

**Climate Change Immediate Action Workgroup Meeting
December 5, 2008 Anchorage, AK
Convened: 1:35 pm**

Communities and individuals participating by phone

Anchorage: Vivian Melde (Ecology & Environment)
Margit Hentschel (Walsh Environmental)
Indra Arriaga (Info-Insights)

Kotzebue:

Kivalina:

St. Michaels:

Nome:

Newtok: Stanley Tom

Shishmaref: Fred D. Eningowuk
Howard Weyiouanna, Sr.
Esther Iyatunguk

Koyukuk:

Unalakleet/Shaktoolik:

Anchorage In-Person:

IAW Members

Trish Opheen (USACE)
Luke Hopkins (AML)
Bob Pawlowski (AFDF– Legislative Climate Change Representative)
John Madden (MVA)

Public and Agency Participants

Community Representatives:

Brice Eningowuk (Shishmaref)
Cindy Pilot (Koyukuk)
Steve Ivanoff (Unalakleet)
Sterling Gologergen (Kawerak)
Jeanette Pomrenke (Kawerak)
Roberta Chavez (AVCP)

Clint Adler (ADOT)

Dan White (UAF)

Margaret (Meg) King (MJ King & Associates)

Carl Borash (USACE)

Kolena Momberger (DEC)

Sally Russell-Cox (DCCED)

Erik O'Brien (DCCED)

Jamilia George (DCCED/Denali Commission)

Jordon Marshall (Rasmuson Foundation)

Denny Lassuy (North Slope Science Initiative)

Judy Jacobs (US F&WS)

Robin Bronen (UAF)

Allison Butler (UAF)

Self-introductions were made and the agenda reviewed.

Public Comment

Roberta Chavez, representing AVPC as the NEPA coordinator, addressed issues in the Yukon Kuskokwim (Y-K) region.

Some of the points she made were:

- Y-K region rapid erosion of communities along the coast and interior.
- Problems with climate change that affect culture and subsistence.
- Noticing more intense storms, wildlife affected, and more flooding.
- Like Newtok, other villages will need to be moved due to flooding and erosion.
- Almost all the villages affected will need to be moved.

Bob P. requested that IAWG be sent pictures for those communities that are experiencing erosion. Any comparison pictures to have visual evidence and show the areas that are changing.

Roberta replied that she would ask village elders.

Sally C. Chefnak is seeking advice from Newtok about land exchanges.

Judy Jacobs: Unaware of any interest about land exchanges/inquiries at USWFS, but would look into it.

Trish O: Suggested to Roberta to look at the USACE's Baseline Erosion Assessment priority list of villages in peril to review and provide additional input if she thinks they missed some villages.

Land Exchange: Judy Jacobs (USF&WS) Post 12/5: Danielle Jerry (USF&WS Refuge Program), Chefnak and Kipnuk have both contacted USF&WS about a potential land exchange. Judy suggests talking with Danielle Jerry, Refuges Division (786-3335) or Nancy Walsh, Realty Branch chief (786-3372).

Draft Definitions (see page 7-9 of this Summary)

Sustainability: How do we build a place that will last?

Comments and suggested changes from participants:

- Need to include cultural - add as a component
- Look at 4/17/08 IAWG report appendix: Sustainability Recommendations for Community Relocations
- Definition by EPA is worrisome – focuses on impact of climate change on aging infrastructure – and the issues in Alaska are different than that – impacts are happening to new construction too
- Suggestion to change wording to APPROPRIATE instead of aging
- Need the concept of holistic approach
- Need to use term “sustainability” but in Alaska there is also a desire/influence for self sufficiency and self-reliance.
- Need to identify investments in the community and how should/do we proactively mitigate the risks for erosion.

Actions → Bob P. committed to continue working on this definition.

Sea Ice: Definition from World Meteorological Organization

Young ice: just formed this year.

Arctic: Whatever definition Alaska uses – needs to include Alaska Peninsula

Suggestion from Co-Chair: RNWG should take this on and suggested looking at areas experiencing more than 1 degree temp change.

Flooding:

Comments:

- Doesn't include water supply ruptures and ground water flooding.

