

# ABOUT LEO

## The Local Environmental Observer Network

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Alaska Native Tribal Health Consortium

Center for Climate and Health

November 13, 2012

*LEO - the Eyes, Ears, and Voice of Environmental Change in Alaska Communities*



# Center for Climate and Health

To assist the tribal health system in understanding the effects of climate change, and to raise awareness and encourage strategies and responses that protect public health.



# We qualify the effects on five health categories



Disease



Food Security



Injury



Mental Health



Water Security

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## Climate Events Alaska, 2012

This map provides an overview of climate-related or potentially climate-related events that are occurring in Alaska USA, during 2012, based on postings from the Circumpolar Climate Events maps. These maps are hosted by the Alaska Native Tribal Health Consortium (ANTHC), Center for Climate and Health and are based on published reports, articles in the press, and local observations. For more information on climate events across the circumpolar north, google us: "Center for Climate and Health".

Public · 2 Collaborators · 126 views

Created on Oct 31 · By mbrubaker · Updated 3 days ago

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### Snow resulting in vehicle-moose collisions (Alaska)

Anchorage, January 4 (extreme weather) A moose conservation group says heavy snow has led to more crashes between vehic and moose. KTUU (<http://bit.ly/zPyGj>) says heavy snow in the mountains thi...

### Snowpocalypse (Alaska)

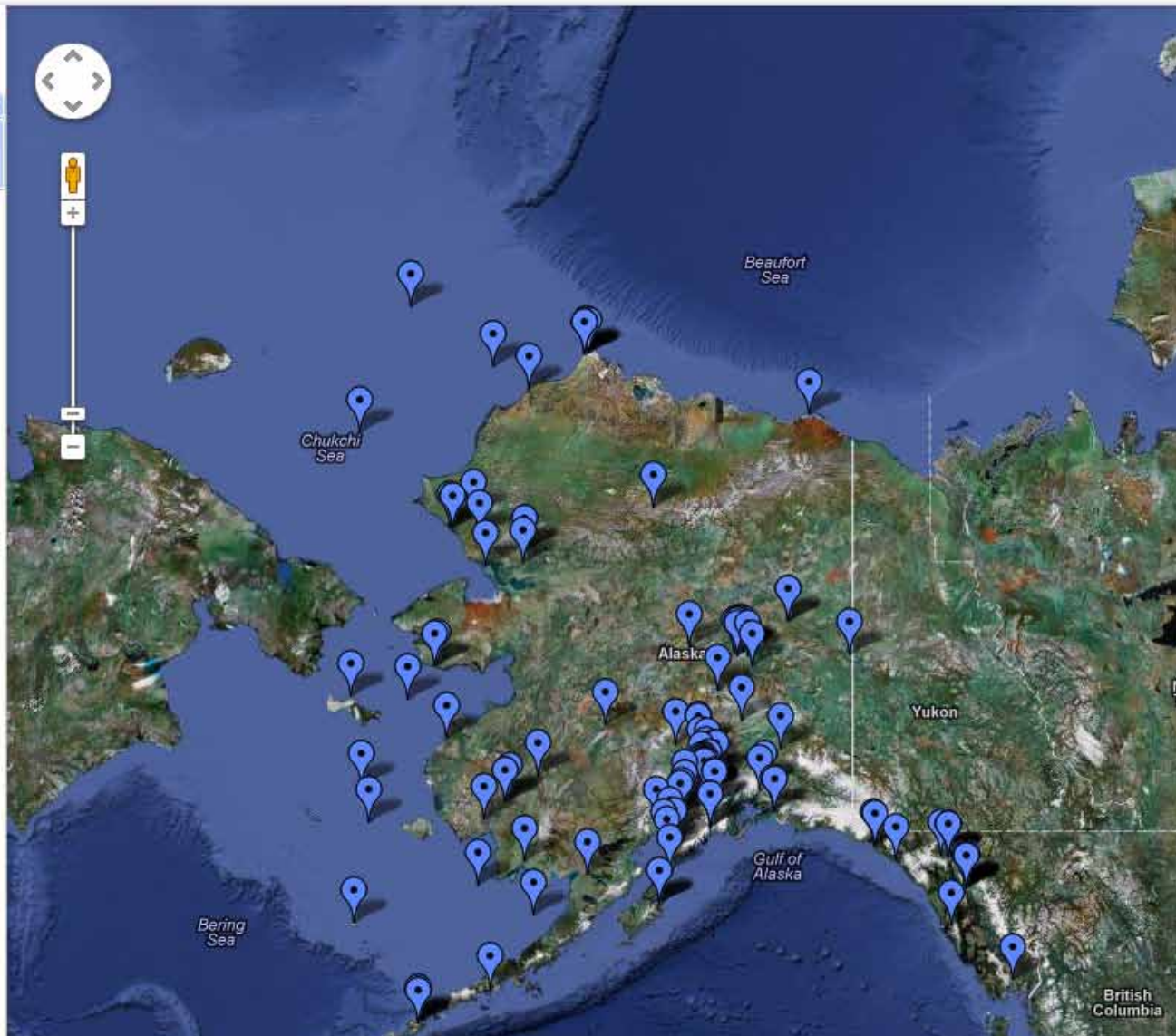
Valdez, January 5 (extreme weather) We're calling it "Snowpocalypse," said J.R. Lewis, owner of KLAM and KCDV r stations in Cordova. "We have a drift that's gotta be 8 or 9 feet hi at the stat..."

