AGENDA D-5
APRIL 2008

MEMORANDUM

TO: Council, SSC and AP Members

FROM: Chris Oliver
Executive Director

ESTIMATED TIME:
2 HOURS

DATE: March 26, 2008

SUBJECT: Ecosystem-based Management

ACTION REQUIRED

(a) ~~Report from~~ Ecosystem Committee
(b) Preliminary review of Arctic FMP (Council only)

BACKGROUND

(a) ~~Report from~~ Ecosystem Committee

The Ecosystem Committee meeting has been postponed until May. However, one of the issues the Committee was planning to discuss may be of interest to the Council, so I am including some information in this briefing report. NOAA recently issued a public review draft of the NOAA Alaska Region Collaboration Team (ARCTic)'s Integrated Services Plan. A summary of this report is attached as Item D-5(a)(1). As you may recall, the head of ARCTic, Ms Laura Furgione, head of the National Weather Service in Alaska, briefed the Council in December 2007 on the work of the team. The report is out for public comment through May 15.

(b) Preliminary review of Arctic FMP

At its June 2007 meeting, the Council directed staff to begin preparing a draft Arctic Fishery Management Plan (FMP) and draft amendments to the scallop and crab FMPs that terminate their geographic coverage at Bering Strait, and to develop an accompanying analysis that considers several options for the Arctic FMP: close the entire Arctic region to all commercial fishing, or close the entire Arctic region to commercial fishing except for the red king crab fishery that has previously occurred in the southern Chukchi Sea.

The Council was scheduled to receive a preliminary report on the Arctic FMP at their February 2008 meeting, but postponed this agenda item to the April 2008 meeting. However, staff did present a progress report on the Arctic FMP in February to the Council's Ecosystem Committee and to the SSC and AP. The SSC, AP, and Ecosystem Committee's comments on the Arctic FMP are provided in Item D-5(b)(1).

Since February, staff has begun the process of addressing the SSC and Ecosystem Committee comments, and has continued to enhance the EA/RIR/IRFA with additional sections, text, and data. Staff also has continued with the outreach program (presentation to the Northwest Arctic Borough Assembly, Radio KOTZ interview, and individual briefings), and additional outreach efforts are scheduled for the coming months.

The recommended alternatives for Council consideration as it proceeds with the Arctic FMP are as follows. A table of the alternatives is attached as Item D-5(b)(2), and the Executive Summary from the preliminary draft EA/RIR/IRFA is attached as Item D-5(b)(3)):

Alternative 1: Status quo. Maintain existing management authority.

Alternative 2: Adopt an Arctic FMP that closes the entire Arctic Management Area to commercial fishing. Amend the scallop and crab FMPs to terminate their geographic coverage at Bering Strait.

Alternative 3: Adopt an Arctic FMP that closes the entire Arctic Management Area to commercial fishing. Amend the scallop and crab FMPs to terminate their geographic coverage at Bering Strait. A red king crab fishery in the Chukchi Sea, of the size and scope of the historic fishery (emphasis added per Ecosystem Committee recommendation), would be exempt from the Arctic FMP.

Alternative 4: Adopt an Arctic FMP that closes the entire Arctic Management Area to commercial fishing. Amend the scallop FMP to terminate its geographic coverage at Bering Strait. The Arctic FMP would cover the area north of Pt. Hope for crab and north of Bering Strait for groundfish and scallops.

At this meeting, staff will give the Council an overview of the status of the Arctic FMP, the accompanying analyses, and the schedule. The FMP, together with its accompanying NEPA analysis, is scheduled for initial review in October.

NOAA's Alaska Regional Collaboration Team (ARCTic) initiated an effort in 2007 to develop an approach for strategic product and service enhancements. In concert with key partners and stakeholders, the team assessed current NOAA services within Alaska Region and built mechanisms to strengthen and promote open relations with key stakeholders. The attached Integrated Services Plan (ISP) documents this effort.

The ARCTic views the ISP as a living document intended to identify what future scenarios and trends NOAA should plan for in Alaska. Within the agency it will guide NOAA Strategic Planning; provide information and decision support for NOAA's annual Planning, Programming, Budgeting, and Execution (PPBES) process; and be the driver for the ARCTic's annual work plans. Externally, we plan to use it as a basis for dialog on how to address regional issues. We hope this document will foster a rich discussion that will ultimately lead to greater internal and external collaboration, better NOAA services in Alaska, and ultimately the achievement of common goals.

In your review of the ISP, we ask you to consider these questions:

- What should NOAA be planning for 10-15 years from now? (Have we missed any scenarios important to you?)
- What requirements do you have for NOAA, now and in the future? For example, what other products and services should NOAA Fisheries provide to its fishery-resource stakeholders?
- What other opportunities exist for collaboration?

We welcome your comments on the document and these questions in general. Please provide your feedback by May 15, 2008 to Amy Holman (amy.holman@noaa.gov).

DRAFT

NOAA's Alaska Region Collaboration Team (ARCTic)

Integrated Services Plan (ISP)

Version 2

Draft for Public Review

April 1, 2008

Table of Contents

Introduction & Background

The Arctic is a vast, largely unknown region on the planet. As America's Arctic state, Alaska has a valuable contribution to better understanding climate change in the Arctic and across the globe. Global climate models have projected that the Arctic is an area where changes to the climate may be the largest in the world. The models predict a greater warming for the Arctic than the rest of the world and Alaska arctic and subarctic regions are already experiencing environmentally and economically-significant climate change. Observed data indicate that over the last 50 years, mean annual surface temperatures have increased 3-5 °F with some of the largest increases occurring along the Alaska North Slope. The extent of Arctic sea ice reached an all time low in September 2007, shattering the previous record in 2005 by 23 percent. It was also 39 percent below the long-term average from 1979 to 2000. Additionally, winter freeze up and spring melt is now arriving more than three weeks later and earlier, respectively. Some waters around Alaska are showing an increase in sea level. On land, an increased seasonal thaw depth of the active layer is causing accelerated permafrost thaw. There is increasing evidence of changes in storm frequency and intensity, as well as shifts in storm tracks.

These observations are consistent with what is expected from warming Arctic conditions and indicate how climate change may affect weather patterns and human activities. For example, there is a greater incidence of aviation icing conditions especially along the coasts of the Bering and Chukchi Seas. There are more frequent high amplitude weather episodes such as mid-winter "break ups"; heavy precipitation causing local flooding; low water events affecting river transportation and subsistence; episodic high wind events; and more variable weather affecting forests and resulting in the greatest wildfire season (6.5 million acres) ever in 2004.

With such drastic changes taking place, assessing National Oceanic and Atmospheric Administration's (NOAA) current products and services is critical to understanding future stakeholder requirements and ensuring NOAA is prepared to meet current and future needs. This document incorporates the NOAA Alaska Region Collaboration Team's (ARCTic) initial Integrated Services Assessment (ISA) into an Integrated Services Plan (ISP) which presents a vision for future agency services.

NOAA's Alaska Region

Extending into the Arctic, Alaska's culturally diverse people, infrastructure, economy, and ecosystems are already experiencing the effects of climate change. Obtaining a better understanding of these early impacts will provide an integration of science and decision-making for use not only in Alaska but also in adaptation strategies employed in the U.S. and around the world.

Geography and Environment

Alaska, also known as "The Great Land" or "The Last Frontier," is surrounded by the Pacific Ocean, Bering Sea, Chukchi Sea, Beaufort Sea, and the Arctic Ocean. While Alaska is geographically isolated from the contiguous 48-states, it is internationally connected and the only U.S. state to border two nations. The geographic scale of the state becomes evident when one considers Alaska is over twice the size of Texas and represents 54% U.S. coast and 66% U.S. continental shelf. 99% of the land area is federal, state, local or native corporation land. Half of all U.S. parklands and 80% of all wildlife refuges are in Alaska.

Alaska holds many records and unique landmarks such as North America's biggest earthquake and tsunami (the 9.2 magnitude Good Friday Earthquake of 1964 and resulting 115 foot tsunami and the 1,733 foot tsunami in Lituya Bay in 1958), the Nation's greatest concentration of glaciers, North America's tallest mountain (Mount McKinley at 20,320 feet), the Nation's farthest-north city (Barrow), and more than 40 active volcanoes.

Social and Economic Context

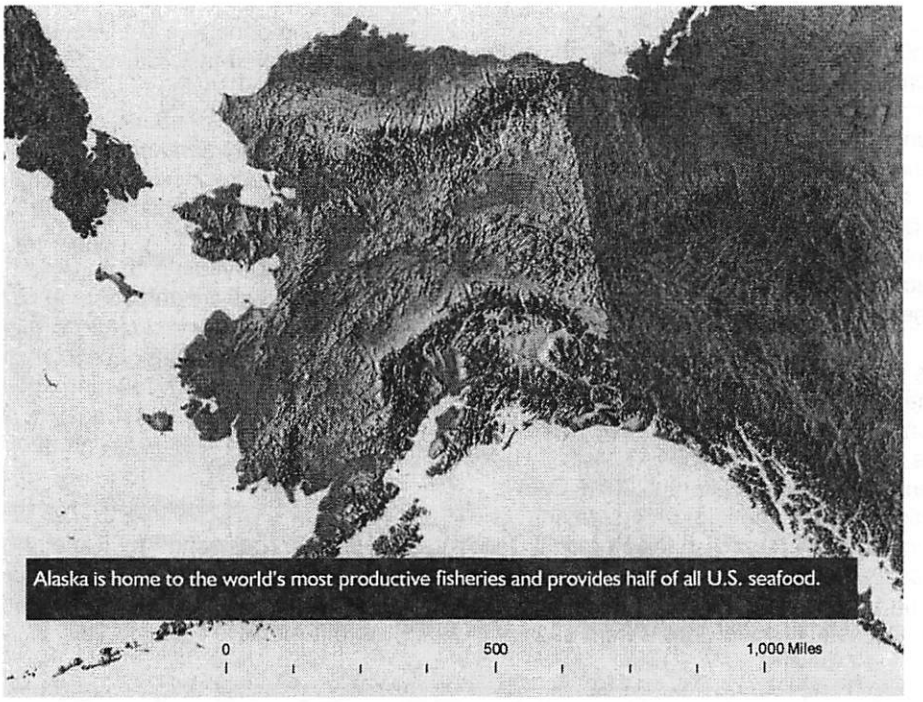
Alaska's strategic air- and waterways present challenges and opportunities in terms of homeland security and economic development. The Ted Stevens Anchorage International Airport is ranked first in the U.S. for landed weight of cargo aircraft, and third in the world for cargo throughput. While over half of Alaska's population lives in the three largest cities, many people live in communities not connected by roads, which rely on aviation for year-around access. Alaska's rich marine ecosystem has some of the most productive and sustainable fisheries in the world (~$4 billion in 2006, about half of the U.S. catches). The Bering Strait is a 53-mile wide chokepoint that links both the Northwest and Northeast Arctic passages for northern Asian, Russian, and European commerce. The Aleutian Islands serve as a major corridor for the Great Circle Route linking commerce from the U.S. west coast to southern Asia. No other marine system in the U.S. has such extreme weather and climate (environmental hazards), vast geographic distances (larger than the combined U.S. marine system), and an extensive coastline (~44,000 miles).

Alaska has extensive oil and gas reserves essential to the Nation's economy and national security. The Alaska Oil Pipeline loses approximately $1 million per hour during a shutdown. Prudhoe Bay, located on Alaska's Beaufort Sea coast, is one of the largest oil fields in the world. New development opportunities exist along the coast and in the Chukchi Sea, as evidenced by the 2008 Oil and Gas lease sale that generated more than $2.6 billion in revenue to the U.S.