- Most communities in Western AK (Unalakleet) have natural barriers, but there's a reversal trend of these barriers and they're disappearing. Used to be easy access to subsistence. Now communities are vulnerable. Definitions are having a huge impact on our communities.
- Extraction of resources – DNR allowed large volume of gravel to be extracted, which took away a natural barrier for Unalakleet. Now with storms – we're more vulnerable – community can become an island; we don't want to stop development but the extraction is or will be a potential disaster due to potential of winter storms. We're having big heartburn. Grossly negative impact. Another site available, but it was easier (less costly) to come in on the beach and scoop. The city monitors, but is more pro-development than the Tribe that said "Hey wait!"
- Need to listen to local knowledge
- Some models of sustainability are out there that IAWG may want to look at for definition and examples.
- We need to identify when we do armor, when we also need beach nourishment? Can we use lighter armor or something else? We need to look at the approach/challenge

Discussion about Definitions Next Steps and IAWG Role:

- We need to have the definitions because we have so many resources
- Bigger than what IAWG can do in the next 12-18 months. We don't need these parameters for our group. Needs longer term thinking.
- Where is the risk for winter coastal environment due to loss of ice armoring?
- Should IAWG take back to Sub-Cabinet so that they need to define—Sea Ice and Arctic
- Where are the problems? How would the definitions help?
- Causal.
- Classic definitions aren't covering what is actually going on. These are necessary but shouldn't be limiting. Educational. Don't want to quibble over individual words.

Actions →

Bob P will continue to work on Sustainability definition. Allison B will identify other models.

Next Meeting – revisit the extraction issue in Unalakleet – good for both DNR and DOT to hear

Other definitions – IAWG clarification needed: Does it want to submit suggestions/ideas to Adaptation Group, RNWG, Sub-Cabinet?

Identifying New Communities and Projects for Immediate Action

Facilitator reminded folks of the homework due by the next meeting 12/22 (or before), and reviewed the input from DOT as being a simple format to use.

The group also talked about budgeting for O&M activities and formulas. USACE Co-Chair talked about their role as building capital projects and not conducting O&M, but C. Borash indicated that there are some formulas USACE has that may be useful to project O&M activities and costs. Additional discussion about a proposed O&M fund that not only DOT, but communities could also initiate/draw from for projects, which is being proposed by the Public Infrastructure TWG. Others suggested RUBA model or VSW/EPA model, might be useful to look at too.

IAWG was concerned about effectively screening projects being brought forward for immediate action and to make sure they meet the parameters of the IAWG. Be careful that it is a process and not just some community smelling money. First 6 met criteria. Real challenge as we move away. IAWG should ask: Is there something already existing in the State that can provide for this community? If not, then IAWG might add.

Improving/Utilizing DCRA Databases. DCCED representative, Sally Cox suggested that if IAWG wanted to incorporate projects into DCRA database, which the CIAP fund would be good to learn about and the various agencies working in the IAWG could coordinate to develop a joint proposal. J. George suggested the updates need to be quarterly rather than annually, and further identified that this would aid others, such as the Rasmuson

Foundation to do some strategic planning to leverage its resources too. Bob P. identified another need for this is to respond in a timely way to legislative requests about projects, associated fiscal questions and to ensure confidence in the database. **J. Madden suggested that this too was a policy recommendation to the Sub-Cabinet.** He further talked about identifying the process of how information gets into the database, and what needs to happen prior to that, e.g. a precursor to describe how a *need gets identified* which likely happens long before a *project* ends up in the database. Trish—such a great idea—how do we do? What is on screen are projects that have an agency sponsor and funding. Does this create Haves and Have nots? Communities still need to demonstrate their needs and hazards. **L. Hopkins said that AML would send out a letter, and can at provide an opportunity to get responses from all, and then IAWG can look at the have/nots.** (see page 10 of this summary)

Bob P. talked about a new model coming forward with Steve H. (AEA) on energy—not out yet, but will see in January - should have him come in and discuss the model with IAWG.

DCRA Database: Identified Actions →

- IAWG Dec 22 Agenda: CIAP program coordinators will present information on funding process
- Beyond Dec 22:
 - Identify Sub-Group to develop proposal for CIAP funding
Note: A Newtok project was funded from CIAP recently, and received comments like – this is the type of project we want to fund.
 - Determine if Steve H (AEA) should be on 1/7 agenda.

S. Ivanoff, Unalakleet: Will have better numbers at 12/22 meeting, but asked group to expect request for design funds for **Shaktoolik Road** based on meetings on 12/16-17 and **moving old** gym in Unalakleet.

Jeanette Pomrenke (Kawerak): Brought up an issue IAWG hadn't heard before - **Teller—brand new school—flooded, new clinic nearby and also in the flood plain.** Likely need to expand on/describe severity of Teller--water shortage—leaking pipes probably due to the flood and things shifting. Finding adequate water sources are scarce. Water is very scarce and community members are reluctant to speak up. Community leadership needs to come together. The school has tried exerting leadership and is trying.

Post 12/5 meeting: Email from Kawerak – need to wait to see how some things settle out in the community, before pursuing projects/efforts with IAWG.