### Sea ice hampering emergency fuel delivery (Alaska)

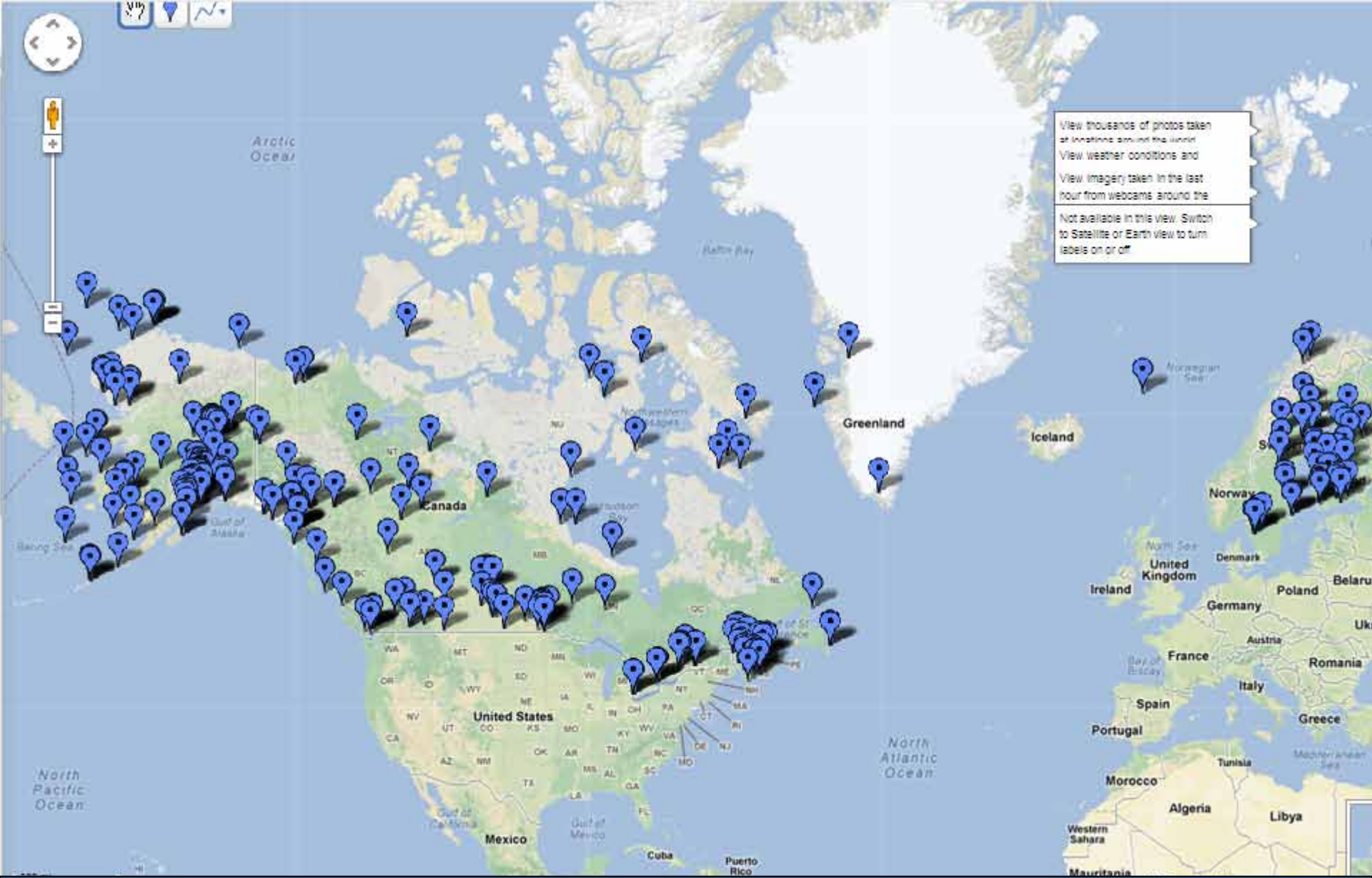
Bering Sea, January 9, (ice) Shifting ice in the Bering Sea is dramatically slowing a Russian tanker's mission to deliver fuel to iced-in community of Nome. A Coast Guard spokesman said Mo t...

### National Guard assists with snow removal (Alaska)

Cordova Alaska, January 10 (extreme weather) Residents of twi Alaska communities are seeking outside help after an exceptiona



Over 180 media reported events on our web-based Google maps.



And hundreds more from reports across the circumpolar north.



