

John Farrell  
Executive Director  
U.S. Arctic Research Commission

Testimony on “*Alaska’s Sovereignty in Peril: The National Ocean Policy’s Goal to Federalize Alaska*”  
April 3, 2012

Good morning Chairman Young. Thank you for inviting me to speak on National Ocean Policy, and the relevance to Alaska.

My name is John Farrell, and I am the Executive Director of the U.S. Arctic Research Commission (USARC), a small, independent Federal agency, created by the Arctic Research and Policy Act (ARPA) of 1984. I testify today on behalf of Commission Chair Fran Ulmer and the other presidentially appointed Commissioners.

As the Executive Director of the Commission, my principal duty is to work with the Commissioners to develop and recommend an integrated national Arctic research policy and to put forward a biennial report identifying goals and objectives for Arctic research. In addition, I assist the Interagency Arctic Research and Policy Committee (IARPC), also created by ARPA, to establish a national Federal Arctic research program plan to implement the policy and to fulfill the research goals.

I’m here today to speak about the Arctic component of the draft Implementation Plan for National Ocean Policy. This policy was created by the National Ocean Council in response to President Obama’s Executive Order 13547, titled “Stewardship of the Oceans, Our Coasts, and the Great Lakes,” that was released on July 19, 2010.

The National Ocean Council asked me and Robert Winokur, the Deputy Oceanographer of the U.S. Navy, to help lead a team to draft the Arctic portion of this policy, and that’s what I’ll testify about today.

Please note that the actions I will discuss today are not final. I look forward to reviewing the comments recently submitted by the public on the draft plan, so that we can adjust the Arctic section to better reflect the needs and concerns identified by the public.

### **Draft Implementation Plan for National Ocean Policy**

A draft Implementation Plan has been created for National Ocean Policy. This Plan lays out the initial steps required to achieve the vision and charge of the Policy, and addresses the most pressing marine challenges that face our nation. The Plan describes the specific actions within the scope of the National Ocean Council’s charge that the Federal Government will undertake to deliver tangible results to the American people.

The Plan does not encompass all Federal actions relating to oceans. Instead, it focuses on nine priority objectives. For each, a suite of actions and their intended outcomes are

described. For each action, key milestones are outlined, lead agencies or other responsible entities are identified, and timeframes are listed. This structure is designed to provide a clear layout of what will be accomplished, by whom, and when.

The purpose of the plan is to help unify Federal efforts within the scope of the National Ocean Policy around clearly articulated priorities and to identify a path to achieve them, to help meet the essential needs of Americans, and to ensure positive outcomes in addressing some of the most pressing challenges facing our ocean and the many Americans who rely on keeping our oceans healthy and productive.

The National Ocean Policy is structured around nine priority objectives, and one of these, “Changing Conditions in the Arctic,” pertains directly to Alaska. The Arctic Ocean is identified as a priority region—the other priorities refer to issues rather than regions—because rapidly diminishing sea ice is presenting opportunities and challenges with great implications for Alaska and the nation as a whole.

### **Scope and focus of testimony**

Today, I will limit my testimony to the Arctic portion of the Implementation Plan, because I am familiar with it. I will not discuss other, broad themes in the Plan, such as ecosystem-based management, and coastal and marine spatial planning. They are beyond my area of expertise and the Commission has not developed a position on those elements of the Plan.

Robert Winokur and I led a team of experts, from a wide range of Federal Departments and Agencies, to draft this Plan objective titled, “Changing Conditions in the Arctic.” Our goal was to address environmental stewardship needs in the Arctic Ocean and adjacent coastal areas in the face of climate-induced and other environmental changes.

### **“Changing Conditions in the Arctic”**

The United States has broad interests in the Arctic. These range from national security and territorial sovereignty to sustainable management of domestic energy and living resources, environmental protection, cultural heritage, and scientific research. These interests must be addressed within the context of change, environmentally, market-driven, and otherwise. The Nation, the State of Alaska, Tribal governments, and coastal communities are faced with critical decisions about how best to manage natural resources and sustainable human activities in this region. They must do so in cooperation with other countries that also have equities in the Arctic.

