North Slope Borough
Oil and Gas Forum

Promoting Responsible Development through Better Coordination
July 20 – 22, 2016
Anchorage Alaska

Mike Aamodt, Mayor
Harry Brower, Mayor Elect
Gordon Brower, Planning Director

Forum Organizing Committee
Gordon Brower, Director, Department of Planning and Community Services
Robert Suydam, Senior Wildlife Biologist, Wildlife Management Department
Jason Bergerson, Assistant to the Director, Administration & Finance Department
Noe Texeira, Mayor’s Office
Karen Crain, Division Manager, Mayor’s Office

Staff
Matt Dunn, Division Manager, Community Planning
Wayne Cary, Assistant Borough Attorney
Glenn Gray, Glenn Gray and Associates

Facilitation Team – Crossroads Leadership Institute
Elizabeth Benson – Facilitator
Dick LaFever – Facilitator
Dr. Terry Stinson
Bill Hall
Cheryl Westley
Gene Pavia

Photo Credit: Photographs of the Forum courtesy of Tom Lohman

This forum is funded with qualified Outer Continental Shelf oil and gas revenues by the Coastal Impact Assistance Program, Fish and Wildlife Service, U.S. Department of the Interior

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1 At the time of the Forum, Mike Aamodt was the Mayor. Harry Brower Jr. was elected as Mayor on July 19, and the election results were certified the week after the Forum.
2 At the time of the Forum, Gordon Brower served as the Deputy Planning Director.
It was a pleasure to attend the North Slope Borough’s second Oil and Gas Forum with representatives from the North Slope Borough, state and federal agencies, industry, nongovernmental organizations, tribes, North Slope communities, and Native corporations. At that time, I was representing the Borough’s Department of Wildlife Management, and Mike Aamodt was Mayor. I thank Mike for his service. As we enter into a new phase of oil and gas development, it will be important to ensure stakeholders have a seat at the table.

The theme of this forum, Promoting Responsible Development through Better Coordination sums up where we need to go next. Because the many landowners and regulatory agencies on the North Slope have separate missions and responsibilities, it is important to continue meetings like these to continue the dialog.

The North Slope Borough organized this forum because of its responsibility for land use planning and zoning across the entire 94,795 square miles of land and water within its jurisdiction. The Borough has a responsibility to provide for economic development as well as wise management of natural resources and protection of the subsistence way-of-life.

Participants in the 2016 Oil and Gas Forum identified concerns about oil and gas development that ranged from permit delays to local impacts from development. Many of the recommendations generated during the three-day meeting were general in nature, so the challenge to all of us is to identify specific solutions to the issues raised during the Forum.

One thing is clear from the discussions during the Forum - more work needs to be done to coordinate efforts among those who have a stake in the North Slope. The Borough intends to do its part to follow through with implementing the recommendations, and it encourages others to take the lead on issues important to them. As former Mayor Aamodt said at the outset of the Forum, one advantage of times like these is the opportunity to take a breath and think about where we have been and where we want to go.

Sincerely,

Harry Brower, Jr.
Mayor
List of Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADF&amp;G</td>
<td>Alaska Department of Fish and Game</td>
</tr>
<tr>
<td>AEWC</td>
<td>Alaska Eskimo Whaling Commission</td>
</tr>
<tr>
<td>ANICA</td>
<td>Alaska Native Industries Cooperative Association, Inc.</td>
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<tr>
<td>ANWR</td>
<td>Arctic National Wildlife Refuge</td>
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<tr>
<td>AS</td>
<td>Alaska Statute</td>
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<tr>
<td>ASRC</td>
<td>Arctic Slope Regional Corporation</td>
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<tr>
<td>BAT</td>
<td>Best Available Technology</td>
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<tr>
<td>BLM</td>
<td>Bureau of Land Management (a federal agency)</td>
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<tr>
<td>BMP</td>
<td>Best Management Practice</td>
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<tr>
<td>CAA</td>
<td>Conflict Avoidance Agreement</td>
</tr>
<tr>
<td>CEO</td>
<td>Chief Executive Officer</td>
</tr>
<tr>
<td>Corps</td>
<td>U.S. Army Corps of Engineers (also abbreviated as USACE)</td>
</tr>
<tr>
<td>DOI</td>
<td>U.S. Department of the Interior</td>
</tr>
<tr>
<td>DOT&amp;PF</td>
<td>Alaska Department of Transportation and Public Facilities</td>
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<tr>
<td>DNR</td>
<td>Alaska Department of Natural Resources</td>
</tr>
<tr>
<td>DR&amp;R</td>
<td>Decommissioning, Removal and Restoration</td>
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<tr>
<td>E&amp;P</td>
<td>Exploration and Production</td>
</tr>
<tr>
<td>EIS</td>
<td>Environmental Impact Statement</td>
</tr>
<tr>
<td>EPA</td>
<td>Environmental Protection Agency</td>
</tr>
<tr>
<td>GAO</td>
<td>U.S. Government Accountability Office (formerly called Government Accounting Office)</td>
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<tr>
<td>GIS</td>
<td>Geographic Information System (a computer mapping tool)</td>
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<tr>
<td>GMT</td>
<td>Greater Mooses Tooth (a development project in NPR-A)</td>
</tr>
<tr>
<td>IAP</td>
<td>Integrated Activity Plan (a BLM plan often issued with a final EIS)</td>
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<tr>
<td>MOU</td>
<td>Memorandum of Understanding</td>
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<tr>
<td>NEPA</td>
<td>National Environmental Policy Act</td>
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<tr>
<td>NPR-A</td>
<td>National Petroleum Reserve-Alaska</td>
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<tr>
<td>NSSI</td>
<td>North Slope Science Initiative</td>
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<tr>
<td>NSB</td>
<td>North Slope Borough</td>
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<tr>
<td>RDC</td>
<td>Resource Development Council (a trade organization)</td>
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<tr>
<td>RMS</td>
<td>Regional Mitigation Strategy (a BLM document for NPR-A)</td>
</tr>
<tr>
<td>ROD</td>
<td>Record of Decision (a decision made in conjunction with an EIS)</td>
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<tr>
<td>SAP</td>
<td>NPR-A Subsistence Advisory Panel</td>
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<tr>
<td>TNHA</td>
<td>Tagiugmiullu Nunamiullu Housing Authority</td>
</tr>
<tr>
<td>UIC</td>
<td>Ukpēaġvik Ḵaanaq Corporation (Barrow Native Corporation)</td>
</tr>
<tr>
<td>USACE</td>
<td>United States Army Corps of Engineers (also abbreviated as Corps)</td>
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North Slope Borough Oil and Gas Forum
July 20 – 22, 2016 Anchorage, Alaska

Executive Summary
The 2016 Oil and Gas Forum follows a similar forum organized by the North Slope Borough (NSB or Borough) in 2007. The theme, Promoting Responsible Development through Better Coordination, reflected the focus of the 2016 Forum. The topics of the eight breakout sessions flow from recommendations in the Borough’s 2014 Oil and Gas Technical Report. These topics were: 1. Reducing duplication and streamlining permitting; 2. Coordinating land use planning and management; 3. Improving the management of tundra travel; 4. Promoting innovative approaches to mitigation; 5. Planning for future transportation and utility corridors; 6. Reducing impacts from North Slope air traffic; 7. Decommissioning oil and gas infrastructure; and 8. Communicating with residents.

The purpose of the Forum was to bring together those with a stake in the future of the North Slope to promote the management of land uses and resources in a regional context (see Appendix A for the Forum Fact Sheet). As the geographic area of oil and gas development expands, there is a growing need to coordinate activities among the many regulatory agencies, landowners and companies doing work in the Borough. A more coordinated approach will encourage greater efficiency, improved permitting and cost savings.

The 115 people who attended the forum represented state and federal agencies, NSB, industry, nongovernmental organizations, Native corporations, communities, and tribes (see Appendix B for a list of participants). The Forum included a mix of plenary sessions and breakout sessions that included panel discussions, presentations and group discussions (see Appendix C for the agenda). The biographies of presenters and panelists may be found in Appendix D.

During the eight breakout sessions, facilitators led group discussions to identify issues and develop recommendations for next steps (see Appendix E). On the last day of the Forum, all participants voted for the top three recommendations from each of the breakout sessions as indicated in the following tables.

**Breakout Session #1: Working Together to Reduce Duplication and Streamline Permitting**

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Votes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good stakeholder engagement builds trust and relationships</td>
<td>42</td>
</tr>
<tr>
<td>Consistency among regulatory approvals</td>
<td>40</td>
</tr>
<tr>
<td>Standardize requirements for background documents needed to support a complete application packet and permit issuance</td>
<td>35</td>
</tr>
</tbody>
</table>

**Breakout Session #2: Coordinating Activities to Improve Land Use Planning and Management**

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Votes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memorandum of Understanding (MOU): Change and expand, define purpose, share the costs, understand role and limits, conduct annual reviews</td>
<td>52</td>
</tr>
<tr>
<td>Region-wide planning process/jurisdictional authority</td>
<td>44</td>
</tr>
<tr>
<td>People impacted must be effectively consulted</td>
<td>43</td>
</tr>
</tbody>
</table>
## Breakout Session #3: Tundra Travel

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Votes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Better coordination across state, borough and federal agencies with a shared database</td>
<td>50</td>
</tr>
<tr>
<td>Tundra manual of traditional knowledge guidelines for assessing damage and remediation</td>
<td>42</td>
</tr>
<tr>
<td>How does climate change affect tundra? Research, regulations, and standards?</td>
<td>30</td>
</tr>
</tbody>
</table>

## Breakout Session #4: Innovative Approaches for Mitigating Impacts

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Votes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Include local and traditional knowledge in project design and mitigation strategy</td>
<td>39</td>
</tr>
<tr>
<td>Study and data coordination and sharing</td>
<td>30</td>
</tr>
<tr>
<td>Large scale health assessment, taking care of people</td>
<td>25</td>
</tr>
</tbody>
</table>

## Breakout Session #5: Planning for Future Roads, Pipelines and Service Areas

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Votes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation corridor plan – start now</td>
<td>49</td>
</tr>
<tr>
<td>Collaboration – maximize skills sets of agency authorities</td>
<td>40</td>
</tr>
<tr>
<td>Define road blocks (obstacles)</td>
<td>40</td>
</tr>
</tbody>
</table>

## Breakout Session #6: Reducing Impacts from North Slope Air Traffic

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Votes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase communication</td>
<td>37</td>
</tr>
<tr>
<td>Reduce frustration by using alternate transport modes and local hire</td>
<td>37</td>
</tr>
<tr>
<td>Educate researchers, identify their impacts and mitigate</td>
<td>33</td>
</tr>
<tr>
<td>Time and area closures - Conflict Avoidance Agreement (CAA) model</td>
<td>32</td>
</tr>
</tbody>
</table>

## Breakout Session #7: Decommissioning, Removal and Restoration (DR&R)

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Votes</th>
</tr>
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<tbody>
<tr>
<td>Use best practices which may include re-use and flexibility</td>
<td>45</td>
</tr>
<tr>
<td>Inventory of what will need to be restored/reclaimed</td>
<td>40</td>
</tr>
<tr>
<td>Take responsibility for current DR&amp;R needs</td>
<td>28</td>
</tr>
</tbody>
</table>

## Breakout Session #8: Communicating with Residents

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Votes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Be aware of community and subsistence activity calendar</td>
<td>33</td>
</tr>
<tr>
<td>Community directory: who, how, when to engage</td>
<td>33</td>
</tr>
<tr>
<td>Mutual respect builds trust</td>
<td>28</td>
</tr>
</tbody>
</table>

After the session on prioritizing the recommendations, the facilitators led an open microphone session where participants had an opportunity to speak on any topic (see Appendix F). The Forum ended with closing comments from Borough staff and the Mayor. Regarding implementation of recommendations from the Forum, topics of special interest to the Borough include improving communication with local residents, expanding service areas to support western expansion of oil and gas development, completing the municipal land selections, expanding the scope of the DNR-NSB MOU, pursuing an MOU with the U.S. Department of the Interior, and developing a database of scientific studies. When developing strategies for addressing the topics discussed during the Forum, the Borough will review the discussions that occurred during the breakout and plenary sessions as well as the recommendations from the 2014 *Oil and Gas Technical Report*. 
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North Slope Borough
Oil and Gas Forum
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DAY 1: July 20, 2016

1. Invocation and Welcome
North Slope Borough (NSB or Borough) Deputy Planning Director Gordon Brower welcomed everyone to the Forum and introduced George Olemaun who gave the invocation. Gordon then introduced Mayor Aamodt.

2. Opening Comments from Mayor Mike Aamodt
Borough Mayor Mike Aamodt welcomed the participants to the Oil and Gas Forum and highlighted the theme of the Forum: Promoting responsible development through better coordination. He opened his comments by sharing some personal stories about how he got to the North Slope and why he has chosen to make it his home. He spoke about recent trends on the North Slope, including development that is expanding both east and west of Prudhoe Bay, an increase in smaller companies operating on the Slope, climate change, and the collapse of oil prices. The Mayor emphasized the importance of creating a regulatory environment that is stable, predictable and also flexible. He noted that the economies of both the State and the Borough are dependent on a healthy oil and gas sector - taxes on oil and gas infrastructure provide over 97% of the Borough’s budget. The Mayor remarked that “one advantage of times like these is the opportunity to take a breath and think about where we have been and where we want to go.” Mayor Aamodt concluded his opening remarks by introducing Governor Bill Walker.

3. Opening Comments from Governor Bill Walker
Governor Walker opened his comments by saying the collaboration at this Forum demonstrates exactly what Alaska needs to be doing. He continued by recognizing members of his cabinet at the Forum and some key personnel in the administration that have roots in Northern Alaska. The Governor expressed concern about the current finances of the State and emphasized the need to turn natural resources into jobs and products. He mentioned meetings with President Obama and Secretary of the Interior Jewell where he explained the importance of access to resources, including access to the 1002 area in the Arctic National Wildlife Refuge (ANWR). The Governor continued by saying changes to the regulatory process are needed to improve permitting and that the State has been working to support approval of oil and gas development in the National Petroleum Reserve-Alaska, including Greater Mooses Tooth 1 and 2 projects (GMT1 and GMT2). He continued by saying that local government gets things done, and that the mission of both the State and local governments is to solve problems now so the next generation doesn’t have to. He encouraged participants to talk to each other, not about each other. The Governor described a visit to the North Slope when a whale was...
lacked – “People working together for the common good.” He concluded his remarks by saying Alaska has been through a lot, and it will get through the current financial challenges by working together.

4. Overview of Agenda

Gordon Brower provided an overview of the agenda, including the plenary sessions and eight breakout sessions. He said one of the reasons the Borough sponsored this Forum is because it is the only government agency with land use responsibility for the entire North Slope. Gordon emphasized that the purpose of the Forum was to develop recommendations to help solve some of the challenges that will face oil and gas development on the North Slope in the coming years. Gordon introduced the facilitators, Elizabeth Benson and Dick LaFever, who then explained how the breakout sessions would work. They said each session will begin with a panel discussion followed by a group discussion to generate recommended next steps for prioritization by all participants on the last day of the Forum. Gordon encouraged everyone to be as open minded and creative as possible.

5. North Slope Borough Planning, Zoning and Permitting

Presenters:
Gordon Brower, Deputy Planning Director
Bill Tracey, Planning Commissioner

Summary: Gordon and Bill summarized the Borough’s authorities for overseeing land use. The NSB is Alaska’s largest local government covering 15% of the state’s landmass. As a home rule government, the Borough has all legislative powers not prohibited by law. To the extent allowed by law, the Title 19 municipal land use code applies to state, federal and private lands. State of Alaska departments are required to comply with local zoning to the same extent as other landowners (AS 35.30.020). The Department of Planning and Community Services has about 30 employees, and it issues 500-600 permits each year. Other than Barrow which has its own zoning districts, all lands and offshore waters are zoned as one of the following: conservation, resource development, transportation corridor, scientific research, or village district. Before land may be developed, it must be re-zoned to the resource development district, and a master plan must be submitted. The Borough Comprehensive plan was revised in 2005, and village comprehensive plans are being developed for all Borough communities. Gordon concluded by saying the Title 19 land use code is due for an update as it has not had a major revision in over 20 years.

6. Oil and Gas Technical Report

Presenters:
Gordon Brower, Deputy Planning Director
Jason Bergerson, North Slope Borough
Glenn Gray, Glenn Gray and Associates

Summary: The three presenters summarized the content of the Borough’s 2014 Oil and Gas Technical Report: Planning for Oil and Gas Activities in the National Petroleum-Reserve Alaska (NPR-A). While the report focused on the NPR-A, most of its recommendations apply to the entire North Slope. The first few chapters provide background information,
Chapter 4 describes the major issues, and Chapter 5 provides recommended next steps for managing oil and gas activities. These recommendations address each of seven topics: 1) communication and coordination (improve interagency coordination for planning and permitting), 2) tundra travel (create standard stipulations, provide a unified regulatory approach, improve winter access for residents), 3) roads (implement a region-wide approach for transportation corridors), 4) pipelines (where feasible, place pipelines in roads or bury in thaw-stable areas, use coastal subsea pipelines to protect sensitive onshore habitats, and require minimum heights), 5) gravel islands (construct offshore islands to avoid impacts to sensitive onshore areas), 6) air traffic (implement a slope-wide tracking system and a violation reporting system, establish flight corridors, reduce impacts of research-related flights, and 7) dismantlement, removal and restoration (DR&R) (update 2002 GAO study, improve agency coordination, develop a slope-wide inventory of abandoned infrastructure, clarify requirements at project approval stage, and revise Title 19).