Disease – Food borne Illness

## **Four stricken by toxic shellfish**

Paralytic shellfish poisoning hot in Juneau area bi-valves

Posted: April 13, 2012 - 4:58pm | Updated: April 14, 2012 - 11:08pm

# Food Security - harvest failures



**Alaska Beat**

**Parnell requests disaster declaration for Yukon, Kuskokwim fisheries**

Alaska Dispatch | Jul, 14 2012

# Health Effects of Climate Change in Alaska

Allergic reactions



Dangerous travel



Poor Water Quality



Food Spoilage



Respirator Illness



Food security



Ice hazard injury



Infrastructure damage



Wildlife disease



Dangerous seas



Allergies



Drought and Infestation



Unsafe food



Snow hazards







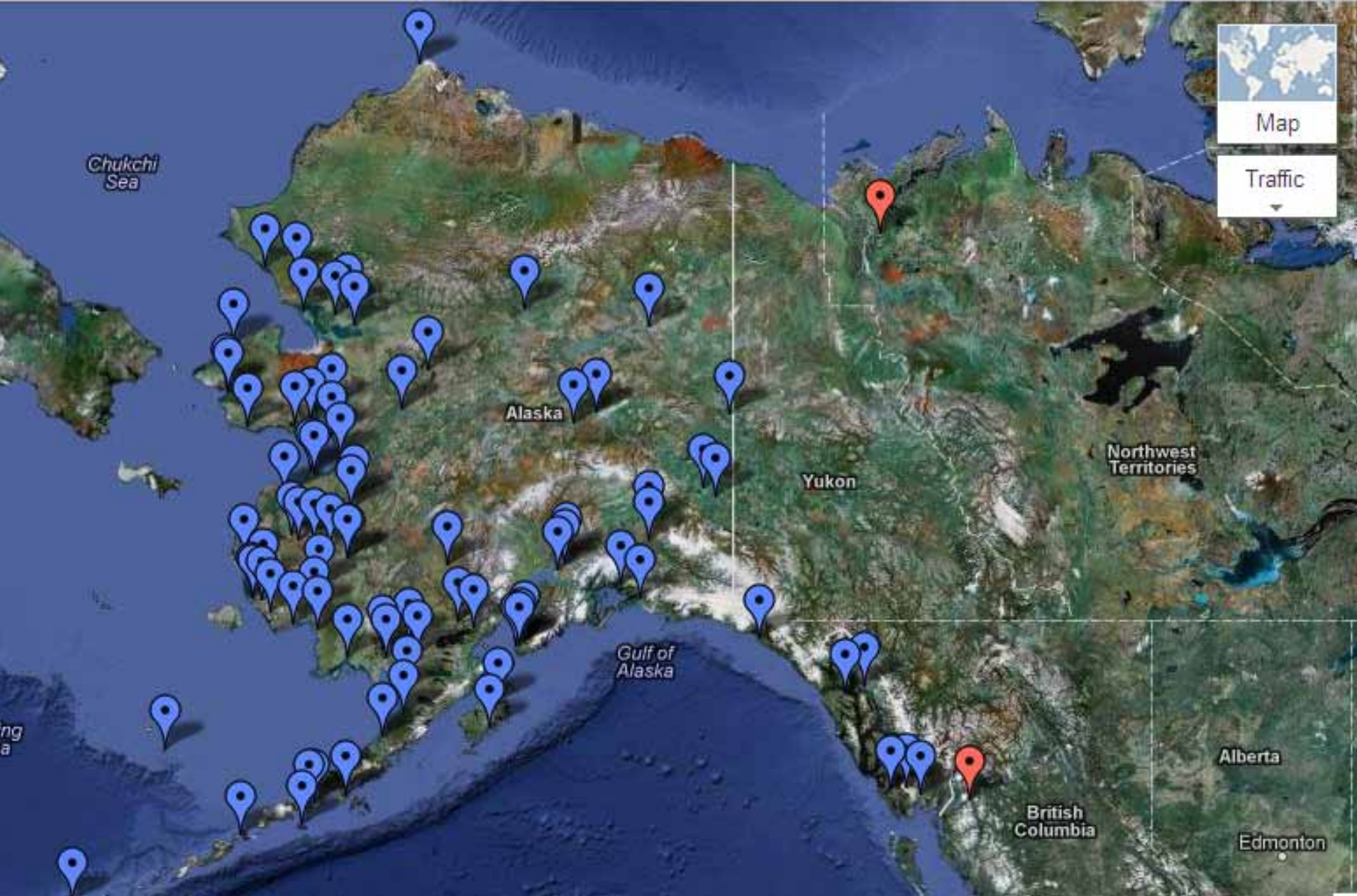
But Alaska has a small population and few communities.



Even some larger communities don't have news media. To improve our understanding and response to climate change impacts we have developed a community observer information network.



A network sensitive to the types of issues that are important and relevant to local residents, and connected to both traditional and western knowledge systems.



LEO started in 2012 as a network of local participants in the fields of environment, wildlife and health. There are now over 170 participants.