One of the most dramatic changes is the decrease in the areal extent and thickness of Arctic Ocean sea ice. Diminishment of the ice, and thawing permafrost leave large areas of coastal Alaska vulnerable to threats from rising sea level, stronger storms, and increased erosion. Marine and terrestrial ecosystems, regional weather patterns, and even the global climate system are affected by the retreat of sea ice. Ice-diminished transit routes in the Bering, Chukchi, and Beaufort Seas and other regions of the Arctic invite

increased international resource development, commerce, and transportation, which will bring both new socioeconomic and environmental opportunities and stressors.

Such rapid changes underscore the need for improved and timelier information across diverse scales and disciplines to provide effective stewardship, to ensure that natural resource management and economic development in the region are environmentally sustainable, and to support effective early warning and emergency response systems. Improved science and technology are needed to help the scientific community forecast changes with greater certainty and provide guidance for local communities, resource managers, and commercial interests in this remote region.

Improvements in daily and weekly sea ice forecasts, for example, will benefit local community activities and safety, while also helping to provide a safe, secure, and reliable Arctic marine transportation system.

Improved hydrographic mapping and bathymetric charting for mariners and for other users of marine transportation systems are also needed. Such products will reduce the risks of maritime incidents and will facilitate more resilient ocean and coastal economies.

Another crucial resource will be a distributed biological observatory that will allow us to collect and share baseline ecosystem data, and better monitor, assess, and forecast environmental conditions under changing climate scenarios.

For the Arctic region, this draft Implementation Plan strives to balance economic growth, community resilience, and environmental stewardship. By working through interagency structures, and by placing an emphasis on improved coordination with the State of Alaska and other stakeholders with common equities, the draft Plan will ensure that initiatives to advance national priorities are informed by the latest developments in science and technology.

The transboundary effectiveness of all of these activities, including considering the needs of the indigenous people and communities of Alaska, can be enhanced through sustained cooperation with the State of Alaska and the Arctic Council.

### **Five actions in “Changing Conditions in the Arctic”**

#### ***Action 1: Improve Arctic environmental response management.***

The melting of sea ice and global market forces will encourage natural resource development in the Arctic. A commensurate rise in marine traffic will likely increase the potential for significant accidents and pollution incidents.

Alaska’s Lieutenant Governor Mead Treadwell recently pointed out the need to pay “close attention to communities, the coastal communities, people who depend on subsistence resources, people who depend on whaling or sealing, or going after walrus to make sure that any oil spill response in the arctic works very closely with community

members.”

Preparing and responding to emergencies related to resource development and marine transportation in the Arctic requires improved coordination, planning, and training; stronger interagency research; and enhanced State, Federal, and international cooperation and collaboration.

In the event that responsible private parties fail or are unable to meet their statutory responsibilities for prevention, mitigation, and cleanup of marine pollution events in the Arctic, this action addresses development and implementation of response coordination, procedures, and decision support systems to protect communities and ecosystems from oil spills and other incidents associated with resource extraction (e.g., oil and gas) and Arctic marine transportation (e.g., commercial shipping and tourism).

Specifically, this action supports the development and implementation of response coordination and decision-support mechanisms to support agency responsibilities, such as NOAA’s Arctic Environmental Response Management Application (ERMA®), Alaska Joint Assessment Team, State–Federal Alaska Data Integration Working Group, and Alaska Regional Response Team (ARRT). A number of Federal departments and agencies are charged with ensuring that resource development projects and marine transportation comply with health, safety, and environmental protection standards. Implementation of this action will require close coordination with a number of existing entities, including the Arctic Interagency Policy Committee, the Interagency Working Group on Coordination of Domestic Energy Development and Permitting in Alaska, and internationally with the working groups and task forces of the Arctic Council.