The recommendations from the Technical Report, summarized in Appendix G, provide the basis for the breakout sessions at the Forum.

7. Agency Responsibilities and Initiatives

**Moderator:** Tom Lohman, North Slope Borough

**Presenters:**
- Steven Cohn, Bureau of Land Management
- David Hobbie, U.S. Army Corps of Engineers
- Hanh Shaw, Environmental Protection Agency
- Andy Mack, Department of Natural Resources
- Ron Benkert, Department of Fish and Game
- Larry Hartig, Department of Environmental Conservation

**Summary:** During this plenary session, speakers gave introductory remarks about the role of their agencies in managing oil and gas activities.

Steven Cohn of the Bureau of Land Management (BLM) provided an overview of how the National Petroleum Reserve-Alaska (NPR-A) is managed for multiple use. He said the BLM is actively leasing areas for development and that the State receives half of the revenues from lease sales. Steven said the 2013 Integrated Activity Plan (IAP) provides management direction for the Northeast NPR-A. He also mentioned that the NPR-A Working Group provides an avenue to coordinate with NSB stakeholders. Steven closed by saying it will be important to integrate the work of all landholders.

David Hobbie, Chief of the Regulatory Division for the Alaska Office of the U.S. Army Corps of Engineers (Corps), said his agency’s main focus for oil and gas activities is the management of wetlands. He said Corps staff members provide assistance to navigate through the complicated set of regulations and that almost all of the people applying for a Corps permit must coordinate their applications with many other agencies. David said the Corps is trying to improve the regulation process, and relationships are important.
Hanh Shaw, Program Manager for the Environmental Protection Agency (EPA), said her agency issues Clean Water Act Section 402 (wastewater discharge) permits and also has a role in Section 404 permits that are issued by the Corps. The EPA also issues air quality permits under authority of the Clean Air Act. The EPA works with the State of Alaska and tribes. It is also involved in spill prevention and response. The agency completes inspections of facilities and uses its enforcement powers when necessary.

Andy Mack, Commissioner of the Alaska Department of Natural Resources (DNR), provided a brief overview of his agency’s regulation of oil and gas activities. He emphasized the need to work with the NSB, Native corporations and tribes. Commissioner Mack spoke about future challenges for Alaska and the need to face them with an open mind. He concluded by talking about the Memorandum of Understanding (MOU) with the NSB, due to be revised soon, and the need to take advantage of opportunities to focus on common goals.

Larry Hartig, Commissioner of the Alaska Department of Environmental Conservation, provided an overview of his agency’s oil and gas responsibilities, including permitting. He gave four thoughts for the future: 1) Alaska is different than other areas and it has its own permitting challenges, 2) the pressure of the current fiscal situation creates cuts, and it is important to consider risks that go along with those cuts, 3) oil infrastructure is aging, and it will be important to mitigate those risks, and 4) it is important to consider how to mitigate climate change.

Ron Benkert, Habitat Biologist for the Alaska Department of Fish and Game (ADF&G), briefly discussed how his agency permits oil and gas activities, including gravel mines and repairs to stream crossing structures. He said ADF&G tries to be consistent throughout the state and it works closely with DNR on rehabilitation and reclamation, including gravel pits. The agency also works with industry to develop agreements for fish and wildlife studies. He said the overall goal is to get a good project that reduces negative impacts.

8. Breakout Session #1: Working Together to Reduce Duplication and Streamline Permitting

Desired Outcome: Identify and prioritize future actions that would improve coordination of the permitting process

Facilitator: Dick LaFever
Panelists:
- Jeff Bruno, Department of Natural Resources
- Ron Benkert, Department of Fish and Game
- Robert Suydam, NSB Wildlife Department
- Steven Cohn, Bureau of Land Management
- Shannon Morgan, Army Corps of Engineers

This session began with a panel discussion followed by a group discussion to identify recommended next steps to reduce duplication and streamline permitting.

Panel Discussion: The panel discussion focused on how memoranda of understanding (MOU) could increase collaboration among agencies.

Jeff Bruno, Associate Director of the DNR Office of Project Management and Permitting, said his office focusses on improving existing processes rather than creating new ones. He said consistency on teams is important and leads to better communication. Jeff spoke about the success of the DNR-NSB MOU.
Ron Benkert, Habitat Biologist for the ADF&G, said coordination and communication are keys to success. He added that having field personnel attend meetings as well as speak with people “on the ground” can reduce misunderstandings that lead to delays.

Robert Suydam, Senior Wildlife Biologist for the NSB, said it is important to work together for the common good, but that agencies and industry can do better. As an example of what works well, Robert said annual meetings held by the National Marine Fisheries Service provide an opportunity for everyone to get together in one room and learn what is going on. Robert also emphasized the importance of developing a qualitative or quantitative method for assessing cumulative impacts. He concluded by recommending standardized sections that could be used for background documents for permitting.

Steven Cohn, Deputy State Director for the BLM, spoke about challenges in managing lands for the national and local interests. He said it is important to encourage a good dialogue to move forward. He also spoke about the challenges among federal agencies that can create uncertainty.

Shannon Morgan, Branch Chief for the U.S. Army Corps of Engineers, spoke about adapting to what is learned from experience. She emphasized the importance of communication to understand the different needs and concerns and the need to put aside personal biases. She concluded her remarks by saying that submission of sufficient background documents makes the process more efficient.

Group Discussion: The facilitator led a discussion about ways to improve permitting. At the end of the discussion, the facilitator worked with the group to identify the major themes and recommendations of the discussion that were prioritized by all of the participants during a plenary session on the last day of the Forum. The top three recommendations ranked by participants on Friday were as follows.

1. Good stakeholder engagement builds trust and relationships,
2. Consistency among regulatory approvals, and
3. Standardize requirements for background documents needed to support a complete application packet and permit issuance.

Other topics discussed by the group included a need to learn from the past, early and frequent coordination and consultation, development of a common glossary, and improved communication. More details about the group discussion may be found in Appendix E.
9. **Breakout Session #2: Coordinating Activities to Improve Land Use Planning and Management**

*Desired Outcome:* Develop a list of methods or initiatives that would improve the coordination of land use planning and management across the North Slope.

**Facilitator:** Elizabeth Benson  
**Panelists:**  
- Monica Alvarez, Department of Natural Resources  
- Stacie McIntosh, Bureau of Land Management  
- Jason Bergerson, North Slope Borough

This session began with a panel discussion followed by a group discussion to identify next steps to improve coordination of planning and management.

**Panel Discussion:** The facilitator posed questions to the panel about the effectiveness of the DNR-NSB MOU, whether a similar MOU between the NSB and the Department of the Interior would be useful, and examples of successful coordination among agencies for land use planning and management. The responses of the panelists are summarized below.

*Monica Alvarez,* Natural Resource Manager for the DNR suggested the MOU with the NSB could be expanded to address other issues in addition to coordination of project reviews. She said it would be important to define the purpose of the MOU, share costs, understand limits, and evaluate the effectiveness of the MOU annually. *Stacie McIntosh,* Manager of the Arctic Office for the Bureau of Land Management (BLM), said her agency does not have interagency MOUs for the NPR-A. She identified a need for stipulations that specify how far oil and gas activities should be separated from cabins and camps.

*Jason Bergerson,* Assistant to the NSB Director of Administration, spoke about the NSB-DNR MOU and whether it could be used to develop better permit standards. He noted problems with establishing a landfill in the NPR-A and suggested some solutions for improving waste management, breaking down paradigms, creating multiple points of contact, consulting with those impacted, increasing communication with industry, establishing infrastructure work groups, initiating a region-wide planning process, and improving coordination with landowners.

**Group Discussion:** The facilitator asked the group to identify obstacles that prevent better communication now and what would work to improve current relationships or create new relationships. At the end of the session, the group identified the major themes and recommendations of the discussion that were brought to all participants at the Friday morning plenary session. The top three recommendations/themes selected by the entire group on Friday are listed below.

1. Memorandum of Understanding (MOU): Change and expand, define purpose, share the costs, understand roles and limits, conduct annual reviews
2. Region-wide planning process/jurisdictional authority
3. People impacted must be effectively consulted
Other items discussed by the group include the need to break down paradigms to compare how oil companies do business, create multiple points of contact, consult with people impacted by an activity, improve communications with industry, create infrastructure working groups, and implement a region-wide planning process. Appendix E provides more details about the group discussion.

DAY 2: July 21, 2016

10. Invocation and Welcome
Gordon Brower introduced Harry Brower Jr. who gave the invocation. Gordon then asked the facilitators, Dick LaFever and Elizabeth Benson, to provide some additional information about the organization of the breakout sessions.

11. Current and Future Industry Initiatives
Moderator: Marleanna Hall, Resource Development Council (RDC)
Panelists:
- Krissell Crandall, BP Exploration (Alaska)
- Lisa Pekich, ConocoPhillips Alaska
- Brien Reep, ExxonMobil Alaska Production
- John Barnes, Hilcorp
- Patrick Conway, Armstrong Oil and Gas

Summary: During this plenary session, industry representatives described near-term plans and ideas for how agency processes can be coordinated better. Marleanna Hall, Executive Director for RDC, introduced panel members as they spoke.

Krissell Crandall, Manager for Regulatory Compliance, BP Exploration (Alaska) said BP has spent more than half a century exploring and developing Alaska’s oil and gas resources while playing an important role in driving economic growth and supporting local communities. She continued by saying that as the operator of Prudhoe Bay, BP is a major property taxpayer to the NSB, and it supports many North Slope organizations and institutions. Krissell said BP has a long business relationship with ASRC, UIC and Kuukpik. She said BP is committed to maintaining a safe and compliant business in Alaska that is sustainable and values its environmental studies and its relationships with the North Slope Native community. Krissell said BP spends more than $1 billion annually on operations and maintenance activities at Prudhoe Bay. She said over the past two years oil prices have dropped 70%, and the challenge for the Borough, the State and the entire industry is to respond to a low oil price environment in a way that improves efficiency and accelerates innovation.

Lisa Pekich, Director of Village Outreach for ConocoPhillips Alaska, gave an overview of her company’s safety record, exploration and development projects in the NPR-A (GMT 1 and GMT2), the CD-5 development project in the Colville River Unit, and mitigation programs. She concluded by summarizing regulatory challenges (reduced access to lands, new standards, use of policy rather than rulemaking) and opportunities (review of all agency standards to remove redundancy, and review of requirements for studies).
Brien Reep, Environmental Manager for ExxonMobil Alaska Production, gave an overview of progress on development of the Point Thomson Project. He said the construction phase has been completed and production began in April 2016 with hydrocarbons transported by a pipeline that connects with the Badami pipeline. The project is expected to produce 10,000 barrels of light oil per day.

John Barnes, Senior Vice President of Hilcorp Alaska, gave an overview of his company which he said has been ranked as one of the top performing independents in the country. Hilcorp employs over 500 staff in Alaska, and its Alaska’s assets include properties in Cook Inlet and on the North Slope.

Patrick Conway, Permit Coordinator for Armstrong Energy, said that the company has operated in Alaska for more than 20 years, and in 2015 it purchased majority holdings from Repsol E&P. He gave an overview of the Nanushuk Project located near the Colville River.

12. Planning for Decommissioning of North Slope Infrastructure

Moderator: Wayne Cary, NSB Law Department
Panelists: Corri Feige, Department of Natural Resources
James Beckham, Department of Natural Resources
Stacie McIntosh, Bureau of Land Management

Panel Discussion: The purpose of this session was to provide background information for the Decommissioning, Removal, and Restoration (DR&R) breakout session held in the afternoon. The moderator, Wayne Cary, provided a brief summary of the 2002 GAO report: Alaska’s North Slope: Requirements for Restoring Lands after Oil Production Ceases.

James Beckham, Deputy Director of DNR Division of Oil and Gas, provided a brief summary of a 2014 report by Arcadis commissioned by DNR, Decommissioning, Removal, and Restoration Regulatory Review. The report included a review of the regulations of five U.S. states, five countries, and the World Bank. For the U.S. states, the aggregate value of bonds is less than the estimated DR&R costs. Each of the countries evaluated in the report require DR&R plans, but the approach to ensure implementation and funding varies.

Corri Feige, Director of the DNR Division of Oil and Gas, said the State requires financial assurance at the time a lease is issued, and a reclamation plan is required before the lease is terminated.

Stacie McIntosh, Manager of the Arctic Office for the BLM, said her agency requires a plan for reclamation to restore the land to look like surrounding areas. She said BLM does not have specific standards for reclamation in the NSB, and it requires bonding of $100,000 as a base rate for a lease.

Participants at breakout session #7 continued the discussion of this topic (see Section 19).
13. Breakout Session #3: Tundra Travel

**Desired Outcome:** Arrive at a common understanding of how agencies regulate tundra travel and generate ideas of how better coordination among agencies and industry would improve the process.

**Facilitator:** Elizabeth Benson

**Panelists:**
- Brent Goodrum, Department of Natural Resources
- Donna Wixon, Bureau of Land Management
- Pauline Ruddy, BP Exploration (Alaska)
- Sara Kenshalo, ConocoPhillips, Alaska
- Gordon Brower, NSB Deputy Planning Director

This session began with a panel followed by a facilitated group discussion on how to improve the management of tundra travel.

**Panel Discussion:** The panelists began by providing brief statements about how their agency or organization dealt with tundra travel. As summarized below, the panelists continued by addressing questions about the need for common standards for tundra damage, how coordination among agencies and industry can be improved, and how the NSB could improve its regulation of tundra travel.

**Brent Goodrum,** Director of the DNR Division of Mining, Land and Water, described the process for opening the North Slope tundra for winter travel. He said DNR previously used different methods, including use of a device called a slide hammer, to determine when the ground was adequately frozen to support off-road travel. In more recent years, DNR has divided the North Slope into different regions based on physical conditions and vegetation. DNR measures depth of snow and temperature of the tundra at 20 sites across the North Slope. The tundra needs to be -5˚ Celsius at 30 cm (approximately 1 foot beneath the surface of the ground) and meet the specified snow depth required for the region before it is opened to tundra travel.

**Donna Wixon,** Natural Resource Specialist for the BLM Fairbanks office, said her agency used to use a slide hammer to determine when the tundra could be opened, but since 2013, it has placed the responsibility on industry to determine when conditions are adequate to ensure tundra is not damaged. She said wrong decisions result in noncompliance with BLM requirements.

**Pauline Ruddy,** of BP Exploration (Alaska), indicated that both summer and winter off-road travel is very important for maintaining the integrity and production projects. She said BP has implemented a system where environmental advisors located in the field assess conditions of the tundra prior to off-road travel. BP also requires that its contractors involved in summer off-road travel attend training. Pauline expressed a need to standardize damage assessment methods used by the State, the NSB and companies, and she recommended continued coordination among these stakeholders. She concluded by saying the shorter winters make it more challenging to get the work done in a timely manner.

**Sara Kenshalo,** Coordinator for Remediation and Mitigation for ConocoPhillips, said tundra travel is an integral part to her company’s work on the North Slope. She emphasized the importance of using criteria to develop a shared understanding when evaluating damage to the tundra. Sara also recognized that the tundra is an important component of the ecosystem and that ConocoPhillips takes tundra travel regulation seriously.
**Gordon Brower**, NSB Deputy Planning Director, emphasized the importance of working together. He agreed that there is a need to standardize assessment methods for tundra damage. Gordon said the Borough requires 12 inches of frost and six inches of snow for winter tundra travel.

**Group Discussion:** During the group discussion, the participants discussed the same questions posed to the panel and developed a long list of recommendations. The facilitator worked with the participants to group the comments into themes and recommendations that were brought to all participants at a Friday morning plenary session. The top three recommendations identified by the entire group were as follows.

1. Better coordination across state, borough and federal agencies with a shared database
2. Tundra manual of traditional knowledge guidelines for assessing damage, remediation
3. Investigate how climate change affects tundra management (research, regulations, and standards)

Other subjects discussed during the breakout session included the need to review and revise regulations to reflect changing conditions and levels of knowledge, use of standardized definitions of damage and disturbance, and coordination of first responses when the tundra is damaged. More details about the group discussion may be found in Appendix E.

14. **Breakout Session #4: Innovative Approaches for Mitigating Impacts**

**Desired Outcome:** Increase the understanding of new ways to mitigate project impacts and whether it would be useful to have a common set of permit standards

**Facilitator:** Dick LaFever

**Panelists:**
- **Kim Kruse**, Department of Natural Resources
- **Stacie McIntosh**, Bureau of Land Management
- **Sheila Newman**, U.S. Army Corps of Engineers
- **Erik Kenning**, Arctic Slope Regional Corp.
- **Craig George**, NSB Wildlife Department

This session focused on new approaches to mitigation, beginning with a panel followed by a group discussion.

**Panel Discussion:** As summarized below, the panelists responded to questions about examples of successful mitigation approaches, how companies can improve facility sharing to reduce impacts, and whether a trilateral MOU between the Borough, DNR and Department of the Interior would be appropriate.