Weather

Erosion

Permafrost

River

Seasonal

Coastal

Plants

Wildlife

Infrastructure

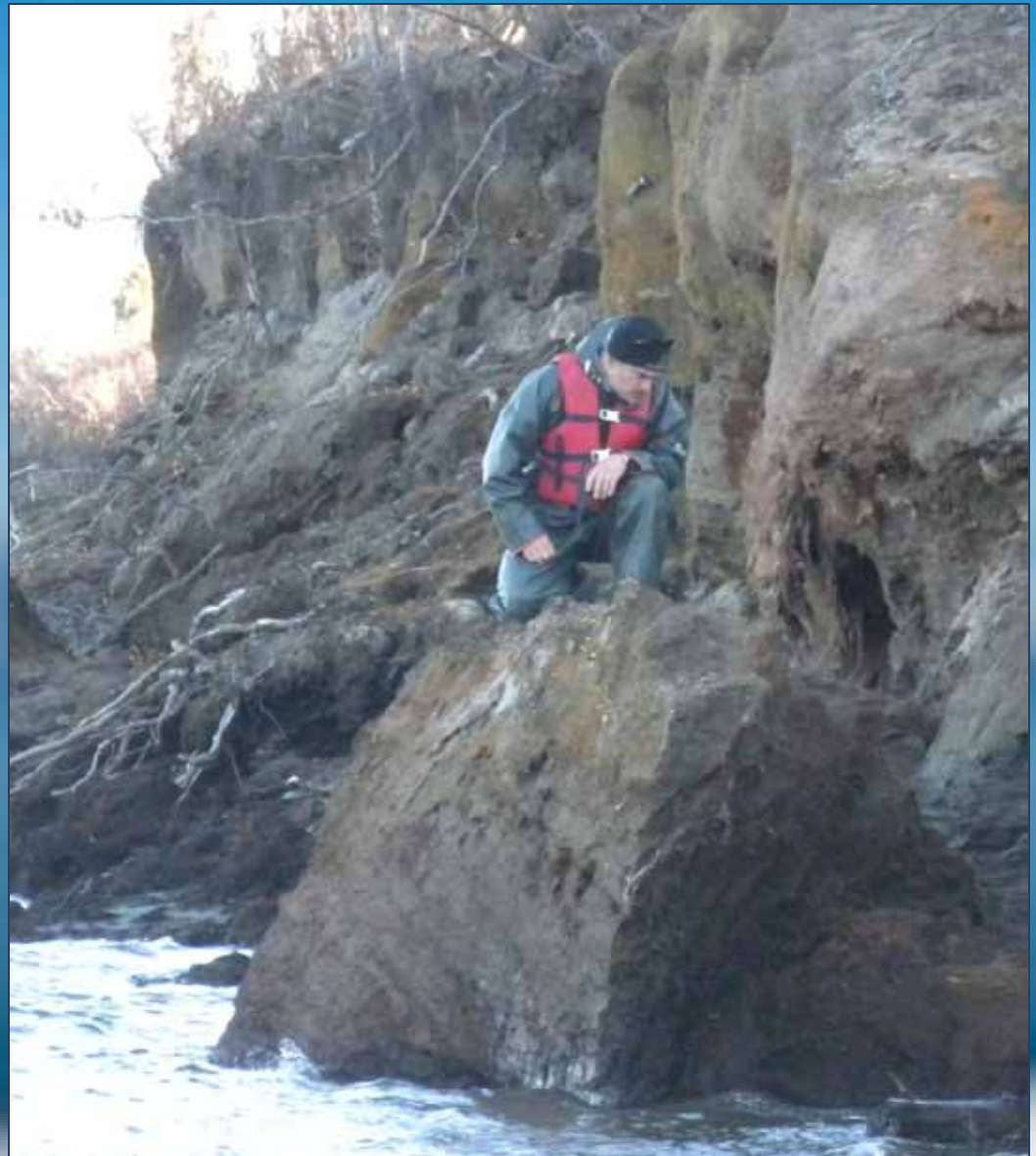
Environment

Transportation

Disease

Food

Water



The focus for LEO is climate change, but observers report on a wide range of local events that are time and location specific.



The LEO participants apply Traditional Ecological Knowledge to identify which observations are unusual, unique and important.



LEO participants apply technology and western scientific methods and partnerships to develop describe and explore the types of events that are important for their communities.



The LEO participants also must decide within their own organizations what information to share with the network.





Observations can be from anyone in the community. The LEO serves as a local contact for collecting, reviewing and completing the information and for follow-up based on the findings and technical consultations.

[Go LEO](#)



## Local Environmental Observer (LEO) Network

Arctic communities are changing due to environmental impacts, climate change and development. Monitoring the environment is important for understanding the risks and benefits and for adaptation. The LEOs are the eyes, ears and voice of environmental change in Alaska communities.



[click here](#)  
**Post an Observation**



[click here](#)  
**Join "LEO" Alaska**

We are tribal environmental professionals who apply traditional knowledge, western science and technology to document unusual plants and wildlife, extreme weather, erosion, flooding, droughts, wildfire and other events that can threaten food security, water security and community health. Checkout our LEO monthly maps and other links to learn more.

