



Alaska Climate Change Strategy and Overview of Possible Federal Actions Regulating Greenhouse Gas Emissions

Natural Resources and Environmental Section
of the

Alaska Bar Association

Anchorage, Alaska

September 23, 2009

Larry Hartig

Commissioner, Alaska Department of Environmental Conservation

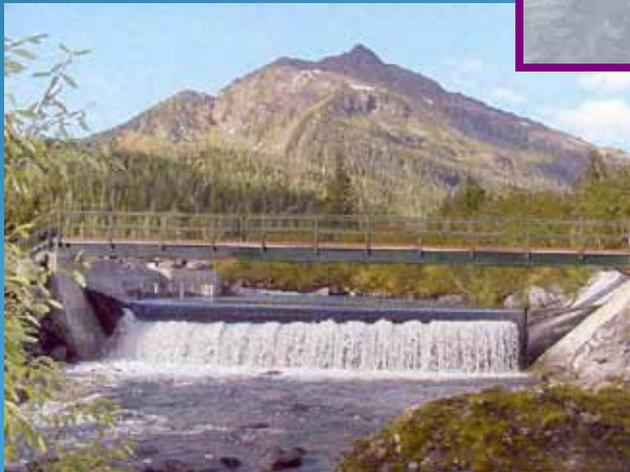
Chair, Alaska Climate Change Sub-Cabinet

Jackie Poston

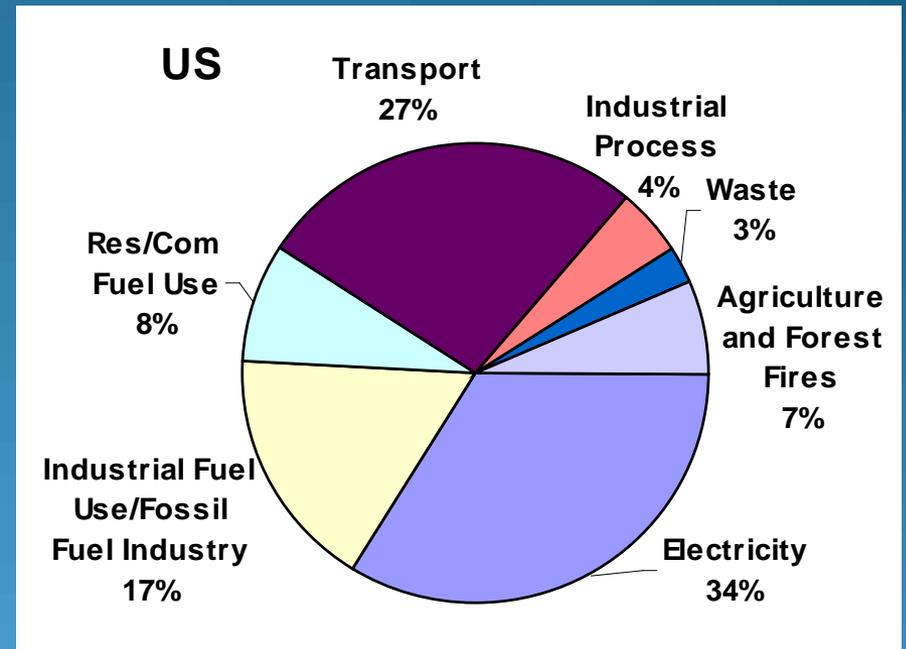
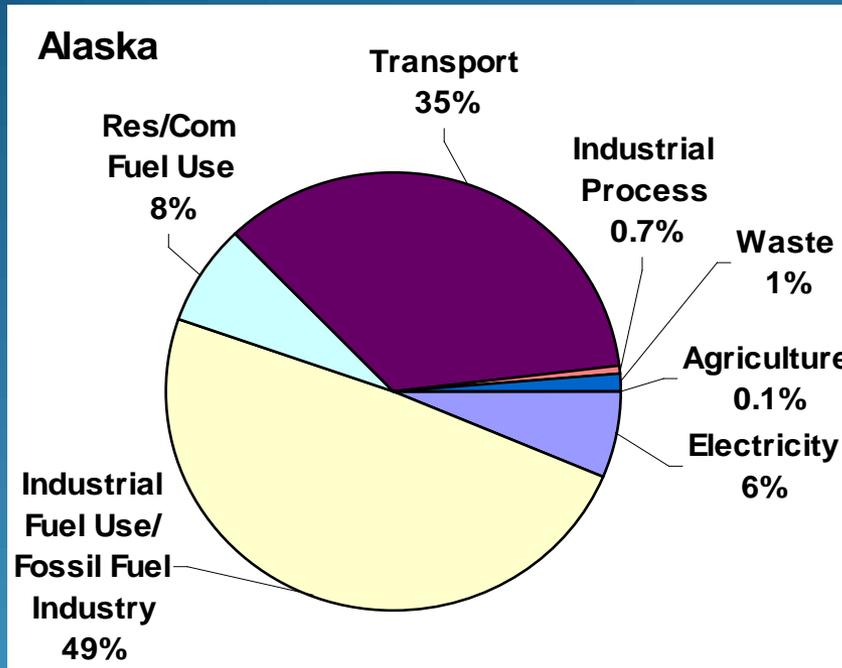
Alaska Department of Environmental Conservation