**Kim Kruse**, Petroleum Land Manager for DNR, supported company efforts to meet with permitting agencies early and often before submitting project applications. She noted that some companies have coordinated their field studies, logistics and equipment to reduce impacts on local communities. Prepacking ice routes based on science and tundra temperature monitoring helps extend the winter season.
**Stacie McIntosh**, Manager of the Arctic Office for the BLM, said her agency implements a mitigation strategy that includes avoiding impacts, limiting the degree of impacts, and providing compensatory mitigation. She said that in NPR-A, the BLM is implementing a proactive regional mitigation strategy (see Section 16 for a description of the strategy). Stacie said that because things are changing rapidly, there needs to be more flexibility for quick responses. As an example of a successful mitigation approach, she said coordination between seismic survey companies and search and rescue staff allows local hunters to decide where to avoid impacts.

**Sheila Newman**, Branch Chief for the U.S. Army Corps of Engineers, said her agency’s authority for mitigation is relatively narrow. The Corps directs project managers to be specific about potential functional loss, rather than loss of acreage, when evaluating the need for mitigation. She said the Corps uses a tool during permitting to determine functional loss.

**Erik Kenning**, Director of Land Management and Enforcement for the Arctic Slope Regional Corporation, provided a perspective about mitigation from the private sector and private landowners. He said the private sector and landowners should play a key role in providing mitigation options as they can offer the most flexibility in addressing mitigation needs. Allowing the private sector and private landowners to provide mitigation options also helps the local people achieve the most input while keeping any related funds within the local community or region.

**Craig George**, NSB Wildlife Biologist, gave some examples of successful mitigation approaches, including Conflict Avoidance Agreements (CAA) between industry and the Alaska Eskimo Whaling Commission (AEWC). He said working with communities gets local people involved with projects and can minimize impacts, such as reducing disturbance by aircraft. Craig said another example of successful mitigation involved limiting Endicott Island fisheries studies to a few issues. Other examples include the use of drones, infrared cameras, radar, ocean gliders, and satellite telemetry.

**Group Discussion**: The participants broke into small groups to identify recommendations for future mitigation efforts. Each group reported back to the entire group about their discussions, and the facilitator worked with the participants to categorize the recommendations into general themes. Those themes were prioritized by all Forum participants on Friday morning. The top three themes are listed below.

1. Include local and traditional activities knowledge in project design and mitigation strategy
2. Study and data coordination and sharing
3. Large scale health assessment, taking care of people

Other subjects discussed by the group included a need to create a central database, improve communication with all stakeholders, develop an inventory of mitigation and compensation
examples, consider aesthetics, evaluate opportunities to re-purpose facilities, implement landscape-scale mitigation, and improve facility sharing. More details about the group discussion may be found in Appendix E.

15. Remarks from Senator Dan Sullivan

U.S. Senator Dan Sullivan gave an address during lunch on Thursday. He expressed support for gatherings like the Forum that bring people together to find ways to support oil and gas development. Senator Sullivan spoke about the success of the MOU between the Borough and the Department of Natural Resources that was implemented when he was the agency’s commissioner. He mentioned the possible trilateral MOU, discussed at the Forum, among the Department of the Interior, the State and the NSB. He noted that it might be a challenge to negotiate such an agreement. Senator Sullivan emphasized the overreach of federal agencies and the need for agencies to work better together to avoid roadblocks to development.

Bud Cribley, Alaska State Director for the Bureau of Land Management (BLM) provided an overview of the regional mitigation strategy (RMS) that was required by the Record of Decision (ROD) for the GMT1 project in the NPR-A. The ROD required a one million dollar effort to develop the RMS as well as seven million dollars for GMT1-specific mitigation to compensate for impacts to Nuiqsut. The RMS provides a proactive approach to identify a suite of mitigation opportunities. It is different from other mitigation programs because of its landscape-scale approach that includes a geographic area where likely future drilling will occur, its anticipation of future mitigation needs, its development outside of the NEPA process, and the fact that it is not a decision document. The RMS describes values at risk, mitigation goals, criteria for prioritizing mitigation actions, guidance for monitoring and adaptive management, and guidance for applying mitigation to future projects. Some of the benefits of the strategy include broad stakeholder involvement, development of a mitigation approach before permitting decisions, certainty, and a way to address cumulative impacts. The process to develop the RMS began in April 2015, and the public review of the conceptual strategy underwent public review April – June of 2016. The final RMS is expected to be released later in 2016.
17. **Breakout Session #5: Planning for Future Roads, Pipelines and Service Areas**

*Desired Outcome:* Discuss opportunities to identify new transportation and utility corridors and opportunities for the NSB to develop new service areas and prioritize future actions that can be taken.

**Facilitator:** Elizabeth Benson

**Panelists:**
- Gordon Brower, NSB Deputy Planning Director
- Marc Luiken, Commissioner, DOT&PF
- Chris Grundman, DNR Division of Oil and Gas
- Stacie McIntosh, Bureau of Land Management

This session began with a panel discussion followed by a group discussion about opportunities for slope-wide planning for transportation corridors, pipeline corridors, gravel mines, and other services for oil and gas development.

**Panel Discussion:** The panelists addressed questions posed by the facilitator about opportunities for new service areas, whether Service Area #10 should be expanded, how stakeholders can work together to establish new transportation and utility corridors, and how to do a better job at sharing facilities and infrastructure to reduce duplication. The responses by the panelists are summarized below.

**Gordon Brower**, NSB Deputy Planning Director, said transportation links and connectivity for the villages can be a solution to lower the cost of living. He said the Borough could zone transportation corridors in addition to the sole existing transportation district, the Dalton Highway. Gordon continued by saying it may be necessary to pass new laws to expand existing corridors and that Borough residents desire a connection to Dalton Highway.

**Marc Luiken**, Commissioner, Alaska Department of Transportation and Public Facilities (DOT&PF), said his agency is interested in putting together a workshop with others to discuss what opportunities exist for future road corridors. He discussed funding challenges and the need for public access when federal funds are used to construct a new road. He concluded by saying there needs to be better science regarding the impact to caribou from new roads.

**Chris Grundman**, Natural Resource Manager for the DNR Division of Oil and Gas, said coordination is necessary to develop any type of transportation corridor. He said DNR has a public process and that the planning infrastructure is in place. He concluded by saying outstanding issues include funding and determining who would manage new corridors.

**Stacie McIntosh**, Manager of the Arctic Office for the BLM, said two areas within the NPR-A would be off the table for a pipeline corridor, but there is room for new corridors. She continued by saying no new landfills may be constructed within the NPR-A.

**Group Discussion:** The facilitator asked the group to identify obstacles that prevented better coordination and what it would take to identify new corridors and services areas. The facilitator worked with the participants to identify common themes of the group discussion. During a plenary session on Friday morning, all participants prioritized the themes, and the top three themes are listed below.

1. Transportation corridor plan – start now
2. Collaboration – maximize skills sets of agency authorities
3. Define road blocks (obstacles)

Other subjects discussed by the group include adoption of the port authority model, reuse of gravel from unused roads, and recognition that specific projects will drive solutions. Details about the group discussion may be found in Appendix E.

18. Breakout Session #6: Reducing Impacts from North Slope Air Traffic

*Desired Outcome:* Provide an opportunity for North Slope residents to identify their concerns about air traffic and identify future cooperation among stakeholders to reduce impacts

*Facilitator:* Dick LaFever

*Panelists:*
- Bill Tracey, NSB Planning Commission
- Robert Suydam, NSB Wildlife Department
- Stacey Fritz, Bureau of Land Management

This session began with a panel discussion about local impacts of air traffic and what is being done to address those impacts. The facilitator then led a group discussion.

*Summary:* The following discussion summarizes the responses by the panelists to questions about current impacts from air traffic and what is being done about them.

**Bill Tracey,** NSB Planning Commissioner, said in the early days, the Borough issued 100-150 permits a year and today it issues 500-600 permits. He said the permitting process is working well and suggested permittees explain why aircraft is needed for a research project. Bill recommended companies think differently to avoid unnecessary daily flights, such as using camps. He said the Shell call centers were useful for hunters. Another example of what is working are efforts by the FAA to keep aircraft away from the walrus haulouts near Point Lay. Another success story was a University of Alaska Fairbanks study that used camps for a loon study. He closed his comments by saying the NSB can help design projects to avoid some conflicts with aircraft.

**Robert Suydam,** NSB Senior Wildlife Biologist, said aircraft conflicts with locals are a major concern of every village. He said some people have threatened to shoot planes in the air, and the consequences could be tragic. Robert also said people are frustrated about too many meetings. He continued by saying Audubon has a useful map of where aircraft fly for some areas of the Borough. He said some of the biggest problems are with agency-sponsored research. Robert suggested that similar measures to protect bowhead whales from aircraft could be applied to caribou. He also said the North Slope Science Initiative might be a good organization to address this issue.

**Stacey Fritz,** Anthropologist/Subsistence Specialist for the BLM, said it is important to understand the impacts aircraft can have on villagers. She said NPR-A Subsistence Advisory Panel meeting notes document local concerns. Aircraft can scare wildlife and have psychological impact on people. Stacey noted that the BLM requires permittees to submit information on their flights, including where they land and the type of aircraft used. Best Management Practice F-1 (from the NPR-A ROD) addresses this issue, and BLM gives permittees information on the location of camps and cabins. She said other ways to avoid conflict regarding aircraft include holding workshops, hosting meetings with permittees,
prohibiting aircraft use during peak subsistence periods, and using compensatory mitigation funds where appropriate. She concluded by saying recording devices have been placed near Nuiqsut to respond to the community’s desire for more research about aircraft.

**Group Discussion:** After the panel discussion, the facilitator led a group discussion about impacts from air traffic. Towards the end of the session, the facilitator worked with the group to identify the common themes of the discussion. All Forum participants prioritized those themes during a plenary session on Friday morning, and the top three themes are as follows.

1. Increase communication
2. Reduce frustration by using alternate transport modes and local hire
3. Educate researchers, identify and mitigate impacts

Other subjects discussed during the breakout session include the creation of a database to track flights, use of time and area closures, use of agreements similar to the conflict avoidance agreements, consolidation of agency site inspections, use of social media to connect with locals, and use of best practices. The details of the group discussion may be found in Appendix E.

19. **Breakout Session #7: Decommissioning, Removal and Restoration (DR&R)**

**Desired Outcome:** Identify what regulators currently require for DR&R, issues that need resolution, and next steps for resolving those issues.

**Facilitator:** Elizabeth Benson

**Panelists:**
- Wayne Cary, NSB Law Department
- James Beckham and Chris Grundman, Department of Natural Resources
- Stacie McIntosh, Bureau of Land Management
- Kara Moriarty, Alaska Oil and Gas Association

This session began with a panel discussion about how DR&R is currently being addressed followed by a group discussion.

**Panel Discussion:** As summarized below, the panelists answered questions about whether there is a common inventory of facilities subject to DR&R, whether it would be useful to keep a central repository available for access by all regulatory agencies, and liability for DR&R.

**Wayne Cary,** Assistant Borough Attorney for the NSB, said under the authority of the municipal code the Borough may require a reclamation plan as a condition of approval, but this is seldom done.

**James Beckham,** Deputy Director and **Chris Grundman** Natural Resource Manager for the DNR Division of Oil and Gas spoke about state requirements for DR&R. They said the State requires a financial surety before development, but creation of a pooled agency fund may be appropriate to ensure funding is available for DR&R. Bonds are often required, and requirements vary according to the situation and history of the operator. Bond requirements can be increased near the end of a project if merited. While reclamation plans are not required at the time of leasing, they are required before the termination of the lease. They said flexibility is necessary because the State may want to repurpose some of the facilities in the future.
Stacie McIntosh, Manager of the Arctic Office for the BLM, said her agency requires a plan for reclamation at the permitting stage, but there are no specific reclamation standards for the North Slope. She referenced a relevant document by the North Slope Science Initiative regarding emerging issues. She concluded by saying the BLM is not the only decision maker, and companies must work with other jurisdictions.

Kara Moriarty, President/CEO of the Alaska Oil and Gas Association, said it is important that DR&R regulations and statutes be flexible since it is difficult to forecast a multitude of factors when oil production ends, such as what communities will want and available technologies. She emphasized the need for collaboration among the North Slope Borough, agencies and industry regarding DR&R.

Group Discussion:
During the group discussion, the facilitator asked for suggestions for how coordination of DR&R can be improved – what issues need to be resolved, what works now and what does not work well. The themes of that discussion were brought to all Forum participants on Friday morning for ranking, and the top three themes are listed below.

1. Use best practices which may include re-use and providing flexibility
2. Inventory of what will need to be restored/reclaimed
3. Take responsibility for current DR&R needs

Other subjects of the group discussion include consideration of a “Superfund” type money pool, better coordination among agencies and landowners for DR&R, creation of an inventory of “chain of ownership” for facilities, and creation of a work group to address this issue further. More details about the group discussion may be found in Appendix E.

20. Breakout Session #8: Communicating with Residents

Desired Outcome: Provide an opportunity for local residents to identify impacts related to numerous meetings held in villages and specific actions that can be taken to improve communication and reduce impacts.

Facilitator: Dick LaFever
Panelists:
- Hanh Shaw, Environmental Protection Agency
- Thomas Napageak, Jr., Mayor of Nuiqsut
- Herbert Kinneeveauk, Jr., Tikigaq Corporation
- Harry Brower, NSB Wildlife Department

This session began with a panel followed by a group discussion on how communication with residents can be improved.

Panel Discussion: The panel part of this session began with an overview of how EPA implements its North Slope Communications Protocol. Then the panelists addressed questions about how agencies and industry can coordinate efforts to reduce impacts to locals such as “meeting overload,” and whether it would be helpful to villages if more agencies developed communication protocols. The panel discussion is summarized below.

Hanh Shaw, Program Manager for EPA’s Region 10 Oil, Gas and Energy Sector, gave an overview of her agency’s North Slope Communications Protocol. The EPA developed the protocol in 2009 to increase the effectiveness of engaging North Slope residents and tribal governments. Communication guidelines in the document include the need to “do your homework;” respect subsistence seasons; invite communities to help plan; be transparent;
begin consultations early; and give clear, flexible, predictable schedules. She also said the protocol gives background information about the North Slope such as local resources that may not be available (e.g., internet, phone, fax, and libraries). The protocol also discusses requirements for tribal consultation and environmental justice, and it includes information about “lessons learned.”

Herbert Kinneeveauk, Jr., President of Tikigaq Corporation said it is important to begin initial communications with villages before a meeting occurs, including providing data and other materials. He said the timing of the meeting is important to avoid hunting seasons which are unique to each village. He said people working with villages need to understand the importance of subsistence whaling. Herbert said residents want to know who is coming to the village. He continued by saying that respect is an important value to villagers—respect of culture, land, air, and sea. He mentioned a comment made earlier in the forum about someone being “smack in the middle of nowhere” that did not respect the people who were raised, live and will be buried in their homeland.

Harry Brower, Jr., Deputy Director for the NSB Department of Wildlife Management and Mayor-Elect, said communication is important to residents because hunters use information about industry activities to plan for their subsistence hunting. Due to problems such as closure of post offices, he said it is important to make sure communications have been received. Harry said words have different meanings for different people. He continued by saying new communication tools can be helpful but also have limits. Harry suggested that there be a review of tribal consultations to determine how they could be more meaningful. He concluded his comments by saying communication with people of different generations is important, and people need to make sure their communications with villagers are functional and meaningful to the community.

Thomas Napageak, Jr., Mayor of Nuiqsut, said the current community of Nuiqsut is relatively new having been settled in 1972. He said his emphasis has been on keeping the subsistence way-of-life alive. He highlighted the importance of communicating with residents, including provision of information by industry about the use of aircraft to minimize impacts to subsistence. He said residents of Nuiqsut are concerned about other impacts of oil and gas activities, including roads.

Group Discussion: The facilitator led a group discussion to identify how communication with residents can be improved. The top three themes of the discussion that were brought forward to all Forum participants on the last day of the Forum are listed below.

1. Be aware of community and subsistence activity calendars
2. Community directory; who, how, when to engage
3. Mutual respect builds trust

Other themes discussed by the group included the need to be transparent, responsive, and accountable; use of terms understandable by a layman; adequate meeting preparation; use of informal means to engage residents; and the need to implement recommendations from the Forum. More details about the group discussion may be found in Appendix E.
DAY 3: July 22, 2016

21. Invocation and Welcome

Matt Dunn, Manager for the NSB Community Planning and Real Estate Division, introduced Arnold Brower, Jr., from the AEWC, who gave the invocation. Matt continued by explaining that the rest of the morning would be spent hearing presentations from representatives from the eight breakout sessions, a prioritization exercise, an open microphone session, and closing comments from NSB staff and Mayor Aamodt.

22. Reports from Breakout Sessions and Prioritization of Recommendations

Forum facilitators, Dick LaFever and Elizabeth Benson, explained that representatives from each breakout session would give a brief summary of the major themes and recommendations discussed during the sessions. After that, all participants would rank the importance of what was discussed during the breakout sessions by placing adhesive dots on their top three selections for each session. The results of the “dot voting” are provided below.