Capabilities and Challenges

NOAA is leveraging and enhancing its diverse set of partnerships to proactively prepare for and respond to the potential immediate and future impacts of climate change on people, societal infrastructures, local/regional economies, and ecosystem changes.

Climate change is already impacting our environment, seasons, and communities. Observable changes, many of which have regional and global implications, are underway across the Arctic. These changes are affecting the health, lives, and livelihoods of Alaskans, including the Alaska Native culture that is fundamentally threatened by climate change. NOAA is prioritizing and developing a baseline of observations and services to effectively monitor, evaluate, and assess climate change and variation in the Arctic Region. These include increases in weather monitoring, improved air quality sampling, improved ocean monitoring, an improved geo-spatial reference system (both horizontal and vertical), updated hydrographic surveys in high priority and emerging critical areas, and improved tide and current predictions to name a few. On the biological side, there are expanded opportunities and challenges in NOAA's marine ecosystems monitoring and management (fish and mammal). Assessing, monitoring, and predicting the responses of coastal and marine ecosystems in Alaska to the loss of sea ice and ocean acidification are primary initiatives related to this. In addition, further tsunami monitoring, research, and inundation modeling continues to be a priority.



NOAA's Regional Collaboration Initiative http://www.ppi.noaa.gov/regional_collaboration.htm)

Components of NOAA have been serving Americans for over 200 years. Nautical charts have been produced since 1807, weather forecasts since 1870, and fisheries stewardship began in 1871. In 1970 these organizations were brought together under one Agency to observe, predict and protect our environment.

In the Executive Order establishing NOAA, President Nixon, declared:

> *"The oceans and the atmosphere are interacting parts of the total environmental system upon which we depend not only for the quality of our lives, but for life itself. "We face immediate and compelling needs for better protection of life and property from natural hazards, and for a better understanding of the total environment–an understanding which will enable us more effectively to monitor and predict its actions, and ultimately, perhaps to exercise some degree of control over them."*

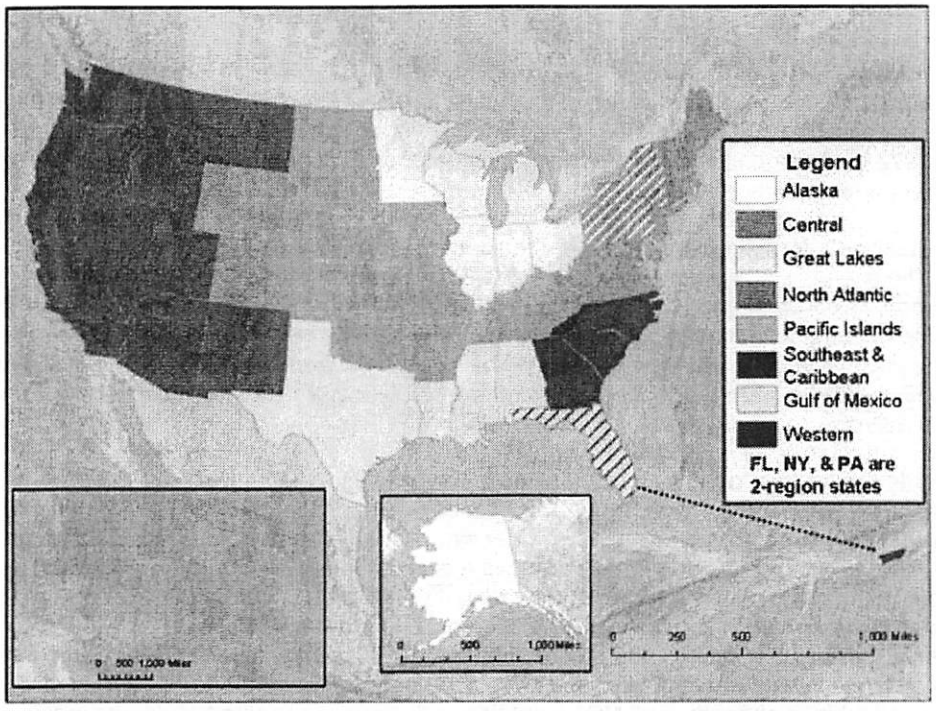
These words ring as true today as they did almost 40 years ago and underscore the interrelationship between the issues NOAA addresses and thus the need for the components of the agency to combine forces to achieve together what none of them could accomplish alone. Understanding and dealing with climate change is a case in point. To protect the fisheries that provide our nourishment, livelihoods, and recreation it will take an understanding of the connections between weather, oceanography, biology, and other disciplines. Will the habitat our marine resources need to survive and prosper change due to increasing melt water from glaciers, sea level changes, water temperatures, ocean and bay chemistry and current patterns, etc.? It will take the combined strength of all NOAA entities and external partners to address these and other questions to develop more accurate predictions and forecasts, mitigate climate impacts and assist society in planning for the future.

For all the contributions NOAA has made to the Nation and the world, much more can and will be done to enhance the knowledge and understanding of the earth's climate system through improved integration of its assets and expertise toward current and future environmental and economic challenges. NOAA's Regional Collaboration Initiative is designed to identify shared internal and external regional interests and goals as the focal point to address regionally-distinct priorities brining to bear the full breadth of NOAA's capabilities.

The guiding principles set forth for the regional and priority area task teams are the following:

- NOAA will advance its goals for regional collaboration through existing authority and accountability structures. This effort does not entail changes to NOAA's organizational structure
- The overarching purpose of regional collaboration is to improve NOAA's productivity and value to customers
- All those participating in this effort will strive to identify, acknowledge, and apply NOAA's full range of capabilities, within and across regions, as needed to improve NOAA's productivity and value to customers

The roots of this initiative date back to 2002 and 2003, when the NOAA Administrator established five regional pilot programs to improve coordination within the agency and raise NOAA's visibility to its constituents. Four years later in 2006 NOAA Leadership assessed the pilot programs and provided guidance to establish the Regional Collaboration initiative. Believing that it is at the regional scale that NOAA can blend the place- based needs of customers and partners with its priorities and responsibilities as a federal agency, eight geographic areas were identified for this effort and teams of key individuals from each of NOAA's line offices were established.



Priority Area Task Teams (PATT)

As part of this effort, NOAA also identified four (4) national strategic priorities to advance through regional collaboration: Hazard Resilient Communities, Integrated Ecosystem Assessments, and Integrated Water Resources Services, and Outreach and Communications. For the Alaska Regional Team, that means putting NOAA expertise and resources toward erosion and flooding; conducting a wide-scale assessment of Alaska marine ecosystems; investigating the impacts of glacier, permafrost melt, and droughts on our air and river transportation systems and fire

seasons, and improving outreach and education efforts across Alaska, such as greater use of the university's Sea Grants program

NOAA is already actively engaged in many high priority partnership activities in the regions and Alaska is no exception. This regional collaboration effort, though, will strengthen NOAA's ability to support those existing activities and, in addition, develop new ways to add value in the regions. In 2007, the eight regional teams including the Alaska Regional Collaboration Team were up and running and NOAA convened national and regional leadership to establish FY 07 – 08 priorities and goals. Nationally, all teams were given the overarching task to establish closer relationships with external stakeholders and partners and improve the effectiveness, value, and utility of NOAA's information, products and services. In Alaska, the team took this to heart and developed a strategy leading to expanded internal and external interactions and the development of this document. This ISP is a first look at the future of NOAA in Alaska and the new areas where the agency should invest in response to emerging changes to regional national and economic interests and opportunities.

NOAA's Alaska Regional Collaboration Team (ARCTic)

NOAA's Alaska Regional Collaboration Team was formed in late 2006 and consists of employees of the National Weather Service, National Marine Fisheries Service, National Ocean Service National Environmental Satellite Data and Information Service, and Office of Oceanic & Atmospheric Research. Our purpose is to develop and implement strategies for addressing priority areas as appropriate for Alaska. We do this by

1. Establishing supporting teams and *ad hoc* working groups as necessary to identify priority areas and achieve the goals of this effort.

2. Acting as the primary channel of communication of the effort to NOAA programs, offices, and employees within their region.

3. Identifying needs of regional customers, stakeholders, and partners.

4. Working with the Priority Area Task Teams, external partners, and each other to develop and implement strategies for addressing the national programmatic priority areas and other priority areas as appropriate for the region.

5. Developing and implementing an Alaska-specific outreach and communication strategy.

6. Participating in the NOAA National Outreach and Communications Task Team.

7. Participating in the four programmatic areas (Hazard Resilient Communities, Integrated Ecosystem Assessments, Integrated Water Resource Services, and Outreach and Communications) as appropriate for the region.

Issues the ARCTic focuses on include Aviation Weather, Climate Change, Ecosystem Assessment, Communications, Education, & Outreach, Integrated Water Resources, Marine Navigation and Safety, Remote Sensing and Technological Innovation, and Sea Ice. Our engagement with internal and external partners and customers is done through the working groups based on the issue above established through the Integrated Services Assessment and Plan (ISA/P) process, as well as existing networks and mechanisms.

Overview of the ARCTic ISA/P Process

Adoption of ISP as an ARCTic activity

The initial guidance to the NOAA regional teams was simple: respond to new external stakeholder and partner demands and improve the effectiveness, value, and utility of NOAA's products and services. As a part of the work plan for fiscal year 2007, the ARCTic developed a prospectus for bringing together the agency and customers to build cross-awareness, assess the agency's activities, and identify the joint goals we and our customers share. This project, known as the ISA/P is expected to be just the beginning of a living and evolving process.

Methodology

The ARCTic identified three objectives for the project:

1. Assess current NOAA services within Alaska Region (AR) with a focus on consistent services and service requirements. The partners we engage for input should include experts encompassing all aspects of NOAA's Alaska Region service areas with an emphasis on weather, climate, marine, and aviation elements.
2. Strengthen and promote open relations with key stakeholders.
3. Develop an approach for strategic product and service enhancements in concert with key partners and stakeholders.

To meet these objectives, the project was divided into two phases: the Integrated Services Assessment (ISA) and the Integrated Services Plan (ISP).

Integrated Services Assessment (ISA)

The ISA consisted of workshop style meetings with external customers and compiling information from many Alaska focused sources including the Arctic Climate Impact Assessment, the Arctic Observing Network, the NOAA Alaska RISA, the Arctic Marine Shipping Assessment, the Alaska Ocean Observing System, our Hydrographic Working Group, our Satellite Sensor User Group, and the multi-agency Statewide Digital Mapping Initiative.

The first meeting was held August 15-17, 2007 at the NOAA/NOS Kasitsna Bay Laboratory (KBL) near Seldovia, Alaska. The purpose of the meeting was for the participants to better get to know each other's missions and services and develop a structure for assessing where NOAA should collaborate and invest in the region's future. This accomplished the first 2 of 3 components of the ISA and set the course for the third.

Eight ARCTic regional working groups were established as the structure for conducting the assessment which resulted in a set of vision papers that will describe different aspects of Alaska's future (10-20 years) and what NOAA's role can be in these areas.

The eight working groups are: Aviation Weather; Climate Change & Impacts; Communications, Education, and Outreach; Ecosystem Assessment; Integrated Water Resources; Marine Navigation & Safety; Remote Sensing; and Sea Ice. Participation in the working groups varies and includes ARCTic team members, participants from the KBL meeting, and additional internal and external specialists who bring topical knowledge and capabilities to the discussion.