MITIGATION



Alaska and US 2005 Greenhouse Gas Emissions by Sector



Potential Climate Change Legislation

- 1. American Clean Energy & Security Act of 2009**
- 2. Senator Boxer's Anticipated Bill**
- 3. Energy and Transportation Bills**

Anticipated EPA Actions and Regulations

1. **Mandatory GHG Reporting Rule**
2. **Endangerment Finding**
3. **Light Vehicle Fuel Economy Rule**
4. **Renewable Fuel Standards**
5. **Actions under Existing Regulations and Programs**

Governor's Climate Change Sub-Cabinet

- Established by Governor through Administrative Order 238 on September 14, 2007
 - **IMMEDIATE ACTION WORK GROUP** – Created to address threats to most vulnerable communities
 - **MITIGATION WORK GROUP** – Tasked with identifying options to reduce GHG emissions
 - **ADAPTATION WORK GROUP** – Tasked with identifying options to help adapt to and plan for a warming environment
 - **RESEARCH NEEDS WORK GROUP**

Governor's Climate Change Stakeholder Process

Governor Parnell

Governor's Sub-Cabinet on Climate Change

Immediate Action
Work Group

Research Needs
Work Group

Adaptation Advisory Group

Public
Infrastructure
Technical
Work Group

Health &
Culture
Technical
Work Group

Natural
Systems
Technical
Work Group

Economic
Activities
Technical
Work Group

Mitigation Advisory Group

Oil & Gas
Technical
Work Group

Energy
Supply &
Demand
Technical
Work Group

Transportation,
Land-Use
Technical
Work Group

Forestry,
Agriculture,
& Waste
Technical
Work Group

Cross-
Cutting
Technical
Work Group



ADAPTATION



Immediate Action Work Group



Hundreds of remote communities are accessible only by air or water, have few jobs, and depend heavily on subsistence hunting and fishing. *(ISER 2008)*