Report from Breakout Session #1: Working Together to Reduce Duplication and Streamline Permitting

- Good stakeholder engagement builds trust and relationships (42 votes)
- Consistency among regulatory approvals (40 votes)
- Standard requirements for background documents needed to support a complete application packet and permit issuance (35 votes)
- Learn from the past (21 votes)
- Early and frequent coordination & consultation - pre-application to execution (21 votes)
- Develop a common glossary (12 votes)
- Responsible development and DR&R through better communication (4 votes)

Report from Breakout Session #2: Coordinating Activities to Improve Land Use Planning and Management

- Memorandum of Understanding among agencies (MOU) (52 votes)
  - Change and expand
  - Define purpose
  - Share the costs
  - Understand role and limits
  - At least annual reviews
• Region-wide planning process/jurisdictional authority (44 votes)
• People impacted must be effectively consulted (43 votes)
• Infrastructure working groups (10 votes)
• Create multiple points of contact (8 votes)
• How to better communicate with industry (4 votes)
• Break down paradigms to compare how oil companies do business (2 votes)

Report from Breakout Session #3:
Tundra Travel

• Better Coordination across State, Borough and federal agencies with a shared data base (50 votes)
• Tundra manual of traditional knowledge guidelines for assessing damage, remediation (42 votes)
• How does climate change affect tundra? Research, regulations, and standards? (30 votes)
• Review and revise regulations to reflect changing conditions and levels of knowledge – uniformity (22 votes)
• Better definitions of damage, and disturbance (21 votes)
• Triage – first response (10 votes)

Report from Breakout Session #4:
Innovative Approaches for Mitigating Impacts

• Include local and traditional knowledge in project design and mitigation strategy (39 votes)
• Study and data coordination and sharing (30 votes)
• Large scale health assessment, taking care of people (25 votes)
• Connect and listen to all stakeholders (20 votes)
• Centralized database (14 votes)
• Community inventory of mitigation and compensation (8 votes)

Facilitator Dick LaFever

• Determine when mitigation is required (credit/debit calculator) (8 votes)
• Multi-user infrastructure planning (7 votes)
• Aesthetics matter - noise, smells, visual, air quality (7 votes)
• Analyze re-purposing of infrastructure (6 votes)
• Landscape-scale mitigation strategy (4 votes)
• Facility sharing (3 votes)

Report from Breakout Session #5:
Planning for Future Roads, Pipelines and Service Areas

• Transportation corridor plan – start now (49 votes)
• Collaboration – maximize skill sets of agency authorities (40 votes)
• Define road blocks (obstacles) (40 votes)
• Port authority model (15 votes)
• Use gravel from unused roads (12 votes)
• Projects will drive solutions (8 votes)
Report from Breakout Session #6:
Reducing Impacts from North Slope Air Traffic

- Increase communication (37 votes)
- Reduce frustration by using alternate transport modes and local hire (37 votes)
- Educate researchers, identify their impacts and mitigate (33 votes)
- Time and area closures - Conflict Avoidance Agreement (CAA) model (32 votes)
- Consolidate agency site inspections (14 votes)
- Social media – connecting locals (8 votes)
- Be good neighbors (5 votes)
- Best Practices (4 votes)

Report from Breakout Session #7:
Decommissioning, Removal and Restoration (DR&R)

- Use best practices which may include re-use and providing flexibility (45 votes)
- Inventory of what will need to be restored/reclaimed (40 votes)
- Take responsibility for current DR&R needs (28 votes)
- Consider a “Superfund” type money pool (12 votes)
- BLM and State need to coordinate a plan with other land owners for DR&R and strive for early consensus (12 votes)
- Create an inventory of “chain of ownership” of facilities (11 votes)
- Create working groups (3 votes)

Report from Breakout Session #8:
Communicating with Residents

- Be aware of community and subsistence activity calendar (33 votes)
- Community directory; who, how, when to engage (33 votes)
- Mutual respect builds trust (28 votes)
- Being transparent, responsive, accountable (21 votes)
- Have meaningful dialogue in layman’s language (16 votes)
- Meeting preparation (16 votes)
  - Go beyond minimum notification requirements
  - Select right materials to share
  - Create a one page summary
- Action after Forum (13 votes)
- Informal resident engagement (10 votes)

23. Open Microphone

The facilitators led an open microphone session where participants were given the opportunity to speak on any topic. This section provides a general overview of the comments, and Appendix F includes a more detailed list of comments by topic.

Most of the comments during the open microphone session dealt with communication. Some comments addressed general communication principles, such as the need to build trust. Other comments addressed specific methods that should be used when communicating with residents, including when and who to contact and the need to schedule meetings outside of major subsistence times.

Other major topics of the session included reducing project impacts; planning for DR&R; completing land conveyances; and incorporating local and traditional knowledge through hiring of subsistence advisors and representatives.
24. Closing Remarks

Gordon Brower, Matt Dunn and Jason Bergerson of the NSB began the closing remarks by summing up their impressions of the Forum discussions and recommended next steps to implement those recommendations. They thanked everyone for participating in the Forum and those who organized it. They said the Borough’s goal is to capture the momentum by completing the report by the end of summer and developing strategies to implement the Forum’s theme of Responsible Development through Better Coordination.

Mayor Aamodt began his closing comments by saying it is a rare opportunity to get all North Slope stakeholders in the same room to discuss common problems and chart the course for the next stage of oil and gas development. He remarked about a comment made earlier in the Forum about the need to involve youth in meetings like these and that the Borough will try to do a better job of that in the future. Mayor Aamodt said another issue that stood out to him was how important personal relationships are in the day-to-day work of everyone. He said “institutional relationships are built on personal relationships that are in turn based on trust.” He summarized some of the important themes of the recommendations made during the Forum and said the challenge will be to keep the dialog going. Mayor Aamodt closed by giving thanks to everyone for taking time from their busy schedules to participate in the Forum and to the facilitators and his staff who worked over the past year to make the Forum a reality.

25. Next Steps

One of the themes throughout the Forum related to the importance of implementing recommendations discussed during the three days of meetings. A number of people commented about the need to keep the discussion going and not let the Forum report gather dust on a bookshelf. The Borough will review the results of the Forum and develop a plan of action for its part in implementing the recommendations. The Borough encourages agencies, industry and other stakeholders to continue work to look beyond the limitations of their agency mandates to work together to tackle unsolved issues that have Slope-wide implications.

Next steps will include incremental work on the recommendations through the course of day-to-day business as well as topic-specific meetings. Further work on the recommendations may occur using targeted efforts through meetings, workshops, work groups, and MOUs.
Topics of special interest to the Borough include improving communication with local residents, expanding service areas to support western expansion of oil and gas development, completing the municipal land selections, expanding the scope of the DNR-NSB MOU, pursuing an MOU with the U.S. Department of the Interior, and developing a database of scientific studies.

Responsible development will only be possible with continued coordination and communication among the landowners, regulating agencies, industry, local residents, and other stakeholders. Efforts need to be made to reduce red tape, improve communication with local residents, and find new ways to avoid or minimize impacts.

26. Forum Evaluation

Twenty nine participants submitted the conference evaluation form (about 25% of all attendees). A number of people commented that too many topics were packed into the three-day forum and that it would have been useful to have more opportunities for interaction among the participants. Those completing the evaluations highlighted the usefulness of the sessions on DR&R and innovative approaches to mitigation. Regarding the most important recommendations, overall improvements to communication and better outreach to residents topped the list. Others mentioned tundra travel, air traffic, DR&R, research, expanded implementation of MOUs, mitigation, permit streamlining, and better coordination to plan for future transportation and utility corridors and service areas. A number of responses on the evaluations included suggestions for future forums and the need to keep the dialog going.
Promoting Responsible Oil and Gas Development through Better Coordination

**Summary:** The July 2016 Oil and Gas Forum builds on a 2007 conference held by the North Slope Borough (NSB) in Barrow. Funded through the Coastal Impact Assistance Program (CIAP), the 2016 forum will focus on improving coordination among the NSB, state and federal agencies, industry, and others to improve land use planning and oil and gas permitting. Discussions at the forum will address recommendations from the Borough’s 2014 Oil and Gas Technical Report. The report may be viewed on the Borough’s website (http://www.north-slope.org/departments/planning-community-services/oil-and-gas-technical-report).

**Venue:** The forum will be held over a three-day period at the Millennium Lakeside Hotel in Anchorage. It will begin at 1:00pm on Wednesday, July 20 and end at noon on Friday, July 22.

**Participants:** To promote adequate opportunities for participation, forum attendance will be by invitation only with a limit of 100 people.

**Objective:** The overall objective of the forum is to manage land uses in a regional context by improving communication and cooperation among those with a stake in the future of the North Slope. As oil and gas development continues to expand, there is a growing need to coordinate the activities of the many regulatory agencies, landowners and companies doing work in the Borough. A more coordinated approach will encourage greater efficiency, improved permitting and cost savings.

**Context:** The North Slope faces a time of significant change as oil fields age and new exploration and development expands in all directions. While once dominated by just a few large companies, many new players now do business on the Slope. A multitude of research projects occur each year, many required as a condition of permit approvals.

For the most part, each land owner uses a separate planning process, and agencies create their own set of permit conditions – sometimes with conflicting requirements. As the only agency that has planning and zoning authority for the entire region, the Borough promotes a coordinated approach that incorporates area-wide considerations when selecting transportation and utility corridors, establishing service areas, locating gravel mines, and considering the cumulative impacts of development.

**Relation to Other Initiatives:** The forum will build on related initiatives such as development of the first State of Alaska North Slope Management Plan, a plan that is needed to complete the conveyance of the lands to the Borough under the municipal land entitlement program. Other initiatives include new developments in the NPR-A, completion of village comprehensive plans, an update to the Borough’s areawide comprehensive plan, revisions to the Borough’s zoning and land use code and meetings under an existing Borough-DNR agreement.

**Format:** The forum will include a combination of plenary sessions and concurrent breakout sessions. It will involve presentations, panel discussions, and group discussions. During the last morning of the form, ideas developed during the breakout sessions will be prioritized for future action.
# North Slope Borough Oil and Gas Forum

**July 20-22, 2016**

## Appendix B: List of Participants

### NORTH SLOPE BOROUGH

<table>
<thead>
<tr>
<th>Name</th>
<th>Position/Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gordon Brower</td>
<td>Deputy Planning Director, North Slope Borough</td>
</tr>
<tr>
<td>Brower Frantz</td>
<td>NSB Department of Planning and Community Services</td>
</tr>
<tr>
<td>Waska Williams Jr.</td>
<td>NSB Department of Planning and Community Services</td>
</tr>
<tr>
<td>Matt Dunn</td>
<td>NSB Department of Planning and Community Services</td>
</tr>
<tr>
<td>Mike Aamodt</td>
<td>Mayor, North Slope Borough</td>
</tr>
<tr>
<td>Noe Texeira</td>
<td>NSB Mayor’s Office</td>
</tr>
<tr>
<td>Julia Kim</td>
<td>NSB Mayor’s Office</td>
</tr>
<tr>
<td>Jason Bergerson</td>
<td>NSB Assistant to Director of Administration and Finance</td>
</tr>
<tr>
<td>Wayne Cary</td>
<td>NSB Law Department</td>
</tr>
<tr>
<td>Tom Lohman</td>
<td>NSB Department of Wildlife Management</td>
</tr>
<tr>
<td>Harry Brower</td>
<td>NSB Department of Wildlife Management and Mayor-Elect</td>
</tr>
<tr>
<td>Craig George</td>
<td>NSB Department of Wildlife Management</td>
</tr>
<tr>
<td>Robert Suydam</td>
<td>NSB Department of Wildlife Management</td>
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<tr>
<td>Bill Tracey</td>
<td>NSB Planning Commission</td>
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<tr>
<td>Glenn Gray</td>
<td>NSB Consultant, Glenn Gray &amp; Associates</td>
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### FACILITATORS

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<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Dick LaFever</td>
<td>Crossroads Leadership Institute</td>
</tr>
<tr>
<td>Elizabeth Benson</td>
<td>Crossroads Leadership Institute</td>
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<tr>
<td>Terry Stinson</td>
<td>Crossroads Leadership Institute</td>
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<tr>
<td>Bill Hall</td>
<td>Crossroads Leadership Institute</td>
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<tr>
<td>Cheryl Westley</td>
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<tr>
<td>Gene Pavia</td>
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### NORTH SLOPE BOROUGH VILLAGES AND ORGANIZATIONS

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<tbody>
<tr>
<td>Jack Schaefer</td>
<td>Mayor, City of Point Hope</td>
</tr>
<tr>
<td>Herbert Kinneveauk, Jr.</td>
<td>President, Tikigaq Corporation</td>
</tr>
<tr>
<td>Eva Kinneveauk</td>
<td>President, Native Village of Point Hope</td>
</tr>
<tr>
<td>Martha Awalin</td>
<td>Cully Corporation</td>
</tr>
<tr>
<td>Martha Tukrook</td>
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</tr>
<tr>
<td>Marie Tracey</td>
<td>President, Native Village of Point Lay</td>
</tr>
<tr>
<td>John Hopson Jr.,</td>
<td>Mayor, City of Wainwright</td>
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<tr>
<td>Hugh Patkotak</td>
<td>Olgoonik Corporation</td>
</tr>
<tr>
<td>Edgar Caldwell</td>
<td>Olgoonik Corporation</td>
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<tr>
<td>Bob Harcharek</td>
<td>Mayor, City of Barrow</td>
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<tr>
<td>Douglas Whiteman</td>
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<tr>
<td>Darrell Brower</td>
<td>Atqasuk Iñupiat Corporation</td>
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<tr>
<td>Matthew Ivanoff</td>
<td>Atqasuk Village</td>
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<tr>
<td>Thomas Napageak, Jr.</td>
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</tr>
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<tr>
<td>Matthew Rexford</td>
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<td>Justus Mekiana, Jr.</td>
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<td>Lawrence Burris</td>
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<td>Arnold Brower Jr.</td>
<td>Alaska Eskimo Whaling Commission</td>
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<td>Delbert Rexford</td>
<td>Ukpeagvik Iñupiat Corporation, Barrow</td>
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<tr>
<td>George Olemun</td>
<td>President, Iñupiat Community of the Arctic Slope</td>
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<tr>
<td>Doreen Lampe</td>
<td>Executive Director, Iñupiat Community of the Arctic Slope</td>
</tr>
<tr>
<td>Rex Rock</td>
<td>President, Arctic Slope Regional Corporation</td>
</tr>
<tr>
<td>Erik Kenning</td>
<td>Director Land Management, Arctic Slope Regional Corporation</td>
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<tr>
<td>Crawford Patkotak</td>
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<tr>
<td>Teresa Imm</td>
<td>Arctic Slope Regional Corporation</td>
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<tr>
<td>Pearl Brower</td>
<td>Ilisagvik College</td>
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<td>David Barnes</td>
<td>University of Alaska Fairbanks</td>
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<td>Marleanna Hall</td>
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<tr>
<td>Josh Kindred</td>
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<tr>
<td>Kara Moriarty</td>
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<td>Pauline Ruddy</td>
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<td>Krissell Crandall</td>
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<td>Lynn DeGeorge</td>
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<td>Andy Mormon</td>
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<td>Jack Laasch</td>
<td>Brooks Range Petroleum</td>
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<tr>
<td>Mike Mason</td>
<td>CEO, Brooks Range Petroleum</td>
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<tr>
<td>Cindy Bailey</td>
<td>Armstrong Oil and Gas</td>
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<tr>
<td>Patrick Conway</td>
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<tr>
<td>Richard Reich</td>
<td>Umiat Environmental</td>
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<tr>
<td>Keith Meyer</td>
<td>Alaska Gasline Development Corporation</td>
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<tr>
<td>Katrina Timm</td>
<td>HDR</td>
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<tr>
<td>Jon Isaacs</td>
<td>AECOM</td>
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<tr>
<td>Elizabeth Dabney</td>
<td>Northern Alaska Environmental Center</td>
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<td>Nicole Whittington-Evans</td>
<td>The Wilderness Society</td>
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<tr>
<td>Catherine Petty</td>
<td>Representative Young's Office</td>
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<tr>
<td>Senator Dan Sullivan</td>
<td>Senator</td>
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<tr>
<td>Mike Fleagle</td>
<td>Alaska Deputy Chief of Staff, Senator Sullivan</td>
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<td><strong>FEDERAL AGENCIES</strong></td>
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<tr>
<td>Bud Cribbley</td>
<td>State Director, Bureau of Land Management</td>
</tr>
<tr>
<td>Stacie McIntosh</td>
<td>Bureau of Land Management</td>
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<tr>
<td>Steve Cohn</td>
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<tr>
<td>Donna Wixon</td>
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<tr>
<td>Stacey Fritz</td>
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<tr>
<td>James Kendall</td>
<td>Regional Director, Bureau of Ocean Energy Management</td>
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<tr>
<td>Jack Lorrigan</td>
<td>Bureau of Safety and Environmental Enforcement</td>
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<tr>
<td>Jess Grunblatt</td>
<td>North Slope Science Initiative</td>
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<tr>
<td>John Pearce</td>
<td>U.S. Geological Survey</td>
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<tr>
<td>Amy Devaris</td>
<td>Regional Director, U.S. Geological Survey</td>
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<td>Hanh Shaw</td>
<td>Environmental Protection Agency</td>
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<tr>
<td>Shannon Morgan</td>
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<td>Sheila Newman</td>
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<tr>
<td>Honorable Bill Walker</td>
<td>Governor</td>
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<tr>
<td>Andrew Mack</td>
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</tr>
<tr>
<td>Edmund Fogels</td>
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<tr>
<td>Chris Grundman</td>
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<td>Monica Alvarez</td>
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<td>Brittany Smith</td>
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<tr>
<td>Amy Karn</td>
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<tr>
<td>Corri Feige</td>
<td>Director, Division of Oil and Gas, DNR</td>
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<td>James Beckham</td>
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<td>Marc Luiken</td>
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<tr>
<td>Troy LaRue</td>
<td>Alaska Department of Transportation &amp; Public Facilities</td>
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<tr>
<td>Ron Benkert</td>
<td>Alaska Department of Fish and Game</td>
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<td>Larry Hartig</td>
<td>Commissioner, Department of Environmental Conservation</td>
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<td>Randy Hoffbeck</td>
<td>Commissioner, Alaska Department of Revenue</td>
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<tr>
<td>Paulette Schuerch</td>
<td>Office of the Governor</td>
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<tr>
<td><strong>OTHER</strong></td>
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<tr>
<td>Karl Ohls</td>
<td>North Star Group</td>
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### Wednesday, July 20