J. George (D Cmsn) brought up the need to recommend integrated planning, and get an MOU among the agencies – Federal Exec Workgroup(?). Jamilia—staffing issues—especially Clinics—what makes durable infrastructure

J. Madden: Need to be mindful of different types of immediate actions. There maybe an immediate action that the state needs to integrate; already has systems in place to address. Construction-everyone, water system-electric.

T. Opheen: Agreed that good community planning is needed, *but IAWG needs to focus on Immediate Action.*

J. Madden: We can add our emphasis to it. We have so many impediments because we don't have a process.

C. Pilot (Koyukuk): **We have mixed perspectives — some want to re-locate, some want to stay.** Don't know how many. Still in the discussion state. Cultural/historical value - don't want to leave. Torn—which direction to go; the community needs help. Will talk to Sally about funding. The Road and Clinic are in really bad condition.

Bob P. Koyukuk is the only 1 of the 6 communities that is from Flooding rather than Erosion. We started with 6 specific, easy to identify communities, but if we try to branch to 21 it gets more difficult.

J. Madden added that there's the possibility of 160 and maybe every community—that's why we need to design a system that can deal with this.

IAWG Report on Sub-Cabinet 12/5 Meeting

John Madden was the only IAWG member able to attend 12/5 Sub-Cabinet meeting.

- Most of the time was not on IAWG issues.
- A good portion of time was spent working with RNWG and identifying purpose/mission/goals. Gained more clarity on this and identified a range of research not just scientific. RNWG will look at broad needs.
- Discussion about Congress—and legislation about how play together regarding critical infrastructure.
- Quite a bit of time was given to the Forum on the Environment—state speakers, workshops, regional/national –10 workshops along Climate Change Track. AML meeting.
- IAWG—report on last meeting, update on planning grant and homeland security
- Next Sub-Cabinet meeting with the Governor, IAWG should also be present
- Compatibility of IAWG with PI TWG

IAWG 12/22 Agenda

- ANTHC Pilot Project/Program – unsure if should be on agenda
- Homework – Identify Community Projects in next 12 – 18 months
 - Resource Extraction – problems, and planning and community involvement
- Homework - Identify new priority Communities in peril (beyond the 6)
- CIAP Presentation (S. Kreel – DNR/D. Johnston - MMS)
- Policies 1&2 from 2008 and fit with new potential policies
 - New Policy Issues/Recommendations:
 - Get IAWG out of business
 - Institutionalize collaboration
 - Effective information – DCRA Database and a transparent system ; Integrated planning in risk prone communities
 - How to address/create process for range of potential threats that may not be related to climate change
 - Review Iowa model in its effort to address catastrophic impacts due to natural disasters – but consider as an approach to prevent disasters
 - O&M Policy
- NOAA request for additional IAWG input (Lidar)
- First Draft of Recommendations Report
- 1/7/09 Agenda

Draft Table of Contents for Recommendation Report 2009

Comments – Add update on projects/funding from 2008, and then a new section with new communities/projects.

Public Comments:

Jordon Marshall (Rasmuson Foundation): Does the IAWG only focus on infrastructure, wondering what recommendations, role it has with community migration? Do communities need something more than armor for example? What about communities that will be impacted from the migration to major Hub communities, likely due to high energy costs?

Co-Chair Opheen: IAWG priority projects focused on areas that had real estate and immediate needs

E 'Brien: First Alaskan's report identified as the top two reasons for moving to urban areas are Jobs/employment and then Education..

B. Eningowuk (Shishmaref): Hearing the IAWG when on a teleconference in the villages is very difficult. Really encourage the IAWG to identify what it might do. The communities were also encouraged to work with their local phone companies too, to see if they could suggest anything to improve the quality.

Jordon Marshall (Rasmuson Foundation): Asked about the IAWG's concern with \$40 p/bbl of oil and how they will shape its recommendations with this in mind.

J. Madden responded that the role of the IAWG is to identify the projects/communities that fit into the parameters it had been given. Sorting out how state revenues get allocated/spent is the role for the Governor and Legislature to do.

Meeting Adjourned: 4:20 pm

DEFINITIONS for IAWG

SUSTAINABILITY

World Commission on Environment and Development

Sustainability is "meeting the needs of the present without compromising the ability of future generations to meet their own needs." (Bruntland Report, WECD, 1987- broad, most commonly accepted definition, as set out by the World Commission on Environment and Development (WCED)

EPA Sustainable Infrastructure Initiative

Looking forward, EPA wants to promote practices that encourage utilities and their customers to address existing needs so that future generations will not be left to address the approaching wave of infrastructure needs that will result from aging infrastructure.