***Action 2: Observe and forecast Arctic sea ice.***

Sea ice forecasting is one of the most urgent and timely ocean issues in the Arctic region. Continued rapid loss of sea ice will be a major driver of changes throughout the Arctic, creating opportunities and challenges. Polar regions, although physically remote from major population centers, have profound significance for the global climate. They act not only as regulators of global temperature, but also as barometers of change. The loss of sea ice affects marine access, regional weather, global climate, marine and terrestrial ecosystems, and coastal communities. For example, a better understanding of how loss of sea ice in the Bering Sea (the location of the largest commercial fishery in the United States) will influence the entire marine ecosystem is of critical importance.

All-season observations from spaceborne and airborne platforms, ships and ice camps, and instruments on and under Arctic sea ice provide short-term information on ice conditions for tactical users. Such observations also support research into understanding Arctic processes and environmental variability and in improving forecasts. This action will improve daily to weekly sea ice models and provide forecasts and new seasonal predictions in formats that are amenable to a wide variety of government agencies and regional users.

***Action 3: Implement a distributed biological observatory.***

Changes in location and timing of the seasonal ice edge can have profound effects on benthic and pelagic marine ecology and human activity. These changes affect the distribution and abundance of baleen whales, and the ability of ice-dependent marine mammals to reproduce and rear young on ice. Likewise, stranding of ice-dependent species on land reduces their likelihood of survival or reproductive rate, and may make the animals less available to subsistence hunters. The effects of these changes on Arctic ecosystems and Alaska Natives who depend on these species are poorly understood.

Continued observations are needed to form the basis of understanding the changing processes in the Arctic region. A distributed biological observatory is one distinct component of the integrated Arctic Observing Network. A distributed biological observatory will improve our understanding of how changes in climate and the Arctic ecosystem will affect subsistence cultures in the region. New collaborations and partnerships will increase our capacity to monitor and assess changing environmental conditions. In addition, all participating agencies will be better able to determine and mitigate the effects of their decisions on marine resources, resulting in improved conservation, protection, and management of Arctic coastal and ocean resources.

***Action 4: Enhance communication systems in the Arctic.***

Communications are essential to implementing the Arctic priorities in the National Ocean Policy. Early warning and emergency response systems would improve our ability to assess the timing and nature of emerging events in the Arctic region, such as environmental disasters, and will improve responses to them.

The Federal Government will advance two aspects of communications: technical capabilities and outreach. On the technical side, the Federal Government will strengthen existing communication systems to allow vessels, aircraft, and other users to effectively communicate with each other and to receive information (e.g., real-time weather and sea ice forecasts) that will significantly decrease the risk of environmental damage and loss of life and property at sea. On the outreach side, special emphasis will be placed on communications with native communities. This is in addition to enhancing the technical capabilities in these areas. The enhancements described here will build upon and support the guidelines and responsibilities in the Arctic Search and Rescue Agreement, to which the United States is a signatory.

***Action 5: Advance Arctic mapping and charting.***

Lt. Gov. Treadwell, who is also the former Chairman of the U.S. Arctic Research Commission, has long been a proponent of additional and higher-resolution imagery, mapping and charting of Alaska's lands, both on and offshore. He and other Alaska State leaders, such as Cora Campbell, Commissioner of the Alaska Department of Fish and Game, and Doug Vincent Lang, Acting Director of the Division of Wildlife Conservation, have underscored the importance of such activities to Alaskans.

As I too stressed in my testimony before this Subcommittee on May 6, 2010, in the hearing on H.R. 2864 titled, “Charting the Unknown: America’s Arctic Seafloor,” that maps and charts are central to our understanding of the Arctic region, and are essential for effective stewardship of this rapidly evolving environment. Knowledge of Arctic marine ecosystems, marine transportation, Arctic sovereignty and governance, and climate change adaptation strategies that coastal communities must develop to sustain their cultures and traditions all fundamentally rely on maps to visualize and depict critical aspects of the operating environment.