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<tr>
<td>1:00pm</td>
<td>Opening Prayer and Welcome</td>
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<tr>
<td>1:10-1:20pm</td>
<td>Opening Comments by North Slope Borough Mayor Mike Aamodt</td>
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<tr>
<td>1:20-1:50pm</td>
<td>Opening Comments from Governor Walker</td>
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<tr>
<td>1:50-2:15pm</td>
<td>North Slope Borough Planning, Zoning and Permitting</td>
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<tr>
<td>2:15-2:45pm</td>
<td>Oil and Gas Technical Report: Planning for Oil &amp; Gas Activities in the National Petroleum Reserve-Alaska</td>
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<tr>
<td>2:45-3:30pm</td>
<td>Agency Responsibilities and Initiatives</td>
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<tr>
<td>3:30-3:45pm</td>
<td>Break</td>
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<tr>
<td>3:45-5:00pm</td>
<td>Concurrent Breakout Sessions</td>
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<tr>
<td></td>
<td>1. Working Together to Reduce Duplication and Streamline Permitting</td>
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<td>2. Coordinating Activities to Improve Land Use Planning and Management</td>
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### Thursday, July 21

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<tr>
<td>8:30-8:45am</td>
<td>Opening Prayer, Welcome and Overview of Day’s Agenda</td>
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<tr>
<td>8:45-9:30am</td>
<td>Current and Future Industry Initiatives</td>
</tr>
<tr>
<td>9:30-10:15am</td>
<td>Planning for Decommissioning of North Slope Infrastructure</td>
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<tr>
<td>10:15-10:30am</td>
<td>Break</td>
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<tr>
<td>10:30am-Noon</td>
<td>Concurrent Breakout Sessions</td>
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<tr>
<td></td>
<td>3. Tundra Travel</td>
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<td>4. Innovative Approaches for Mitigation</td>
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<tr>
<td>Noon-1:30pm</td>
<td>Hot Buffet Lunch with remarks by Senator Dan Sullivan and a presentation by Bud Cribley on the Regional Mitigation Strategy for Northeastern NPR-A</td>
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<tr>
<td>1:30-3:15pm</td>
<td>Concurrent Breakout Sessions</td>
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<td>5. Planning for Future Roads, Pipelines and Service Areas</td>
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<td>6. Reducing Impacts from North Slope Air Traffic</td>
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<td>3:15-3:30pm</td>
<td>Break</td>
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<tr>
<td>3:30-5:00pm</td>
<td>Concurrent Breakout Sessions</td>
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<td>7. Decommissioning, Removal and Restoration (DR&amp;R)</td>
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<td>8. Communicating with Residents</td>
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### Friday, July 22

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<tr>
<td>8:30-8:45am</td>
<td>Opening Prayer, Welcome and Overview of Day’s Agenda</td>
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<tr>
<td>8:45-10:30am</td>
<td>Prioritization of Recommendations from Breakout Sessions</td>
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<tr>
<td>10:30-11:30am</td>
<td>Open Microphone</td>
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<tr>
<td>11:30am-Noon</td>
<td>Closing Comments</td>
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<td>Noon</td>
<td>Evaluation Forms Collected – End of Forum</td>
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Appendix D: Biographies for Presenters and Panelists

Mike Aamodt, Mayor, North Slope Borough. Mike served as the Borough Mayor at the time of the Forum and as a Borough Assembly Member for the past 23 years. He graduated from East Anchorage High School and has a Bachelor of Arts degree in Anthropology from the University of Alaska Fairbanks. He came to the North Slope in 1967 to work on an archeology project in Point Hope and married Patsy Nusunginya in 1968. He has also worked as an elementary school teacher in Point Hope, a high school shop teacher in Barrow, owner of Aamodt Construction, and in retirement planning for 19 years. He and his wife have two children, Nels Aamodt and Avaiyak Destiny Aamodt.

Monica Alvarez, Natural Resource Manager, Division of Mining, Land and Water, Alaska Department of Natural Resources (DNR). Monica is the Section Chief of the Resource Assessment and Development Section directing DNR planning and the municipal entitlement program. Monica has worked for DNR for the past 15 years.

John Barnes, Senior Vice President, Hilcorp Alaska, LLC. Mr. Barnes has over 30 years in the upstream oil and gas business, with the majority of his experience in Alaska. In 2011, he joined Hilcorp Alaska as Senior Vice President of Exploration and Production, responsible for the transition and ongoing operations in Cook Inlet. Mr. Barnes is currently Team Leader for the Alaska North Slope Assets acquired in 2014. Other work experience includes assignments in West Texas, Houston, the North Sea, and Russia. He received a Bachelor of Science in Petroleum Engineering from Colorado School of Mines and is a registered professional engineer in Alaska.

James Beckham, Deputy Director, Division of Oil and Gas, Alaska Department of Natural Resources. Jim has a Bachelor of Science degree in Marine Science from the U.S. Coast Guard Academy and over 30 years of professional leadership, management, and operational experience in both the public and private sectors. Jim has knowledge of the technical aspects of Alaska oil and gas issues in the downstream products and transportation sectors, as well as extensive commercial negotiation experience. Additionally, Jim has over ten years of advanced level professional experience in environmental regulation compliance, pollution control, and environmental damage recovery.

Ron Benkert, Habitat Biologist, Alaska Department of Fish and Game (ADF&G). Ron is currently the acting Area Manager for the ADF&G Habitat Division in Palmer. He oversees all Title 16 and Special Area permitting in the Mat-Su Borough including oil and gas activities in the Cook Inlet area, specifically within the Susitna Flats State Game Refuge. He is also a member of both the Alaska LNG and ASAP Technical Working Groups and is working on the proposed Donlin gas pipeline. He also represented ADF&G on the Susitna Watana Hydro Project, Wishbone Hill Coal Project, and the Port Mackenzie Rail Extension Project.

Elizabeth A. Benson, AICP, Forum Facilitator. For over 37 years, Elizabeth has worked with private industry, state and federal regulatory agencies, nongovernmental organizations, and individual communities. She spent 35 of those years working in Alaska. Elizabeth currently operates her own planning consulting business, Benson Planning Associates.

Jason Bergerson, Assistant to the North Slope Borough Director of Administration and Finance. During his more than 25 years with the North Slope Borough, Mr. Bergerson has been involved in many issues
related to development and permitting. He has been working with the Planning Department for over 10 years on the Municipal Land Entitlement process and is currently the primary point of contact for the Borough for this issue. He has worked on issues related to the Borough-owned Service Area 10 at Prudhoe Bay which provides utilities for oil and gas companies. He has worked on the development of new gravel material sites on Borough lands to support expanded utility services. Mr. Bergerson has also worked with the Borough’s Petroleum Engineer during the last six years monitoring industrial development across the North Slope and has been involved in discussions with the operators and regulators on every development project, and has assisted Planning Department staff in permit reviews. He was also a contributing author for the 2014 Oil and Gas Technical Report and is a member of the team that organized the 2007 Oil and Gas Forum.

Gordon Brower, Director, North Slope Borough Planning Department. As the Deputy Director, Gordon is involved in all activities of the Planning Department, including implementation of the zoning and land use code. He was born and raised in Barrow and grew up harvesting subsistence resources. He has worked for the Borough for 24 years with most of those years with the Planning Department. He is a whaling captain and a local fisherman. Mr. Brower was on the team organizing the Borough’s 2016 Oil and Gas Forum and was a member of the team that produced the Borough’s 2014 Oil and Gas Technical Report.

Harry Brower, Jr., Deputy Director, North Slope Borough Department of Wildlife Management and Mayor-Elect. Harry is a whaling captain in the Alaska Native subsistence harvest of bowhead whales and a lifelong resident of Barrow, Alaska. He is a very active subsistence hunter and is a proud provider to his wife and five children, numerous relatives, and members of his community. He is the Commissioner from Barrow to the Alaska Eskimo Whaling Commission (AEWC) and serves as its Chairman. He also chairs the Subsistence Subcommittee of the Arctic Waterways Safety Committee. In addition to his work on behalf of bowhead whale and other marine mammal subsistence hunters, Harry has been heavily involved in the design and implementation of efforts to document levels of subsistence harvest in the North Slope villages and documents land use by subsistence hunters. He also serves as a member in numerous committees and councils in Alaska and has involved himself internationally, representing the AEWC at meetings of the International Whaling Commission. He has participated in numerous public hearings and public meetings regarding potential impacts of industrial activity to wildlife and subsistence hunting activities. Harry is a regular guest presenter on subsistence related topics at various local, state, and national meetings.

Jeff Bruno, Deputy Director, Office of Project Management and Permitting, Alaska Department of Natural Resources (DNR). Jeff has worked for DNR for the past 10 years spending time at the State Pipeline Coordinator’s Office (SPCO) and most recently as the Associate Director of the Office of Project Management and Permitting (OPMP). He has also served as the lead State of Alaska coordinator for the Greater Mooses Tooth Unit 1 and 2 projects. Jeff received a Bachelor of Science degree in economics.

Wayne Cary. Assistant Borough Attorney, North Slope Borough.

Steven Cohn, Deputy State Director for Resources, Bureau of Land Management. He provides leadership on a diverse range of programs, including oil and gas, minerals, fish and wildlife, land use planning, and recreation. He has 15 years of experience with BLM in field, regional and headquarters capacities.

Pat Conway, Permitting and Regulatory Coordinator, Armstrong Oil and Gas. Born and raised in New Hampshire, Patrick has lived in Anchorage for 10 years with his wife and two daughters. He has worked in various capacities on oil and gas, permitting, regulatory, and environmental compliance since
relocating to Alaska. Previous to his current positions, he has worked for Repsol Service Company, BP Exploration Alaska, Eni Petroleum, and the Natural Resource Group.

Krissell Crandall is the Regulatory Compliance and Environment Manager for BP Exploration (Alaska), Inc., which operates the Prudhoe Bay Unit. Her experience with BP Alaska includes working as a project HSE manager, a land and regulatory negotiator, and an oil and gas landman. Krissell has been a branch manager with the Bureau of Land Management working on the Alaska land transfer program, and she started her career in Alaska as an attorney with Perkins Coie.

Bud Cribley, Alaska State Director, Bureau of Land Management. Bud Cribley joined the BLM in 1975 as a Forestry Technician in the Arizona Strip District in northwest Arizona. Since then, he has held several positions as a Rangeland Management Specialist with the BLM in Montana, Utah, and Colorado. Before moving to Washington, D.C., he served as a Field Manager and the Assistant District Manager for Nonrenewable Resources for the Winnemucca District in Nevada. In 1997, he moved to Washington, D.C., to serve as a senior specialist with the Wild Horse and Burro program, was a Congressional Fellow in the Senate for one year, later heading up the Rangeland Resources Division. In 2006, he served as Acting State Director in Idaho before returning to Washington, D.C., as Deputy Assistant Director for Renewable Resources and Planning. In November 2010, Bud moved to Alaska to take the position of Alaska State Director. Bud holds a Bachelor of Science degree in Forestry from Stephen F. Austin State University in Nacogdoches, Texas. As the Alaska State Director, Bud leads close to 700 employees in multi-use management of over 72 million surface acres throughout the state. In his spare time, Cribley enjoys hunting, fishing, and exploring Alaska.

Matt Dunn, Division Manager, Community Planning, North Slope Borough Planning Department. Mr. Dunn is responsible for comprehensive planning, GIS services, land Services, resource development, municipal land entitlements, and the capital improvement program. He has worked in several other positions with the Borough. Mr. Dunn has also worked for oil and gas companies throughout the world, including the Gulf of Mexico, South America, West Africa, Australia, and Southeast Asia. He led the team organizing the Borough’s 2016 Oil and Gas Forum.

Corri Feige, Director, Division of Oil and Gas, Alaska Department of Natural Resources. Corri is a geophysicist and engineer with more than two decades of management-level experience in the energy industry. During her past 17 years in Alaska, she has worked for and on behalf of small and mid-size independents advancing conventional and non-conventional energy projects on the North Slope, Cook Inlet and Southwest Alaska. Corri previously has held management positions at Pioneer Natural Resources and Linc Energy, and she has owned a consulting group involved in energy projects. Her skills include project management, permitting, government and regulatory affairs, stakeholder relations and remote Alaska logistics. She has a degree in geophysical engineering from the Montana School of Mines, and before coming to Alaska, she worked as a geophysicist on exploration programs around the world.

Stacey Fritz, has been working as the Anthropologist/Subsistence Specialist in the Bureau of Land Management Arctic Office for six years. She has lived in Fairbanks for 25 years, and before working for BLM she studied the history of the DEW Line and modern industrialization in the Western Arctic. A central part of her job is to coordinate BLM’s NPR-A Subsistence Advisory Panel (SAP), which has workshops and public meetings three or four times a year in one of the six North Slope Villages that is impacted by activity within the NPR-A. The SAP was created by the 1998 Northeast NPR-A Record of Decision, which stipulates that lessees must provide information to, and directly consult with, the SAP before submitting an exploration plan or a development and production plan to the BLM. In 2012 the SAP expanded its purview to include consultation on all types of permitted activities in the NPR-A,
namely scientific research and monitoring. The SAP members make recommendations to the Authorized Officer on how to mitigate impacts to subsistence.

John C. “Craig” George, North Slope Borough Department of Wildlife Management. Craig has worked as a Wildlife Biologist with the Borough in Barrow since 1982. He earned a Bachelor of Science degree in Wildlife Biology from the Utah State University in 1976 and recently completed his Ph.D. at University of Alaska Fairbanks in bowhead whale energetics, age estimation and morphology. Beginning in 1982, Craig worked on and later coordinated the bowhead whale ice-based population abundance project (whale census) on the sea ice near Point Barrow for nearly two decades. He also has conducted hundreds of postmortem exams on bowheads harvested by Alaska Eskimos. He has published a number of papers on this work ranging from evidence of killer whale predation to structural anatomy to population biology. Craig has attended IWC meetings since 1987 focusing mainly on aboriginal whaling management procedures, assessments and population estimation. He has also participated in studies of Eskimo traditional knowledge on the North Slope. Craig has lived in Barrow since 1977 and is married to Cyd Hanns, a veterinary/wildlife research technician. Together they enjoy community and outdoor activities with their two sons Luke and Sam.

Glenn Gray, Oil and Gas Forum Coordinator, Glenn Gray and Associates. Glenn has worked in Alaska for over 40 years, including 13 years consulting with the NSB. Since 2003 he has served as the principal for Glenn Gray and Associates, consulting for municipal governments across Alaska. Glenn specializes in community and regional planning and land use issues. Previously, he worked for several state and federal agencies on natural resource issues, including over ten years coordinating State of Alaska reviews of onshore and offshore oil and gas projects. He was a contributing author of the Borough’s Oil and Gas Technical Report and he assisted the Borough in organizing the 2016 Oil and Gas Forum. Glenn has a Bachelor of Science degree in Natural Resource Management from the University of Connecticut and Master of Science degree in Regional Planning from the University of British Columbia.

Brent Goodrum, Director of the Division of Mining, Land and Water for the Alaska Department of Natural Resources (DNR). Under Goodrum’s leadership, the Division manages all state-owned land, excluding park land, amounting to over 100 million acres of uplands and 65 million acres of tidelands, shorelands, and submerged lands. The Division also manages all of the State’s water resources, equaling about 40% of the nation’s fresh water supply. Prior to joining DNR in May of 2011, Goodrum served for 20 years in the active duty U.S. Marine Corps as an Infantry and Reconnaissance Officer. He graduated with Merit from the U.S. States Naval Academy in 1991 and earned a Master’s Degree in Operations Research from the Naval Postgraduate School in 1999. Goodrum first came to Alaska with his wife and three daughters in 2003.

Chris Grundman, Division of Oil and Gas – State Pipeline Coordinator’s Section, Alaska Department of Natural Resources. Originally from Wisconsin, Chris moved to Alaska in 1999 after graduating from UW – La Crosse with a Bachelor of Science degree in Geography and Earth Science. Chris has worked for the State of Alaska since 2000, with 13 of those years at the DNR. In his current position as a Natural Resources Manager III, he serves as Operations Manager for the Permitting and Right-of-Way Leasing Programs. The State Pipeline Coordinator’s Section is responsible for the administration of Alaska Statute 38.35 pipeline right-of-way leases including the coordination of the State’s oversight of preconstruction, construction, operation, and termination of jurisdictional pipelines.