Participants in the ISA represented a cross-section of these disciplines.

- *Climate*
- *Ocean and Atmospheric Observations*
- *Research (Basic and Applied)*
- *Search and Rescue (SAR)*
- *Oceanography (Open Ocean & Coastal)* – Physical (includes Chemical) and Biological (Open, Coastal, Estuaries)
- *Tsunamis, Coastal Currents, and Fresh Water Discharge*
- *Native and Cultural*
- *Transportation – Aviation, Marine, and Land*
- *Homeland Security, Emergency Management*
- *Mapping Charting, and Geodesy (MC&G)*
- *Marine (Biological) Sciences –*
- *Hydrological*
- *NOAA Informational Services (Weather & Climate)*
- *Social-Economic Sciences*

Each Vision Paper consists of the following components

- Vision
  The world as it would be/as we would like to see it.
- Background
  Sets the background and/or context of the vision.
- Objective
  Objectives that if accomplished would help achieve the vision.
- Mission (NOAA's Role)
  NOAA's role in achieving the vision; addresses what the Agency can control.
- Gap Analysis
  Where we are vs. where we would need to be.
- Immediate Actions
  What we can do/are doing now and in the near future.
- Benefits & Risks
  Benefits of filling the gap and risks associated with both taking actions to fill the gap as well as the consequences of not taking action.

Draft Vision Papers developed by the working groups were reviewed at the second ISA meeting held at the Federal Building Annex in Anchorage, Alaska October 30-31, 2007. This meeting provided the input for the development of the ARCTic Integrated Services Plan (ISP).

Integrated Services Plan (ISP)

The ISP was developed from November 2007-January 2008 by NOAA ARCTic members. It describes the ISA/P process and recommends areas for investment for NOAA between now and 2020. The document is strategic in nature and as such does not constitute commitments to specific activities or budgets. It is, however, intended to inform and aid NOAA planning and budgeting as well as give a focus for existing resources and activities.

Intended Uses of the Plan

The ARCTic expects this plan will be used both internally and externally to NOAA. In this first iteration, we see it as a starting point to foster further discussions on these and other subjects with customers and NOAA Staff. As it evolves, we will use it internally to guide NOAA Strategic Planning; guidance and decision support for NOAA's annual Planning, Programming, Budgeting, and Execution (PPBES) process; and the ARCTic's annual work plan. Externally the members of the team intend to use the ISP as a focus for cross-NOAA relationships with customers. The intent is to capture the shared visions well enough that they will be used in customer plans and meetings, and foster and solicit collaboration from additional persons and entities that can help Alaskans to reach shared goals and objectives.

This document is the culmination of the initial ISA/P effort and provides the ARCTic's view on areas for future NOAA investment in Alaska. It serves as a beginning of the dialog on the regional issues and provides a means of developing a joint pathway to address Alaskan regional concerns. We hope this document will foster a rich discussion that will ultimately lead to greater internal and external collaboration, better NOAA services in Alaska, and ultimately the achievement of common goals.

Current NOAA Services In Alaska

NOAA's National Weather Service (NWS)

NOAA NWS Alaska Region's mission is to provide weather, hydrologic, climate forecasts and volcanic ash and tsunami warnings for the state of Alaska and its surrounding waters for the protection of life and property and the enhancement of the national economy.

The NWS Alaska Region is comprised of three Weather Forecast Offices (WFOs), 12 Weather Service Offices (WSOs), the Alaska-Pacific River Forecast Center (APRFC), the Alaska Aviation Weather Unit (AAWU), the Anchorage Center Weather Service Unit (CWSU), the West Coast and Alaska Tsunami Warning Center (WC/ATWC), the Anchorage Electronics Unit (AEU) and the Alaska Region Headquarters (ARH).

The Alaska Region Headquarters staff manages all operational and scientific meteorological, hydrologic, and oceanographic programs of the region including observing networks, weather services, forecasting, climatology, and hydrology. Some of the unique services provided by our Alaska Region offices include:

- Operation of the U.S. Tsunami Warning System via the West Coast and Alaska Warning Center (WC/ATWC) in Palmer. The WC/ATWC provides tsunami warnings for coastal communities and leads tsunami hazard mitigation efforts in the form of preparedness, education, and training for the Canadian coastal regions and ocean coasts of all of U.S. States except Hawaii.

- Operation of the Alaska Aviation Weather Unit (AAWU), which provides detailed aviation forecast products for all of Alaska. The AAWU also manages the Anchorage Volcanic Ash Advisory Center (VAAC) - one of only nine such centers worldwide. The Anchorage VAAC's forecast and warning responsibilities include the Anchorage Flight Information Region and far eastern Russia.

- Production of the television show "Alaska Weather", a cooperative effort with public television station KAKM in Anchorage. This daily 30-minute show (the only one it its kind in the country) provides a detailed depiction of weather across Alaska and is hosted by one of our meteorologists from the Anchorage WFO.

- An extensive marine forecast and warning area, which spans from the Canadian Border to the Russian Border and from Dixon Entrance (55 degrees North latitude) north. This includes the Gulf of Alaska, the Bering Sea/Aleutian Islands, and the Arctic Coast.

- Operation of an Ice Forecast Desk within the Anchorage WFO. This Ice Desk produces graphical analyses of sea surface temperatures and sea ice as well as five-day sea ice forecasts throughout the year.

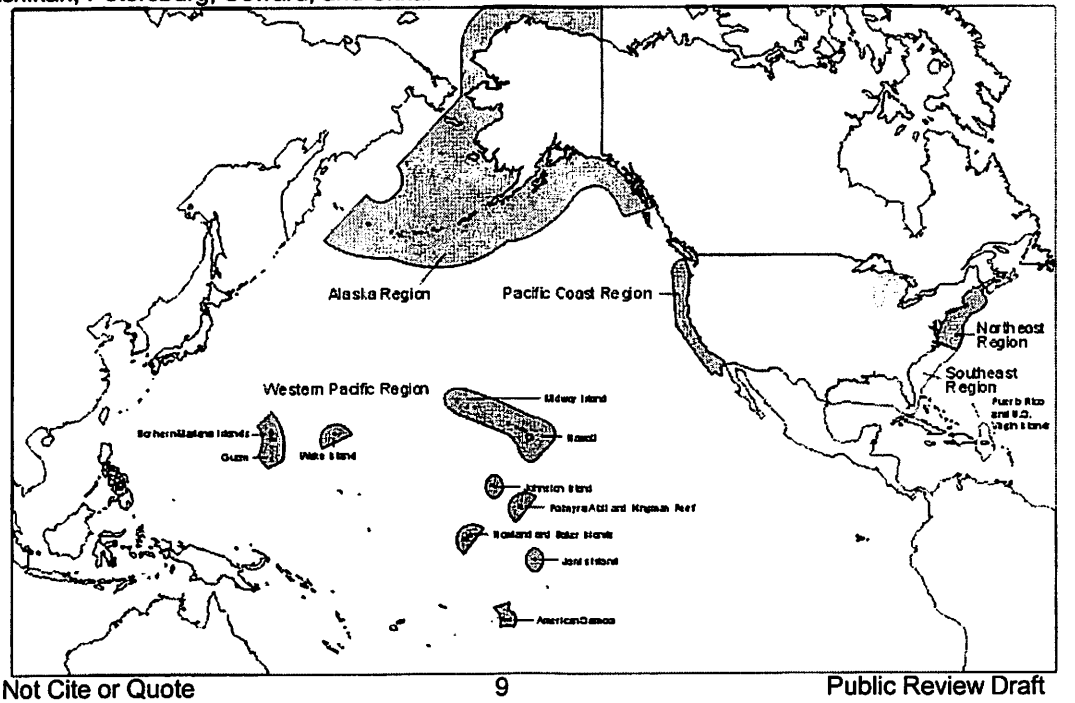
To find additional information on NOAA's NWS offices in Alaska please reference the following link: http://www.arh.noaa.gov/wxoffices.php

National Marine Fisheries Service

NOAA Fisheries' mission in Alaska supports the NOAA strategic goal of ecosystem management. The Alaska Ecosystem Complex is composed of 4 recognized LMEs (Beaufort, Chukchi, Bering, and Gulf of Alaska LMEs). The agency's current priorities and services in Alaska include:

- Fishery research, management and enforcement in the Federal waters of the US Exclusive Economic Zone (3-200-mile zone off Alaska).
- Carryout NOAA's marine resource stewardship mission through robust fishery and marine mammal research programs.
- Contribute to NOAA's understanding of Climate Change, particular related to loss of sea ice off Alaska and its impacts to marine resources.
- In close collaboration with the North Pacific Fishery Management Council, a federal advisory body established by Congress, guide regional fishery management.
- Implement five Secretary of Commerce approved Fishery Management Plans.
- Incorporate Ecosystem Approaches to Management, relating multispecies and habitat interconnectivity.
- Fulfill in-season management responsibilities for halibut and sablefish Individual Fishing Quota (IFQ) programs.
- Expand Market-Based Management Systems (LAPPs, IFQ, CDQ, Cooperatives) to generate economic stability to fisheries and fishery dependent communities.
- Conduct fish and marine mammal stock assessment surveys and fishery observer programs.
- Carryout NOAA's Co-management responsibility under MMPA and ESA for the sustainable harvest of marine mammals by Alaska Natives.
- Protect and restore essential fish habitat.
- Consult with other agencies on living marine resources issues.
- Coordinate review and provide comment on Corps of Engineers, Department of Transportation, and other resource development projects.

The organization's regional headquarters is in Juneau with field offices located in Anchorage, Kodiak, Dutch Harbor, and St Paul. Research components are located at NMFS laboratories in Juneau, Sitka, Kodiak, and Seattle, Washington. And enforcement offices are in Homer, Ketchikan, Petersburg, Seward, and Sitka.



NOAA's Office of Marine and Aviation Operations

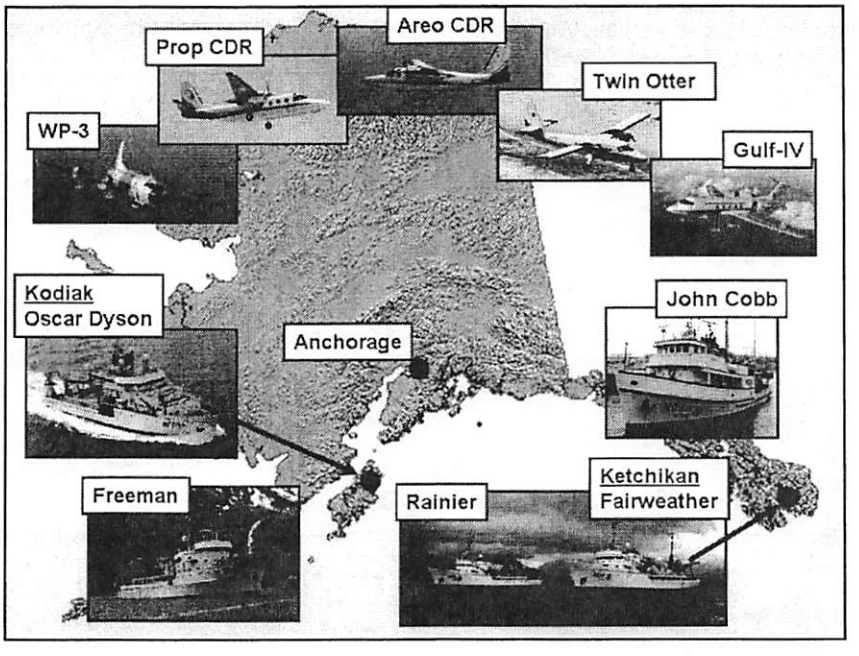
NOAA's Office of Marine and Aviation Operations operate a wide variety of specialized aircraft and ships to complete NOAA's environmental and scientific missions. Aircraft are managed by the Aircraft Operations Center (AOC), located at MacDill Air Force Base in Tampa, Florida. Ships are managed by the Marine Operations Center (MOC) and located in various locations around the United States including two vessels located in Alaska, one home ported in Kodiak, AK and another in Ketchikan, AK.

