Alaska State Legislature
Alaska Northern Waters Task Force
January, 2012 Report

Economic Opportunity * Sustainable Communities and Environments * Preserving Cultural Heritage

The Northern Waters Task Force would like to thank the many communities and people throughout the state who welcomed us and took the time to help us better understand their communities and the Arctic issues facing them. Additionally, the task force thanks the many accomplished specialists, dedicated public servants, local leaders, and concerned citizens who addressed the task force. Without hesitation, presenters gave their time and traveled great distances to share their knowledge with us. Their guidance was invaluable when making our final recommendations.

This report contains information on many topics and identifies a number of opportunities and concerns. It also contains a number of recommendations on how to best plan and prepare communities and state government for future changes in the Arctic. In a number of instances there is already work underway that may address the opportunity or concern that underlies a recommendation. In those cases, the recommendation should be read as encouraging the good work that is already being done, whether that work is being done by local communities, state and federal agencies, universities, companies, or other organizations and individuals.

A quote from a resident of Wales, Alaska, on the Bering Strait:
"From here we can see into tomorrow."

Introduction:

The Arctic is warming at twice the rate of the rest of the planet, with significant loss of perennial sea ice already resulting.[1] The years 2005 to 2010 were the warmest measured in the Arctic since record keeping began around 1880.[2] Recent predictions foresee an entirely ice-free Arctic summer within four decades.[3]

The coincidence of diminishing sea ice and the intensifying worldwide race for natural resources has rapidly increased international interest in the far north. In addition to the eight Arctic nations—the United States, Russia, Canada, Iceland, Denmark, Norway, Finland, and Sweden—other governments are eyeing the economic potential of the resource rich region. They include China, Japan, South Korea, and the European Union.[4]

These Nations and others are anticipating the development of northern shipping routes that will bring huge savings in time and fuel costs, and they recognize a new frontier for mineral extraction, oil and gas exploration, commercial fisheries, and tourism. There are many challenges accompanying these opportunities, including the preservation of communities and cultures confronted with thawing glaciers and permafrost, intensifying storm surges and coastal erosion, and declining populations of migratory animals.[5]

For Alaska, the economic benefits over the long term could be substantial. But how will we confront

[1] For the purposes of this report the Arctic is defined using the definition found in the Arctic Research and Policy Act (ARPA**).** See Appendix A.

[2] Arctic Monitoring and Assessment Programe, Snow, Water Ice and Permafrost in the Arctic, Executive Summary 2011. http://www.amap.no/swipa/. This report focuses on the impacts of a changing climate on snow, ice, and frost conditions in the Arctic over the last ten years. The work is directed by the Arctic Council and carried out by 200 of the world's leading Arctic researchers.

[3] Id.

[4] China and South Korea have increased their research in the area, are constructing several ice breakers, and have established a permanent research station at Svalbard.

[5] To learn more about recent environment changes see NOAA's newest report card. Richter-Menge, J., M.O. Jeffries and J.E. Overland, Eds., 2011: Arctic Report Card 2011. http://www.arctic.noaa.gov/reportcard.

the challenges and opportunities awaiting us in the Arctic while also providing for sustainable communities and protecting the environment?

In 2010, the Alaska State Legislature established the Northern Waters Task Force to increase the state's engagement with these issues.[6] Since the task force was created, it has studied a vast quantity of scientific, social, economic, and environmental research. It has consulted with more than 65 experts from universities, the U.S. military, non-governmental organizations, and dozens of state and federal agencies.[7] During twelve meetings in Juneau, Anchorage, Barrow, Wainwright, Kotzebue, Nome, Wales, Bethel, and Unalaska, the task force listened to thoughtful testimony delivered by hundreds of Alaskans, many from areas already impacted by transforming conditions.[8]

The Northern Waters Task Force has learned that the state of Alaska's planning for the opening of the Arctic lags far behind that of the U.S. federal government, and in turn, our federal government's preparations are markedly behind those of other Arctic nations.

On both the state and federal level, the task force has identified numerous urgent needs, many of them deeply intertwined. For example, to prepare for dramatically increased shipping—whether through the Northwest Passage or through the Northern Sea Route—Alaska must begin developing deep-water ports and safe harbors in northern waters as soon as possible; we must initiate a risk assessment for the Bering Strait—certain to be a shipping pinch point; the U.S. Coast Guard needs to establish bases considerably nearer to the Arctic; we must increase research to understand possible impacts on Arctic communities and the marine life on which they depend; and more.

The subject of icebreakers provides perhaps the most telling example of policy shortcomings at the federal level. As of 2011, Russia had a fleet of eight active nuclear powered icebreakers, with plans to launch a tenth by 2015. Intent on being a player in trans-Arctic shipping, China owns the world's largest non-nuclear icebreaker and has funded construction of a second that will be ready by 2013. Sweden, Finland, Canada, South Korea, and Japan are also adding to their icebreaking fleets. However, the United States has just one active heavy-duty icebreaker—the U.S. Coast Guard vessel Healy. Meanwhile, the 1970s-era icebreaker Polar Star has been sidelined in "Caretaker" status in Seattle since 2006, and its sister ship, the Polar Sea, has been decommissioned. Despite persistent appeals from many quarters—including from Alaska Lieutenant Governor Mead Treadwell, former chair of the United States Arctic Research Commission—Congress has not yet legislated funding to add new polar class icebreakers to the United States fleet.

The state of Alaska has only just begun to grapple with these and many other pressing issues. Apart from the Northern Waters Task Force, there have never been personnel in state government—not even a single individual—focused exclusively on these complex concerns. It is therefore among the task force's highest priorities to press for the creation of a commission to develop a comprehensive state strategy for the Arctic. As the Arctic changes, the decisions Alaska faces will continue to evolve and grow in complexity. An Alaskan Arctic Commission responsible for these issues on state, national, and international levels will enable Alaska to more effectively respond to unfolding developments and will jumpstart our preparations to ensure that the state and its peoples' interests are protected long into the future.

[6] See Appendix B for the full text of House Concurrent Resolution 22. See Appendix C for the Northern Waters Task Force member's biographies and Appendix D for the member roster.
[7] See Appendix E for a list of the presenters.
[8] See Appendix F for the list and dates of the hearings. See Appendix G for the hearing agendas.

This report summarizes the Northern Waters Task Force's recommendations on Arctic issues affecting Alaska. The recommendations are in the following six areas:

- ***Arctic Governance***
- ***Arctic Planning & Infrastructure Investment***
- ***Oil & Gas Development***
- ***Arctic Fisheries***
- ***Marine Transportation***
- ***Arctic Research***

MEMBERSHIP AND DUITES OF THE TASK FORCE:

The Alaska State Legislature created the Alaska Northern Waters Task Force (ANWTF) in 2010 to assess development of state and federal northern waters. The Alaska Northern Waters Task Force is comprised of legislators, leaders from Arctic communities, and representatives of key federal and state agencies. Members of the task force are as follows: Representative Reggie Joule, Chair; Senator Bert Stedman, Vice-Chair; Representative Bob Herron; Senator Lyman Hoffman; Dept. of Environmental Conservation Commissioner Larry Hartig; North Slope Borough Mayor Edward Itta; Unalaska City Manager Chris Hladick; Nome Mayor Denise Michels; NANA Corp. Vice-President Chuck Green; and Alaska Marine Conservation Council Chair Dave Kubiak. Alternate members of the task force include Senator Donald Olson; Representative Bryce Edgmon; Richard Glenn from Arctic Slope Regional Corporation and Cora Campbell, Commissioner of the Department of Fish & Game. The United States Coast Guard served as the federal liaison and was represented by Rear Admiral Christopher Colvin until May 19, 2011. Upon Rear Admiral Colvin's departure, Rear Admiral Thomas Ostebo served as the federal liaison for the reminder of the term.

The duties of the task force are as follows:

(1) Assess and facilitate creation of a state and federal commission responsible for overseeing the development of state and federal northern ocean waters;

(2) Facilitate regional coordination, cooperation, and outreach regarding the creation of the commission to keep local stakeholders informed and to incorporate their input into the process;

(3) Identify and coordinate efforts of mutual concern for federal, state, and local agencies, as well as international interests in the creation of the commission; and

(4) Conduct hearings in the Arctic & Sub-Arctic regions of Alaska to fulfill its purpose.

The task force must provide final recommendations to the Legislature by January 30, 2012. The full text of House Concurrent Resolution 22 which formed the Northern Waters Task Force can be found at Appendix B .

ARCTIC GOVERNANCE:

"Most of the Arctic, like most of the world, is commonly owned. With ownership comes the obligation to manage our resources for the benefit of the total. To do that, we must understand the reality, the richness, and the responsibility of the North."
--Former Alaska Governor Wally Hickel

Introduction:

The Arctic is transforming, largely due to a changing climate and increased globalization of economic activities. These rapid changes make it necessary to explore the adequacy of existing Arctic governance structures and to consider adjusting these systems or creating new ones to better suit developing needs. Arctic nations must strengthen their relations and enhance cooperation at regional and international levels as they each develop and refine their regulatory frameworks and policy mechanisms on Arctic issues and forge new international agreements and understandings. We in Alaska must ensure that our Arctic residents and the state of Alaska have a strong voice in these matters.