Marleanna Hall, Executive Director, Resource Development Council (RDC). Marleanna joined the RDC as a Projects Coordinator in 2007 and was responsible for RDC’s fishing, Native corporation and endangered species issue work. She also served as the Development Director for Alaska Resource Education (formerly AMEREF: Alaska Mineral and Energy Resource Education Fund). In 2012 she was
promoted to work on issues across Alaska concerning mining and tourism. Prior to RDC, Marleanna was employed by Tesoro Alaska Company, which was the catalyst for her interest and passion in supporting industries involved in the responsible development of Alaska’s natural resources. She has completed the Leadership Anchorage program through the Alaska Humanities Forum, as well as the Leadership and Executive Advancement Program (LEAP) through the Anchorage Chamber. She earned her Bachelors in Business Management from University of Alaska Anchorage. Marleanna and her husband Dan have one son, Alex, and three Labradors. They enjoy spending time between their home in Anchorage and their cabin in Willow.

Larry Hartig, Commissioner, Alaska Department of Environmental Conservation. Mr. Hartig is an attorney with more than 20 years of experience in environmental law, regulations, permits and land use issues. Prior to his appointment in 2007 as Commissioner, he was in private practice as an attorney with the Anchorage law firm of Hartig Rhodes Hoge & Lekisch, PC. Joining the firm in 1983, Mr. Hartig worked primarily on environmental, natural resources, and commercial matters. His practice included assisting clients in obtaining environmental and other permits for natural resource development projects, as well as projects involving environmental compliance and cleanup of contaminated properties. Clients included government, private developers, industry, and Native corporations, among others. He also worked as a landman in the Land/Legal Department of Alyeska Pipeline Service Company between 1972 and 1976. Mr. Hartig has a B.A. from the University of Utah and received his J.D. from Lewis and Clark College. He is a member of the Exxon Valdez Oil Spill Trustee Council, a member of the Alaska Bar Association and a former member of the State Board of Forestry.

David Hobbie, Chief of the Regulatory Division, U.S. Army Corps of Engineers – Alaska District. In this position, Mr. Hobbie provides oversight of the Corps’ second largest regulatory program in the nation. He is responsible for all permitting activities in Alaska. This entails leading a diverse group of professional engineers, biologists and geologists to make timely permit decisions. His previous work with the Corps included a variety of assignments in Washington D.C., the Jacksonville District, the South Atlantic Division, the Mobile District, and the Alaska District. Mr. Hobbie has extensive experience with the Corps and has worked at six different districts as a park ranger, project manager and within emergency management operations. In 2004, he deployed as a resident engineer to Iraq. He has received two meritorious achievement medals, the Bronze Order of the De Fleury Medal, five commanders’ awards, a letter of achievement from Ambassador Paul Bremmer and various other awards for achievements throughout his career. In 1990, Mr. Hobbie earned a Bachelor’s degree in forestry and wildlife from Southern Illinois University in Carbondale, Illinois. He and his wife, Diane, are the parents of four children: Jaime, Jase, Jenna, and Jeremy.

Erik Kenning, Director, Land Management and Enforcement for Arctic Slope Regional Corporation (ASRC). Mr. Kenning has been working for ASRC for nearly 22 years and has been involved in many North Slope projects for 27 years. He has had a focus in GIS related projects and land management functions. He is primarily responsible for a wide variety of surface and subsurface resource related activities for the ASRC Land Department. These include developing a mitigation bank on ASRC lands, exploring other mitigation opportunities for the North Slope, managing surface use on ASRC lands, addressing community concerns related to surface activities across the North Slope, and involvement in a wide range of natural resource projects. Mr. Kenning holds a B.S. in Geography (GIS) and a B.S. in Industrial Technology from Illinois State University.

Sarah Kenshalo is the Coordinator for Remediation and Mitigation supporting ConocoPhillips Alaska, Inc. In this role, Sarah manages ongoing environmental liabilities, contaminated site closures, tundra rehabilitation, and mitigation efforts. Sarah has worked with ConocoPhillips in Alaska since 2005 supporting the Environmental and Permitting Group. Sarah was raised in Palmer, Alaska and received a
B.S. in Environmental & Engineering Geology from Western Washington University. She lives with her family and new puppy in Anchorage.

Herbert Kinneeveauk, Jr., President, Tikigaq Corporation. Mr. Kinneeveauk is the President of the Tikigaq Corporation, the local Native corporation for Point Hope. He is a husband, father, grandfather and whaling captain and serves as a member of the North Slope Borough Assembly.

Kim Kruse, Petroleum Land Manager, Division of Oil and Gas, Alaska Department of Natural Resources. She joined the Division of Oil and Gas in July of 2011 and manages the Permitting Section. She has worked for the Department of Natural Resources in various capacities coordinating and managing land use activities and reviewing and permitting resource projects. She received a B.A in Business Administration from Lewis and Clark College.

Dick LaFever, Forum Facilitator, Crossroads Leadership Institute. Mr. LaFever is an experienced facilitator, trainer and consultant within the private, non-profit, and government sectors. He has worked with business and industry leaders, senior staff, senior management teams, employee teams and cross-functional teams. Dick is an adjunct instructor at Alaska Pacific University in the Business Management Department.

Tom Lohman, Department of Wildlife Management, North Slope Borough. Tom has lived in Alaska since 1985, and began his career with the North Slope Borough in Barrow as an Assistant Borough Attorney in 1987. He moved to the Borough’s Department of Wildlife Management in 1991, focusing primarily on oil and gas, land management, wildlife, and subsistence issues. Tom relocated to Anchorage in 1995 to act as the Borough’s primary point of contact during large scale multi-agency planning efforts, including several considering NPR-A and OCS leasing proposals, Northstar, Liberty, Point Thomson, and other development projects, and high profile Alaska Coastal Zone Management and subsistence debates.

Marc Luiken, Commissioner, Alaska Department of Transportation and Public Facilities. Under his direction, the department is responsible for the planning, design and construction, as well as the maintenance and operation of Alaska’s transportation system, public buildings and facilities. He previously served as the department’s Commissioner from December 2010 to October 2012; a position he took after serving as DOT’s Deputy Commissioner for Aviation. Most recently, Commissioner Luiken was employed as a project manager and performance coach with RLG international, supporting the oil industry in Alaska with ConocoPhillips and BP Exploration Alaska. Prior to his public service to the State of Alaska, Luiken served 29 years with the U.S. Air Force, retiring June 1, 2010 as the Vice Commander of the 11th Air Force. His career as an Air Force fighter pilot spanned the globe with multiple assignments in the United Kingdom and Germany, and an assignment in Japan. He is combat veteran with service in Operation Desert Storm, Operation Southern Watch, Operation Joint Forge and Operation Enduring Freedom. Commissioner Luiken holds a Bachelor degree in Human Factor’s Engineering from the U.S. Air Force Academy, a Master’s degree in Management from Troy State University and a Master’s degree in Strategic Studies from Air University in Alabama. He is a Certified Member of the American Association of Airport Executives and a member of the Air Force Association. He lives in Anchorage with his wife Suzanne. They have five children; each of whom are Alaska residents.

Stacie McIntosh, Manager, Arctic Office, Bureau of Land Management. Stacie began as a permanent employee for the Bureau of Land Management in 2002, serving as the Anthropologist for the Arctic Field Office focusing on subsistence use and tribal consultation in the National Petroleum Reserve in Alaska. Prior to that, her federal employment includes working as a seasonal archaeologist for BLM,
and a term archaeologist for the National Park Service. Stacie has lived in Alaska since 1989, and travelled extensively throughout the state while working in the private sector as a contract archaeologist from 1994 to 2002. In 2009 she became the Assistant Field Manager for the Arctic Field Office, served as the acting Manager from January to August 2015, and was permanently hired into the Manager position in September 2015. Stacie has a Bachelor of Science degree in Anthropology-Archeology and a Masters of Arts degree in Anthropology-Social Cultural from the University of Alaska Fairbanks.

**Andy Mack**, Commissioner, Alaska Department of Natural Resources. Born and raised in Soldotna, Mr. Mack has experience in Arctic policy and development. Most recently, he served as a Managing Director of Pt Capital, the only private equity fund based in Alaska, and as an advisor to multiple Alaska Native corporations engaged in oil and gas activities on the North Slope. In this role, he helped guide the regulatory drafting and implementation applied to drilling efforts in the Chukchi and Beaufort Seas. Mr. Mack worked as both a civil and criminal defense attorney for five years and as a legislative assistant for more than 10 years. He holds a Bachelor of Arts degree from Concordia College in Minnesota and a juris doctor from Loyola Law School in California. He is a former member of the Resource Development Council of Alaska Board of Directors.

**Kara Moriarty**, President/CEO, Alaska Oil and Gas Association. Kara came to Alaska from her home state of South Dakota to teach elementary school in Atqasuk, an Iñupiaq village in the North Slope Borough. After working in Washington, D.C. for then South Dakota Congressman, now U.S. Senator John Thune, she moved back to Alaska and lived in Fairbanks for seven years. She has served as legislative staff in Juneau to Senator Gary Wilken and was the President/CEO of the Fairbanks Chamber for four years. She joined the AOGA staff in April 2005. She became the fifth Executive Director of AOGA on January 1, 2012. She became President/CEO December of 2013. She is a 2003 recipient of Alaska's Top 40 Under 40 Award and was the Honorary Iceman at Eielson Air Force Base. She is a member of the Downtown Rotary Club of Anchorage and serves on the Executive Committee of the Resource Development Council. In her spare time she can be found volunteering in full Jaguars gear on any given day as her children's "football mom". Her husband Gerry is an Alaska Airlines pilot, and they enjoy their three young children, Joseph, Margaret and Garrett.

**Shannon Morgan**, South Branch Chief, U.S. Army Corps of Engineers (USACE). Shannon began her career with the USACE as an intern in 1993, after working seasonally for the Alaska Department of Fish and Game in Bethel, Alaska. She has worked in the USACE Alaska District Regulatory Division for 21 years, working on permits across all regions and work sectors of Alaska. Shannon was born and raised in Alaska, with a family background in construction and recently worked as a consultant in the private sector. Education includes a B.S. in Natural Science from UAA, and a Master’s degree in Watershed Science from Colorado State University.

**Thomas Napageak, Jr.**, Mayor of Nuiqsut. In addition to mayor, Thomas has served as vice mayor, vice president of Nuiqsut’s Tribal Council, President of the Kuukpik Subsistence Oversight Panel, interim chair of the Village Voice Committee for Nuiqsut, member of the Alaska Nanuq Commission, and a member of the Nuiqsut Whaling Captains Association.

**Sheila Newman**, Special Actions Branch Chief, U.S. Army Corps of Engineers, Alaska District, Regulatory Division. In her current position, Sheila oversees third party mitigation and the production of environmental impact statements where the Corps is the Lead Federal Agency. Sheila is a University of Alaska (Fairbanks) graduate with undergraduate degrees (B.S.) in wildlife biology and biological sciences and University of LaVerne graduate in management studies (M.S.). She began her career with the Corps of Engineers in 1999 in the Fairbanks Regulatory Field Office, worked for the Air Force as an RCRA
program manager from 2004 to 2006, managed surface coal mining and mitigation for the Corps Hunting District regulatory program from 2006 to 2014 and returned to the Alaska District in September of 2014.

**Lisa Pekich**, Director of Village Outreach, ConocoPhillips Alaska, Inc. In her current position, Lisa supports the Business Unit by building relationships with the local Alaska communities and stakeholders. Lisa has worked in various careers with ConocoPhillips in Alaska since 1991, including environmental compliance, permitting, remediation, commercial planning and strategy, and stakeholder engagement activities for the Denali – the Alaska Gas Pipeline project. Lisa served as the Oil and Gas Industry representative on the State of Alaska Arctic Policy Commission in 2013 and 2014 as well as on the board of Green Star, Inc. in Anchorage for over six years. She developed the Alaska Forum on the Environment’s Environmental Technician Apprenticeship Program which is a registered apprenticeship program working to train Alaskans to work in environmental careers. Lisa was raised in Anchorage, Alaska and received a Civil Engineering degree from California Polytechnic State University – Pomona, and is also certified as a Qualified Environmental Professional (QEP). Lisa, her husband Illiya, and their three sons (Daniel, John, and Steve) live in Anchorage and enjoy camping, rafting, canoeing, fishing, and snowboarding throughout the year.

**Brien Reep**, Safety, Security, Health & Environmental Manager, ExxonMobil Alaska Production. Brien has worked for ExxonMobil for over 35 years in a variety of positions. Most recently, he worked on the Point Thomson Project during both the exploration and current production phase. He also spent 14 years with ExxonMobil on their Sakhalin Island projects.

**Pauline Ruddy**, Land Use Regulatory, Permitting, and Compliance Advisor, BP Exploration Alaska. Ms. Ruddy moved to Alaska in 1994, having graduated from the University of Minnesota, Duluth with a Bachelor of Science in Geology. Ms. Ruddy started her career in Alaska working as a contractor for the U.S. Air Force performing contaminated site investigations and risk assessments and assisting with public outreach. She gained experience in NEPA while coordinating and managing the completion of a large EIS for the Department of Transportation. She later worked for Arctic Slope Regional Corporation (ASRC) Energy Services providing permitting, issue management, and stakeholder strategy support for Shell Exploration. Ms. Ruddy was the Regulatory Affairs Manager for Shell Exploration for several years, including the 2012 drilling season. She began working for BP Exploration (Alaska) in 2013 where she continues to support operations in Prudhoe Bay.

**Hanh Shaw**, Program Manager, Oil, Gas and Energy Sector U.S. Environmental Protection Agency, Region 10. As the Sector Manager, Hahn is responsible for coordinating the activities, reviews, and decision-making across the agency’s regulatory programs. She also serves as the senior advisor to the Executive Team and Regional Administrator on all EPA program responsibilities associated with the Sector. Since joining EPA in 1993, Hanh has worked in a variety of media programs. She began her career as a Superfund project manager responsible for the cleanup of heavily contaminated sites. Hanh’s experiences also include leading multiple complex Environmental Impact Statements for mining and oil and gas development proposals in Alaska. She spent almost 10 years in the Office of Water, where she was responsible for water discharge permits for oil and gas projects in Cook Inlet and the Arctic. Hanh also served as the Regional Team Lead responsible for oversight of the state-implemented the water discharge permitting programs in Washington, Oregon, and Alaska. Hanh has a Bachelor of Science degree from Seattle University in Environmental Engineering. She is an avid cook, gardener, and accomplished marathoner. She resides on a small island in Puget Sound with her husband and 16-year-old son.
Honorable Dan Sullivan, Senator, U.S. Congress. Senator Sullivan was sworn in as Alaska’s eighth U.S. Senator on January 6, 2015. He serves on four Senate committees vital to Alaska: the Commerce, Science and Transportation Committee; the Armed Services Committee; the Environment and Public Works Committee; and the Veterans' Affairs Committee. Prior to his election to the U.S. Senate, he served as Alaska’s Attorney General and Commissioner of the Alaska Department of Natural Resources. Senator Sullivan has a distinguished record of military and national security service and is currently an infantry officer and Lieutenant Colonel in the U.S. Marine Corps Reserves. Over the past 21 years, he has served in a variety of command and staff billets on active duty and in the reserves, including active duty to serve with a Joint Task Force in Afghanistan. Sullivan served in the Administration of President George W. Bush as the U.S. Assistant Secretary of State for Economic, Energy, and Business under Secretary of State Condoleezza Rice. Sullivan also served as a Director in the International Economics Directorate of the National Security Council staff at the White House. He has a Bachelor of Arts in Economics from Harvard University and a joint law and Masters of Science degree in Foreign Service from Georgetown. He and his wife Julie Fate Sullivan have three teenage daughters: Meghan, Isabella and Laurel.

Robert Suydam, North Slope Borough Wildlife Department. Robert Suydam has lived in Barrow, Alaska and worked as a Wildlife Biologist for the Borough beginning in 1990 and as a Senior Wildlife Biologist since 2009. His research interests have focused on monitoring population trends and documenting natural history traits of bowhead whales, beluga whales, eiders, geese, and other Arctic species. He has served on several recovery teams and on a variety of advisory groups concerning the research and management of subsistence resources in northern Alaska. Currently he serves on the Committee of Scientific Advisors for the U.S. Marine Mammal Commission, the Science Technical Advisory Panel for the North Slope Science Initiative, and as vice chair to the International Whaling Commission’s Scientific Committee. Robert earned a Master’s degree in biology from the University of Alaska Fairbanks in 1995, and a Ph.D. in aquatic and fisheries sciences from the University of Washington in 2009.

Bill Tracey, North Slope Borough Planning Commission. Mr. Tracey lives in Point Lay with his wife Marie. He has served on the Borough Planning Commission since the 1980s as a commissioner and alternate commissioner. Mr. Tracey has held a number of jobs during his time in Point Lay, including employment with the Borough, Arctic Slope Regional Corporation Iñupiaq Builders, the Cully Corporation, and as the Borough and Point Lay fire chiefs. He has also served on the boards for Ilisagvik College, ANICA and the TNHA Housing Authority.

Honorable Bill Walker, Governor, State of Alaska. In December of 2014 Governor Walker and Lt. Governor Byron Mallott were sworn in as the first non-partisan administration in Alaska’s history. Governor Walker was born in Fairbanks and raised in Delta Junction and Valdez. Prior to taking office, he and his wife, Donna, owned a law firm that focused on municipal and oil and gas law.