While ocean and coastal mapping in general is part of the “Observations, Mapping, and Infrastructure” priority objective in the draft Plan, this action will support the unique needs for accurate hydrographic surveys and shoreline mapping essential to modernizing nautical charts of U.S. Arctic waters and the Alaskan coastline. The action will enhance maritime commerce and help coastal communities develop adaptation strategies and disaster preparedness plans. It will increase the effectiveness of decisions regarding permitting, future ecosystem studies, and environmental stewardship. Mapping also supports biological habitat characterizations for ecosystem stewardship and restoration, development of storm readiness adaptation strategies for coastal communities facing the impacts of climate change, and emergency preparedness and response tools such as Arctic ERMA®.

### **How was the draft Plan developed?**

The plan was drafted with the involvement of stakeholders and sought significant input, at various stages of development, from national, regional, and local stakeholders and the general public.

Two public comments periods (from January through April, and from June through July) on a full-content outline of the plan were held in 2011. Another comment period, on the draft Plan, has just closed.

Public listening sessions were held in Barrow on June 9, 2011 and in Anchorage on June 10th. And to reach even further, a webinar, co-sponsored by the US Arctic Research Commission and the National Ocean Council, and hosted by the Alaska Center for Climate Assessment & Policy, of the University of Alaska Fairbanks, was held on April 19, 2011, and included a Q&A session.

Furthermore, the Governance Coordinating Committee, composed of State, Tribal, and local government officials, such as Mark Robbins, from the Alaska Governor’s Office, and the Ocean Research Advisory Panel, including the Anchorage-based Director of the Alaska Ocean Observing System, Molly McCammon, provided input for the Plan.

Comments and suggestions from these efforts, such as from the State of Alaska, from industry organizations, from non-governmental organizations and from individuals were duly considered and in many cases incorporated into what we drafted.

## **Fiscal Responsibility**

In developing the Arctic component of the draft Plan, we were instructed by the National Ocean Council to consider three questions:

1. What activities can be accomplished with existing Federal and partner resources?
2. How can existing resources be re-purposed for greater efficiency and effectiveness?
3. Where do we need to include activities that with minimal additional resources may allow for additional truly transformative and far-reaching impacts?

These questions are addressed in the actions developed in the draft Implementation Plan, and are specifically detailed in the milestone section.

### **How will the Implementation Plan increase efficiencies?**

The Plan identifies not only resource requirements, but also expected efficiencies to be gained in plan implementation among Federal agencies, and with State, tribal, and local government partners. Through increased communication, coordination, and integration across all levels of government, agencies will streamline processes and reduce duplicative efforts, while better leveraging limited resources.

### **How will the draft Plan be used?**

Once final, each participating Federal agency will begin implementing the actions contained in the Implementation Plan. Federal agencies will coordinate and collaborate with State, Tribal, and local authorities, regional governance structures, academic institutions, nongovernmental organizations, recreational users, private enterprise, and other stakeholders. The Plan will be adaptive and allow for modifications. The Plan will be reviewed annually and modified, as needed, based on new information or changing conditions. Given the uniqueness of Alaska, regional coordination, planning and implementation of the Plan will be critical. Actions will need to be tailored to regional needs and priorities.

**In summary**, the U.S. Arctic Research Commission supports the draft Implementation Plan for National Ocean Policy and specifically the actions proposed in the national priority objective, “Changing Conditions in the Arctic.” These actions are not yet final. But if properly supported, the Commission thinks these actions should significantly advance our knowledge and understanding of the Arctic Ocean, and these will be of great use to resource managers and policy makers responsible for the overall economy of the State of Alaska, the focus of this field hearing.

Thank you for considering the Commission’s views on the National Ocean Policy.