Developing the resource rich Arctic in a way that maintains sustainable communities and limits adverse impacts to the environment will require unprecedented cooperation among Arctic nations. This level of cooperation will require changes in how Arctic nations think about sovereignty and territorial boundaries on both land and water. Traditional sector-based regulation will not effectively safeguard the environment from damage. Each Arctic nation must recognize that how they develop their resources can impact not only themselves but also their neighbors. Working together, the Arctic Nations can foster productive, sustainable development while respecting the entire region's fragile ecosystems and the cultures and quality of life of its inhabitants.

Over the past year, it has become apparent to the NWTF that the United States lacks a national vision for the Arctic and has no comprehensive strategy for its future. The state of Alaska has supported environmentally sound resource development in the Arctic and elsewhere in the state as the primary means to provide for an economy and jobs for all Alaskans. The NWTF believes it would benefit the state, as discussions on Arctic issues and opportunities continue with the federal government and internationally, to collect the different elements of state policies relating to the Arctic into one definitive document. Substantial efforts are necessary on both the national and state level to prepare for changes in the Arctic and to ensure responsible

stewardship of the U.S. Arctic far into the future. In turn, these efforts will require involvement in the Arctic Council and its work groups, which are endeavoring to forge consensus among the Arctic nations on many of the most pressing questions facing the region on an international level.

National and International Actions:

***1. The NWTF Recommends that the Alaska State Legislature and the State of Alaska Continue to Urge the United States Senate to Ratify the United Nations Convention on the Law of the Sea*:**

The Alaska State Legislature and Governor Parnell are on record supporting the United States Senate ratification of the United Nations Convention on the Law of the Sea (UNCLOS). The United States is the only major maritime power and the only Arctic nation that is not a party to the convention. More than 160 nations and the European Union have joined UNCLOS. Congressional ratification will substantially benefit our country's economic and national security interests. The NWTW strongly encourages the state of Alaska to continue to support ratification, and it appreciates the efforts of Senator Begich and Senator Murkowski, who are working with their colleagues in the U.S. Senate to get UNCLOS ratification to the Senate floor for a vote as soon as practicable.

International cooperation in the Arctic must be strengthened with the force of law recognized by all Arctic parties. Public testimony and comments from international, national, and state representatives indicates that legal frameworks are already in place for Arctic governance over certain matters.[9] The Law of the Sea Convention provides a mechanism to resolve disputes.

An annex to the convention negotiated under President George H. W. Bush and finalized in 1994 put to rest concerns regarding diminished national sovereignty. Since then, every U.S. president has endorsed ratification. Said President George W. Bush on May 15, 2007, "[Ratification] will secure U.S. sovereign rights over extensive marine areas, including the valuable natural resources they contain. Accession will promote U.S. interests in the environmental health of the oceans. And it will give the United States a seat at the table when the rights that are vital to our interests are debated and interpreted."

Ratification of UNCLOS will enable the U.S. to peacefully legitimize its Extended Continental Shelf claims in the Arctic and gain access to additional oil and gas reserves. Under the convention, nations can submit claims to submerged lands and the resources there if they demonstrate that their continental margin extends beyond the 200-mile Exclusive Economic Zone. UNCLOS also secures open sea lanes for maritime commerce and corridors for submarine cables and pipelines.

[9] Global agreements related to Arctic issues include the United Nations Framework Convention on Climate Change, the Stockholm Convention on Persistent Organic Pollutants, the Treaty of Spitsbergan, which provides for access to the Svalbard Archipelago, and the International Maritime Organization's guidelines for shipping. Regional agreements also exist, such as the joint management agreement between Norway and Russia regarding fishing and the agreement between Canada and the United States regarding co-management of the Porcupine Caribou Herd. These accords establish a history of successful efforts to resolve governance issues between parties in a variety of matters.

United States military, national security, and business interests support ratifying the convention. By failing to act, the United States jeopardizes its effectiveness in shaping future ocean policies, risks its ability to improve its strategic position in the Arctic, and imperils economic opportunities afforded under the convention. The United States should ratify the convention as quickly as possible.

2. The NWTF Supports the Development of a Comprehensive United States Arctic Strategy:

A comprehensive U.S. Arctic policy should ensure that national interests are balanced with Alaska state interests. Commitments to safeguard the environment and preserve the traditions and wellbeing of the region's communities and cultures should accompany all strategies for economic development. Alaska should not only support this effort but also contribute to it, given that Alaska's residents in the region are clearly among those Americans who know the U.S. Arctic best.

On January 9, 2009, President George W. Bush adopted a U.S. Arctic Policy through National Security Presidential Directive 66 (NSPD-66) and Homeland Security Presidential Directive 25 HSPD-25).[1] Under the Obama Administration, this policy still stands. In addition to addressing national security and homeland security needs, the policy calls on the U.S. to:

- Protect the Arctic environment and conserve its biological resources;
- Ensure that natural resource management and economic development in the region are environmentally sustainable;
- Involve the Arctic's indigenous communities in decisions that affect them; and
- Enhance scientific monitoring and research into local, regional, and global environmental issues.

The policy also endorses ratification of the United Nations Convention on the Law of the Sea and calls for continuing participation in the Arctic Council; negotiation of agreements with other Arctic nations regarding increased human activity in the region; and continuing cooperation with other countries on Arctic issues through the United Nations.

On July 19, 2010, building on President Bush's directive, President Obama signed an Executive Order[2] establishing the first ever National Policy for the Stewardship of the Ocean, Our Coasts, and the Great Lakes, which adopts the Final Recommendations of the Interagency Ocean Policy Task Force (IOPTF)[3] and directs federal agencies to implement these recommendations.

[1] The full text of the Arctic Policy can be found at: http://www.fas.org/irp/offdocs/nspd/nspd-66.htm

[2] The full text of the Presidential Executive Order can be found at: http://www.whitehouse.gov/the-press-office/executive-order-stewardship-ocean-our-coasts-and-great-lakes

[3] The full text of the Interagency Ocean Policy Task Force Final Recommendations can be found at: http://www.whitehouse.gov/files/documents/OPTF_FinalRecs.pdf

A cabinet-level National Ocean Council (NOC) has been created to carry out the National Policy. It has established a Governance Coordinating Committee to formally engage with states, tribes, and local governments. Mark Robbins, Associate Director of the Office of the Governor in Washington, D.C., was selected in consultation with Governor Parnell to represent the Alaska region on the 18-member committee.

The implementation of Coastal and Marine Spatial Planning—a comprehensive, ecosystem-based system for coordinating sustainable uses of our oceans and coasts—is among the NOC's priority objectives. The council has called for the creation of nine regional planning bodies—consisting of federal, state, and tribal authorities—to develop coastal and marine spatial plans. According to the existing framework, Alaska will be a region unto itself, with its own planning body.

As the NOC moves forward and U.S. Arctic policy becomes further defined, the state of Alaska should work with federal agencies to ensure that state interests and the interests of Alaska's Arctic communities are fully recognized and incorporated.

3. The NWTF Recommends that the State of Alaska and the United States Encourage and Participate in the Adoption of International Agreements for Fisheries, Oil and Gas, and Other Transboundary Issues:

Arctic nations will benefit from agreements to ensure all parties develop resources in the region safely and responsibly. Cooperation between the United States, Canada, and other Arctic nations in areas including marine research, seafloor mapping, and vessel tracking is encouraging, but more such agreements and understandings are needed. Regardless of when or how the United States moves forward developing its own resources in the Arctic, we must recognize other nations are already active in developing resources off their Arctic coasts and this development could impact Alaska. Marine life, oil spills, and shipping accidents do not respect national boundaries.

The NWTF recommends that international standards related to Arctic oil and gas infrastructure be established among all Arctic nations. These should include requirements for the design, construction, transportation, installation, operation, and removal of offshore structures. An international agreement on oil spill response standards is also essential. Reflecting the level of risk such development brings to the region, these standards should be particularly rigorous. Both the Arctic Council and the International Organization for Standardization have begun work toward these goals. The Arctic Council at the Seventh Ministerial Meeting in Nuuk, Greenland, on May 12, 2011, established a Task Force to develop an international instrument on Arctic marine oil pollution preparedness and response and produce recommendations for the prevention of marine oil pollution. The results are to be presented jointly at the next Ministerial meeting in 2013. In light of oil and gas development already underway in some regions of the Arctic, the NWTF encourages finalization of this work as soon as possible.

The U.S. government should continue international negotiations regarding the management of Arctic marine life. Northern fisheries are covered by international agreements in waters within the 200-mile Exclusive Economic Zones of coastal nations. However, high Arctic waters

beyond those limits are unregulated. We must reach agreements with other Arctic nations to cooperatively research fish stocks and sustainably manage transboundary marine life of all kinds. These accords should be finalized as soon as possible, before commercial fishing expands into the high arctic.

As part of any marine life agreement, the Arctic nations should consider establishing an international fisheries management organization for the Arctic. The state of Alaska and its Arctic communities should be represented in any such organization that is formed.

4. The NWTF Recommends that the Alaska State Legislature and the State of Alaska Support and Encourage Greater International Cooperation through the Arctic Council and Inuit Circumpolar Council-Alaska:

There is a need for on-going, proactive, international cooperation on Arctic issues. Having recognized that the Arctic Council is the world's predominant intergovernmental forum for Arctic governance, the NWTF recommends greater state engagement with the council and its workgroups and encourages its member countries to support expanding its mandate as an institution for forging multilateral and mutually beneficial agreements among Arctic nations.