[LEO Alaska \(Flickr\) Photostream](#) & [LEO Alaska \(YouTube\) Channel](#)



### LEO July 2012 Map

Map Sat Ter Earth



POWERED BY Google Imagery ©2012 Google - ©2012 NASA - Terms

View LARGE: [click here](#)

LEO Maps Archive

July 2012

#### Related Pages

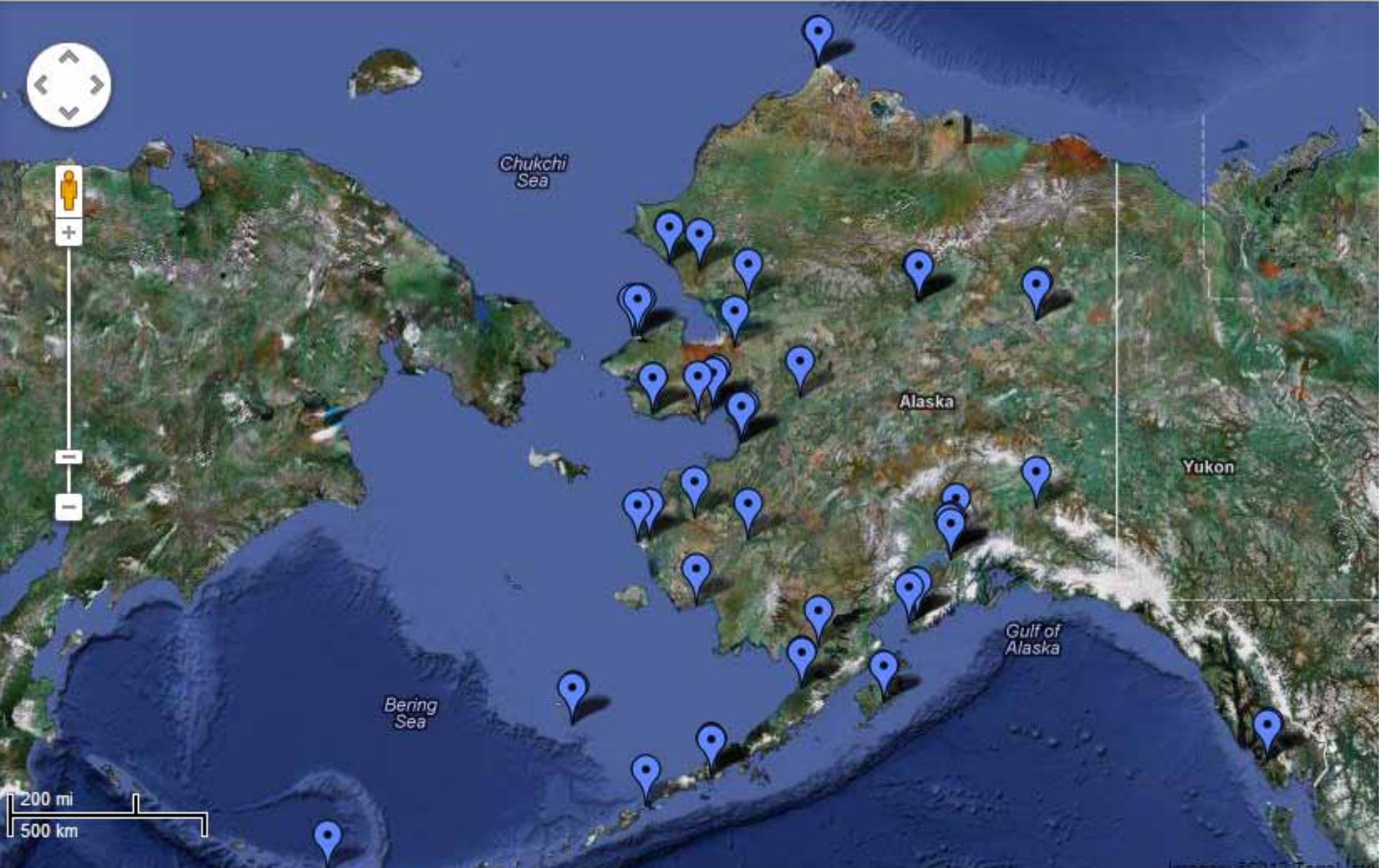
- [About LEO](#)
- [Contact Info](#)
- [LEO Slideshow](#)
- [Partners & Resources](#)

1,449 Visits: storage, Alaska  
1 Recent Hit



revolvermaps





In 2012 LEO has posted over 50 observations across Alaska about unusual environmental, weather, wildlife and community events.

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**Local Environmental Observer (LEO) Map, May 2012**

Local Environmental Observer (LEO), May 2012  
 This map provides a monthly record of unusual or noteworthy events that have occurred across Alaska. The purpose is to increase communication and understanding about our changing environment and to encourage healthy ways to adapt. Reports are provided through the network of Local Environmental Observers (LEO); environmental professionals located in local or regional tribal organizations across Alaska.

For more information visit our site at the [Alaska Native Tribal Health Consortium](#), Center for Climate and Health:

<http://www.anthc.org/chs/ces/climate/leo/>  
 Email: [anthcleo@anthc.org](mailto:anthcleo@anthc.org)

Funded by the Environmental Protection Agency

Public · 2 Collaborators · 8,470 views  
 Created on May 3 · By [mbrubaker](#) · Updated Jul 9  
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Deer with fur loss in Southeast



**Discolored seal with sores on side flipper (photo)** ✕

Last Updated by [moe](#) on Jul 9



Shishmaref, May 19, 11:30 PM, (sea animal)  
 This ringed seal was taken in Shishmaref Inlet, approximately 3 miles up the staked trail to 7 mile ice pond. There was no breathing hole present, the seal had traveled from the east of the stakes heading westward. There seems to be a BB size lump on one of the forearms, and showing evidence of sores on one side flipper. Hopefully this will bring us closer to understanding what may be causing the illness and disease that our marine mammals are being affected by. According

[Directions](#) [Search nearby](#) [Save to map](#) [more](#)

A good observation provides information about the nature of the observation as well as why it is unique and important, and any interpretations by the observer. Ideally it also includes photos or video.