Five NOAA vessels spend part of their field season working in support all line office in Alaska waters. NOAA Ship MILLER FREEMAN, NOAA Ship JOHN COBB and NOAA Ship OSCAR DYSON primarily support fisheries and ecosystem monitoring including Pollock, Cod, Hake stock assessments, marine mammals surveys, as well as essential fish habitat monitoring. NOAA Ship RAINIER and NOAA Ship FAIRWEATHER primarily support nautical charting efforts along Alaska's 44,000 mile of coastline, some of which has never been surveyed. In addition to their primary focus many of these vessels conduct projects in support of weather and Tsunami warning buoy deployments.

Five NOAA aircraft support projects across the main NOAA line offices. Projects complete in 2007 include:

- Winter Storms Project for NWS and NESDIS
- Snow Survey mission for NWS
- Alaska Airport Surveys for NOS
- Steller Sea Lion survey for NMFS
- Alaska Harbor Seals survey for NMFS
- Beluga Whale survey for NMFS
- Bowhead Whale Feeding Study(BOWFEST) for NMFS
- Bowhead Whale Aerial Survey Program (BWASP) for Department of Interior - Minerals Management Service - with observers from NMFS onboard.

In other years NOAA Aircraft have worked on Lidar Hydrographic surveys for NOS and air quality monitoring for OAR.



NOAA Ships and Aircraft in Support of Alaska Programs

National Ocean Service

The National Ocean Service (NOS) products and services in Alaska include: real-time water level observations, tide predictions; coastal meteorological, water temperature and current data; navigation services (hydrographic surveys, nautical charts, navigation response teams); oil and chemical spill response; geodetic services, and coastal ocean science. NOS physical assets in the state include: the Kasitsna Bay Laboratory; Port of Anchorage Physical Oceanographic Real-Time System (PORTS®); and National Water Level Observation Network (NWLON) stations. NOS also provides operational support for the Kachemak Bay National Estuarine Research Reserve (KBNERR), which is operated by the Alaska Department of Fish and Game, Sportfish Division. NOS has relatively few employees based in Alaska, but provides many services to Alaska from out-of-state offices. NOS also provides extensive imagery and other data sets for Alaska, such as coastal photography, nautical charts, coastal survey maps, environmental sensitivity index maps, hydrographic surveys, estuarine bathymetry, and geodetic control points. Metadata for this information and access to many of the data sets is available via the Internet.

The Kasitsna Bay Laboratory (KBL) is the only NOS-owned and operated facility in Alaska. KBL is the Alaska field laboratory of the Center for Coastal Fisheries and Habitat Research, under the National Centers for Coastal Ocean Science (NCCOS). NCCOS partners with the University of Alaska Fairbanks (UAF) to conduct collaborative research and education activities at the laboratory. KBL research focuses on understanding the response of subarctic coastal and estuarine ecosystems to change – particularly climate variability, land and resource use, and extreme events. The mission is to provide federal, state, local and tribal agencies with the information, tools, and training needed for scientifically-based resource management, using an integrated approach to understanding the ecosystem. Research areas include: trophic dynamics, marine biodiversity, fish habitat, coastal monitoring, mariculture, cold water diving and application of emerging underwater technology to ecosystem assessment. KBL supports field and laboratory studies with flowing seawater and dry laboratories, a scuba facility for year-round cold water diving, dock, small boats, and housing for up to 48 people. The laboratory also supports formal and informal marine science education and outreach activities, to include graduate and undergraduate classes and research, as well as K-12 programs.

At 365,000 acres of lands and waters, the KBNERR is the largest of 27 reserves in the National Estuarine Research Reserve System and encompasses vast subtidal zones, intertidal expanses, extensive marsh systems and terrestrial forests. The KBNERR mission is to enhance understanding and appreciation of the Kachemak Bay estuary and adjacent waters to ensure that these ecosystems remain healthy and productive. Research priorities include: larval and juvenile fisheries recruitment and life history dynamics, coastal dynamics (natural and anthropogenic), including land use change, natural hazards, ocean productivity, and long-term water quality monitoring. The reserve offers a variety of educational programs and activities targeted at coastal decision makers, K-12 students and teachers, as well as residents and visitors to the local area. For additional information on Kachemak Bay Reserve, please visit: www.kbayrr.org.

The NOS Center for Operational Oceanographic Products and Services (CO-OPS) operates 24 long-term continuously operating tide stations in the state of Alaska which provide data and information on real-time water level, tidal datums and relative sea level trends, and which are capable of producing real-time data for tsunami and storm surge warning. These stations are located at Ketchikan, Port Alexander, Sitka, Juneau, Skagway, Elfin Cove, Yakutat, Cordova, Valdez, Seward, Seldovia, Nikiski, Anchorage, Kodiak, Alitak, Sand Point, King Cove, Adak, Nikolski, Atka, Unalaska, Nome, Red Dog Dock (north of Kotzebue) and Prudhoe Bay. NOS also provides tidal water level and current predictions for coastal stations. Historical water level and current information is available for stations occupied for shorter durations. Several short-term tide stations are also occupied in Alaska each year by CO-OPS in partnership with Office of Coast Survey and National Geodetic Survey. These gauges provide vertical control for hydrographic surveying and shoreline mapping surveys, and also establish or validate datum reference bench marks and provide data and information for tidal predictions and other coastal applications.

CO-OPS' National Current Observation Program has been in Alaskan waters since 2001 collecting currents data and updating historic tidal current predictions for publication in the US Tidal Current Tables. Over 150 predictions in areas such as Cook Inlet, Prince William Sound and Southeast Alaska have been updated or added to the Tables, including the addition of new reference stations. In FY08 CO-OPS is deploying 50 current meters in northern Southeast Alaska and will update the 100-year old reference station at North Indian Pass. In FY09 and FY10, CO-OPS will measure currents and predict tidal currents at over 40 locations in Kodiak, Afognak and Dutch Harbor, including Unimak Pass. In future years, CO-OPS will measure currents in the outer Aleutian Island chain. In 2003 and 2004, CO-OPS deployed HF-Surface Current Mappers (HF-SCM) to better understand the surface current movement in Cook Inlet. In FY09, CO-OPS intends to deploy HF-SCM in Prince William Sound to assist with AOOS efforts and hopes to use that data to update predictions in the Tables as well.

The Anchorage PORTS®, operated cooperatively between CO-OPS and the local maritime community in the Port of Anchorage, provides quality-controlled data which is disseminated in real-time to local users for safe and efficient navigation. The Anchorage system currently includes water level and meteorological measurements at two stations, in Anchorage and Nikiski.

The NOS Office of Coast Survey maintains a regional presence in the field to serve its customers and act as ambassadors to the maritime community. The Navigation Manager for Alaska is based in Anchorage and focuses primarily on resolving charting and navigation questions, educating constituents on emerging charting technologies and their uses, and soliciting feedback on NOAA's navigation products and services from the commercial maritime industry. They also help to identify the challenges facing marine transportation. These agents assist the Coast Survey in overseeing NOAA's nautical chart data collection and information programs to meet constituent needs for information to navigate safely and efficiently.

The Geodetic Advisor is a jointly funded NOS employee that resides in the state to provide liaison between NOS and the host state. The Geodetic Advisor guides and assists the state's charting, geodetic and surveying programs through technical expertise. This program also provides technical assistance in planning and implementing Geographic/Land Information System: (GIS/LIS) projects. Currently the NOS Navigation Manager for Alaska is also serving as the Geodetic Advisor.

NOAA's Scientific Support Coordinators provide guidance to reduce risks to coastal habitats and resources from oil and hazardous chemical spills. The Alaska SSC is based in Anchorage and works directly with U.S. Coast Guard spill response teams by providing critical scientific support to the federal On-Scene Coordinator (OSC) during spills of oil or hazardous materials. SSCs use oil spill trajectory estimates, chemical hazards analyses, and assessments of the sensitivity of biological and human-use resources to help the OSC make timely operational decisions. SSCs provide guidance, experience, and resources to develop spill preparedness plans that help identify the spill response action with the greatest environmental benefit.

The National Status and Trends (NS&T) program, run by the NCCOS Center for Coastal Monitoring and Assessment, includes Mussel Watch and Benthic Surveillance projects in Alaska. Mussel Watch is the longest continuous contaminant monitoring program in U.S. coastal waters, analyzing chemical and biological contaminant trends in sediment and bivalve tissue collected at over 280 coastal sites from 1986 to present. There are eleven sites that have been monitored in Alaska, with five sites in southeast Alaska, Prince William Sound and Homer that are currently monitored on an ongoing basis. Additional Mussel Watch sites are being collected to improve spatial coverage for the resource management and public health needs of state agencies (ADF&G, DEC) and Alaska Native organizations. The Benthic Surveillance Project analyzed chemical and biological contaminant trends in sediment and fish tissue collected at 183 coastal sites from 1984 to 1993. The database includes: sediment, fish liver and fish bile chemistry for over 100 organic and inorganic contaminants, and associated diseases in the fish livers. There

are twelve previously sampled Benthic Surveillance sites in Alaska, with 2007 sampling in Kachemak Bay. NS&T data and related assessment reports are available via the internet.

The NCCOS Center for Sponsored Coastal Ocean Research sponsors the Northeast Pacific Global Ocean Ecosystems Dynamic (GLOBEC) research program, which seeks to understand the effects of climate change on the distribution, abundance, and production of marine animal populations in areas important to the regional and national economies.

NOS Data Explorer. The NOS Data Explorer provides direct Internet access to primary NOS imagery and data holdings for coastal photography, nautical charts, coastal survey maps, environmental sensitivity index maps, hydrographic surveys, water level stations, estuarine bathymetry, geodetic control points and the Historical Map and Chart Collection. Extensive datasets for Alaska coastal areas can be accessed through this geographic driven search engine at NOS Data Explorer home.

In addition, NOS is the home of the IOOS Program Office and the Pribilof Islands Environmental Restoration Project.

Office of Oceanic and Atmospheric Research

NOAA's Office of Oceanic and Atmospheric Research (OAR) supports NOAA's Ecosystem, Climate, and Weather and Water Goals in Alaska.

Ecosystem–related activities within OAR are conducted by two laboratories, Alaska Sea Grant, the office Ocean Exploration and Research, and the National Undersea Research Program.

Both he Pacific Marine Environmental Laboratory (PMEL) in Seattle, Washington and the Earth System Research Laboratory provide fisheries research. PMEL conducts EcoFOCI in the Bering Sea and Gulf of Alaska, in conjunction with the Alaska Fisheries Science Center of the National Marine Fisheries Service (NMFS) and partners at the University of Alaska – Fairbanks, the Cooperative Institute for Arctic Research (CIFAR), and others. The goal of EcoFOCI is to determine the influence of the physical and biological environment on marine populations and the subsequent impact on fisheries. EcoFOCI scientists integrate field, laboratory and modeling studies to determine how varying biological and physical factors influence large marine ecosystems in Alaska. Providing efficiency to fishery assessments, the Earth System Research Laboratory conducts surveys in the Alaskan coastal waters using NOAA Fish Lidar. The per kilometer cost of a survey using Lidar from a small aircraft is less than 10% of a ship survey, and the depth penetration is more than 3 times that of a visual survey.