Established in 1996, the Arctic Council is an intergovernmental group that includes representatives from the governments of Canada, Denmark (including the Faroe Islands and Greenland), Finland, Iceland, the Russian Federation, Norway, Sweden, and the United States.[10] The chairmanship of the council alternates between the member states every two years. Presently, Sweden holds the chair. In 2013 Canada will assume the chairmanship, and in 2015 it moves to the U.S.

No other international body provides a forum for such a diversity of perspectives on matters related to the Arctic. The council's work is noted for its collaborative style. In particular, northern indigenous peoples play an active role in its activities. Organizations granted Permanent Participant status by the council include the Aleut International Association (AIA), Arctic Athabascan Council (AAC), Gwich'in Council International (GCI), Inuit Circumpolar Council (ICC), Russian Association of Indigenous Peoples of the North (RAIPON), and the Saami Council. Permanent Participants enjoy full consultation rights in Arctic Council deliberations and decisions.

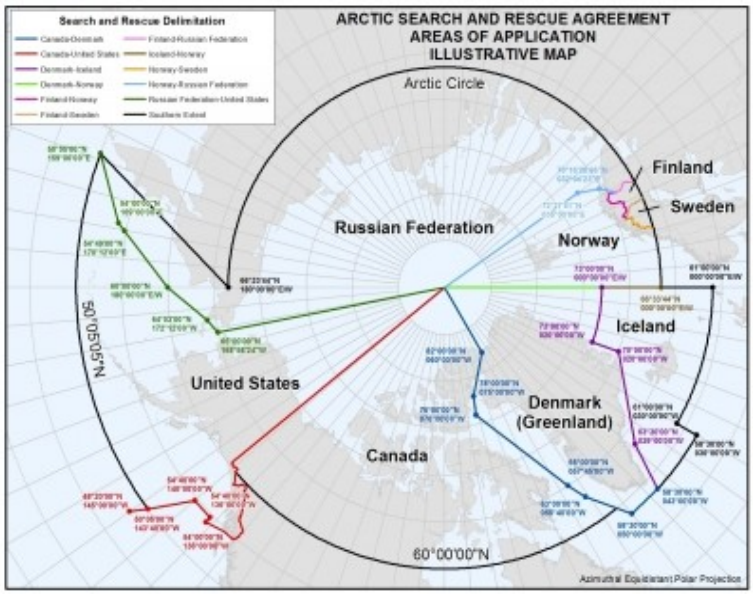
The Arctic Council's work is supported by experts in six working groups who conduct research and prepare analyses to inform the deliberations of the council and other international bodies. Their areas of concentration include sustainable development, Arctic monitoring and assessment, Arctic contaminants, protection of the marine environment, emergency prevention and preparedness, and conservation of flora and fauna.

In May of 2011, the members of the Arctic Council formalized a search and rescue agreement that details Arctic emergency response.[11] It is the first binding legal instrument to have

[10] For more information on the Arctic Council go to: http://www.arctic-council.org

[11] The details of the Search and Rescue agreement can be found at: http://arctic-council.npolar.no/en/meetings/2011-nuuk-

originated with the organization. The Arctic Council also created a task force to develop an international instrument on Arctic marine oil pollution preparedness and response and best practices in the prevention of marine oil pollution. Potentially, these agreements will serve as models for mutual support and cooperation among Arctic nations.



Because the Arctic Council has been at the forefront of moving the international Arctic agenda forward, it makes sense for the State of Alaska to support its continued efforts. In order to strengthen the Arctic Council, the NWTF makes the following recommendations:

- The NWTF believes that the U.S. government should support expanding the Arctic Council's mandate to include discussions on environmental security. Given greater authority, the council will be better able to advance agreements on shipping, commercial fishing, environmental protection, and oil and gas development.

- The NWTF agrees with Aspen Institute and the Arctic Governance Project Steering Committee[12] findings that stronger and more stable funding should be secured for the Arctic Council. In turn, the council would be better equipped to provide resources to its Permanent Participants for increased involvement in council forums.

- The NWTF also supports enlarging the number of non-Arctic states that enjoy Observer status at the Arctic Council, however, not in such a way that would weaken the influence granted to the council's Permanent Participants.

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[12] For the full Arctic Governance Project Report go to:
http://img9.custompublish.com/getfile.php/1219555.1529.wyaufxvxuc/AGP+Report+April+14+2010[1].pdf?return=arcticgovernance.custompublish.com

- The state of Alaska should continue participation in the Emergency Prevention and Preparedness Working Group of the Arctic Council and become more actively involved in other Arctic Council initiatives by attending related forums. Alaskans should be kept informed of progress in these endeavors.

  Additionally, the task force recommends the State of Alaska and the Alaska State Legislature support the efforts of the Inuit Circumpolar Council (ICC).[13] Founded in 1977 by the late Eben Hopson of Barrow, Alaska, the Inuit Circumpolar Council has grown into a major international non-government organization representing approximately 150,000 Inuit of Alaska, Canada, Greenland, and Chukotka (Russia). In addition to holding Permanent Participant status with the Arctic Council, the ICC holds Consultative Status II at the United Nations. ICC-Alaska represents Inuit from Alaska at the Circumpolar Council.

  The State of Alaska and the Alaska State Legislature should establish means for regular communications with ICC-Alaska, in order to enhance collaboration on matters of mutual interest before the Arctic Council and the ICC.

State & Local Involvement:

1. The NWTF Recommends that the Alaska State Legislature Create a Commission to Develop an Alaskan Arctic Strategy:

As the Arctic changes and interest in its natural resources escalates, many complex issues are emerging that hold enormous ramifications for Alaska's future. The State of Alaska and others have only just begun to grapple with these evolving challenges and opportunities.

The Alaska State Legislature should create a commission to develop a comprehensive, long-term Arctic strategy to help guide and coordinate the many critical decisions Alaska faces in the years ahead. The Alaskans assembled for this commission should properly reflect the wide diversity of stakeholders in Alaska's Arctic

This commission's responsibilities should include coordinating efforts between the Legislature, the Administration, and Alaska's Congressional Delegation to effectively communicate Alaska's needs concerning the Arctic to U.S. federal government.

This commission's duties should also include enhancing the state's on-going engagement on Arctic issues on national and international levels, both to keep the state responsive to relevant developments and to ensure that Alaska's manifold interests are understood and acknowledged by all others concerned with the region.

2. The NWTF Recommends the State of Alaska Establish a Commission to Address State-Wide Ocean Issues on an Ongoing Basis:

Alaska has more coastline than the rest of the United States combined. Our oceans bring an

[13] More information about ICC can be found at: http://library.arcticportal.org/99/

enormous amount of wealth to the state through shipping, fishing, tourism and recreation. Oil and gas exploration on Alaska's Outer Continental Shelf is likely to play a pivotal role in the state's future. Climate change and ocean acidification confront us with alarming, imminent, long-term challenges.

In order to focus considerably greater attention and resources on our oceans and coastlines throughout the state, the state of Alaska should authorize an Alaska Oceans Commission, whose membership includes a suitably broad cross section of stakeholders.

3. The NWTF Recommends that the Responsibilities of an Alaska Arctic Strategy Commission and an Alaska Oceans Commission Include Substantial Communication and Consultation with Alaskans:

Both an Arctic Strategy Commission and an Ocean Commission should adopt formal processes for Alaskans to receive information and provide input on Arctic and ocean issues. During NWTF hearings in coastal communities across the state, it was clear that Alaskans must be provided opportunities to participate in Arctic policy and Outer Continental Shelf development decisions. Many local government officials, tribal government representatives, and individuals expressed a need for timelier, more frank, and more thorough information from state and federal authorities regarding policies and activities off our coasts.

The task force believes that consistent structured communication and consultation—particularly with those Alaskans likely to be most impacted by evolving conditions—is the best way to build consensus, advance responsible policies, and stimulate broadly beneficial economic development.

4. The NWTF Recommends that Communities and Organizations in Alaska's Arctic Regions Consider Forming an Arctic Working Group:

Communities and organizations across Alaska's Arctic regions should consider forming an Arctic working group to build region-wide consensus on priority issues and advance their interests at the state, national, and international level. Through such a working group, Arctic residents would be able to collaborate on positions that clearly address local needs, including the preservation of essential indigenous traditions and ways of life. The working group could also serve a valuable communications role, helping to keep its constituent communities abreast of related issues in Alaska, in Washington D.C., and abroad.

The formation of an Alaska Arctic regions working group would be particularly timely, given that the chairmanship of the Arctic Council moves to

Canada in 2013 and, in turn, to U.S. in 2015. This should provide North American interests excellent opportunities to advance their objectives. A coalition of this magnitude could carry great weight in influencing policy and decision making at the state, federal, and international level and provide a clear voice for local residents.

5. The NWTF Recommends that the State of Alaska Continue the Dialogue Regarding a Coastal Zone Management Program:

The Alaska State Legislature should continue to discuss re-establishing a coastal zone management program as a mechanism for coordination, consultation, and consensus building with coastal communities and the federal government on matters of resource development.

Task force members and residents of Wales bringing in fish before a NWTF community meeting.