Collaborate **EDIT**

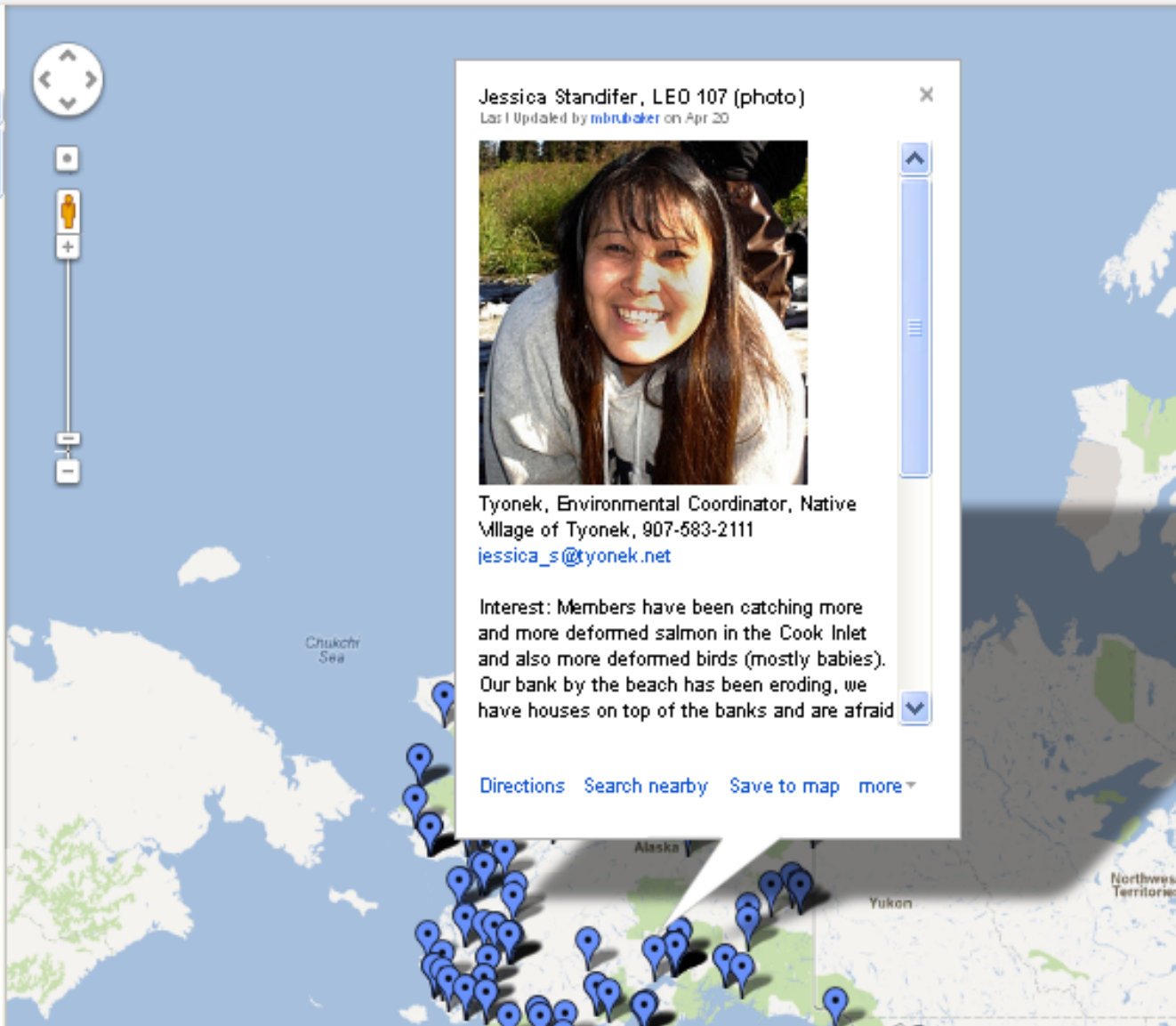
Explore making custom maps in an [interactive tutorial](#).