NOAA's National Sea Grant College Program is a federal-university partnership that integrates research, education, and outreach. Alaska Sea Grant addresses priority coastal and marine issues affecting 54% of the U.S. Current research and outreach projects address impacts on the salmon industry, wiser utilization of fisheries, marine environmental issues, economic leadership and diversification of Alaska's marine economy.

OAR also has a significant undersea research capability. The vision of NOAA's Office of Ocean Exploration and Research (OER) is "to make the unknown ocean known." OER research and discovery missions fit into four areas: (1) mapping the physical, biological, chemical and archeological aspects of the ocean; (2) understanding ocean dynamics at new levels to describe the complex interactions of the living ocean; (3) developing new sensors and systems for ocean exploration, and; (4) reaching out to the public to communicate the benefits to current and future generations of unlocking the secrets of the ocean. OER has sponsored diverse missions to Alaskan and Arctic waters since 2001 to conduct seafloor mapping of geological features and biodiversity in the Arctic and Bering Sea, seamount exploration in the Gulf of Alaska, benthic communities in Bristol Bay, and exploration of shipwrecks in Southeast Alaska, among others.

Complimenting OER, NOAA's Undersea Research Program (NURP) provides undersea scientists with tools and expertise that they need to work in the undersea environment, from the shoreline to the deep sea. NURP is comprised of a network of six regional centers. Based at the University of Alaska Fairbanks, NOAA's Undersea Research Center for the West Coast and Polar Regions (WCPR) supports undersea research and scientific investigation in those areas. Developing a greater understanding of the habitats and life cycles of fisheries, which are a tremendously important resource in these regions, is a priority at WCPR.

OAR's Climate-related activities include climate monitoring observatories and networks, short term forecast decision aids and long-term climate research.

The Barrow Observatory is one of six baseline observatories supported by the NOAA's Climate Observations and Services Program and operated by the NOAA Research Global Monitoring Division, located in Boulder, CO. The observatories are part of a global network monitoring atmospheric constituents that cause climate change and depletion of the ozone layer. The Barrow Observatory measures ozone, greenhouse gases, stratospheric ozone depleting gases, air quality gases, aerosols, and radiation above the observatory and monitors air pollution (Arctic haze) flowing across the Arctic from Eurasia to Alaska. The Barrow Observatory is host to 25

cooperative research projects from various universities and government agencies from around the nation. In addition, ESRL is participating in several long-term climate research programs near Barrow. Radiometers and cloud radars routinely measure important properties of clouds that affect climate such as cloud height, thickness, particle type (ice or water), water content, and ice content. Ultimately the knowledge of how arctic clouds affect the global climate system will be improved so that better predictions can be made of how man and nature might change climate.

Barrow, along with Nome and St. Paul Island, are sites where ESRL operates an ultraviolet radiation (UV) monitoring network. These measurements are done as part of the ESRL GMD Radiation group's research on the Earth's surface radiation budget. Research efforts are devoted to the extent and cause of observed variations in long-term radiation and meteorological measurements, using satellite observations and climate model calculations.

To measure the distribution and trends of carbon dioxide (CO_2) and methane (CH_4), the two gases most responsible for human-caused climate change, ESRL operates a Cooperative Global Air Sampling Network, including a station at Shemya, AK. Other greenhouse gases and carbon monoxide are also measured. Shemya is a very remote location that samples air coming from the Asian continent. These measurements help determine the magnitude of carbon sources and sinks at northern latitudes in Asia.

Fairbanks is one of the locations in the United States where ESRL takes column measurements of the amount of ozone between the earth's surface and the top of the atmosphere at a number of locations in the United States. These measurements are used to determine the amount of ultraviolet radiation reaching the earth's surface. Excess ultraviolet radiation is responsible for human skin cancer and is also harmful to other biogenic organisms. These are important as column ozone measurements monitor changes in the stratospheric ozone layer resulting from human-produced chlorine and bromine compounds that destroy ozone.

ERSL also operates from Fairbanks a new and growing small aircraft-based North American network of sampling sites (Carbon America) to measure vertical profiles of important greenhouse gas concentrations. Air is sampled above the surface up to approximately 25,000 feet above sea level using a reasonably small, light, and economical automated system to measure CO_2, CH_4, and other greenhouse gases. This data will improve global carbon cycle models.

In addition, ESRL contributes to a consensus seasonal forecast and other products for the fire season for Alaska and other states. This new climate decision-support tool provides information for a seasonal fire danger outlook, used by the National Interagency Coordination Center for fires to make proactive short- and long-range decisions for strategy development and resource allocation, and to improve efficiency and firefighter safety.

Supporting weather and water hazards, OAR is active in Tsunami and Volcanic Ash research. The Tsunami Research Program at the Pacific Marine Environmental Laboratory (PMEL), seeks to mitigate tsunami hazards to Alaska, California, Hawaii, Oregon, and Washington. Research and development activities at PMEL focus on 1) improved tsunami measurement technology and the design of optimal tsunami monitoring networks, 2) improved models to increase the speed and accuracy of operational forecasts and warnings, and 3) improved methods to predict tsunami impacts on the population and infrastructure of coastal communities. PMEL conducts these activities in collaboration with the states and the National Weather Service, including the West Coast and Alaska Tsunami Warning Center in Palmer.

Volcanic ash is an extreme hazard to aircraft, having caused more than $250M in damage during the past 20 years. ESRL, in collaboration with other federal and state agencies, has developed and installed the Volcanic Ash Coordination Tool (VACT). The tool enables the Anchorage Volcanic Ash Advisory Center, which generate forecasts for ash, to diagnose eruptions and forecast presence of ash.

Cutting across these categories are the NOAA Arctic Research Program, and the Cooperative Institute for Arctic Research (CIFAR).

The Arctic Research Office (ARO) serves as a focal point for NOAA's research activities in the Arctic, Bering Sea, North Pacific and North Atlantic regions. The office manages the Arctic Research Initiative and other funds allocated to it, supporting both internal NOAA and extramural research. It represents NOAA on the Interagency Arctic Research Policy Committee, leads U.S. involvement in the Arctic Monitoring and Assessment Program, and provides a point of contact between NOAA and the Cooperative Institute for Arctic Research and the International Arctic Research Center at the University of Alaska Fairbanks.

(CIFAR) is a cooperative institute between NOAA and the University of Alaska, sponsored by NOAA Research. CIFAR conducts research in collaboration with NOAA on a wide variety of issues critical to the Arctic, including fisheries oceanography, hydrographic studies and sea ice dynamics, atmospheric research, climate dynamics and variability, tsunami research and prediction, and environmental assessment and monitoring. CIFAR works closely with researchers from the eight countries of the Arctic Council on climate impact assessments, and is planning joint oceanographic cruises with Russia.

National Environmental Satellite, Data, and Information Service

NOAA's National Environmental Satellite, Data, and Information Service (NESDIS) is dedicated to providing timely access to global environmental data from satellites and other sources to promote, protect, and enhance the Nation's economy, security, environment, and quality of life. To fulfill its responsibilities, NESDIS acquires and manages the National operational environmental satellites, provides data and information services, and conducts related research.

Alaska plays a critical role in the acquisition and distribution of data from NOAA and other environmental satellites. The *NOAA Fairbanks Command and Data Acquisition (FCDA) Station* (http://www.fcdas.noaa.gov/) represents the most significant physical presence of a NESDIS LO activity in Alaska. This primary NOAA polar satellite ground station provides telemetry, command, real time and stored mission data recovery in support of NOAA's mission requirements. The Fairbanks CDA Station current mission set includes support to the following NOAA and non-NOAA satellites: NOAA POES and GOES, DOD DMSP, Naval Research Laboratory (NRL) CORIOLIS, NASA AQUA, AURA, and European METOP. During the summers of 2005-2007, FCDAS also provided direct downlink data capture services from USGS LANDSAT-5 for extensive Alaska mapping and wildfire management in cooperation with the University of Alaska and the U.S. Geological Survey. The FCDAS has received and transferred 10,885 LANDSAT-5 scenes into the National Satellite Land Remote Sensing Data Archive. By mid-2008, FCDAS is scheduled to assume operations for the COSMIC constellation of U.S. and foreign satellites and French CNES JASON-2 mission. Launch supports are a regular part of activities at the site, the most recent of which include NOAA-18 POES, as well as a new DMSP spacecraft.

The Fairbanks facility also provides a downlink for the International COSPAS-SARSAT program. The FCDAS SARSAT system provides emergency beacon response for the North Pacific, Alaska, Bering Sea and Arctic Ocean. The Alaska Personal Locator Beacons (AK PLB) Program established in 1994 utilizes a transmitted coded signal that is received by a COSPAS, SARSAT, or GOES satellite and relays the signal to a ground station that calculates the PLB location and transmits the information to the U.S. Mission Control Center. The USMCC recognizes the specially coded beacons as an AK PLB and transmits a distress message directly to the Alaska Rescue Coordination Center (AKRCC) at Fort Richardson just north of Anchorage. The AKRCC then uses state, local or federal assets to conduct the search and rescue. Other instruments located at the station include the ARGOS Master and Orbitography beacons, U.S. Climate Reference Network Station, and a CORS GPS.

NESDIS also maintains a satellite ground station in Pt. Barrow to provide telemetry and command support for the POES primary spacecraft while also supplying high latitude real-time HRPT observations of the Arctic for use by the NWS, AFWA, AOOS, AVO and UAF researchers.

One example of an innovative operational achievement to improve data and information services to Alaskan customers is a new way of processing polar winds using NASA's AQUA satellite, real time MODIS data. Soon, surface ocean wind data available from AVHRR satellite data (30-40 passes per day) received at the Pt. Barrow ground station will be used to operationally produce polar winds products.

Another example of NOAA's collaboration in the Arctic region is with the Canadian Space Agency. The Canadian satellite, *RADARSAT-1 (R-1)*, is not a NOAA asset, but NOAA and NASA have an agreement with the Canadian agency for the use R-1 data for identifying Arctic sea ice.