6. The NWTF Recommends that Alaska Continue Participating in the Pacific Northwest Economic Region's Arctic Caucus:

The Pacific Northwest Economic Region (PNWER) is a non-partisan forum for regional planning whose membership includes governmental, business, and non-profit representatives from Alaska, Idaho, Montana, Oregon, and Washington in the U.S., and Alberta, British Columbia, Saskatchewan, Yukon Territory, and Northwest Territories in Canada.

In 2009, PNWER members from Alaska, Yukon, and Northwest Territories formed the Arctic Caucus in order to explore issues of common interest, including development opportunities and responsible environmental safeguards. The caucus's current priorities include strategies to maximize opportunities for North American interests when the two-year chairmanship of the Arctic Council moves to Canada in 2013 and to the U.S. in 2015.

Alaska should continue to support the participation of its members in the PNWER Arctic

Caucus as advocates for Alaska's interests.

ARCTIC OIL & GAS EXPLORATION and DEVELOPMENT and RESEARCH ON WAYS TO REDUCE THE RISK OF SPILLS AND OTHER ACCIDENTS:

Introduction:

According to a 2008 US Geological Survey (USGS) report, "The extensive Arctic continental shelves may constitute the geographically largest unexplored prospective area for petroleum remaining on Earth." The USGS estimates that 13% of the earth's undiscovered oil reserves and 30% of the undiscovered gas reserves are in the Arctic.[14] To put that into perspective, if these estimates are accurate, it would be the equivalent of adding two Saudi Arabia's to the world's global reserves.

The USGS estimate includes:

- 90 billion barrels of oil
- Nearly 1,700 trillion cubic feet of natural gas, and
- 44 billion barrels of natural gas liquids.

These amounts are in addition to the 240 billion barrels, or about 10% of the world's known petroleum reserves, that have already been discovered. [15]

Eighty-four percent of these new amounts estimated by USGS are predicted to be located offshore. The report puts one third of the estimated oil in the circum-Arctic region of Alaska and the Alaska Outer Continental Shelf (OCS). The Chukchi and Beaufort Sea areas off of Alaska's north coast rank behind the Gulf of Mexico for domestic resources. [16]

The state of Alaska and a number of the companies who have operations here have decades of experience in exploring and developing oil reservoirs in the Arctic and offshore. Although most of the production (over 15 billion barrels) has come from wells on the North Slope, there have also been 78 wells drilled in the Arctic Ocean, 33 wells in the Bering Sea, and 695 wells in Cook Inlet. The safety and environmental record associated with exploration and development work has largely been good, with no major spills or casualties.

However, the challenges of operating in the Arctic must always be respected. As exploration and perhaps development extend further offshore and further from existing operations on the

[14] See USGS Circum-Arctic Resource Appraisal website at http://energy.usgs.gov/arctic/.
[15] USGS Fact Sheet 2008-3049: Circum-Arctic Resource Appraisal: Estimates of Undiscovered Oil and Gas North of the Arctic Circle; at http://pubs.usgs.gov/fs/2008/3049/.
[16] Department of the Interior, "Estimated Undiscovered, Economically Recoverable Resources," http://www.doi.gov/whatwedo/energy/ocs/upload/UERR-map-2012-2017-80-NoYear-Note.pdf.

North Slope, these challenges will intensify. Careful evaluation of risks and implementation of mitigation measures will be critical each step of the way, and constant vigilance will be a mandate.

New OCS exploration and development will occur in steps over time with perhaps a decade or more between the discovery of any new reservoir and its development. There will likely be new challenges. Current exploration plans limit drilling on the OCS to open water periods, with a buffer before seasonal ocean ice starts to form again in the fall. This allows a period of time for addressing drilling problems or spills without the additional complication of ice. Once a well goes into production it would likely be operating year-round, as would any associated pipelines and other facilities needed to move the oil to shore for processing and transportation to markets. It will be important to use the time leading up to the production phase to identify any new measures that should be taken to minimize the risk of spills.

The state of Alaska must also track the exploration and development of oil and gas resources occurring elsewhere in the Arctic, including offshore areas near Norway, Denmark (Greenland), Iceland, Russia, and Canada. Norway and Russia already have producing wells off their shores. The Baltic Sea, which freezes annually, is a major transportation corridor for shipment of crude oil by tanker through ice infested waters. State-of-the-art, purpose-built ice breaking tankers equipped with emergency towing systems, advanced mechanical recovery systems for oil in ice, and recovered oil storage capacity provide valuable insights for operating in broken ice. The experience of Russia, where there are ice conditions more similar to conditions in Arctic Alaska, may also prove instructive. We must also look at the risks to Alaskan waters and shores from spills in the Canadian Arctic and from tankers passing from Russia to Pacific ports. Canada could be looking at deep-water drilling in the Eastern Beaufort Sea off their shore in the near future. The Canadian National Energy Board (NEB) has recently completed a review of offshore drilling practices based on lessons learned from the Gulf of Mexico spill and other recent incidents. The NEB report contributes additional valuable knowledge for how to safely operate in the Arctic. Lastly, cooperation with other Arctic nations, and with individual states and provinces, could help enhance all of our abilities to prevent and respond to spills.

There will also be continuing production from existing and new reservoirs on the North Slope, including perhaps from "unconventional" oil sources such as shale formations. New technologies and systems may be needed to tap these reservoirs, and with them, new methods and means for regulators to oversee the safety of these operations and provide environmental protection.

The Trans-Alaska Pipeline System (TAPS) has been transporting crude oil from the North Slope to Valdez for over three decades. Continued production on and around the North Slope is extending the operating life of TAPS beyond its original design life. This is necessitating modifications up and down TAPS. Another challenge to the continued safe operation of TAPS is the decline in the flow of oil through the system. The flow is currently (2011) at about 600,000 barrels per day, less than one third of the average daily flow at peak production in the late 1980's. Lower flow rates mean less heat in the line and a longer time for the oil to travel from the North Slope to Valdez. With cooler oil in the line there is less time the line can be shut down or slowed down in winter before ice and wax formation begin to occur in the system, possibly making it impossible to safely restart the line until systems thaw in the summer season. There is the need to consider, among other measures, adding heat to certain areas of the line to

avoid longer periods of shutdown or slowdown of TAPS.

There is the prospect of the commercialization of natural gas produced from the North Slope and nearby areas. Although there aren't the same environmental risks associated with the production, storage, and transmission of natural gas as there are with crude oil, there are other environmental concerns. One of these is greenhouse gas (GHG) emissions associated with the production, transmission, and eventual burning of natural gas. There is much interest around the world in moving to natural gas as an affordable yet less carbon-intense fuel for heat and power. However, there are still GHG emissions associated with natural gas. The gas produced on the North Slope varies by production field. Prudhoe Bay gas contains about 12 mol% carbon dioxide, which is not marketable and one of the primary GHGs. If the U.S Congress or EPA chose to regulate the emissions of GHGs, the carbon dioxide in the North Slope gas may have to be removed and re-injected underground rather than released to the atmosphere. It takes a lot of energy to produce energy. It is likely a much larger quantity of natural gas would be burned on the North Slope to power the compressors, generators and other equipment needed to produce and move the gas. There would be a volume of GHG released from the burning of this fuel. Lastly, there is the carbon in the natural gas that would be released when it is burned by the ultimate consumers of the gas. The U.S. EPA currently does not have limits on the concentrations of GHGs that are allowable in the atmosphere (thus what amounts may be emitted), and the U.S. does not impose any kind of tax or fee on GHG emissions. If this changes, it could affect the economics of a North Slope natural gas project.

The NWTF heard from a number of stakeholders during field hearings conducted in Barrow, Wainwright, Kotzebue, Wales and Nome about the concerns local people have about the potential benefits and detriments of Arctic oil and gas exploration and development. There was broad concern about the likelihood of a large oil spill and the impacts it could have on the fragile Arctic environment. Such a spill could impact subsistence and other cultural practices of the local people for decades. They reminded the NWTF of need to be cautious and respectful of the environment and to learn from the local knowledge of the people who have lived sustainably in the Arctic for many generations.

The NWTF also heard from scientists about the need for better scientific knowledge of Arctic ecosystems, the stresses that may already be present from the current climatic warming, and what additional impacts marine transportation and drilling could have on the Arctic. They also described the need to advance mechanical recovery of oil in water, particularly where ice is also present, and other response options. Finally, they spoke to the need to make data and other information more accessible to researchers and the public. Several organizations and agencies are already working on ways to do this.

The NWTF recognizes that as draft plans, leases, permits and other proposed authorizations are put together and distributed for public and agency review, it will be vitally important to have the input of local knowledge and the best science, and where there are critical gaps in our knowledge, to acknowledge this and work diligently to timely and constructively address these gaps.

The NWTF recognizes and appreciates the many efforts that are already underway by local governments, organizations, federal and state agencies, universities, and industry to develop ways to make future activities in the Arctic more safe and protective of the environment and

culture of indigenous people. It is intended that the recommendations below support the continuation and possible enhancement of these efforts, including through better coordination and cooperation among local people, all levels of government, international organizations, and industry to maximize the sharing of knowledge and the arrival at positive outcomes.

