Oct. 27th.
- ✓ The team will meet with the Native Village of Noatak, provided a project update, answered questions, and reviewed the list of seven Advisory Group Applicants received so far.
- ✓ The tribe wants to recruit more Elders to serve on the Advisory Group. The Tribe will make their recommendations on November 7, 2011.

Kivalina

- ✓ The project team will travel to Kivalina on November 8, 2011 to meet informally with the IRA Council and City of Kivalina.
- ✓ The team's objective is to describe the project, answer questions and request permission to recruit Advisory Group Applicants.

How was information collected?

Kotzebue

- ✓ The project team met with Kotzebue IRA Council on Oct. 25, 2011.
- ✓ The team described the project, answer questions and requested permission to recruit Advisory Group Members.
- ✓ The Council voted unanimously in support of recruiting Advisory Group Applicants in Kotzebue.
- ✓ The team circulated flyers and email messages and continues to recruit a minimum of seven applicants in Kotzebue.
- ✓ Please contact John Goodwin, Sr. at 907-442-2500 x171 (direct) if you live in Kotzebue and would like to serve on the Kotzebue Subsistence Mapping Advisory Group.

How was information collected?

Northern Alaska Subsistence Literature Collection

- ✓ The Alaska Department of Fish and Game (ADF&G) Division of Subsistence produced an electronic database of literature related to subsistence hunting and fishing in Northwest Alaska.
- ✓ The collection is large and contains 2,000 individual PDF files.
- ✓ The Borough has edited summaries of the collection available, created in the bibliography program EndNote.
- ✓ The collection includes all the technical papers published by the ADF&G Division of Subsistence and by the Alaska MMS-OCS program (now BOEMRE).
- ✓ It also includes approximately 1,500 journal articles, conference papers, books, and reports related to subsistence in northwest Alaska that ADF&G collected.

How was information collected?

Northern Alaska Subsistence Literature Collection (continued)

- ✓ Northwest Alaska subsistence activities, such as Georgette and Shiedt (2005) Whitefish: Traditional ecological knowledge and subsistence fishing in the Kotzebue Sound Region, Alaska.
- ✓ Northwest Alaska subsistence species, including some reports from other areas that cover species found locally, such as Underwood (2000) Abundance, length composition, and migration of spawning inconnu in the Selawik River, Alaska.
- ✓ Archeological and historical subjects such as Anderson (1988) Onion Portage: The archeology of a stratified site from the Kobuk River, Northwestern Alaska.
- ✓ Economic topics, such as Kruse (1991) Alaska Inupiat subsistence and wage employment patterns: understanding individual choice.
- ✓ Food safety topics, such as Kuhnlein and Chan (2000) Environment and contaminants in traditional food systems of northern indigenous peoples.
- ✓ Food security topics, such as Ford (2009) Vulnerability of Inuit food systems to food insecurity as a consequence of climate change: a case study from Igloodik, Nunavut.

How was information collected?

Northern Alaska Subsistence Literature Collection (continued)

- ✓ Theoretical literature from ecology, economics, sociology, and other disciplines that may (or may not) be relevant to subsistence in northwest Alaska such as Axelrod (1984) *The Evolution of Cooperation*, Henrich (2004) *Foundations of human sociality: Economic experiments and ethnographic evidence from fifteen small-scale societies*, Ostrom (2009) *A General Framework for Analyzing Sustainability of Social-Ecological Systems*, and Sahlins (1972) *Stone age economics*.
- ✓ The collection has been developed over many years by many people. It is impossible to name all those who contributed to developing the collection.
- ✓ A few deserve special recognition: Linda Ellanna, former deputy director of the Division of Subsistence; Richard Stern, former regional supervisor for the Division of Subsistence, Susan Georgette; now with the Selawik Refuge; Alex Whiting, with the Kotzebue IRA; and Denali Whiting, who scanned many older papers last summer with support from BLM and the Kotzebue IRA.

How was information collected?

GIS Database

Scientific and Technical Support

- ✓ Oceana provided support in the identification of research priorities in the Subsistence Mapping Project.
- ✓ Oceana provided GIS training and support to the project. Specifically Oceana's GIS Analyst participated in the project's GIS training workshop, whose analyst prepared and presented presentations.
- ✓ Oceana produced an initial draft summary and a revised summary of the information database for the project.

Review project methods and approach to ensure scientific validation

- ✓ Oceana produced a written overview of the methods used in other regions to identify Important Ecological Areas.
- ✓ Oceana developed an initial draft table of contents for an Important Ecological Areas.

How was information collected?

GIS Database (continued)

Assist the NWAB work to compile ecological and subsistence information into a GIS database

- ✓ Oceana provided the Northwest Arctic Borough a copy of the GIS database containing the information gathered to produce the Arctic Marine Synthesis.
- ✓ Provided a data used and literature cited document for the information contained in the Arctic Marine Synthesis.

Assist in the identification of data gaps to help update Arctic research priorities:

- ✓ *Oceana participated in a discussion on identifying gaps in documented local and traditional knowledge to inform other parts of the project and future research needs and provided a written summary of the discussion.*

How will information be stored?

The Borough will develop a secure database where files can be searched by key word, date, and/or other relevant information. This system will be known as the Data Warehouse.

The Data Warehouse will have two key components:

1. **PRINT LIBRARY** - Maps, reports, and other documents will be stored in a secure location – essentially a library.
2. **DIGITAL LIBRARY** - Electronic files will be stored on a secure computer. The files may include peer reviewed, literature, reports, documents, assessments, research notes, digital photographs, audio recordings, outreach materials, correspondence, GIS data, and maps.

What have we learned?

- I have much to learn. I am a student. Elders, hunters, those who fish, pick berries and plants, those who live from the land and the sea are teachers.
- The Northwest Arctic Borough needs updated information on subsistence reflecting both local and traditional knowledge and western knowledge to protect subsistence, preserve Inupiaq culture, and promote compatible development.
- We will not duplicate previous research. We will not reinvent the wheel.
- When collecting local and traditional knowledge of subsistence, there are methods available to protect intellectual property – both technically and legally. We will not create treasure maps.
- There is strong interest from communities in the Northwest Arctic Borough to develop Advisory Groups that will serve as experts to who can share local and traditional knowledge.
- There is limited western knowledge of subsistence in the Northwest Arctic Borough.
- Existing maps and reports show the need to bridge traditional and local knowledge and western knowledge.
- Bridging these two worlds successfully requires the cooperation and participation of many people. *We can do this!*

2011 Subsistence Mapping Conference

What's Missing?

The Borough needs your help to develop an updated atlas of subsistence maps for the Northwest Arctic Borough.

How will we bridge local and traditional knowledge and western knowledge?

The Traditional Knowledge Specialist, Interns, Advisory Groups, and other Borough staff will help provide and document local and traditional knowledge. Please contact the Intern in your community if you want to

Advisory Groups, Borough Staff, and key project partners will work together to develop and edit the maps.

How will you manage all this information?

The Borough and its partners are developing a Data Warehouse that will serve a safe and secure place to store both print and electronic information on subsistence in the region.

Information stored in the Data Warehouse will be used to by Borough Staff, Advisory Groups, and key project partners develop the atlas of important ecological areas (IEAs) and potential resource development areas reflecting both local and traditional knowledge and western knowledge of subsistence.

The Data Warehouse and atlas of maps will be stored securely at the Borough to be used by the Borough as a decision-support tool when conducting zoning and permitting. The goal, above all else, is to protect subsistence and preserve the Inupiaq way of life.

2011 Subsistence Mapping Conference

Questions?

Taikuu.

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