Donna Wixon, Natural Resource Specialist, Bureau of Land Management (BLM). Donna works in the BLM Arctic Office which manages the National Petroleum Reserve-Alaska (NPR-A). She has been working in the permitting and compliance section for 16 years and with BLM for 25 years. Donna works on Oil and Gas Permitting, Realty Authorizations and Recreation Permits and conducts inspections.
This appendix summarizes input from Forum participants on the eight breakout session topics. It includes information from flip chart and computer notes taken by the facilitators and written comments by the participants. For each topic, the desired outcome for the breakout session is listed followed by common themes of the discussions, specific recommendations, and other issues identified during the discussions. During the breakout sessions, the facilitators worked with the participants to identify general themes of the discussion. On the last day of the Forum, the facilitators led an exercise to prioritize the general themes, and the votes allocated to each of the themes are noted below.

While this appendix focuses on comments from the participants, a summary of the panel discussions and presentations that occurred during the breakout sessions may be found in the main document.

**Breakout Session #1: Working Together to Reduce Duplication and Streamline Permitting**

*Desired Outcome of Breakout Session: Identify and prioritize future actions that would improve coordination of the permitting process*

*Common Themes Identified by Session Participants:*
- Good stakeholder engagement builds trust and relationships (42 votes)
- Consistency among regulatory approvals (40 votes)
- Standardize requirements for background documents needed to support a complete application packet and permit issuance (35 votes)
- Learn from the past (21 votes)
- Early and frequent coordination and consultation - pre-application to execution (21 votes)
- Develop a glossary of common terms (12 votes)
- Responsible development and decommissioning, removal and restoration (DR&R) through better communication (4 votes)

*Specific Recommendations:*
- Pre-application
  - Formalize a process for multi-agency participation at pre-application meetings.
  - Establish clear expectations for what is needed to issue permits.
  - Identify information needs early (goes along with gap analysis).
- Application completeness
  - Standardize background information requirements.
  - Establish a standardized format and information to save time and money.
- Complete a gap analysis for mitigating impacts – there is a way to apply for funds for mitigating impacts.
- Establish “life of project” permits.
- Improve stipulations:
  - Develop stipulations for how far oil and gas activities should be from cabins and camps.
  - Move towards performance-based requirements rather than being prescriptive.
- Conduct early and frequent coordination and consultation.
• Provide greater sharing of infrastructure.
• Provide more consistency among regulatory approvals.
• Be sure all are at table.
• Engage stakeholders.
• Use historical snapshots – learn from the past.
• Conduct proper health assessments of impacts to people.
• Allow electronic payments for permits.
• Avoid jargon and technical language.
• Improve NEPA Process:
  o Identify a preferred alternative in draft EISs.
  o Participate as a cooperating agency.
  o Address cumulative effects.

Other Comments:
• Include hands on, practical experience.
• Things occur in cycles; look at what was done in past when conditions were similar.
• Emphasize cooperation.
• Villages impacted by oil and gas and recreational activities allowed by BLM. Must be some give and take, can’t keep getting impacted and taking it. We are being too nice.
• There is a process in place for many positive things in the communities.
• Requirements have changed over the years but the industry has to comply with all requirements, even when they have changed significantly.
• Language changes create unfair demands – it should remain the same.
• Success is based on language and communication between the applicant and agencies.
• These are examples of why we need to do this dialogue.
• State departments must be in compliance with Borough planning and zoning (as explained in NSB PowerPoint presentation).
• If deviating from a NSB policy, must have a hearing with the Borough Assembly.
• More dialogue and discussion is needed for all parties to understand the rules and policies.
• Maybe this is the right time to change, work more closely together is a common thread to stay on the same page.
• Exxon – worked together with NSB and State to coordinate EIS.
• Point Thomson permit team won 2013 Denali award for exceptional performance of a team.
• MOUs develop relationships through teams and promote coordination before permit issuance (e.g., DNR-NSB MOU).
• Public lands such as the NPR-A have a national interest as well as interest of local stakeholders.
• Good dialogue is necessary:
  o Pre-application meetings best when project definition is mature, but open to address concerns.
• ConocoPhillips approach in NPR-A includes a focus on mitigation of community impacts
• Changing conditions from different administrations is a concern (e.g., NPR-A IAP).

Breakout Session #2:
Coordinating Activities to Improve Land Use Planning and Management

Desired Outcome of Breakout Session: Develop a list of methods or initiatives that would improve the coordination of land use planning and management across the North Slope.

Common Themes Identified by Session Participants:
• Memorandum of Understanding (MOU) (52 votes)
  o Change and expand
  o Define purpose
  o Share the costs
  o Understand roles and limits
  o At least annual reviews
• Region-wide planning process/jurisdictional authority (44 votes)
• People impacted must be effectively consulted (43 votes)
• Infrastructure working groups (10 votes)
• Create multiple points of contact (8 votes)
• How to better communicate with industry (4 votes)
• Break down paradigms to compare how oil companies do business (2 votes)

Specific Recommendations:
• Help people who are impacted.
• Address land use to assist industry.
• Use ice roads – better for environment and subsistence.
• Share infrastructure rather than each company having its own.
• Develop more infrastructure in the western part of North Slope.
• Develop a way to allow landfills in NPR-A.
• DNR-NSB MOU – coordination and consistency:
  o Define purpose.
  o Expand the scope of the MOU.
  o Share the costs.
  o Complete annual reviews.
• Create infrastructure working groups.

Other Comments:
• Jurisdictional authority has been a problem in the past.

Breakout Session #3:
Tundra Travel

Desired Outcome of Breakout Session: Arrive at a common understanding of how agencies regulate tundra travel and generate ideas of how better coordination among agencies and industry would improve the process.

Common Themes Identified by Session Participants:
4. Better coordination across state, borough and federal agencies with a shared data base (50 votes)
5. Tundra manual of traditional knowledge guidelines for assessing damage, remediation (42 votes)
7. Review and revise regulations to reflect changing conditions and levels of knowledge – uniformity (22 votes)
8. Better definitions of damage, disturbance (21 votes)
9. Triage – first response (10 votes)

Specific Recommendations:
• Improve coordination among Borough, State and BLM:
• Work towards a common management approach.
  • Establish shared database for tundra travel.
  • Review and revise agency regulations to reflect changing conditions, reflect current knowledge and provide uniformity.
• Definition for damage:
  • Develop a common definition for damage and disturbance and clarify the difference between these terms (State, NSB, industry and scientists).
  • Develop evaluation criteria to determine the severity of damage (e.g., a tundra disturbance index).
• Coordinate inspections and response to damage:
  • Conduct annual workshop with DNR and NSB to train inspectors.
  • Cooperate among agencies during first response to damage.
  • Promote early triage in response to reports of damage.
  • Standardize assessment methods.
• Climate change research:
  • Conduct research to determine how climate change is affecting tundra.
• Hold an ice road symposium.
• Manual or guide:
  • Develop guidelines for assessing tundra damage and requiring remediation.
  • As a start, review *Tundra Treatment Guidelines* from DEC.¹

**Other Comments:**
• Active layer of tundra is no longer stable.
• 12 inches of frost used to be achieved in November - now it can the first of January.
• Damage assessment:
  • Immediate visual effects may not directly correlate with extent of damage.
  • Damage not always visible in the winter – unreported damage results.
  • Tussocks regenerate from the mat - smaller damage.
  • There are differences between Borough and State enforcement.
  • Remediation must be in compliance with Borough requirements.
  • Borough works to get their staff on site as soon as possible when damage is reported.
  • Anaktuvuk Pass is working with the National Park Service to receive grant funding to restore tundra damaged from local ATV use.
• Village concern - can we consider another transportation corridor – permanent road to a central location?
• Timing is critical – early triage needed.

**Breakout Session #4:**
**Innovative Approaches for Mitigating Impacts**

**Desired Outcome of Breakout Session:** Increase the understanding of new ways to mitigate project impacts and whether it would be useful to have a common set of permit standards

**Common Themes Identified by Session Participants:**
• Include local and traditional activities knowledge in project design and mitigation strategy (39 votes)
• Study and data coordination and sharing (30 votes)

¹ *Tundra Treatment Guidelines: A Manual for Treating Oil and Hazardous Substance Spills to Tundra.*
• Large scale health assessment, taking care of people (25 votes)
• Connect and listen to all stakeholders (20 votes)
• Centralized database (14 votes)
• Community inventory of mitigation and compensation (8 votes)
• Determine when mitigation is required (credit/debit calculator) (8 votes)
• Multi-user infrastructure planning (7 votes)
• Aesthetics matter - noise, smells, visual, air quality (7 votes)
• Analyze re-purposing of infrastructure (6 votes)
• Landscape-scale mitigation strategy (4 votes)
• Facility sharing (3 votes)

Specific Recommendations:
• Cumulative impacts - come up with a qualitative or quantitative method to improve information and outcomes.
• Reconcile differences between local and national interests.
• Research:
  o Continue research to identify impacts from different types of activities – focus on activities with greatest impacts.
  o Reduce impacts of research by consolidating and coordinating studies (agencies and industry).
  o Agencies and companies should better collaborate on studies.
  o Use new technologies to reduce impacts (e.g., drones, acoustic monitoring, sea gliders, satellite telemetry).
  o Identify parties for researchers to contact
• Sharing facilities:
  o Reduce impacts by sharing pads, roads, ice roads, and other facilities.
  o Companies should do a better job at sharing facilities, services, etc.
• Shared inspections: combine agency site inspections.
• Pre-plan for infrastructure that can be used.
• Mitigation:
  o Develop a landscape-level mitigation strategy.
  o When assessing impacts, use tools that evaluate functional loss of habitat (rather than basing mitigation on loss of acreage).
  o Gap analysis for mitigating impacts.
  o Investigate if communities could be recipients of mitigation funds for their use or to invest in projects (e.g., improved sewage treatment.)
  o Re-evaluate compensatory mitigation for using mine sites to support fish habitat – once sites become fish habitat, other uses may be precluded (e.g., water withdrawal for ice roads).
  o Promote stipulations that allow companies to determine how to meet the standard (i.e., performance-based stipulations).
  o Identify sites that could be repurposed.
• Database:
  ▪ Complete an inventory of examples of mitigation efforts.
  ▪ Create a database of approaches that can be used.
• Wetlands mitigation - Link net operating losses into wetlands mitigation solutions on a massive scale.
• Maximize activities occurring during the winter to avoid damage.
• Put creative minds together.
• Be creative about limiting factors that may come from other geographic areas (example: birds from South America). Is there thinking about that? Not applicable under authorities of the Corps.
• Make sure funding is available.

Other Comments:
• Local impacts:
  o Communication:
    ▪ Direct discussion between applicant and local people is needed.
    ▪ Connecting with communities and companies and regulatory agencies (listen, pretend you live there).
    ▪ What’s missing is engagement of people on the North Slope. People’s experience and knowledge is underutilized.
  o Health:
    ▪ Borough and State need to look at health impact assessment at all areas, not one project or area.
    ▪ Health impacts need to be investigated (asthma, cancer, etc.). This needs to be studied and be part of an EIS. The effects need to be seen and known.
  o After the fact, locals lost the land to development and are losing their hunting grounds. Give land back to people once companies leave.
  o Impacts for hunters; threatened to be arrested while hunting on certain lands. Some companies allow that but others do not.
  o Local landowners have more interest but less funding. Can mitigation be given to communities for them to use or invest in projects?

• Mitigation:
  o Good to look at mitigation from a higher level as U.S. Army Corps of Engineers is doing - compensatory mitigation required in 404 and Section 10 permits.
  o Mitigation banks have been used elsewhere (not on North Slope).
  o Offsite mitigation may be possible.
  o Mitigation most effective between industry and the local areas to really address their issues.
• Non-invasive monitoring equipment was appreciated.
• Studies that confirm level of impacts with lots of good data. Maybe if data are evaluated which shows no need or impact, maybe focus on another area that does need more study or mitigation.
• Transparency, make meaningful mitigation for a watershed.
• Technological improvements: when using them we need to be careful and keep communities up to speed on the new technologies. Socialization needs to be done to mitigate these impacts.
• North Slope includes three ecoregions.
• Impacts on people - live off animals, they are being researched, air pollution, sound pollution of equipment on animals and people, smells from diesel vehicles an industry
• Detailed studies did not influence compensation for Point Thomson project.
• Need transparency when doing cost-benefit calculations.
• Conflict avoidance agreements between AEWC and industry have been successful.
Breakout Session #5:
Planning for Future Roads, Pipelines and Service Areas

*Desired Outcome of Breakout Session:* Discuss opportunities to identify new transportation and utility corridors and opportunities for the NSB to develop new service areas and prioritize future actions that can be taken.

*Common Themes Identified by Session Participants:*
1. Transportation corridor plan – start now (49 votes)
2. Collaboration – maximize skills sets of agency authorities (40 votes)
3. Define road blocks (obstacles) (40 votes)
4. Port authority model (15 votes)
5. Use gravel from unused roads (12 votes)
6. Projects will drive solutions (8 votes)

*Specific Recommendations:*
- **Planning:**
  - Consider slope-wide planning for transportation corridors, pipeline corridors, gravel mines, and other services for the oil and gas activities.
  - Hold a workshop for future road corridors.
  - Start a transportation and utility corridor plan.
  - Identify opportunities for new gravel mines and other services.
  - Plan for a connection to the Dalton Highway.
  - Consider gravel roads on the Western part of the North Slope (not annual ice roads).
- Promote reuse of gravel from unused roads for new roads.
- Change requirements to allow landfills in the NPR-A.
- **Address obstacles:**
  - Mix of land ownership.
  - Federal funding requires public access (not just village access).
  - Funding sources.
  - Community opposition to new roads that may be accessed by outsiders.
  - High costs for transportation.
  - Creation of new service areas by Borough.

*Other Comments:*
- What will it take to identify new transportation and utility corridors and how can the NSB develop new service areas?
- Two areas would be off the table for a pipeline corridor in the NPR-A.
- North Slope Port Authority discusses the possibility of a corridor.
- Village concerns: can we consider another transportation corridor – permanent road to a central location (e.g., an airport)?
- State’s North Slope Management Plan can help overcome obstacles.
- Need to do as much as possible onshore.
- **Permanent roads:**
  - Time to consider permanent roads to specific locations such as villages.
  - Let’s be/get smart due to all the times we’ve built and made ice roads. Money that could be used to build roads needed for exploration. Be wise about spending our money. We may have the longest coast in the U.S but we are in need of roadways and not just ice roads. Have we learned anything from our past?
As industry heads west, roads (gravel) should be built instead of working on ice roads every winter. Learn from the past. This would help with freight and so much more for our northern communities. Point Lay has the best coal and gravel. This road would be helpful to our community in so many ways.

Let’s build a roadway system for northern Alaska to do more oil and gas exploration on land. Plus, this would help in our everyday life of freight for shipping for our NSB residents and business. A port would not work for every village. Transportation – lower costs (roads), gravel access (best gravel), coal access (best coal). Federal money means “public” uses.

Funders impose restrictions (e.g., federal money means public access - industry funding creates other obstacles).

A project should initiate a planning process – no roads to nowhere.

• Port Authority:
  - We are against building a port near Point Lay due to our harvesting of mammals. The traffic in the ocean will only increase yearly. This needs to be addressed more in the villages. Not to mention more use of the NSB search and rescue. Medical (hospital) issues will increase.
  - Port is not wanted, too shallow.

**Breakout Session #6:**
**Reducing Impacts from North Slope Air Traffic**

*Desired Outcome of Breakout Session:* Provide an opportunity for North Slope residents to identify their concerns about air traffic and identify future cooperation among stakeholders to reduce impacts

*Common Themes Identified by Session Participants:*
  - Increase communication (37 votes)
  - Reduce frustration by using alternate transport modes and local hire (37 votes)
  - Educate researchers, identify their impacts and mitigate (33 votes)
  - Time and area closures - Conflict Avoidance Agreement (CAA) model (32 votes)
  - Consolidate agency site inspections (14 votes)
  - Social media – connecting locals (8 votes)
  - Be good neighbors (5 votes)
  - Best Practices (4 votes)

*Specific Recommendations:*
  - Increase communication with local residents - use social media.
  - Consider time and area closures (use CAA model).
  - Reduce flights needed by deploying fuel and supplies by land during winter.
  - Use camps for research and to decrease impacts.
  - Remove areas from lease sales to reduce impacts.
  - Use a “good neighbor” approach.
  - Require permittees to identify where they will be landing and type of aircraft
  - Hire locals, use subsistence advisors.
  - Identify who researchers should contact.
  - Coordinate agency inspections (e.g., combine flights to reduce aircraft).
  - Tracking flights - Consolidate flight information among agencies.
  - Minimize research projects and share information (BLM and EPA have done this).
  - Identify what can be done to mitigate impacts before the fact.
• Agencies should communicate with villagers in the same way that industry does.
• Consider involving the North Slope Science Initiative to address this issue.
• Help government agencies learn from industry to help relationships with local people.
• Reduce “stick picking” to reduce impacts of aircraft.
• Consider impacts from all aircraft (industry, agency, researchers, ecotourism, recreational users).
• Document history and lessons learned.
• Share information about subsistence times:
  o Many hunting seasons on the North Slope; winter, breakup, etc.
  o Share a subsistence calendar to identify what types of hunting are occurring when.
• Increase communication between researchers and residents:
  o Inform researchers regarding all parties to contact – find ways to inform researchers as to how to communicate and mitigate impacts.
• Continue use of call centers
  o Shell would call into call centers to find out where people were going
  o Agencies should contribute to funding of call centers.
• Identify flight patterns - build on existing Audubon map.

