

**STUDY TITLE:** Aggregate Effects of Research and Environmental Mitigation Monitoring of Oil Industry Operation in the Vicinity of Nuiqsut

**REPORT TITLE:** Aggregate Effects of Oil Industry Operations on Iñupiaq Subsistence Activities, Nuiqsut, Alaska: A History and Analysis of Mitigation and Monitoring

CONTRACT NUMBER: M09PC00034

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**BACKGROUND:** A number of studies have documented the impacts of oil and gas development on North Slope subsistence activities and recommended measures to reduce these impacts, particularly in the community of Nuiqsut, Alaska. Over the years, agencies, industry, and local residents have adopted these measures or worked to develop new mitigation measures intended to lessen the impacts of oil industry activities on Nuiqsut's subsistence activities. However, few if any efforts have monitored effectiveness of these measures once they have been recommended or implemented. For this reason, the USDOJ Bureau of Ocean Energy Management (BOEM) sought to gain a better understanding of the effectiveness of past and current mitigation efforts to reduce potential impacts on subsistence activities near Nuiqsut, Alaska.

**OBJECTIVES:** The study team conducted research to identify and evaluate the effectiveness of specific subsistence mitigation strategies and stipulated actions guiding oil and gas industry operations in the vicinity of Nuiqsut. Specifically, the study team evaluated mitigation measures intended to lessen the potential negative impacts of oil and gas development on subsistence activities for seven onshore and offshore development projects in the vicinity of Nuiqsut: Alpine, Alpine Satellites, Endicott, Meltwater, Northstar, Oooguruk, and Tarn.

**DESCRIPTION:** Research components included an inventory of planned mitigation and subsistence concerns related to the seven development projects; interviews with agency, industry, and community key informants; a history of proposed and implemented mitigation; an analysis of the effectiveness of mitigation measures and monitoring plans; and recommendations for how individual mitigation measures, in addition to the mitigation process as a whole, could be improved.

**SIGNIFICANT CONCLUSIONS:** Through discussions with key informants, the study team found that a majority of mitigation measures were, in concept, considered to be effective. However, individual mitigation stipulations varied in effectiveness due to differences in how they were implemented by development companies. No measures were considered to be "ineffective" in their design, but rather in their implementation. In many cases, key informants provided recommendations for how a mitigation measure could be enhanced to improve its effectiveness. The study team found that in a number of cases local residents were unaware of the presence of a mitigation measure and therefore were unable to provide information about the effectiveness of these measures. In addition, local residents' frustrations were often directed toward the mitigation process rather than the mitigation measures themselves, indicating that improved communication and consultation with local communities could improve local perceptions related to mitigation.

The study team found that in most cases there is no mechanism for monitoring mitigation

measures after they have been implemented, or for measuring their effectiveness. This is particularly true for social mitigation measures aimed at reducing impacts on subsistence activities. Increased local input before, during, and after project development, with equal opportunities for participation by local subsistence harvesters and local entities, would provide a more effective mechanism for developing, implementing, monitoring, and measuring the effectiveness of mitigation measures addressing local subsistence uses. In addition, the study team found that providing a more transparent and accessible way for agencies and the public to track stipulated mitigation measures by project and developer would also contribute to efforts to monitor mitigation.