1. ***The NWTF Recommends that the State of Alaska and the United States Develop A Framework for the Identification, Acquisition, and Sharing of Data and Other Information to Support Leasing, Permitting, and other Agency Decision:***

The many decisions that will be made by federal and state agencies regarding OCS leasing, exploration, and development will be based on data and other information, some of which may not currently exist or be readily accessible. This creates the risk that agency decisions could be delayed while important information is collected or that agency decisions could go forward without consideration of all important information. There is also the need to monitor for impacts in the Arctic from increased activity and to take these impacts into consideration in future permitting decisions. Good coordination among federal and state agencies and other organizations involved in data collection, data integration, and scientific research will help assure that any data or science gaps will be identified and timely addressed.

To this end, the NWTF recommends:

- State and federal agencies with responsibilities relating to OCS leasing, exploration and development, and oil spill prevention, preparedness, and response collaborate to identify future research that would contribute key data or knowledge to enhance and augment the permitting processes in a timely manner.

- Federal and state agencies, universities, and others coordinate and enhance the sharing and accessibility of scientific data and local knowledge. Data and local knowledge that are important to future decisions relating to OCS activities should be reasonably accessible to the public, researchers, and industry and government agencies. Creating reliable syntheses of studies and reports may also be helpful in providing a broader understanding of important facts and avoiding a duplication of effort.

- Federal and state agencies survey current efforts to develop baseline information and track potential changes in key biological and physical conditions relevant to the sustainability of Arctic ecosystems and species, including walrus, ice seals, bowhead whales, fish, birds, and other marine mammals that inhabit the Beaufort and Chukchi Seas. Identify any additional monitoring that would be helpful in making future resource decisions or responding to spills and other accidents. Identify potential means for collecting these data.

- Greater involvement by the state of Alaska and its universities in international, regional (with Russia and Canada), national, and statewide collaborations on Arctic scientific research. This includes active participation with the U.S. Arctic Research Counsel, and with U.S. agencies involved with the work of the Arctic Commission, the North Pacific

Research Board, and North Slope Science Initiative, among others.

2. The NWTF Recommends that the State of Alaska and the United States Support Continued Improvement in the Ability of Industry and Government To Prevent, Contain, Control, Clean-up and Remediate Spills into Arctic Waters:

Any spill of oil or hazardous substances into open water is a challenge to clean up. The Arctic environment creates additional challenges, such as ice cover and broken ice conditions. Mechanical recovery of oil is the primary cleanup strategy in both state and federal oil spill planning requirements. Other response options, such as igniting the volatile portions of spilled oil ("in-situ burning") or applying dispersants may reduce the impacts of the oil on the environment. In situ burning was developed in Alaska to augment removal of oil in broken ice to accommodate offshore drilling in state waters. The state has developed guidelines for the use of this response tool, and its usefulness has been overwhelmingly demonstrated in the Gulf of Mexico spill and recent industry tests in cold water ice conditions. The window for use of in-situ burning in Arctic conditions is actually extended by cold temperatures, which reduce volatilization. Improvements to mechanical recovery of oil in ice using brush and oleophilic technologies are progressing. Submerged application of dispersants in the Gulf of Mexico significantly reduced the volume of dispersants needed when compared to conventional surface applications. More research will allow continued advancements in spill response technologies to better understand the benefits, or detriments, of the use of mechanical, in-situ burning, and dispersants.

All of the above points to the importance of doing what we reasonably can to prevent spills from ever happening. Realistically, the probability of a spill ever occurring won't get all the way to zero. Thus, it is necessary to be prepared to respond to spills in ways to minimize their consequences. Damages from spills will be reduced if the spill is contained within a smaller area and the source of the spill is quickly stopped. Still, some risk will remain that a spill in open water could not be quickly contained and would migrate towards coastal areas. This creates the need to be able to respond to a spill that covers a large area, encompassing different environments (offshore open ocean, near shore areas, tidelands, estuaries, and shorelines) requiring different response tactics. Virtually all marine spills in Alaska are supported with an on-water response capability because of the lack of road access to coastal shorelines. This requires federal, state, and local governmental entities to work together on spills that cross multiple jurisdictional boundaries. It also raises questions about how industry and agencies will support a response that could last weeks if not longer, particularly in the Arctic, where there is less infrastructure in place.

Russia and Canada are Alaska's neighbors and share a common goal of preventing and responding to spills. Bilateral agreements between Russia and the United States for combating pollution in the Bering and Chukchi Seas and between Canada and the United States for Dixon Entrance and the Beaufort Sea are the means for coordinating joint efforts to prevent, prepare, and respond to incidents which may threaten or cause transboundary marine pollution. The state of Alaska also has jurisdiction over state waters and is coupled to the federal response system through the Unified Plan for Response to Oil and Hazardous Substance Releases and a formal Memorandum of Agreement. With increased shipping through the Arctic and Bering Strait and oil and gas development being planned for the Chukchi Sea and both the Canadian and US portions of the Beaufort Seas, it is essential that the state and US Coast Guard aggressively advance international cooperation and coordination for preparedness and response with Russia and Canada.

To this end, the NWTF recommends:

- State and Federal agencies with direct responsibilities for oil spill prevention, preparedness, and response work cooperatively with industry, local officials, and other stakeholders to develop a framework to periodically share information on their respective efforts to reduce the probability and severity of oil spills in the Arctic. The purpose would not be to duplicate current agency or industry efforts to comply with federal and state law, but rather to enhance communication and transparency on issues of mutual concern and seek additional synergies and means for improving oil spill prevention, preparedness, and response.

- Update current agreements or memoranda of understanding among state and federal agencies that describe the state of Alaska's role in the review and consideration of spill prevention and response provisions in federal OCS exploration and contingency plans.

- State and Federal agencies should enhance oil spill preparedness and response through forums by which on-scene coordinators and incident commanders in Alaska can provide recommendations for improvement based on operational experience.

- State and Federal agencies should work jointly under the existing bilateral agreements to formally plan, prepare, exercise, and drill for mutual aid and a joint international response with Russia and Canada for transboundary spills which may impact Alaskan waters.

- Enhance coordination among state and federal agencies, industry, and stakeholders in the preparation of government regional response plans and facility-specific plans prepared by industry.

- State and federal agencies and industry should be encouraged to work with people in coastal communities where spills could occur to incorporate local knowledge into the spill contingency plans and to enhance local initial response capabilities. The state should continue to support the prepositioning of initial response assets in these communities and local response agreements and training.

- State and federal agencies (Alaska Regional Response Team) should timely address any outstanding science or other issues relating to the use of in-situ burning or dispersants in responding to spills in marine waters. The Unified Plan for Alaska should provide for pre-approval of the use of in-situ burning and dispersants in accordance with appropriate findings and consultations by the federal and state on-scene coordinators.

- The state of Alaska, which has primary jurisdiction over the flow lines that carry the mixture of crude oil, water, gas, and other material from the well head to a processing facility where the oil is extracted, should continue to develop and implement its current program to oversee the safe operation and maintenance of these lines and encourage development of practicable means to reliably monitor for leaks from these lines. This will become all the more critical as the number of subsea or buried flow lines (as well as surface flow lines) could likely increase in the future. Pipeline leak detection helps

identify leaks early and avoid small leaks that could continue undetected for longer periods of time, resulting in larger spills.

- State and federal agencies should work with Alyeska Pipeline Service Company, its owners, and other stakeholders to timely identify and address risks associated with operating TAPS at decreasing flows.

- The state of Alaska should encourage collaborations among companies operating on the OCS to share best practices, fund research, and establish goals, expectations, and voluntary monitoring and reporting programs that drive the industry towards continuous improvement in increasing safety and reducing environmental risks.

- The state of Alaska should also encourage collaborations among industry and government, both at international and domestic levels, to develop better means to track and mechanically recover oil in ice and broken ice conditions in the Arctic. There are a number of existing collaborations that the state should continue to encourage, including the Joint Industry Partnership.

- The state agencies with primary responsibilities for well safety, control, spill response, and leasing (the Alaska Oil and Gas Conservation Commission, the Alaska Department of Environmental Conservation, and the Alaska Department of Natural Resources) should continue to coordinate their efforts relating to well safety and control risks, response planning standards, and the evaluation of the value of establishing state requirements for safety and environmental management systems.

- ADEC should maintain its relationships with neighboring jurisdictions to exchange information and share resources to reduce the risk of spills. This includes participating in mutual aid agreements, transboundary spill planning, training exercises, and research.

3. The NWTF Recommends that the State of Alaska Set a Goal to be a Leader in the Safe Exploration and Production of Oil and Gas in the Arctic.

Over the last three decades, companies operating on the North Slope and in Cook Inlet pioneered a number of important technologies and programs in the oil and gas industry. These include advancements in extended-reach drilling and enhanced oil recovery, to name a few. The TAPS, when it was completed over 20 years ago, was considered an outstanding engineering accomplishment. The state, along with federal agencies, industry, response cooperatives, and local oversight organizations, has over the last 20 years developed and maintained oil spill planning, preparedness, and response capabilities for Cook Inlet and Prince William Sound that are models for what can be achieved with innovation, commitment, and cooperation.

Alaska is home to indigenous people who have lived here sustainably for thousands of years and have a deep respect and understanding of the natural Arctic environment. They have been important contributors to the success of scientists studying the area and the companies that work there.