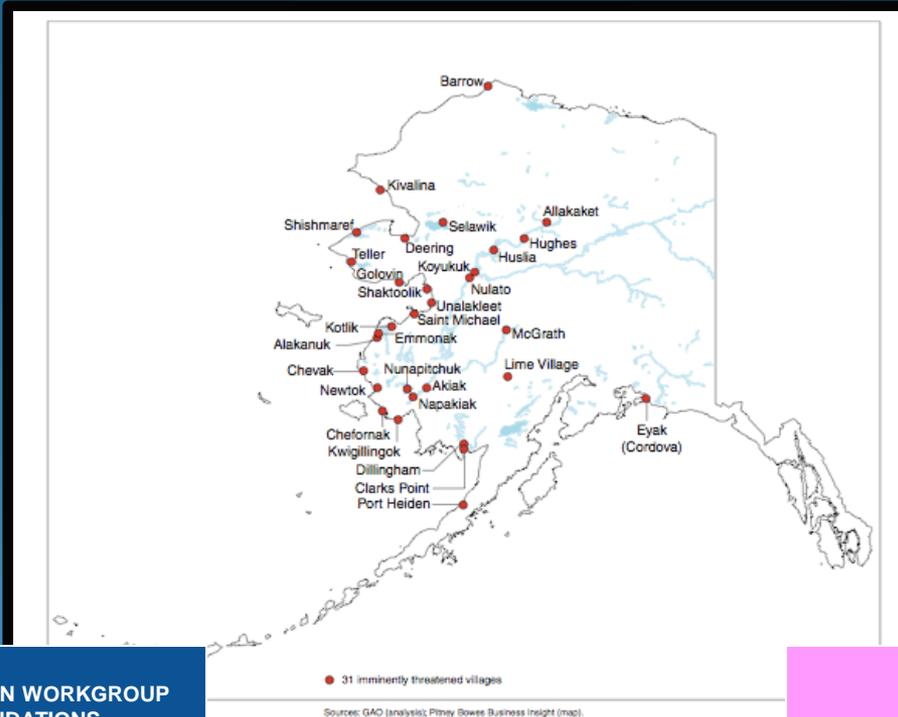
31 Villages Imminently Threatened [GAO 2009]

Alaska Communities in Peril

RECOMMENDATIONS REPORT TO
THE
GOVERNOR'S SUBCABINET
ON CHANGE CLIMATE



**FINAL REPORT
FROM THE
IMMEDIATE ACTION WORKGROUP
APRIL 17, 2008**



Requesters
**United States Government
Accountability Office**

GAO

June 2009

ALASKA NATIVE VILLAGES
Limited Progress Has Been Made
on Relocating Villages Threatened
by Flooding and Erosion

GAO-09-551

IMMEDIATE ACTION WORKGROUP
RECOMMENDATIONS
TO THE
GOVERNOR'S SUBCABINET
ON
CLIMATE CHANGE
MARCH 2009



GAO Reports ('03 '09)

IAWG Reports ('08 & '09)

Public Infrastructure TWG
('09)

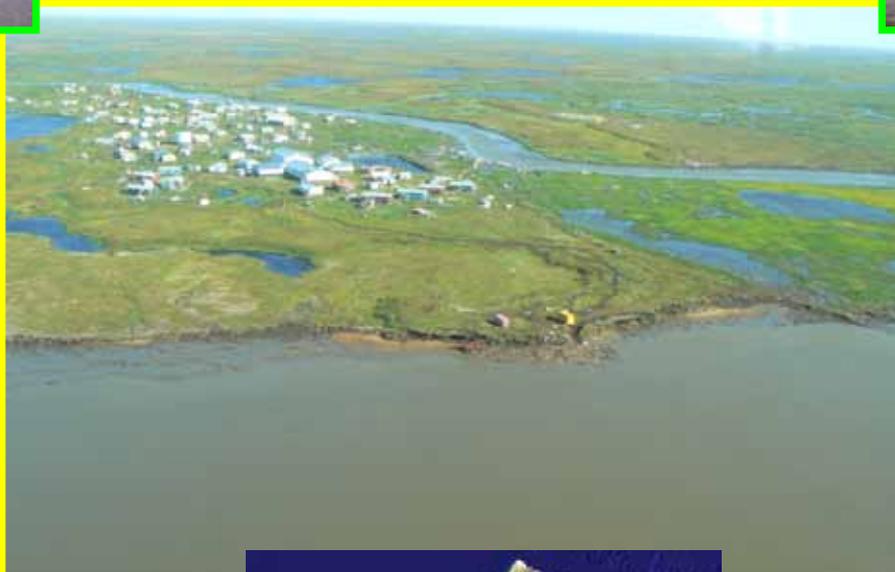
USACE Assessment ('09)