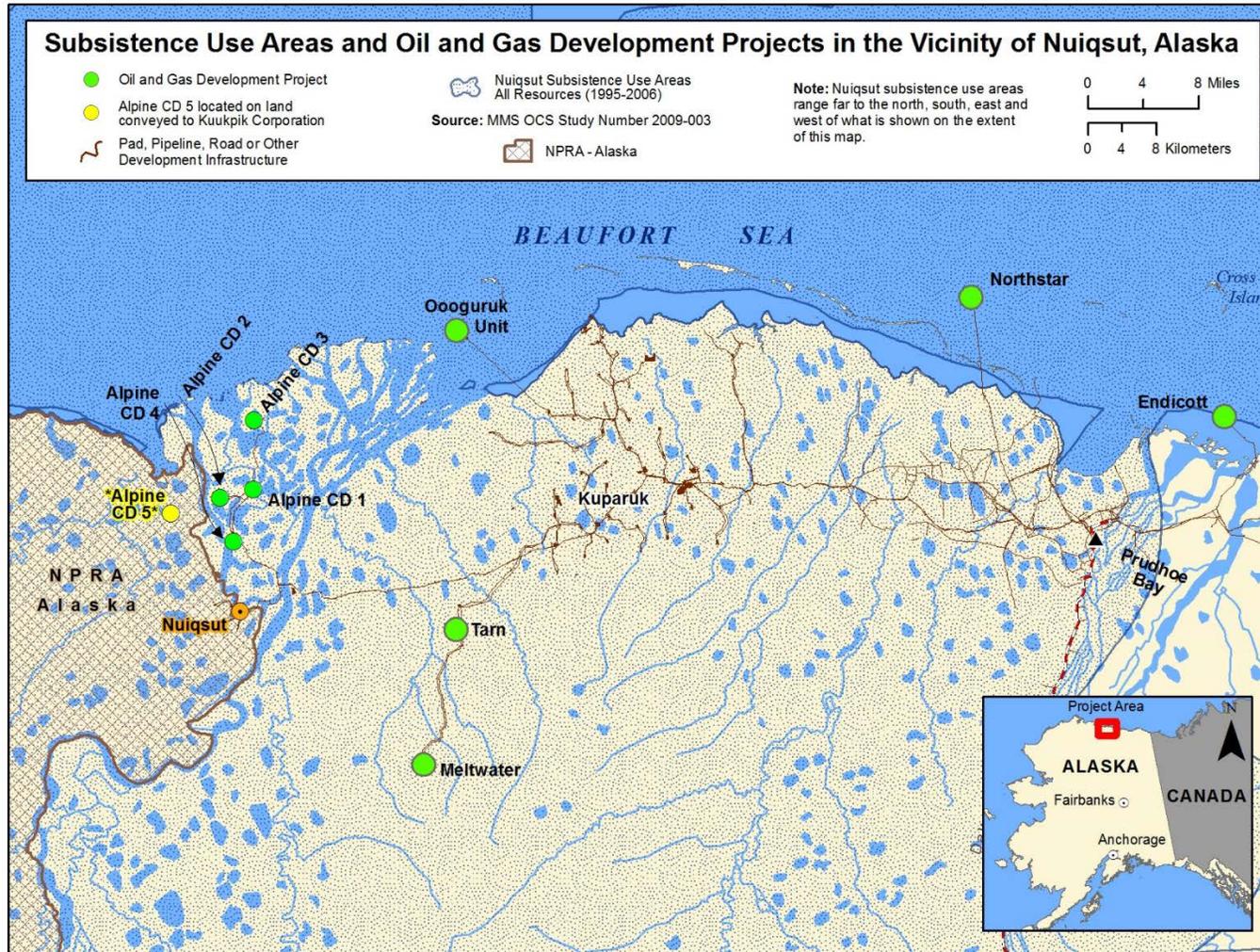
Overall, the study provided a useful basis for agencies, developers, and local residents to increase collaboration in the development of new mitigation measures, enhance existing mitigation measures, and streamline the mitigation process. If implemented, the study team's recommendations could serve as a starting point for meaningful discussion about changes to mitigation measures that improve their effectiveness and, ultimately, reduce impacts on Nuiqsut subsistence activities resulting from oil and gas development.

**STUDY RESULTS:** This was an evolving study that originally focused on documenting mitigation measures found in NEPA documents and tracking concerns and mitigation measures from scoping testimony through EISs and RODs or FONSI. When the study team learned that binding mitigation stipulations are contained primarily in permits and leases, the study grew to include stipulations found in permits, DPP letters of approval, and lease sale agreements. The information provided by individuals from governmental agencies, industry, and the community of Nuiqsut was key to the success of the study by helping focus and refine the research and providing information that increased the researchers' understanding of the mitigation process.

Through its inventory of mitigation measures for the seven development projects, the study team found a considerable number of mitigation measures (over 800) that addressed subsistence users, activities, resources, and habitats either directly or indirectly. The number of mitigation measures that directly addressed subsistence users and activities (rather than subsistence resources and habitats) was far smaller, at 80 measures.

The study team evaluated the effectiveness of 16 mitigation types and associated 80 individual mitigation measures. Spatial and temporal mitigation types included Conflict Avoidance Agreements, Guarantee Access to Subsistence Resources, Helicopter and Airplane Management, Location of Facilities, Pipeline Elevation and Placement, Water Vessel Management, and Winter Operations. Social mitigation types included Community Consultation, Employee Cultural Awareness Training, Employee Hunting Prohibition, Good Neighbor Policy, Mitigation Fund, Research on Subsistence Impacts, Subsistence Leave Policy, Subsistence Oversight Panel, and Subsistence Representatives. Based on the responses from key informants, the study team concluded that many of the mitigation measures aimed at lessening effects to subsistence users and activities need improvement through modification of the measures themselves, or through improved communication with local residents. The study team concluded that the measures requiring the greatest improvement are those social mitigation measures aimed at lessening impacts to subsistence users and activities.

**STUDY PRODUCT:** Braund, Stephen R. Braund & Associates. 2013. Aggregate Effects Research and Environmental Mitigation Monitoring of Oil Industry Operation in the Vicinity of Nuiqsut: History and Analysis of Mitigation Measures, Final Report. Prepared for the U.S. Department of the Interior, Alaska OCS Region, Anchorage, AK. Technical Report No. BOEM 2013-212.



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