Alaska should be a leader in any development of oil and gas resources in the Arctic. The University of Alaska is well positioned to support this effort along with state agencies. Currently, the University of

Alaska Fairbanks (UAF) is proposing to establish a research center focused on oil spill prevention and preparedness in the Arctic. Experts across the University are already engaged in numerous research projects related to Arctic oil spills; the center would help consolidate the effort. This center will allow UAF to partner with state and federal agencies, industry, and other academic institutions on their work.

To this end, the NWTF recommends:

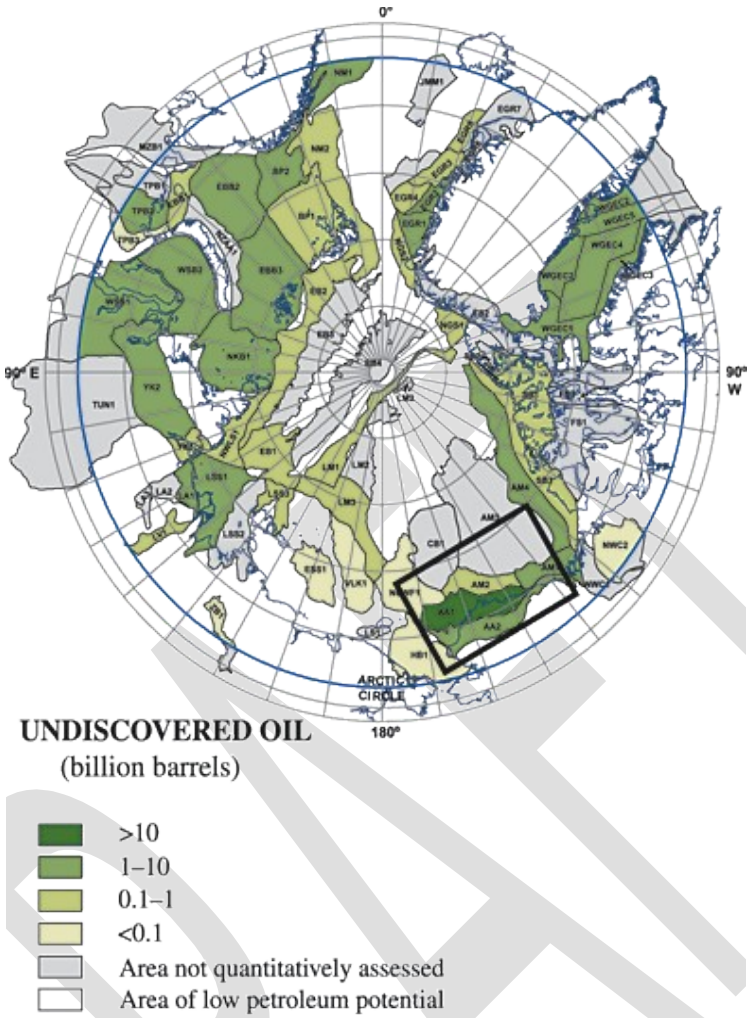
- Development of the University of Alaska as a center of excellence for research of practical and deployable technologies that can be used by government agencies and industry to reduce the probability and severity of spills in Arctic waters, whether from vessels or fixed facilities such as drilling platforms and pipelines.

- Collaborations with local governments and other regional entities that will help integrate local knowledge with science and improve the understanding of the risks of offshore oil and gas operations in the Arctic.

- Alaska's continued participation in international and national venues, including Arctic Council work groups, where best practices and knowledge are shared, and where additional research can be done together.

4. The NWTF Recommends that the State of Alaska Encourage Congress to Raise Liability Limits and Fund Oil-Spill-in-Ice Research:

The state and the legislature should encourage Congress to raise the liability limit for oil spills and increase the per incident pay out from the Oil Spill Liability Trust Fund. The state and the legislature should also encourage Congress to fund oil-spill-in-ice research by appropriating the Oil Pollution Act of 1990 resources as originally intended. DEC should participate in the Interagency Coordinating Committee on Oil Pollution Research (ICCOPR) established under the Oil Pollution Act to advocate for development of Arctic-specific oil spill research and development.

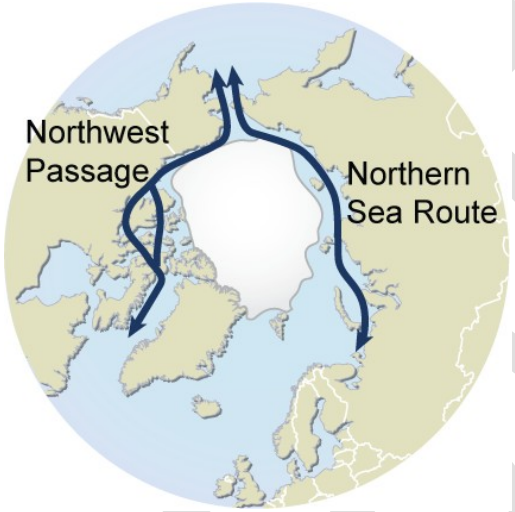


Assessment units of the Circum-Arctic Oil and Gas Assessment, color-coded according to the mean estimated undiscovered, technically recoverable oil resources. The black rectangle outlines the approximate location of the Alaska North Slope and Beaufort and Chukchi Seas OCS areas. Modified from Gautier and others (2009) by the U.S. Geological Survey.

Marine Transportation:

Introduction:

Within the next ten to twenty years, the loss of perennial sea ice is expected to open Arctic waters for a substantial part of each year to new shipping routes. Maritime powers have been searching for a shorter route from the Atlantic to Asia for centuries. The melting Arctic raises the possibility of two such routes:



Source: Hugo Ahlenius, UNEP/GRID-Arendol

- The Northern Sea Route runs along Russia's northern border from Murmansk to Providenya and could be used for trade between northeast Asia and northern Europe.
- The Northwest Passage runs through the Canadian Arctic Islands and the Alaskan Arctic Ocean and could be used for trade between northeast Asia and North America.

The economic benefits of these new routes could be significant. Of the two sea lanes, the Northern Sea Route holds particular promise due to superior depth, summers freer of ice, and comparatively direct routing. Therefore, it is anticipated that this will be the preferred arctic sea lane in the near future. Ships sailing between East Asia and Western Europe could save more than 40% in transportation time and fuel costs by navigating this route instead of the Suez Canal.

Currently, most Arctic marine traffic is destinational, delivering goods and supplies to the Arctic or transporting minerals out of the region. In 2006, it was estimated that some 6,000 vessels operated in or transited the Arctic in tourism, minerals mining, oil and gas exploration, military operations, and other activities. Today this number has reached more than 7,000, and many nations are actively building more ships designed to operate in Arctic waters. Notably, traffic related to eco-tourism is expanding rapidly in the region. In 2004, an estimated 1.2 million passengers visited the Arctic; by 2007 this number had doubled.

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(U) Shortest Routes Between Major Ports of the Atlantic and Pacific

Red denotes Northern Sea Route (NSR) Yellow denotes Northwest Passage Blue denotes Suez or Panama Canals

		ASIA										NORTH AMERICA	
		Shanghai (1/2)	Singapore (2/1)	Ningbo (3/-)	Guangzhou (5/13)	Tianjin (6/18)	Qingdao (7/11)	Qinhuangdao (8/-)	Hong Kong (9/3)	Busan (10/6)	Dalian (11/26)	Vancouver (47/47)	Long Beach (55/-)
EUROPE	Rotterdam (4/7)	NSR	Suez	NSR	NSR	NSR	NSR	NSR	NSR	NSR	NSR	NSR	NSR
	Antwerp (17/15)	NSR	Suez	NSR	NSR	NSR	NSR	NSR	NSR	NSR	NSR	NSR	NSR
	Hamburg (23/10)	NSR	Suez	NSR	NSR	NSR	NSR	NSR	NSR	NSR	NSR	NSR	NSR
	Marseilles (36/-)	Suez	Suez	Suez	Suez	Suez	Suez	Suez	Suez	Suez	Suez	NSR	Panama
	Amsterdam (40/-)	NSR	Suez	NSR	NSR	NSR	NSR	NSR	NSR	NSR	NSR	NSR	NSR
	Novorossiysk (52/-)	Suez	Suez	Suez	Suez	Suez	Suez	Suez	Suez	Suez	Suez	NSR	Panama
	Le Havre (53/39)	NSR	Suez	NSR	NSR	NSR	NSR	NSR	NSR	NSR	NSR	NSR	Panama
	Algeciras (57/30)	Suez	Suez	Suez	Suez	NSR	NSR	NSR	Suez	NSR	NSR	NSR	Panama
	Primorsk (58/-)	NSR	Suez	NSR	NSR	NSR	NSR	NSR	NSR	NSR	NSR	NSR	NSR
NORTH AMERICA	South Louisiana (13/-)	Panama	Panama	Panama	Panama	Panama	Panama	Panama	Panama	Panama	Panama	Panama	Panama
	Houston (16/-)	Panama	Panama	Panama	Panama	Panama	Panama	Panama	Panama	Panama	Panama	Panama	Panama
	New York (21/20)	NWP	Suez	NWP	NWP	NWP	NWP	NWP	NWP	NWP	NWP	Panama	Panama
	Corpus Christi (60/-)	Panama	Panama	Panama	Panama	Panama	Panama	Panama	Panama	Panama	Panama	Panama	Panama
	Beaumont (59/-)	Panama	Panama	Panama	Panama	Panama	Panama	Panama	Panama	Panama	Panama	Panama	Panama
	New Orleans (63/-)	Panama	Panama	Panama	Panama	Panama	Panama	Panama	Panama	Panama	Panama	Panama	Panama
	Mobile (72/-)	Panama	Panama	Panama	Panama	Panama	Panama	Panama	Panama	Panama	Panama	Panama	Panama
	Lake Charles (73/-)	Panama	Panama	Panama	Panama	Panama	Panama	Panama	Panama	Panama	Panama	Panama	Panama

NOTE: Parenthetical numbers indicate the port's 2007 rank worldwide by total cargo volume,/total container traffic,according to the American Association of Port Authorities.