**LEO Network Participants (Please Do Not Distribute)**

This is a private map for LEO Network Participants. It shows the locations of all LEOs and has contact information to encourage collaboration within the network. This map is for LEO participants only, so please do not distribute. You can click on the individual icons to look at LEO information and their photos. If you have comments or would like to add information, or be removed from the map, you can contact the map hosts at: [anthcleo@anthc.org](mailto:anthcleo@anthc.org)

Units led: 3 Collaborators: 2,548 views  
 Created on Jan 24 · By [mbrubaker](#) · Updated Jun 25  
[Rate this map](#) · [1 comment](#) · [KML](#)

- Moses Tcheripanoff, LEO 01 (photo)**  
 Wasilla LEO Manager and Web Guru, Alaska Native Tribal Health Consortium, 907-729-2496, [mp.tcheripanoff@anthc.org](mailto:mp.tcheripanoff@anthc.org) Interests: believe that this program is essential for keeping our communities connect...
- Mike Brubaker, LEO 02 (photo)**  
 Anchorage / McDonald Spill LEO Manager, Director Community Environment and Safety, Alaska Native Tribal Health Consortium, 907-729-2464, [mbrubaker@anthc.org](mailto:mbrubaker@anthc.org) Interests: community change related to c...
- Hanna Eklund, LEO 03 (photo)**  
 Chugach / Anchorage, Researcher, Chugach Regional Resource Commission, 907-562-6647, [hanna@crcaalaska.org](mailto:hanna@crcaalaska.org) Interests: ... LEO since January 2012.



LEO is also a social network and participants correspond with each other directly to discuss local concerns and exchange information.



Hollis, Alaska, May 1, 2012 (land mammals) We have been seeing Sitka Black-tailed deer with large patches of fur hanging from their bodies and bald spots the size of place mats. Brian Holter Jr. *Hairloss syndrome?*



Buckland, May 23 (flooding) The Buckland River is flooding and causing damage to structures in low lying areas of the community of Buckland. Residents are concerned about the effects from dump site. Paul Eaton, LEO *Referred to ANTHC.*



Kwigillingok, February 22 (coast, ice) After a storm we noticed pressure ice ridges along our coast, over 100 ft up. These ice ridges tend to grow further out away from the coastline. Gavin Phillip, LEO, *Referred UAF.*



## LEO Alaska - Coastal Ice

This map documents observations of sea ice conditions in Alaska made by Local Environmental Observers (LEO) network members and other coastal community members, starting November 2011. Examples of typical observations include: first appearance of different ice types (slush ice, floe ice, shorefast ice); Ice protecting the coast (ice berms, bottomfast ice); and Ice interacting with shoreline (ice push, mud and sand frozen into ice). The map is co-hosted by the Alaska Native Tribal Health Consortium, Center for Climate and Health and the University of Alaska Fairbanks, Geophysical Institute.

Public · 4 Collaborators · 294 views

Created on Nov 2 · By [mbrubaker](#) · Updated 7 hours ago

[Rate this map](#) · [Write a comment](#) · [KML](#) 



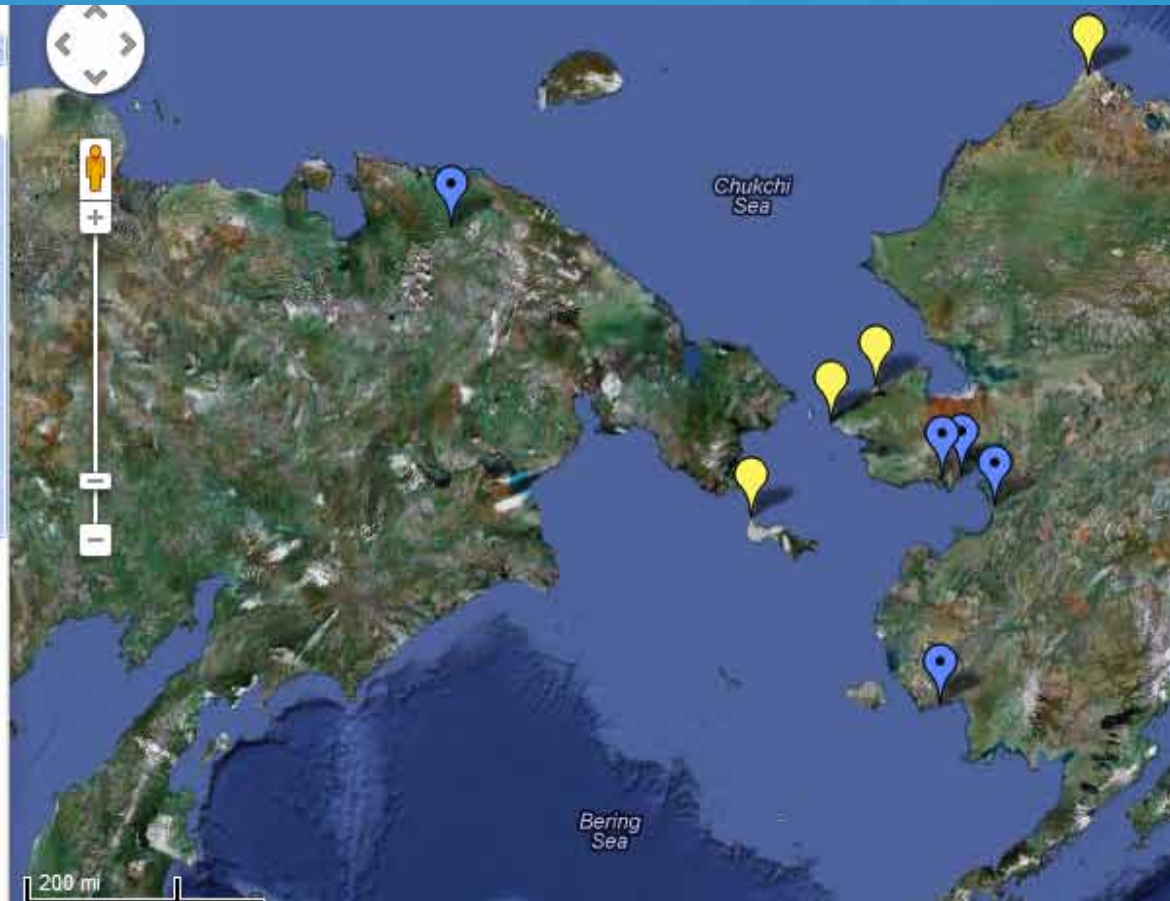
### Ice damages subsistence camps (photo)