**Alaska Baseline Erosion
Assessments**

[http://www.poa.usace.army.mil/
AKE/Home.html](http://www.poa.usace.army.mil/AKE/Home.html)

**U.S. Army Corps of Engineers
2009**

Coastal Communities in Peril from Flooding & Erosion - Newtok -



Newtok Planning Group

Native Village of Newtok

- Newtok Traditional Council (NTC)
- Newtok Native Corporation (NNC)

State

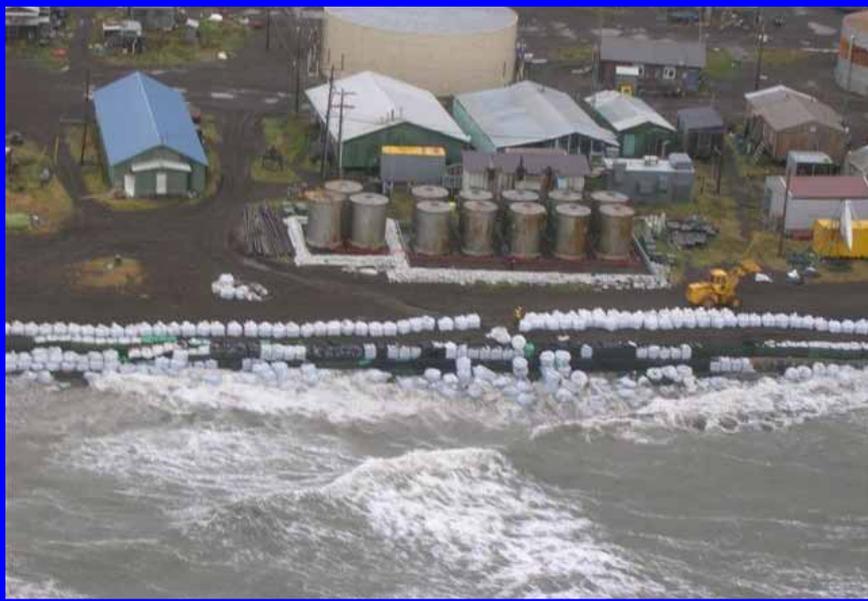
- § Alaska Department of Commerce, Community, and Economic Development (DCCED), Div of Community & Regional Affairs
- § Alaska Department of Environmental Conservation/Village Safe Water Program (VSW)
- § Alaska Department of Transportation and Public Facilities (DOT/PF)
- § Alaska Department of Military and Veterans Affairs/Division of Homeland Security and Emergency Management (DHS&EM)
- § Alaska Department of Education and Early Development (DEED)
- § Alaska Department of Health and Social Services (DHSS)
- § Alaska Industrial Development and Export Authority (AIDEA)/Alaska Energy Authority (AEA)
- § Alaska Governor's Office
- § Cold Climate Housing Research Center

Federal

- § U.S. Army Corps of Engineers (USACE), Alaska District
- § U.S. Department of Commerce, Economic Development Administration (EDA)
- § U.S. Department of Agriculture, Rural Development
- § U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS)
- § U.S. Department of Defense (DOD)
- § U.S. Fish & Wildlife Service (FWS)
- § U.S. Department of Housing and Urban Development (HUD)
- § U.S. Department of the Interior, Bureau of Indian Affairs (BIA)
- § U.S. Department of Transportation, Federal Aviation Administration (FAA).
- § U.S. Environmental Protection Agency (EPA)
- § Denali Commission
- § Senator Lisa Murkowski's Office

Regional Organizations

- § Association of Village Council Presidents (AVCP),
- § Housing Improvement Program (HIP)
- § Coastal Villages Region Fund (CVRF)
- § Lower Kuskokwim School District (LKSD)
- § Rural Alaska Community Action Program (RurAL CAP)
- § Yukon-Kuskokwim Health Corporation