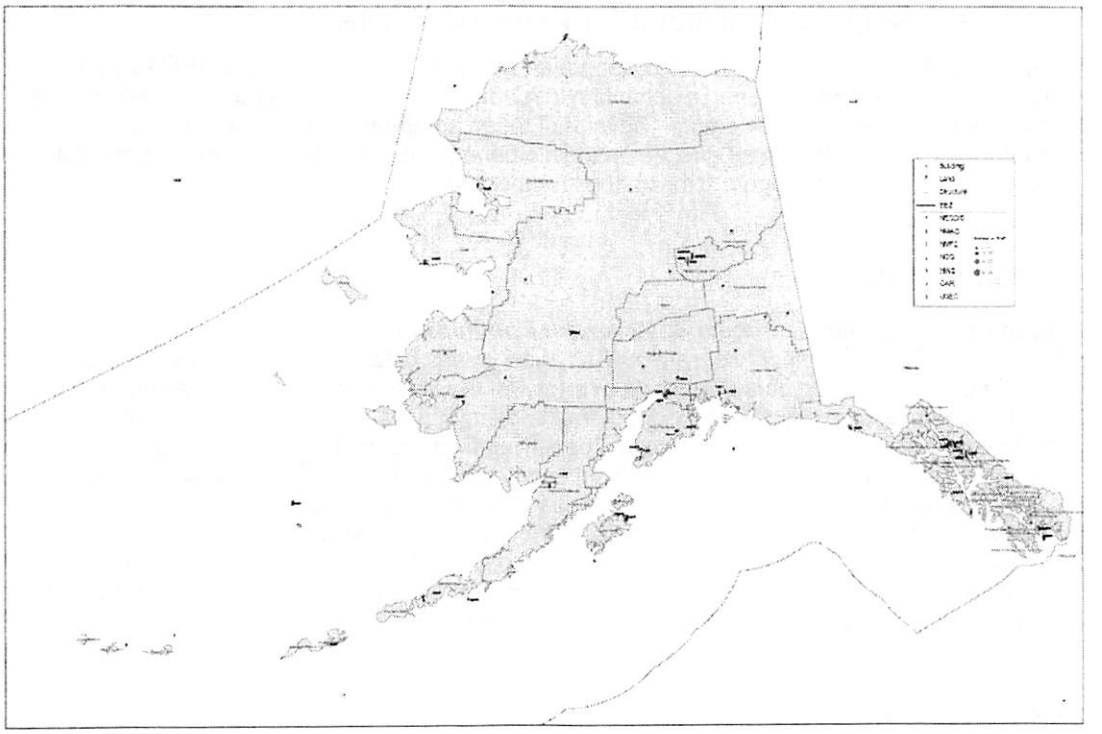
The NPOESS era of new and more capable polar orbiting satellites will require additional high capacity circuit interfaces to NWS AR, to enable the FCDAS to provide real-time data from NPP, NPOESS, METOP and other operational spacecraft thus enabling the NWS AR to receive real-time direct broadcast data from the next generation remote sensing spacecraft.

Data and Information Services

Although not physically located in Alaska the NOAA's National Data Centers (NNDC) consist of three discipline-oriented national data centers - Climate, Geophysics, Oceans – that manage and archive data from Alaska. The *NOAA National Climatic Data Center (NCDC)* located in Asheville, NC has a statutory mission to provide long term storage and public access to the climate observations of the United States, such as Alaska, and use these observations to describe the climate of the U.S. As apart of this role, NCDC operates and manages the U.S. Climate Reference Network (USCRN), http://www.ncdc.noaa.gov/oa/climate/uscrn/ which provide reference climate observations. Currently four (4) USCRN stations are operational in Alaska: Fairbanks CDA, Pt Barrow, Sitka, and St. Paul Is. Between 2008 and 2011 a total of at least 29 USCRN stations will be installed and operational. These sites will provide a convenient platform for additional permafrost monitoring sensors.

The **National Geophysical Data Center** (NGDC) in Boulder, CO handles Earth Observations from Space (satellites), Space Weather and Solar Events, Bathymetry and Global Relief, Marine Geology and Geophysics, Natural Hazards, as well as Geomagnetic and Gravity Data and Models. One of its strongest connections to Alaska is its digital elevation modeling for tsunami hazards. The third center is the National Oceanographic Data Center (NODC) in Silver Spring, MD which has a connection to the Alaska Ocean Observing System through its mission to ensure that global oceanographic data sets are maintained in a permanent archive and easily accessible.

Research. The *Center for Satellite Applications and Research (STAR)*: is the science arm of NESDIS that transfers satellite observations of the land, atmosphere, ocean, and climate from scientific research and development into routine operations. STAR activities related to Alaska include development of products to detect or forecast several hazards to aviation, (E.g. volcanic ash, fog, and low clouds, icing, turbulence, and convective wind gusts), and three sea ice products (accurate daily maps of sea ice, tactical ice monitoring; and accurate short-term *forecasts* of sea ice).



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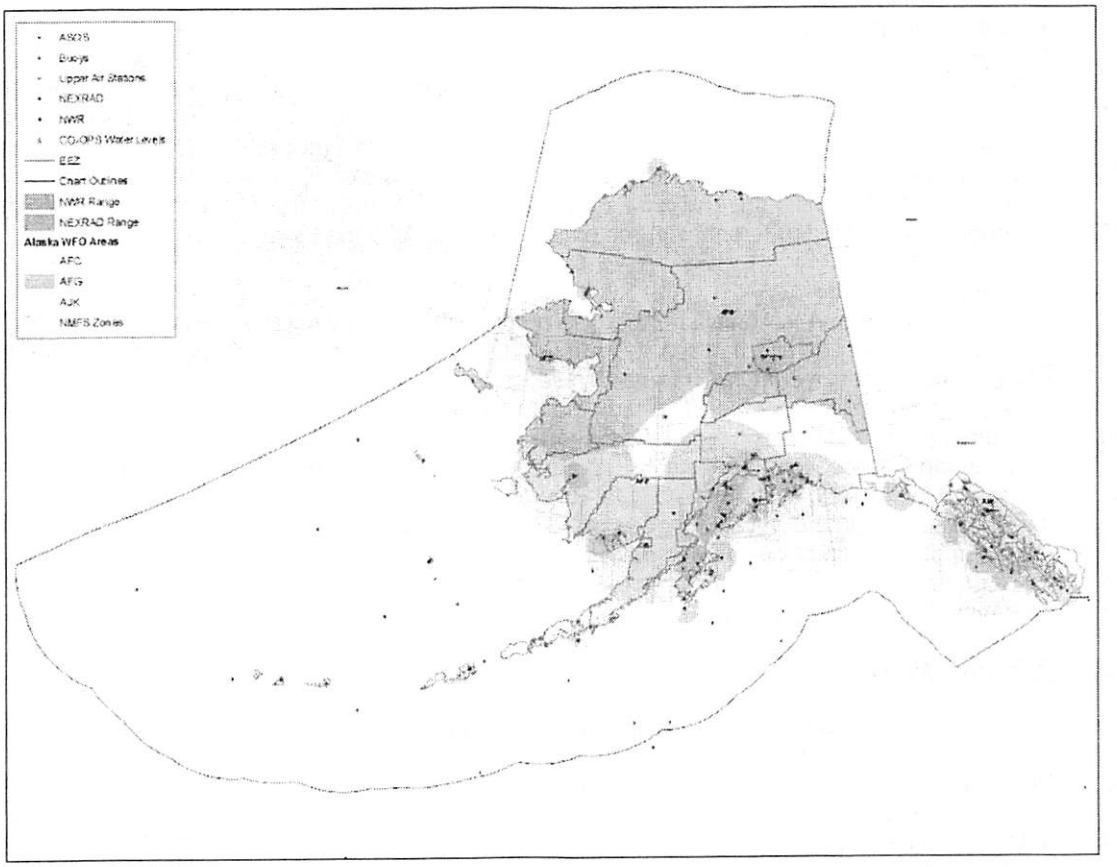
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Alaska Regional Collaboration Team Achievements

While NOAA entities in Alaska have collaborated for years, the advent of the ARCTic has provided a formal and sustained mechanism that has produced a number of accomplishments for both the agency and our customers. Several of these are detailed below. In addition, the development of this document and the intangible benefits of expanded networking are producing results and fueling even higher expectations for the future.

Climate Change

Input to Alaska Climate Impact Assessment Commission

The Alaska Climate Impact Assessment Commission was established in 2006 by the State Legislature to prepare a comprehensive overview of the likely impacts of climate change affecting Alaska, and steps we can take to mitigate that impact. In developing the overview the commission is considering facilities and infrastructure, identifying financial implications of climate change, and helping local Alaskan communities with planning activities. The NWS Alaska Region and NMFS Alaska Fisheries Science Center participated in a hearing organized by the Alaska Climate Impact Assessment Commission on April 12, 2007 and other ARCTic members have provided subsequent information related to this ISP at the request of commissioners and individual assisting them. The report of the Commission is due at the end of February 2008 and will likely contain many NOAA related themes and recommendations.

Marine Navigation & Safety

NOAA-USCG Partnership Increases Data, Safety

NWS staff in Kodiak, AK working with the USCG District 17 have put together a plan to provide training in three critical areas for the USCG: surface observations reporting, heavy weather, and ice reconnaissance. The first briefing is essentially done and NWS AK Regional HQ is reviewing it. The second will focus on heavy weather recognition and avoidance with a "North Pacific/Bering Sea/Gulf of AK" slant. The third could be on Ice reconnaissance with help from the Ice Recon crews at the NIC at Suitland. The initial focus will be on the Kodiak USCG "Fish" school as part of the briefing school for cutters that will be conducting patrols in the Bering.

Digital Ice Analyses

Digitization of the Sea Ice Analysis database produced by the Anchorage Forecast Office Ice Forecaster remains a very high priority for the Alaska Region. The archive consists of over 24 years of high spatial resolution, hand analyzed ice analyses preserved almost exclusively on paper. The analyses is of much finer temporal (3 times per week as opposed to one) and spatial resolution than what is produced at the National Ice Center. The Alaska Region and the UAA Engineering Department have established a project to transfer archived analyses into a geospatial information systems (GIS) format such as the ESRI shapefile. The ice analyses will then be available to the NWS as well as all NOAA customers for use in decision support systems (DSS), ecosystem analysis, as well as ocean and ice forecast models. Currently a small number of ice analyses have been transferred by UAA graduate students. Dialogue is underway to determine the full scope of the project.

Resource Management

2008-2009 Integrated Ocean & Coastal Mapping Project (IOCM) in Kachemak Bay

Ocean and Coastal Mapping provides information that is critical to many management decisions. NOAA alone has needs bathymetry, habitat, and topographic data and maps for its missions. Currently, the data for each is collected separately at a great collective expense. NOAA as part of the Interagency Working Group on Ocean and Coastal Mapping has initiated a select number of pilot projects to determine if/how efficiencies can be found.

The primary objectives of the multi-year project in Kachemak Bay are to demonstrate multiple uses of ocean and coastal mapping data and define the process for planning and conducting IOCM surveys on a regular basis. Specifically, the Kachemak Bay project will show how one hydrographic survey can support habitat information for ecosystem based management, emergency management, and economic development as well as NOAA nautical charts. Activities will include hydrographic surveys, shoreline imagery and topography, contaminant sampling, and potentially subtidal substrate and habitat map development. Additional activities such as Marine debris surveys and removal, circulation modeling, V-Datum development, watershed/hydrology modeling, and inundation mapping may be incorporated if funding and assets are available.

At the time of publication, each NOAA line office, USGS, USACE, and USCG are participating from the federal level; Alaska Department of Fish & Game and Alaska State Parks are contributing from the state; the local/regional government of Kenai Peninsula Borough, City of Homer, City of Seldovia, Seldovia Village Tribe, Port Graham village, and Nanwalek village are involved; and we're expecting participation from Cook Inlet Regional Citizen's Advisory Council (CIRCAC), Alaska Ocean Observing System (AOOS), and Cook Inlet Keepers as well.

Through the collaborative efforts of these partners, we expect the following outcomes:

- Ecosystem Based Management
  - Assist ADF&G and NMFS fishery and habitat resource managers, both offshore and nearshore
    - Identifies benthic habitat with or without relief features, such as reefs, mounds, deeper pinnacles, sand waves, etc...
    - Address unknowns for nearshore EFH descriptions, such as juvenile rearing (nursery) areas.
    - Aids to assess anthropogenic (human-induced) processes that may or may not affect benthic habitat. i.e. coastal development, marine dredge disposal areas, oil and gas pipeline route
    - Application to other embayments; start putting several pieces together.
- Safe Navigation
  - Provides mariners with new nautical charts for safe navigation
- Economic Development
  - Provides USACE and City of Homer with information for Homer Harbor Expansion
  - Provides Alaska Industrial Development and Export Authority members with bathymetry and circulation data for Kachemak Bay Tidal Power Proposal
- Emergency Management
  - Supports USCG use of Kachemak Bay as a Place of Refuge for damaged vessels
- Better Government Services
  - Improves survey collaboration with Alaska state/local agencies
  - Provides cross-training opportunity for NOAA ship crews
  - Provides high resolution bathymetric data for circulation and watershed-estuary models

The success of this project will play a large role in NOAA's evaluation of requirements for survey operations in the future.