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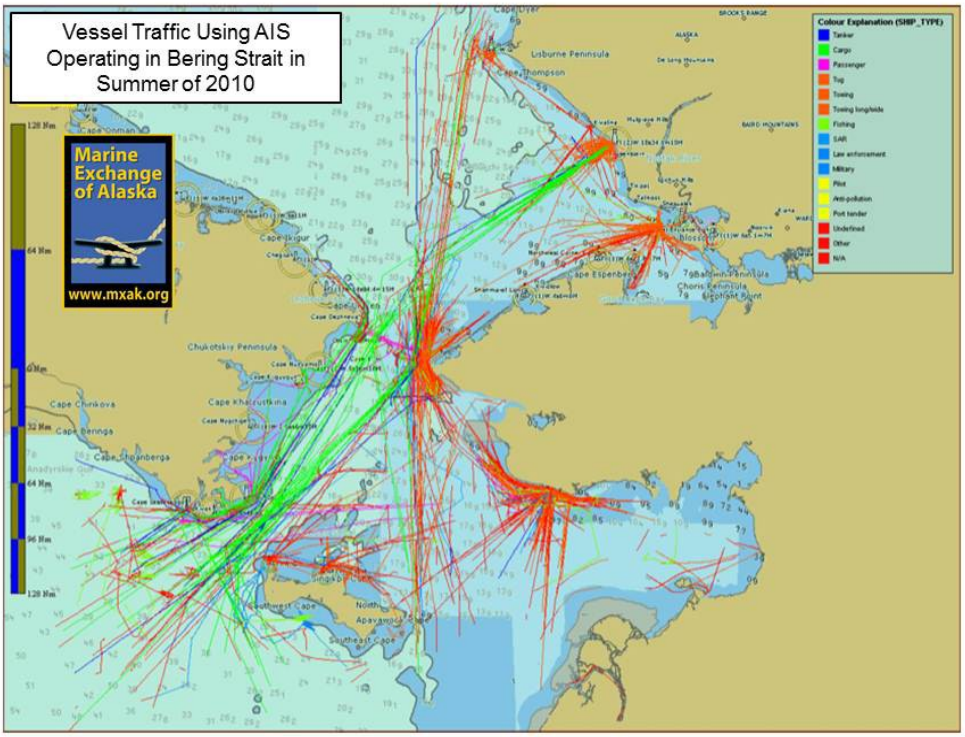
Table provided during a May, 2011, presentation by Z. Hamilla of the Office of Naval Intelligence

With increased shipping and marine traffic comes increased risk of vessel groundings, spills, allisions, collisions, pollutants, noise disturbances, and invasive species. This risk is particularly high due to the lack of detailed navigational charts, reliable weather forecasting, vessel traffic separation protocols, search and rescue infrastructure, and overall maritime domain awareness throughout the Arctic.

Based on these changes and factors the NWTF makes the following recommendations:

1. ***The NWTF Recommends that the United States Work with the International Community to Finalize the Polar Code and Establish a Bering Strait Vessel Traffic Separation Scheme***:



Vessel Traffic in the Bering Strait Region during the summer of 2010 as depicted by the Marine Exchange of Alaska

Maritime shipping is regulated through international treaties that establish standards for the safety and security of maritime operations. These standards are agreed upon through the International Maritime Organization (IMO), an agency of the United Nations.

Currently, Arctic ships are governed by the same requirements as any other open water ships. The IMO needs to finalize the Polar Code to supplement international maritime and environmental conventions that already apply in the Arctic. The Polar Code can provide additional requirements regarding rescue equipment, passenger safety, firefighting, ice navigation, and navigation in uninhabited areas. Additionally, the code can include requirements for Arctic ship construction, design, equipment, crew training, and operations. The IMO should also consider measures or regulatory frameworks to provide safety mechanisms for the regions of the central Arctic Ocean beyond coastal state jurisdiction.

The Polar Code is currently being drafted, and the rules are expected to be in force by 2014. The United States and Alaska should be actively involved in discussions with the IMO to ensure that Alaska's unique needs are met.

The United States and Russia need to begin a process with IMO of establishing Bering Strait routing measures. Clearly, all transient traffic in the future, regardless of the route taken, must transit the Bering Strait. This remote, narrow, and hazardous international strait is located in an environmentally sensitive area with little to no search and rescue or maritime disaster-response capability within 800 miles. Increased vessel traffic in the future will make this area particularly vulnerable to maritime disasters. It is only prudent that basic routing measures and vessel monitoring systems be put in place to reduce the risk of calamity in the Bering Strait.

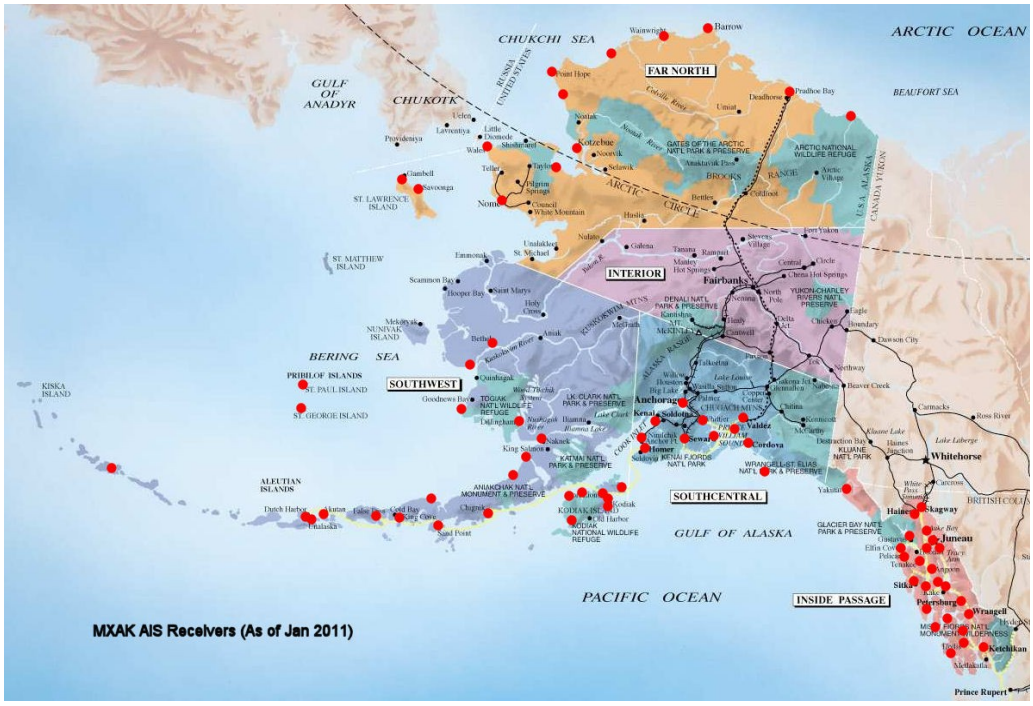
2. The NWTF Recommends that Navigational Charts and Other Aids to Navigation be Updated and Improved along with Vessel Tracking and Automatic Identification Systems:

For safe shipping, existing nautical charts for the Arctic need to be updated. In an effort to reduce the likelihood of accidents, an assessment of navigational needs should be undertaken to identify priority actions and target locations most likely to present hazards. Short and long range navigation aids will be needed, for example, buoys, iceberg and other sea-condition warning systems, high-risk-area vessel-traffic management systems, and improved communication technology.

Expanding Automatic Identification System (AIS) vessel tracking across Alaskan northern waters beyond the Canadian border to Tuktoyuktuk should be a high priority. The system—an international government/industry partnership—serves vital governmental and private sector needs. Expanding it will produce a clear record of transport across the U.S. Arctic waters, particularly for vessels either servicing Canadian western Arctic communities or bound for transit through the Northwest Passage. As AIS provides a traffic monitoring service, it also provides a mechanism where a navigation watch with safety zones can aid navigation across the Arctic waters where permanent aids to navigation are difficult to power and maintain. Expanding the AIS network across the western Arctic will also allow for compliance under the

International Maritime Organization Guidelines for Ships Operating in Polar Waters (Resolution A.1024(26)).

The Alaska State Legislature and the state of Alaska should continue to support the expansion of the Marine Exchange of Alaska's vessel tracking in the Arctic. The task force encourages the organizations and agencies involved in vessel tracking to pursue all channels of funding to increase their vessel tracking range.



Locations of the Marine Exchange of Alaska's AIS Receivers as of Jan 2011

3. *Northern Waters Task Force Supports the National Oceanic and Atmospheric Administration's (NOAA) Hydrographic Arctic Mapping and Recommends that NOAA Also Include Detailed Near Shore Bathymetric Mapping:*

The NWTF supports increased funding to expedite the mapping of the Arctic regions of Alaska, with particular support for updated mapping of coastal navigation routes and entrance routes to coastal villages.