Golovin, November 16, 2011 (ice, subsistence) The huge Novemt storm that struck Western Alaska caused damage to several subsistence camps at the mouth of the Kichavik River north of Golovin. Sea ice...



### Unusually late sea ice freeze

Elim, December 2011 (coast, ice, subsistence) The freeze up of s ice on our shores are usually frozen by end of October. Due to th late freeze up, subsistence harvesting for crab and seal were de



LEO is adding topical maps to provide for long term tracking and to engage interested communities, researchers and agencies.



Unalakleet, October 7 (birds) On Saturday I shot 6 spruce grouse and 2 ptarmigan. When I was cleaning the first grouse I ripped open the breast and there were worms squiggling around on top of the breast meat.  
Victoria Kotogan, LEO *Referred to ADF&G and UAF*



King Cove, May 6 (insect) Unusual insects were found in a local home and we suspect the insect might be the Brown Marmorated Stink Bug. "We figure that the bug came in a box that we had ordered from E-bay from New Jersey. We found 10 stink bugs in my house so far and they really do stink!" Honey Lou Wilson, LEO *Referred to UAF.*



Nome Boat Harbor, July 19, 2012, 11:00 AM (environmental) M/V Rustler sank in big November storm and has leaked petroleum/oil into Nome Small Boat Harbor since this time. Michael Sloan, LEO, *Referred to ADEC.*



Observations are often shared with other networks and technical experts to assist with interpretation and work with the LEO on the issue.

## Some of our LEO Partners, 2012

Erosion and Flooding – US Army Corp of Engineers

Coastal Erosion – U.S. Geological Survey

Ice Change - UAF Geotechnical Institute

River Change – National Weather Service River Watch

Permafrost Change – UAF, Permafrost Lab

Water and Sanitation, ADEC, Regional Tribal Health Consortium

Emergency Planning – Homeland Security, Local and Borough Govts.

Wildlife Disease, ADF&G, ADEC, USF&W

Subsistence Harvest – ADF&G Subsistence Division

Algae Blooms, DHSS, UAF, Woods Hole Oceanographic Institute

Invasive Wildlife – UAF Cooperative Extension Service, ADF&G

Environmental Issues – Alaska Department of Environmental Conservation



OBV No. (B000)	Observer Name	Date of Observation, time & google map link		What is the location? (landmarks)	or		(All Communities Map)						
					Latitude	Longitude	Community	Weather	Air Quality	Community Water	Community Food	Seasons	
B001	Toby Anungazuk Jr.	<a href="#">16-Nov-11</a>	n/a	Mouth of the Kichavik River near Golovin	64° 36' 08"N	-163° 06' 35"W	Golvin					X	
B002	Warren Daniels	<a href="#">27-Dec-11</a>	9:00 AM	Elim beach front	64° 36' 57"N	-162° 15' 30"W	Elim						
B003	Brian Holter Jr.,	<a href="#">22-Feb-12</a>	n/a	Klawock Alaska - On a fishing boat at the cannery. The boat is from Klawock and had been their through the winter.	55° 33' 08"N	-151° 30' 35"W	Klawock						
B004	Gavin Phillip	<a href="#">22-Feb-12</a>	n/a	Coastline Kwigillingik	59° 51' 03"N	-163° 07' 59"W	Kwigillingok						
B005	Tim Greene	<a href="#">09-Mar-12</a>	n/a	Coastal area	59° 21' 33"N	-151° 55' 20"W	Nanwalek						
B006	Oxcenia O'Domin	<a href="#">17-Mar-12</a>	5.00pm	Seward Hwy, near Mchugh Creek	61° 01' 47"N	-149° 45' 35"W	Anchorage						
B007	Bruce Wright	<a href="#">20-Mar-12</a>	n/a	Behind the village of Akutan	54° 08' 04"N	-165° 46' 32"W	Akutan						

In addition to posting on the map, the observations are available in a spread sheet format on at the LEO website. These are organized by observer name, date, location and by topic.



### ANTHCleo

3 likes

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Message

⚙️ ▼

Non-Profit Organization

The program is managed by the Center for Climate and Health at the Alaska Native Tribal Health Consortium (ANTHC).

About



Photos

👍 3

Likes



Events



# The take home

Communities seek assistance in responding to climate change.

Local observers provide capacity for addressing local issues.

LEO members select, qualify and post their own observations.

They apply TEK as well as western technology and science.

They engage directly with technical experts.

LEO is a model for expanding broader networks on climate.

*For more information e-mail [mbrubaker@anthc.org](mailto:mbrubaker@anthc.org)*