Water Resources

Advanced Hydrologic Prediction Services (AHPS) Multi-sensor Array

The Alaska Pacific River Forecast Center (APRFC) and the U. S. Geological Survey (USGS) are participating in a joint project to implement the first stages of a water quality/water resources program. They jointly decided that water temperature would be the best parameter to measure in

Recommendations on the Arctic FMP from the February 2008 Council meeting

- Ecosystem Committee
- SSC
- Advisory Panel

EXCERPT FROM ECOSYSTEM COMMITTEE MINUTES, FEBRUARY 6, 2008

Arctic FMP

Mr Wilson briefed the Committee on the preliminary EA/RIR/IRFA for the Arctic FMP. The Committee appreciates the work that has been put into this document to date, and recognizes Council and NMFS staff effort. In general, the Committee agrees with the approach of the preliminary draft, and notes that staff have addressed the Committee's recommendations from their last meeting, regarding analysis and outreach.

The Committee recommends that Alternative 3 be amended to state that the exemption would be exclusively for the reported red king crab fishery in the Chukchi Sea. Changing this language would allow the Council to distinguish clearly between Alternatives 3 and 4. Under Alternative 3, the exemption would apply to a fishery of the size and scope of the reported historical fishery, and the fishery would not be allowed to occur in the whole of the Chukchi Sea but only in that geographic area where it has reportedly occurred. This contrasts with Alternative 4, under which any crab fishery that might develop in the area south of Point Hope would be managed under the existing crab FMP.

Mr Wilson also brought up an issue that has come out through NOAA General Counsel review. The document incorrectly characterizes State authority in Arctic Federal waters as being able to regulate all vessels fishing in the area. The State does not have authority over vessels that may wish to fish in the Arctic EEZ and are not registered with the State of Alaska. The Council and Secretary could, through a provision under the MSA, give the State authority to regulate unregistered vessels; this could be pursued as an interim measure on the path to finalizing the FMP. The Committee believes this would complicate and potentially delay the completion of the FMP, and is not an issue since the Council's intent is to adopt an Arctic FMP that would establish Federal authority. Therefore, **the Committee recommends that the document be corrected to accurately represent status quo, but that no other interim measures be initiated.**

The Committee recommends that the Council keep this analysis high on the priority list, and on its current timeline. Given the current heightened interest in the Arctic, the Council's action has national and international implications. Mr Wilson noted that the aspect of the analysis most likely to delay the schedule is the crafting of text for the FMP. NOAA GC has commented that particular care will be needed for the language of the MSA-required FMP provisions, given that the FMP will not allow fishing (for example, how to specify maximum sustainable yield or overfishing reference points). The SSC also has suggestions for writing the FMP. **The Committee recommends that the Council ask NOAA GC and the AFSC to work actively with staff to help prepare the FMP text to address these issues.**

The Committee also had some specific suggestions for improving the analysis, relating to the description of the reported historical red king crab fishery, the process for future management decisions, and the implications of ESA-listing for ice-dependent Arctic marine mammals.

EXCERPT FROM SSC MINUTES, FEBRUARY 2008

D-3 (c) Draft EA/RIR/IRFA for an Arctic FMP

Bill Wilson (NPFMC) presented a preliminary draft EA/RIR/IRFA for an Arctic Fishery Management Plan. Chris Krenz (Oceana) and Donna Parker (Arctic Storm) presented public testimony on this issue.

¶In June 2007, the Council directed staff to begin preparing a draft analysis. The motion was made in response to heightened interest in the Arctic, due to climate change and its associated warming trend, and sea ice recession. As presently conceived, this FMP would encompass all invertebrates and non-salmonid fishes.

The SSC reviewed the draft analysis and suggests that the drafting team consider the following comments.

- The Council has the opportunity to develop an FMP that will be useful as the foundation for future fisheries management for the region. The FMP should be written with a framework that closes fisheries in Federal waters, until sufficient scientific information is accumulated, particularly on stock status, which would justify rescission of the closures. **The SSC agrees that current information does not provide a sufficient basis for opening the Arctic region to commercial fishing.** This approach is consistent with the National Standard 2 requirement that conservation and management measures shall be based on the best scientific information available. If criteria for opening a fishery are included in the FMP, the SSC suggests that the drafting team examine the State of Alaska policies for developing new fisheries.

- The MSFCMA and National Standards require definitions of MSY, an MSY control rule, and MSY stock size, and reference points for overfishing and overfished levels. Consequently, the FMP should include these reference points and control rules, defined at the stock level or in aggregate. The lack of information is not an appropriate rationale for failing to define the methods for estimation of MSY and overfishing levels. These concepts can be defined based on existing knowledge, regarding acceptable harvest control rules, and can be modified as required and as information accumulates. **The definitions currently applied to BSAI and GOA fish and invertebrate stocks could be used as examples of a framework for management in the Arctic.**

- **The species or species groups to be covered by the Arctic FMP should be reviewed. For example, consideration should be given to whether whitefish, herring, clams, and a host of other species are to be included.** Input from the State of Alaska should be sought in this regard. The rationale for inclusion or exclusion of particular species should be articulated in the analysis. For example, although it may be premature to categorize many Arctic species as "forage fish," there may be sufficient data on some species to make recommendations (e.g., juvenile Arctic cod are known to be important to black guillemots in the Arctic). In addition, the species or species groups included under the FMP should be reviewed in light of the current deliberations of the non-target committee.

- **Conservation measures to address the sensitivity of the Arctic ecosystem could be addressed as an OY consideration.** The current draft analysis argues that the uniqueness of the Arctic ecosystem is a rationale for closing the region to directed fishing. All ecosystems are unique and, therefore, this argument alone is not sufficient to justify a blanket prohibition on fishing. Instead, the analysis should draw attention to particular attributes of the Arctic ecosystem that elevate the likelihood of adverse outcomes.

- Where possible, the EA/RIR/IRFA should include existing information from various surveys and reviews of the Arctic. A survey of the Beaufort Sea is planned for 2008, and there have been University of Alaska RUSALCA surveys in the Chukchi Sea. These surveys may provide some quantitative estimates of fish abundance for the region. Also, a recent National Research Council (NRC) review of available information on the Beaufort Sea benthic ecosystem could be referenced. This review concluded that the productivity of the area is low and may be sensitive to benthic impacts. Likewise, the analysis should address available information about the experience of other nations that conduct fishing in Arctic regions (e.g., Russia, Chukchi Sea; Norway, Barents Sea; Canada, Arctic). Inclusion of additional information on food habits of marine mammals and seabirds in the Arctic region would also enhance the document.

- **The SSC is supportive of stakeholder outreach activities that have occurred during development of this EA/RIR/IRFA.** If the drafting team adds technical information regarding biological reference points, the outreach staff should make sure that the potentially impacted communities are apprised of the additional information and the rationale for its inclusion, and that they understand the Council process that would be required to undertake changes to the FMP.

- The description of cumulative effects, included in the draft analysis, should be expanded to include a discussion of the impacts of oil and gas leases in the region.

- The draft analysis should be revised to more fully explain the differences between Alternatives 3 and 4, in terms of the effect of exempting the Kotzebue Sound red king crab commercial fishery and deferring management to the State.

EXCERPT FROM ADVISORY PANEL MINUTES, FEBRUARY 2008

D-3 (c) Preliminary review of Arctic FMP

Recognizing that Arctic marine waters support a unique and fragile ecosystem as well as human communities, the AP supports advancing the Arctic FMP development. The AP recommends that analysts continue outreach to engage Arctic Alaskans and other stakeholders in crafting the FMP. Further, the AP recommends that the analysts incorporate the recommendations of the Ecosystem Committee.
Motion passed 19/0.

DRAFT

Table 2-1 Summary of Alternatives

Alternative	Groundfish Authorized?	Authority	Scallops Authorized?	Authority	Crab Authorized?	Authority	Scallop northern boundary	Crab northern boundary	Notes on Chukchi Sea red king crab fishery management
1	no	State regs	yes	Scallop FMP	yes	Crab FMP	Pt Hope	Pt Hope	Open - Crab FMP defers mgt authority to State
2	no	Arctic FMP	no	Arctic FMP	no	Arctic FMP	Bering Strait	Bering Strait	Closed
3	no	Arctic FMP	no	Arctic FMP	yes	Magnuson -Stevens Act/State	Bering Strait	Bering Strait	Open by State – exempt from Federal management
4	no	Arctic FMP	no	Arctic FMP	yes	Crab FMP	Bering Strait	Pt Hope	Open - Crab FMP defers mgt. authority to State

PRELIMINARY
NOT INTENDED FOR PUBLIC REVIEW
FEBRUARY 2008 COUNCIL REVIEW ONLY

Preliminary Draft Environmental Assessment/ Regulatory Impact Review/ Initial Regulatory Flexibility Analysis

for the Arctic Fishery Management Plan and Amendment 29 to the Fishery Management Plan for Bering Sea/Aleutian Islands King and Tanner Crabs and Amendment 13 to the Fishery Management Plan for the Scallop Fisheries Off Alaska

Prepared by staff of the:
North Pacific Fishery Management Council
National Marine Fisheries Service, Alaska Region
Alaska Fisheries Science Center
Alaska Department of Fish and Game

January 2008

For Further Information Contact:
Bill Wilson
North Pacific Fishery Management Council
605 West 4th Avenue, #306
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Abstract: The document provides decision-makers and the public with an evaluation of the environmental, social, and economic effects of alternatives to manage the fishery resources in the Arctic Management Area. No significant fisheries exist in the Arctic Management Area, either historically or currently. However, the warming of the Arctic and seasonal shrinkage of the sea ice may be associated with increased opportunities for fishing in this region. The Council proposes to develop an Arctic Fishery Management Plan that would (1) close the Arctic to commercial fishing until information improves so that fishing can be conducted sustainably and with due concern to other ecosystem components, (2) determine the fishery management authorities in the Arctic and provide the Council with a vehicle for addressing future management issues, and (3) implement an ecosystem based management policy that recognizes the unique issues in the Alaskan Arctic. This document addresses the requirements of the National Environmental Policy Act, Presidential Executive Order 12866, and the Regulatory Flexibility Act.

Executive Summary

The North Pacific Fishery Management Council (Council) recognizes emerging concerns over climate warming and receding seasonal ice cover in Alaska's Arctic region, and the potential long term effects from these changes on the Arctic marine ecosystem. The Council expressed concern over potential

effects on fish populations in the Arctic region, and discussed a strategy to prepare for possible future change in the Arctic region. The Council determined that a fishery management regime for Alaska's Arctic marine waters is necessary.

The Council proposes to develop an Arctic Fishery Management Plan (FMP) that would (1) close the Arctic to commercial fishing until information improves so that fishing can be conducted sustainably and with due concern to other ecosystem components; (2) determine the fishery management authorities in the Arctic and provide the Council with a vehicle for addressing future management issues; and (3) implement an ecosystem based management policy that recognizes the unique issues in the Alaskan Arctic.