Other Comments:
• Communication should be a two-way street. Residents, industry and other agencies willing to communicate, just need to make it happen.
• Frustration because of a lack of responsiveness from agencies.
• Delegation of authority is not clear – don’t know who is responsible.
• Call centers:
  o What is the status of call centers? Shell funded them in the past, but not this year.
  o Funding agencies should help contribute to these call centers to help villages with cultural needs and subsistence needs.
  o Conoco Phillips has a daily call number that people can call. Also have a daily recording to let people know what the activity is in the area (Nuiqsut only).
• Barrow search and rescue can be called but looking out for game.
• Planes do interfere with the subsistence lifestyle – villagers live off the food of the land and sea - villagers impacted by aircraft and by outside hunters coming in to their area.
• After impact has occurred it is too late and hunter does not get any game and loses money on the hunt. This has gone on for several years now. Still talking but not solved yet. These are real situations when a hunter can’t provide food for family or community. People go without food as a result.
• Long history – lots of data, must sit down and put it all together. Agency communication and cooperation is needed. Permits are given to many different people and agencies which villagers don’t know about. They are told it is “every day stuff.” Tourism, sightseeing, sport fishing, etc. use aircraft. They can disrupt the wildlife actions and patterns. Take the local people’s history in mind is important.
• Non-subsistence hunters have been a problem in Anaktuvuk Pass.
• Wainwright worked with industry to talk about impacts and mitigation, industry hired people and worked with the village dates. Agencies don’t do this and are not as sensitive. Want industry to communicate with people but the agencies don’t follow that example.
• Wainwright has cancelled at least one project due to the impacts of aircraft on people.
• Communication must go both ways.
• Alaska Eskimo Whaling Commission is a leader – Diomede was declared nutritionally a disaster area – no food, no resources for them.
• Government agencies are not sensitive to the local subsistence calendars.
• Lack of local hire increases the need for aircraft.
• Tracking:
  o Subsistence Advisory Panel Meetings identify impacts.
  o Permits (number of takeoffs and landings).
  o As a resident I don’t know who is out there with aircraft.
• It is very expensive to travel.
• Air traffic over and around the walrus haul out at Point Lay creates a hazard to the walrus herd - stampeding occurs.

Breakout Session #7:
Decommissioning, Removal and Restoration (DR&R)

Desired Outcome of Breakout Session: Identify what regulators currently require for DR&R, issues that need resolution, and next steps for resolving those issues.

Common Themes Identified by Session Participants:
4. Use best practices which may include re-use and providing flexibility (45 votes)
5. Inventory of what will need to be restored/reclaimed (40 votes)
6. Take responsibility for current DR&R needs (28 votes)
7. Consider a “Superfund” type of money pool (12 votes)
8. BLM and state need to coordinate a plan with other land owners for DR&R and strive for early consensus (12 votes)
9. Create an inventory of “chain of ownership” that is current, to identify current landowner (11 votes)
10. Create working groups (3 votes)

Specific Recommendations:
• Encourage reuse of materials.
• Create a working group.
• Identify chain of ownership for facilities and roads that will need to be restored.
• Determine if a “funding pool” would be appropriate.
• Create a list of best practices from sites where gravel has been removed.

Other Comments:
• Bonds are required of operators, and bonds may be increased near the end of a project if circumstances merit an increase.
• Requirements vary according to situation, purpose and history of operator.
• Restoration/reclamation plans:
  o While a plan is required, there is a lot of wait and see.
  o The plan would be done at a later time with an awareness now of the ultimate requirement.
• Waiting until activity ceases should not be an option.
• Iḷisaġvik College, located at the Barrow Naval Reserve is an example of agencies not taking responsibility. “The amount of stuff we have is overwhelming.”
• BLM and State are land owners so NSB should work with them.
• AOGCC has an inventory of all wells and DNR has an inventory of facilities in lease documents. NSB may also have an inventory.
• Once you lay down a road it is a big deal to remove it.
• Future uncertainty:
  o It is important to be flexible since it is difficult to know what will exist in the future.
  o We will not know the answers until abandonment takes place
• NSB has not said “we don’t need that anymore.” That may be a good tactical approach.
• Tundra treatment for spills - we could have some “best practices” from sites where the gravel has been removed.

Breakout Session #8:
Communicating with Residents

Desired Outcome of Breakout Session: Provide an opportunity for local residents to identify impacts related to numerous meetings held in villages and specific actions that can be taken to improve communication and reduce impacts.

Common Themes Identified by Session Participants:
• Be aware of community and subsistence activity calendar (33 votes)
• Community directory: who, how, when to engage (33 votes)
• Mutual respect builds trust (28 votes)
• Being transparent, responsive, accountable (21 votes)
• Have meaningful dialogue in layman’s language (16 votes)
• Meeting preparation (16 votes)
  o Go beyond minimum requirements to notify
  o Select right materials to share
  o Create a one page summary
• Action after Forum (13 votes)
• Informal resident engagement (10 votes)

Specific Recommendations:
• Create a community directory – who to reach out to in order to avoid mistakes.
• Use a variety of methods to communicate (old and new technologies).
• Meet first with trilateral group in village (city, tribe and village Native corporation).
• Be sure the right people are at the table.
• Plan ahead in order to have the right information for an effective dialogue.
• Conduct training.
• Increase mutual respect.
• Develop a glossary of common terms.
• Avoid jargon and technical language.
• Listen to concerns and document “lessons learned.”
• Combine meetings when possible.
• Learn about the community – each village is different.
• Hire locals.
• Best practices for meetings:
  o Communicate with residents before visit.
  o Know local subsistence calendar and schedule meetings accordingly.
  o Send information early.
  o Prepare project summary sheets.
  o Provide meeting notice in a variety of ways.
  o Meet with trilateral group first (i.e., tribe, city and local Native corporation).
  o Be clear about why the meeting is being held.
- Have a translator for elders.
- Be “solutions oriented.”
- Serve a meal.
- Wander streets, talk with people.
- Have activities for kids – most villages don’t have child care options.
- Follow up after meeting.

- Hold people accountable to provide follow up.

Other Comments:
- The right mix of people – industry, agency staff and others – are needed to build trust.
- Transparency is needed to the highest degree possible.
- Responsiveness needed as things change.
- There is no single point of contact for each village – city, village, corporation, ICAS, other, whaling captains, etc.
- MOUs might be out-of-date.
At the end of the Forum, just before the closing remarks, participants were given an opportunity to speak on any topic. This appendix summarizes the comments by topic rather than by order of occurrence.

Communication
- General principles
  - Building trust and relationships was an important theme of the Forum.
  - When can communicate it works well. If not used, it makes things worse.
  - Be sure to understand what residents are dealing with – take the time to be sure people are communicating well.
  - No matter how hard you plan and are aware, you will have some people complain. Be respectful, there are many meetings, and communication matters to them.
- Communicating with residents
  - When trying to engage people in the villages, need a database of who to contact.
  - Take the time to contact community leaders about changes to project timelines or comment periods.
  - Ilisagvik College can help with teaching communication issues for agencies and industry.
  - People play many roles in each community. You may find that talking to one person accomplishes touching many aspects in community – “touch many by touching a few.”
  - Subsistence activities are done throughout the entire year, and people will miss meetings that are scheduled during prime hunting times. For some activities like whaling, people prepare for it all year long. Work has to be done by families, therefore some meetings will be missed. Newcomers need to understand this way of life.
  - Point Hope has gone through a lot beginning with the planned Project Chariot nuclear detonation. The history of relations with outsiders has led to attitudes today - it is not because they don’t care, it is about how people were treated in past. Residents want to be listened to as they listen to others. Respect is the most important value for visitors to use when communicating with local residents.
  - The EPA North Slope Protocol, developed in 2009, incorporates lessons learned, best practices, and knowledge of the region. This document is an important starting point for others doing business in the Borough.
- Need to involve the tribe in each community – workers deal with many issues in their work with the tribe after working at their day job.

Community Information
- The Community Database on State of Alaska website needs to be updated with correct information.

Decommissioning, Removal and Restoration (DR&R)

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2 Presumably, this comment reflects the database on the website for the Alaska Department of Commerce, Community and Economic Development: [https://www.commerce.alaska.gov/web/dcra/ResearchAnalysis.aspx](https://www.commerce.alaska.gov/web/dcra/ResearchAnalysis.aspx)
• Consider season of year when removing buildings, roads, as it may have long term consequences (water holes as an example)
• DR&R is single biggest issue for the future - past activities have resulted in waste from military installations, oil drums on the tundra, and other problems
• NSB is giving DR&R a lot of thought – need to develop a process now about ways to use sites before final reclamation, to promote responsible development
• The issue of funding needs to be revisited on the chart. It should be re-worded. Promissory notes don’t give assurance that money will be there.

**Land Conveyances**
• DNR is still working on a plan for conveying more acreage – need to think ahead about the future projects now to avoid problems (e.g., materials sites)
• Need to get more lands conveyed to NSB to save costs

**Project Impacts**
• Do it right the first time so don’t have to do it again
• Health concerns
  o Health impact should be considered due to what has been dumped in the past – there may be a risk of cancer from former activities
• Aircraft impacts
  o Exploration at a coal deposit near Point Lay was serviced by aircraft, and hunters were concerned that the inability to harvest caribou in the next few years resulted from the exploration activities. Caribou calving season may also have been impacted. The following season, residents asked the company to delay the timing of aircraft and use of fixed-wing aircraft which had fewer impacts than helicopters.
• Do as much as can on land before going offshore
• Tundra travel - gravel roads provide problems for tundra travel – have to go around instead them. Seismic activity needs to be studied as to the impact on roads

**Funding**
• Understand respect when dealing with agencies in terms of receiving funds (competition between State and tribal entities). Don’t let timelines go by.

**Local and Traditional Knowledge**
• Subsistence Advisors
  o Need to use the knowledge of residents through the subsistence advisor program, which provides traditional knowledge, saves money, and also provides local jobs.
  o Subsistence representatives for each project are very important, although they may be difficult to find at times. It is a valuable program that benefits the project, increases communication, and helps to develop confidence and experience for the representatives.
• Language and cultural data that is not being utilized.
Language used by industry language does not facilitate understanding, especially when English is not the first language.
Oil and Gas Technical Report: Planning for Oil & Gas Activities in the National Petroleum Reserve-Alaska

Summary of Recommendations

General Recommendations

5.2.1 Interagency Coordination

- **Agency Plans:** Amend agency planning processes to consider the entire region; address cumulative impacts; and continue coordination during plan implementation.

- **Regulatory Improvements:** Standardize lease sale and permit stipulations and incorporate new innovative approaches.

5.2.2 Update Title 19

- Update Title 19 to respond to new conditions and practices:
  - **Standards:** Clarify development standards (policies) and use performance-based requirements where feasible.
  - **Policies:** The term “policies” should be replaced with another term that reflects the enforceability of the requirements, such as “standards.”
  - **Subsistence Representatives:** The update should clarify when the NSB may require subsistence observers or representatives.

5.3 Communication and Coordination

**Communication with Residents:**

- **Protocols:** Agencies should consider developing protocols for working with communities on the North Slope similar to the one developed by the EPA.

- **Advance Contact:** Agencies and industry should contact city and tribal leaders before scheduling a meeting in the community to discuss timing of the meeting and any other concerns.

- **Consolidate Meetings:** Consolidate meetings when feasible to avoid meeting fatigue experienced by some communities.

**Project Coordination:**

- **Interagency Coordination:** Explore options for improved coordination of project reviews with agencies, and develop a new system to replace the coordinating function of the former ACMP.

- **Effective Opportunities for Participation:** Expand opportunities for involving the NSB and its communities during lease sales and exploration and development permitting. Permit streamlining efforts should retain opportunities for local involvement.

- **Subsistence Observers:** Expand options for involving local residents in monitoring projects.

- **Information Sharing:** Agencies are strongly encouraged to share work products (e.g., GIS and mapping data, including cabin and camp inventories and aerial photography).
Local Participation in Research:
- **Communities**: Coordinate research activities with communities (e.g., more involvement in research design, implementation, and reporting draft results for their review); support adequate funding for the NSSI; and consolidate information on a single website.
- **Research Principles**: Researchers should follow the National Science Foundation’s *Principles for the Conduct of Research in the Arctic*.
- **Ordinance**: The NSB should consider adopting an ordinance that provides direction to researchers (similar to what the Northwest Arctic Borough has done).
- **Local and Traditional Knowledge**: Researchers soliciting knowledge from residents are encouraged to be respectful of sensitive information and provide adequate compensation.

5.4 Tundra Travel

**Title 19:**
- **Standards**: Move the approval criteria in NSBMC § 19.50.030(J) to Chapter 19.70.
- **Winter Tundra Travel**: Consider replacing the current snow and frost depth requirements with a more flexible approach that is a hybrid of the state federal approach.
- **Summer Tundra Travel Criteria**: Provide more specific summer tundra travel guidance.
- **Definitions**: Update the definition of tundra travel in Chapter 19.20 to exempt snow machines used for personal use and to differentiate between winter and summer tundra travel.
- **Remediation**: Clarify requirements for rehabilitation and restoration of tundra damage that includes to the use of BATs and BMPs and criteria for assessing damage.

**NSB Standard Stipulations:**
- **Trail Crossings**: Develop a standard stipulation for inclusion in ice road permits that requires smooth transitions at junctions with established trails.

Local Use:
- **Local Use**: Encourage companies to provide subsistence access to snow and ice roads.
- **Dalton Highway Access**: Improve winter access from villages to the Dalton Highway.

Interagency Coordination:
- **Vegetation Mapping**: Improve vegetation maps for use in identifying routes that would avoid sensitive vegetation and incorporate it into the NSB GIS system.
- **Continue to Improve Tundra Travel Communication**: Improve access to up-to-date online information about tundra travel.
- **Jurisdiction**: Address responsibilities for various aspects of tundra travel such as public safety and removal of abandoned vehicles.
- **Evaluation of Management Approaches**: Work with state and federal agencies and industry to evaluate current tundra travel management and consider a standardized approach.

5.5 Roads

- **Region-Wide Planning**: Support Slope-wide road and utility corridor planning, convene a workshop to address this issue, and establish NSB zoning to establish corridors.
- **Better Science**: Encourage more research into the effects of road corridors on caribou.
- **Subsistence Access**: Allow subsistence users access to oil field roads while limiting public access.
- **Pullouts**: Add pullouts for subsistence users (i.e., a place to park trucks and trailers).
5.6 Pipelines

- **Region-Wide Planning:** Use 19 zoning code to establish pipeline corridors; convene a workshop. **Pipelines in Roads:** Co-locate cold-oil pipelines in roads to mitigate caribou migration impacts.
- **Buried Pipelines:** Bury pipelines in areas where there are thaw-stable soils.
- **Subsea Pipelines:** Support coastal subsea pipelines where there is critical onshore habitat.
- **Minimum Heights:** Update Title 19 requirements to establish minimum pipeline heights of 7’.
- **Reflectivity:** Encourage the use of coatings on pipelines to reduce reflectivity.

5.7 Gravel Islands

- **Avoid Onshore Impacts:** Use nearshore Islands to avoid impacts to sensitive onshore areas.

5.8 Recommendations for Air Traffic

- **Tracking:** Develop a Borough-wide system to track actual landings and takeoffs by type of use.
- **Violations:** Implement a system to report violations of permit conditions for air travel.
- **Corridors:** Establish corridors for air traffic to avoid wildlife during sensitive periods.
- **Research:** Consider impacts of research when requiring new studies.

5.9 Dismantlement, Removal & Restoration (DR&R)

- **Update Study:** Complete a follow up study to evaluate what has been done to address issues raised in the 2002 GAO study, including an evaluation of the adequacy of reclamation plans.
- **Agency Coordination:** Increase coordination among regulatory agencies and industry.
  - **Inventory:** Develop a Slope-wide system to inventory abandoned infrastructure and track individual restoration and rehabilitation efforts.
  - **Lessons Learned:** Review effectiveness of methods and monitoring.
  - **Agency Regulation:** Discuss how current DR&R requirements could be improved.
  - **Financial Responsibility:** Review adequacy of financial responsibility requirements, and explore options for a standard methodology for calculating DR&R costs.
  - **Criteria:** Explore criteria for determining when DR&R obligations have been met.
  - **Process:** Develop a process to implement DR&R for large production facilities that includes consideration of assets that could be transferred to Borough ownership.
- **DR&R Plan:** Revise Title 19 to require a reclamation plan with NSB permit applications that:
  - Requires DR&R actions when all or part of an infrastructure is no longer used.
  - Allows NSB to require a reclamation plan during master plan updates.
  - Allow use of a reclamation plan submitted to another agency when appropriate.
  - Require restoration of ecosystem function and subsistence opportunities.
  - Require explanation of why infrastructure should not be restored to original condition.
  - Require updates to restoration plans to address new information or conditions.
- **Financial Responsibility:** Evaluate surety requirements in Title 19 to ensure there is adequate financial responsibility and to examine this ability when ownership is transferred.

**Policies:** Revise Title 19 to require restoration to pre-project unless such reclamation would cause greater adverse impact or it would not be in the interest of the NSB.