**Coastal
Communities
in Peril from
Flooding & Erosion
- Kivalina -**

Coastal Communities in Peril from Flooding & Erosion - Shismaref-



Decision-makers at all levels need information to address needs and answer questions

SOME EXAMPLES:

Short-Term (Emergency Preparedness):

- Heightened need for more accurate & timely inundation hazard warnings

Long-Term (Planning for the Future):

- **How long will community survive in current location?** (SLC, permafrost degradation, isostatic rebound, storm characteristics, energy, jobs/economic outlook, etc.)
- **What factors should be considered in developing Community Plans for:**
 - **Relocation or Migration** – Is a move imperative?
 - **Protection in-place** – Can community increase resiliency and longevity at current location in-lieu of, or in conjunction with, relocation or migration?
- **If relocating or migrating, is new location suitable?**
 - Are geologic conditions favorable?
 - Are subsistence resources sufficient?
 - Is there an abundant supply of drinking water?
 - Is there adequate access to transportation, medical facilities, & other needs?

Partial List of Recommended Needs & Approach Heavily Reliant on Data & Observations

1. DATA & OBSERVATION NEEDS (RETRIEVAL, COLLECTION, INTEGRATION, INTERPRETATION, MANAGEMENT)

- a. Climate & geophysical information – Temp, Precip, Wind, Ice, Bathymetry...
- b. Community-specific information – Demographics, Infrastructure, Cultural, Economic, Energy, etc.

2. CRITICAL PRODUCTS AND APPLICATIONS

- a. Down-scaled modeling
- b. Update of Environmental Atlas for Alaska
- c. Revision of Construction & Design Standards for anticipated conditions

3. DEVELOPMENT, ADOPTION OF POLICIES, & IMPLEMENTATION OF ADAPTATION MEASURES

- a. Interagency coordination imperative (IAWG model) - Collaborate, Streamline, Plan & Leverage Knowledge and Resources
- b. Effectively involve community & local knowledge in decisions & process

Fisheries are Important to Alaska...

Domestic groundfish industry off Alaska (in Bering Sea & Aleutian Islands) is largest fishery by volume in U.S.

(Hiatt, NPFMC Economic SAFE 2008)

- 49% of all domestic landings in U.S. in 2007 by weight
- 1.9 million metric tons retained catch

The seafood industry supports ~38,000 jobs in AK

(ISER 2008)



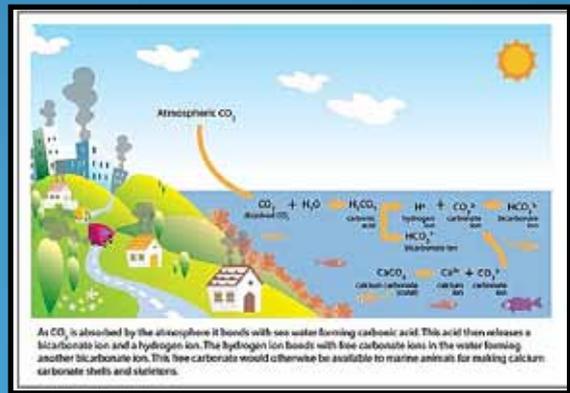
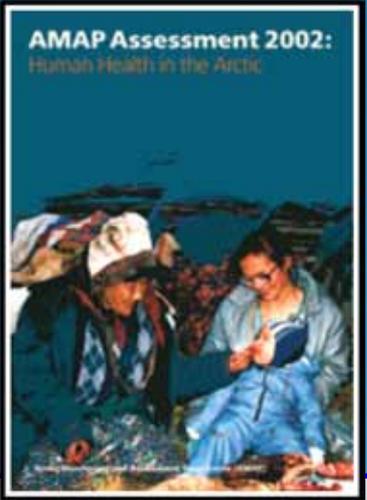
Setting the net during the Fall 2002 Alaska mackerel tag recovery cruise.
(Photo by Ruth Christiansen)

Ocean Research is Important to Alaskan Fisheries

Timely & High Quality Research - Critical to Address New & Increasing Threats to Ocean Resources & National Security while Supporting Development Opportunities