The Arctic Management Area is all marine waters in the exclusive economic zone (EEZ) of the Chukchi and Beaufort Seas from 3 nautical miles offshore the coast of Alaska or its baseline to 200 nautical miles offshore, north of Bering Strait (from Cape Prince of Wales to Cape Dezhneva) and westward to the U.S./Russia Convention Line of 1867 and eastward to the U.S. Canada maritime boundary.

Purpose and Need

Chapter 1 describes the proposed action and its purpose and need: to establish Federal fisheries management in the Arctic Management Area that complies with the Magnuson-Stevens Act. The action is necessary to prevent commercial fisheries from developing in the Arctic without the required management framework and scientific information on the fish stocks, their characteristics, and the implications of fishing for the stocks and related components of the ecosystem.

Alternatives

Chapter 2 describes and compares four alternative management regimes. The four alternatives are summarized as follows:

Alternative 1: Status quo. Maintain existing management authority.

Alternative 2: Adopt an Arctic FMP that closes the entire Arctic Management Area to commercial fishing. Amend the scallop and crab FMPs to terminate their geographic coverage at Bering Strait.

Alternative 3: Adopt an Arctic FMP that closes the entire Arctic Management Area to commercial fishing. Amend the scallop and crab FMPs to terminate their geographic coverage at Bering Strait. A red king crab fishery in the Chukchi Sea would be exempt from the Arctic FMP.

Alternative 4: Adopt an Arctic FMP that closes the entire Arctic Management Area to commercial fishing. Amend the scallop FMP to terminate its geographic coverage at Bering Strait. The Arctic FMP would cover the area north of Pt. Hope for crab and north of Bering Strait for groundfish and scallops.

Summary of the impacts of the alternatives

The Environmental Assessment/Regulatory Impact Review/Initial Regulatory Flexibility Analysis (EA/RIR/IRFA) evaluates the alternatives for their effects within the action area. The impacts of each alternative for finfish and shellfish, marine mammals, seabirds, ecosystem relationships, society, and the economy, are assessed in Chapters 4 through 9 of this EA/RIR/IRFA.

Finfish and shellfish in the Arctic Management Area

Chapter 4 analyzes the impacts of the alternatives on finfish and shellfish. Many species of marine and anadromous fish and shellfish inhabit Arctic waters. However, no species of finfish or shellfish are known to occur in the Arctic Management Area in sufficient biomass to support commercial fishing, except for red king crab. The Council's objective for Alternatives 2, 3, and 4 is to create an FMP that closes the Arctic region to commercial harvest of all fish and shellfish species. Under all alternatives, salmon and halibut commercial fisheries would remain closed under status quo management. The Arctic FMP's Fishery Management Unit (FMU) under Alternatives 2 and 3 would include all arctic Federal waters north of Bering Strait. However, in contrast to Alternative 2, the Arctic FMP under Alternative 3 would exempt from Federal management a red king crab fishery in the Chukchi Sea. Alternative 3 would allow a red king crab fishery in the southern part of the Chukchi Sea to be exclusively managed by the State of Alaska. The Arctic FMP's FMU under Alternative 4 would include all Arctic Federal waters north of Bering Strait for all managed species, except for crab species. The crab FMP management boundary would remain at Pt. Hope and the crab FMP would not be amended.

If no new fisheries are developed, then no impacts of selecting any of the alternatives are evident other than maintaining essentially the status quo. The primary difference is that under Alternative 1, the State of Alaska could open a new or developing fishery under its regulations while under Alternative 2, 3, and 4, the Federal Arctic FMP would need to be amended and any new fishery would need to managed in compliance with applicable Federal law.

Birds in the Arctic Management Area

Chapter 5 analyzes the impacts of the alternatives on birds. Birds occur in substantial numbers in the Arctic Management Area. Nearly all Arctic birds are migratory, present sometime between May and November. Arctic bird species include waterfowl, shorebirds, loons, seabirds, hawks and eagles, ptarmigan, and songbirds. Three bird species listed under the Endangered Species Act inhabit the areas where commercial fishing could occur: Short-tailed Albatross, Spectacled Eider, and Steller's Eider. Interactions between birds and commercial fisheries may occur due incidental take, reduced prey availability, and habitat disturbance. Since all of the alternatives under consideration would close commercial fisheries in the Arctic Management Area, none of the alternatives would impact birds.

Marine Mammals in the Arctic Management Area

Chapter 6 analyzes the impacts of the alternatives on marine mammals. The Arctic is known for its indigenous, and sometimes migratory, marine mammal populations. Fourteen marine mammal species are present in the Arctic Management Area: bowhead whales, gray whales, beluga whales, minke whales, killer whales, fin whales, humpback whales, spotted seals, bearded seals, ribbon seals, ringed seals, Pacific walrus, polar bears, and harbor porpoise. Narwhals may be present in the eastern Beaufort Sea. Interactions between marine mammals and commercial fisheries may occur due to overlap in important

marine mammal prey and the size and species of fish that are harvested in the fisheries, and due to temporal and spatial overlap in marine mammal occurrence and commercial fishing activities. Since all of the alternatives under consideration would close commercial fisheries in the Arctic Management Area, none of the alternatives would impact marine mammals.

Ecosystem

Chapter 7 analyzes the impacts of the alternatives on the ecosystem. Commercial fisheries can impact systemic relationships between components of the ecosystem by changing predator/prey relationships, energy flow and balance, and biological diversity. Since all of the alternatives under consideration would close commercial fisheries in the Arctic Management Area, none of the alternatives would impact the ecological relationships between components of the Arctic ecosystem.

Economic and Social Impacts

Chapters 8 and 9 analyze the economic and social impacts of the alternatives. Chapter 8 is the Regulatory Impact Review. Chapter 9 is the Initial Regulatory Flexibility Analysis. None of the alternatives would have an immediate impact on commercial fishing (other than on the red king crab fishing in Kotzebue Sound), or on subsistence, personal use, or recreational fishing, or on subsistence hunts of marine mammals. These alternatives would have no economic or cultural/social impacts on communities dependent on the resources. Alternative 2 would end a small scale, poorly documented red king crab fishery in the EEZ in Kotzebue Sound; the other alternatives would have no effect on this fishery. Alternatives 2, 3, and 4, which prohibit fishing, would create a new enforcement responsibility for the NOAA Office of Law Enforcement and the Coast Guard. The scope and cost of this responsibility can't currently be determined due to the lack of an historical fishery, and the considerable uncertainty about the resource and the ways it might be exploited. Alternatives 2, 3, and 4 would provide a legal framework for future development of sustainable fisheries.

AGENDA D-5(b)
Supplemental
APRIL 2008

North Slope Borough
OFFICE OF THE MAYOR

P.O. Box 69
BARROW, ALASKA 99723
☎ 907 852-2611 ext. 200
Fax: 907 852-0337

Edward S. Itta, Mayor

March 5, 2008

MAR 2 2008

N.P.F.M.C.

Eric A. Olson, Chairman
North Pacific Fishery Management Council
605 West 4th Avenue, Suite 306
Anchorage, Alaska 99501-2252

Dear Mr. Olson:

I understand the North Pacific Fishery Management Council (NPFMC) is preparing a draft Fishery Management Plan (FMP) for the Arctic Federal waters, from the Bering Strait to the Canadian border in the Beaufort Sea. Dr. Bill Wilson (NPFMC) indicated to my staff that the Council's proposal is to close these waters to commercial fishing until there is sufficient scientific information to justify a fishery be initiated. I further understand that any existing small or subsistence fisheries that occur in Federal waters or adjacent State waters will not be affected.

The North Slope Borough strongly supports the Council's proposed action for several reasons. First, while bowhead whales are one of the most important resources of the coastal Inupiat Eskimo, fish are also a very important subsistence resource to our residents. Many residents depend on the local fish resources in our local waters. Thus, there is potential for competition from commercial fishing with subsistence fisheries. Obtaining needed scientific information in the development and regulation of commercial fishing is necessary. Second, there are threats to whales and other marine mammals posed by commercial fishing. We have landed several bowhead whales with Bering Sea crab gear attached to them and know of other bowheads that have died from gear entanglement. We also observe whales with scarring caused by boat propellers. Reducing negative interactions between commercial fisheries and marine mammals will require a better understanding of the resources in the Beaufort and Chukchi Seas. Lastly, there has been a dramatic increase in the amount of offshore oil and gas activity in the Arctic in the past two years. With sea ice retreat due to global warming, there is also the potential for commercial shipping through the Arctic. Thus, we are greatly concerned about cumulative impacts from the rapidly expanding human activities in the seas that provide our food. Limiting commercial fishing at this time will help us develop approaches for mitigating impacts from human activities to the resources that our people depend upon.

Again, the North Slope Borough supports the NPFMC's proposed FMP for the Arctic. We look forward to continued interaction with the Council. Please keep us informed as the program unfolds.

Sincerely,

Edward S. Itta

Edward Itta
Mayor

cc: Chris Oliver, North Pacific Fishery Management Council
Dr. Bill Wilson, North Pacific Fishery Management Council
Taqulik Hepa, Director NSB Department of Wildlife Management
Johnny Aiken, Director, NSB Planning Department
Andy Mack, NSB Mayor's Office

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LATE COMMENT
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MAR 2 8 2008
N.P.F.M.C.

March , 2008

Mr. Eric Olsen, Chair
North Pacific Fishery Management Council
605 W. 4th Ave., Suite 306
Anchorage, AK 99501

Dear Mr. Chairman:

In our letter dated January 29, 2008, we requested that the North Pacific Fishery Management Council begin a new solicitation process for submitting habitat area of particular concern (HAPC) proposals. The process that was proposed for HAPC identification by the Council and Tetra Tech FW called for a new solicitation cycle every three years. It has now been more than four years since the last HAPC proposal solicitation.

The Council declined to act on our request, and according to David Witherell, the Council is not scheduled to consider initiating a new HAPC proposal process before 2009.

Identifying and establishing appropriate protections for vulnerable habitats requires periodic review to incorporate new research and increased understanding of potential ecological, economic, and cultural impacts. In the four years since the last HAPC proposal solicitation, there have been several relevant habitat studies in the region, including benthic surveys in the Aleutians and Bering Sea canyons. The available data on the impacts of climate change on Arctic and sub-Arctic waters has also advanced considerably in this time period.

Together with the Council's denial of requests to provide us with space on the agenda to present new data on vulnerable coral and sponge habitats, the delay in considering new HAPC proposals is inconsistent with the Council's stated commitment to science-based management. It also runs counter to the intent of Congress as expressed in the deep sea coral provisions in the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006.

The first Report to Congress on the Implementation of the Deep Sea Coral Research and Technology Program cites three areas under the North Pacific Fishery Management Council's jurisdiction which are known to include coral areas that currently lack

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protection, including the coral habitats of Zhemchug and Pribilof Canyons which Greenpeace and NOAA biologists recommended should be prioritized for protection[1].

We urge you to move quickly to protect vulnerable habitats, and look forward to working with the Council to develop HAPC proposals for your consideration.

Sincerely,

Thomas W. Wetterer
General Counsel

cc James Balsiger
National Marine Fisheries Service

Thomas Hourigan
National Marine Fisheries Service

Douglas DeMaster
Alaska Fisheries Science Center

[1] New Coral Data for Bering Sea Canyons, Alaska Marine Science Symposium 2008: www.greenpeace.org/usa/press-center/reports4/new-coral-data-for-bering-sea