The NWTF concurs with the 2011 National Hydrographic Survey Priorities for Alaska. However, NOAA priorities for Alaska in the Bering Strait should be moved from priority two to priority one. The Bering Strait is the shipping choke point in Alaska's northern waters. It is imperative that up-to-date bathometric information be provided for safe navigation. The NWTF encourages the exchange of this information with the Russian government so that both governments have complete mapping of the entire strait.

The task force also supports NOAA's efforts to fund additional tidal observations to close the tidal data gap in accordance with the 2008 NOAA Network Gap Analysis for the National Water Level Observation Network. These increased observations will allow the joining of the digital mapping initiative vertical data with the Mean High Water and Mean Lower Low Water data that determine ownership and jurisdiction of state, federal, Native, and private lands.

4. The NWTF Recommends that the Alaska State Legislature and the State of Alaska Continue to Support Maritime Training Centers in Alaska:

The need for trained and experienced mariners to operate in the Arctic is clear. The task force highly recommends the development of training programs throughout Alaska that can produce competent seafarers for safe operations in the Arctic. Specialized training—such as a USCG approved Ice Navigator curriculum that would implement the recommendations of the Arctic Marine Shipping Assessment and be consistent with the future requirements of the IMO Polar Code—is essential. In addition, qualifications, training, and experience standards for operation of ice breakers, arctic lightering operations, and high latitude navigation should be considered to ensure that increased maritime commerce in the Arctic is developed safely.

The Task Force sees a real opportunity for Alaska to become the U.S. center of excellence in Arctic maritime training and seafarer development. Building on the state's strong university system, institutions such as the AVTEC Maritime Training Center, and practical training opportunities in Alaska's ice covered waters, this state is uniquely positioned to become an international leader in high latitude navigation safety training.

5. The NWTF Supports Completing the Aleutian Islands Risk Assessment and Initiating a Shipping Risk Assessment for the Bering Strait:

Aleutian Islands Risk Assessment:

Phase A of the Aleutian Island Risk Assessment has been completed by the Advisory Panel assembled for the project. The findings are posted at http://aleutiansriskassessment.com/.

The study mainly focused on traffic following the great circle route through the Aleutian Islands and Bering Sea. The guiding principles applied to the analysis of risk reduction options were that prevention measures take priority over response measures and all measures should be realistic and practical.

The Advisory Panel developed recommendations for risk reduction options in two categories: those recommended for immediate implementation and those recommended for further study in Phase B of the assessment.

Options for immediate implementation include:

- Develop an enhanced vessel monitoring and reporting program;
- Enhance towing capabilities on Coast Guard cutters, and increase cutter presence in the Aleutians;
- Stage additional emergency towing systems in the Aleutians.

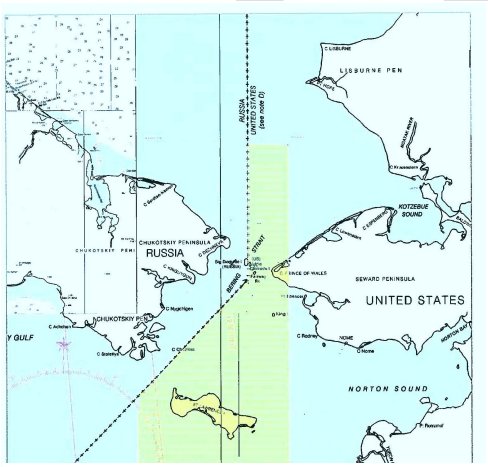
Options recommended for additional development or study in Phase B, prior to full implementation:

- Increase rescue tug capability in the Aleutians;
- Increase salvage and spill response capability in the Aleutians;
- Determine the boundaries of IMO Particularly Sensitive Sea Areas, and develop recommendations for associated protective measures;
- Strengthen the Aleutians Subarea Contingency Plan.

Other key considerations for reducing risk of groundings and spills include offshore vessel routing for circumpolar traffic to provide timeframes for responding to disabled vessels. Offshore vessel routing has been successfully employed along the Pacific west coast and is a primary, cost-effective tool for reducing risk that can be efficiently implemented. Implementation of offshore vessel routing for the Aleutians would yield the same success as has been enjoyed on the Pacific west coast.

Full implementation of the federal rules is made more important because of increased shipping already occurring through Arctic waters. Implementation of the federal rules is critical to developing a response capability for the Arctic as well as the Aleutians.

Bering Strait Shipping Risk Assessment:



The shaded region represents the Study Area for the USCG's Bering Strait Port Access Route Study as described in (75 FR 68568).

The NWTF recommends that the State of Alaska participate in and support the efforts of the USCG Port

Access Route Study. Alaska should work with the USCG and Russia to bilaterally assess the risk of increased shipping through the Bering Strait and analyze the options for staging international assets to respond to that risk. The location of staging areas in Nome or other Alaska coastal locations should be considered for US assets. Provideniya or other Russian coastal areas should be considered for Russian assets. This effort would contribute greatly to the development of any future IMO-led effort to establish internationally binding ship routing measures, such as a Bering Strait Vessel Traffic Separation Scheme.

6. The NWTF Recommends Non-Tank Vessel Rules and Standards for Arctic Transit:

NWTF was constantly reminded throughout our work that the Arctic by definition includes all of the Aleutian Islands and the entire Bering Sea as well as the waters north of the Bering Strait. Moreover, it is our beliefs that while the aforementioned "assessments" proceeds, there several common and irrefutable facts that must be addressed at all levels of the Public and Private Sectors. This work includes the following:

1. Implementation of Non-tank Vessel Rules and Aleutian Island Transit Standards: Today the most likely environmental threat to the Arctic is an incident involving a non-tank vessel. These are typically large commercial vessels with fuel tanks in excess of one million gallons of fuel and related hazardous cargos. Empirically and statistically these vessels make up the greatest percentage of transits and they have proven over time to be the vessels most likely to experience an accident that puts them in jeopardy of sinking or running aground. Non-tank Vessel rules will require these vessels to meet more stringent standards of responsible party requirements and allow government agencies to provide greater oversight.

   Immediate implementation of the USCG Non-tank Vessel Plan (NTVRP) rules would advance development of a response capability as well as marine firefighting and salvage capacity in the Aleutians. This is critical in an area of the state that supports the largest commercial fishery in the country. This rule would require vessel response plans for non-tank vessels calling in US ports. In combination with the tank vessel rule already in place, this rule would place the burden of providing sufficient salvage, firefighting, and response capabilities on all vessels passing through the Aleutians that call on US ports. The requirement to comply with these rules would provide the necessary incentives for vessel owners/operators to fund increased salvage and spill response capabilities in the Aleutians. It may also be the means for financing an appropriate rescue tug for this economically and biologically important resource area.

2. Maritime Emergency Response Capability: Everywhere the NWTF went we were reminded of the dearth of response capabilities in the Arctic, from Attu to Deadhorse. More study and more reports will not change this fact. State jurisdiction for meeting requirements for oil spill contingency plans and financial responsibility apply to state waters, which extend out to three miles. Federal jurisdiction for federal oil spill contingency plan and financial responsibility requirements apply to federal waters out to twelve miles. (***verify if US financial responsibility requirements extend beyond 12 miles or not)***Vessels within twelve miles and not calling on a US port, however, are in innocent passage and are not subject to US or state requirements. Vessels navigating from the Arctic and passing through the Bering Strait and vessels navigating the circumpolar route through the Aleutian Islands that are not calling on a US port are not subject to either federal or state oil spill contingency plan or financial responsibility requirements, even though they are in close proximity to Alaska coastlines and pose a significant threat if there was a casualty. These vessels will not have the contracted response capability with an Oil Spill Removal Organization (OSRO) to respond and contain a release.

   It is the finding of the NWTF that maritime transportation response capabilities for search and rescue, salvage, and environmental response—both government and industry owned—must be provided. Recent near misses involving loss of propulsion, steerage way, and dropped tows have come close to disaster and if not for good fortune could have ended in tragedy. Reliable and predictable response capability is needed now.

   Development of a response capability for vessels in innocent passage is critical to the protection of Alaska's enormous fisheries, subsistence, and coastal resources. International and bilateral agreements provide an opportunity to develop a response capability for vessels in innocent passage. In that regard, the state and federal agencies should proactively advocate for increased preparedness and response measures for vessels in innocent passage through the Arctic Council's efforts to establish a preparedness and response agreement for the Arctic nations. Other venues include collaboration with Russia to jointly develop a capability for the Bering Strait via the bilateral agreement for combating pollution in the Bering and Chukchi seas. The 1990 International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC), which was signed by the US and the International Maritime Organization (IMO), provides other venues by which the state and federal government can advocate for development of a response capability and OSROs for vessels in innocent passage.

3. Alternative Compliance Rules: It is clear to NWTF that the tyranny of distance and the time of response throughout the Arctic will require innovation and creativity by all entities involved to find effective and affordable solutions. Alternate compliance rules provide opportunity for this creativity and can drive down cost. NWTF strongly recommends that the US Coast Guard and industry work together to not only bring forth these ideas but also to implement the best solutions as soon as possible.