Temperature, Salinity, Circulation, & other physical & chemical changes such as **Ocean Acidification**

- Expansion of Exploration & Development of Mineral Resources
- Transboundary Contaminants
- Maritime Incidents, e.g. spills
- Fisheries Impacts
- Invasive Species



German ships poised to complete Arctic shortcut (AP Photo released 9/11/09. Beluga Shipping)

Preparing to Meet New Challenges

- Lack of deep water ports and “harbors of refuge”
- Need for increased emergency response capability
- Federal &/or state oil-spill contingency needs for foreign vessels
 - Lack of monitoring of ships
- Relatively less knowledge and capacity to respond to spills in broken ice conditions
 - Invasive Species & other natural resource concerns



17Aug09; Commandant Allen briefing re: USCG present & future responsibilities in the Arctic. AK Air National Guard Hangar, Nome, AK
U.S. Coast Guard photo/Petty Officer 3rd Class Charly Hengen

Description: Helicopter view Canadian Coast Guard Ship Louis S. St. Laurent (left) and U.S. Coast Guard Cutter Healy (right) on the Arctic Ocean. Photo by: Jessica K. Robertson, USGS

Defining Anticipated Needs and New Roles in the Arctic



NSPD-66 / HSPD-25

National Security Presidential Directive and Homeland Security Presidential Directive

January 9, 2009

NATIONAL SECURITY PRESIDENTIAL DIRECTIVE/NSPD -- 66

HOMELAND SECURITY PRESIDENTIAL DIRECTIVE/HSPD - 25

SUBJECT: Arctic Region Policy

I. PURPOSE

A. This directive establishes the policy of the United States with respect to the Arctic region and directs related implementation actions. This directive supersedes Presidential Decision Directive/NSC-26 (PDD-26; issued 1994) with respect to Arctic policy but not Antarctic policy; PDD-26 remains in effect for Antarctic policy only.

B. This directive shall be implemented in a manner consistent with the Constitution and laws of the United States, with the obligations of the United States under the treaties and other international agreements to which the United States is a party, and with customary international law as recognized by the United States, including with respect to the law of the sea.

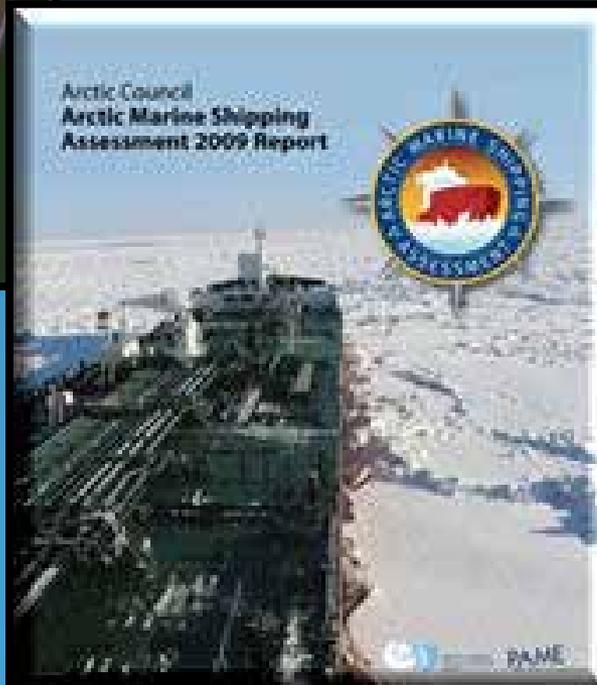
WHY THE ARCTIC MATTERS

AMERICA'S RESPONSIBILITIES AS AN ARCTIC NATION



A COMMONWEALTH NORTH STUDY REPORT
that Seals and the Shipping industry

Arctic Council Arctic Marine Shipping Assessment 2009 Report



CC BY-NC-SA

Alaska The Last Frontier

The End



<http://www.climatechange.alaska.gov/>