SEA ICE

Defined by World Meteorological Organization in numerous terms:

http://www.aari.nw.ru/gdsidb/XML/sea_ice_nomenclature.html

For purpose of our work, refer to landfast sea ice: <http://mms.gina.alaska.edu/supp/Definition.pdf>

Excerpt: Numerous definitions of landfast ice exist in the literature, which consider to different extents all the processes that occur in the nearshore zone in the presence of sea ice. According to Weaver (1951) "fast ice or landfast ice is the young coastal ice which, in stationary sheets, builds seaward from the shore of landmasses ... by being more or less attached to the shore, or by being otherwise confined". The World Meteorological Organization (1970) defines fast ice as "Sea ice which remains fast along the coast, where it is attached to the shore, to an ice wall, to an ice front, or over shoals, or between grounded icebergs". Stringer *et al.* (1978) define the fast ice zone as "the area generally shoreward of the 20m isobath with quite stable ice much of the year" and only include ice contiguous with the shore. Barry *et al.* (1979) list three criteria that can distinguish landfast ice from other forms of sea ice: "(i) the ice remains relatively immobile near the shore for a specified time interval; (ii) the ice extends from the coast as a continuous sheet; (iii) the ice is grounded or forms a continuous sheet which is bounded at the seaward edge by an intermittent or nearly continuous zone of grounded ridges". Furthermore, according to the WMO, sea ice can be classified as either landfast ice or pack ice, while Weaver describes drift ice as a third category, which is "transitional between the fast ice and the polar pack ice". Similarly, Stringer *et al.* define a category for ice in the shear zone between the landfast ice and pack.

(AK-03-06, MMS-71707), Mahoney, et.al.

ARCTIC

The **Arctic** is the area around the [earth's North Pole](#). The Arctic includes parts of [Russia](#), [Alaska](#), [Canada](#), [Greenland](#), [Lapland](#) and [Svalbard](#) as well as the [Arctic Ocean](#). The 10°C (50°F) July [isotherm](#) is commonly used to define the border of the Arctic region.

From: <http://www.knowledgerush.com/kr/encyclopedia/Arctic/>



RIVERINE

FLOOD - A flow beyond the carrying capacity of a channel.

EROSION - The wearing away of land by the action of natural forces. On a river the carrying away of material by wave action or flow of water.

COASTAL

FLOOD - A water level above the highest estimated tide.

EROSION - The wearing away of land by the action of natural forces. On a beach, the carrying away of beach material by wave action, tidal currents, and littoral currents.

Erosion/Deposition is an ongoing natural process, not a unique event, often times increased during flooding.

Flooding is a unique natural event, the boundaries of which can be influenced by the extent of erosion.

Letter from AML to its Communities requesting information about immediate needs/actions.

From: Kathie Wasserman
Sent: Tuesday, December 09, 2008 4:01 PM
To: Rebecca Van Keuren
Subject: FW: Imminent communities' needs for IAWG

The Immediate Action Work Group, (IWAG), an 8 member advisory team to the Governor's Sub-Cabinet Panel on Climate Change, has requested a list from Alaska Municipal League on any member communities' imminent or near term threat of loss of life, loss of infrastructure, loss of public and private property, or health epidemics due in-part to impacts from the changing climate as it relates to erosion, flooding, subsidence due to permafrost thawing, community wildfire threat.

The IAWG is to make recommendations on continuing or additional projects, policies and goals that can be initiated or accomplished in a 12-18 month timeframe (January 2009 – June 2010) for the communities that face imminent threats of loss of life, loss of infrastructure.

This **list** is due to AML offices by close of business Wed, Dec 17, 2008. This list will be reviewed and submitted to the IAWG for their Dec 22, 2008, 10 AM public meeting agenda actions. Projects that have been listed through Denali Commission or DCRA online community project listing have been reviewed by the IAWG Co-Chairs.

Luke Hopkins, the AML Board representative on this action group has been requested to gather any AML community needs that may have been overlooked during various agency reviews of identifies communities.

Please submit any replies to the AML offices and due to the short timeline, email short responses to the AML.

A project / need description for the list should simply and briefly outline the issue, possible recent action that lead to how the risk has developed, i.e. early winter storms, shoreline revetment impacts, wild fire threat increases due to climate changes such as wide spread vegetation die off, or river flooding arising in-part from impacts of recent changes in climate. There are also considerations for being listed for relocation planning efforts, if deemed necessary by a community.

The current IAWG draft list of communities includes the original six – Kivalina, Koyukuk, Newtok, Shaktoolik, Shishmaref, Unalakleet,- and 18 additional communities from recent agency updates – Alatna, Allakaket, Barrow, Cheforak, Chevak, Clarks Point, Deering, Dillingham, Elim, Emmonak, Golovin, Hughes, Huslia, Kipnuk, Kotlik, Lime Village, McGrath, Nulato, Nunapitchuk, Port Heiden, Saint Michael, and Selawik. Recent discussions have considered Teller and Hooper Bay.