



U.S. Department of the Interior
Bureau of Land Management

Coastal Plain Oil and Gas Leasing Program Draft Environmental Impact Statement

Volume I: Executive Summary, Chapters 1-3, References, Glossary

December 2018

Prepared by:

US Department of the Interior
Bureau of Land Management

In cooperation with:

US Fish and Wildlife Service
US Environmental Protection Agency
State of Alaska
North Slope Borough
Native Village of Kaktovik
Native Village of Venetie Tribal Government
Venetie Village Council
Arctic Village Council

Estimated Lead Agency Total
Costs Associated with Developing
and Producing this EIS
\$1,200,000



United States Department of the Interior



BUREAU OF LAND MANAGEMENT
Alaska State Office
222 West Seventh Avenue, #13
Anchorage, Alaska 99513-7504
www.blm.gov/alaska

In Reply, Refer To
1793 (930)

December 2018

Dear Reader:

I am pleased to present the Coastal Plain Oil and Gas Leasing Program Draft Environmental Impact Statement (Leasing EIS) for your review. It addresses a list of issues and contains three action alternatives for the Bureau of Land Management's (BLM) implementation of an oil and gas program in the Coastal Plain of the Arctic National Wildlife Refuge (Arctic Refuge). This program is required by the Tax Cuts and Jobs Act of 2017, Public Law 115-97 (PL 115-97).

The Coastal Plain is within the political boundary of the North Slope Borough and is predominantly managed by the US Fish and Wildlife Service as part of the Arctic Refuge. The decisions to be made as part of this Leasing EIS concern which areas of the Coastal Plain would be offered for oil and gas leasing and the terms and conditions to be applied to such leases and subsequent authorizations for oil and gas activities.

The action alternatives discussed in the Leasing EIS include lease stipulations and required operating procedures designed to mitigate impacts on natural resources and their uses. All future on-the-ground actions requiring BLM approval, including potential exploration and development proposals, will require further National Environmental Policy Act analysis based on the site-specific proposal.

The BLM will evaluate all comments received and address substantive comments in the final Leasing EIS scheduled to be released in 2019.

The most useful comments are specific and address one or more of the following:

- Identification of new information that would have a bearing on the analysis.
- Inaccuracies or discrepancies in information or any errors in our portrayal of the resources and uses of the program area.
- Suggestions for improving implementation of an oil and gas leasing program, consistent with the purposes of the Arctic Refuge.
- Identification of new impacts, alternatives, or potential mitigation measures.

When you share your comments with us, please be as specific as possible. Identify the specific concern or correction you are suggesting, where it appears in the Leasing EIS, and the modification you feel is necessary or appropriate.

I appreciate your comments on the Leasing EIS and there are three ways to submit them:

- Electronically at <https://goo.gl/HVo5Mj>
- By mail to:
Ms. Nicole Hayes
Project Manager
BLM Alaska State Office
222 West 7th Avenue, #13
Anchorage, AK 99513
- In person at the BLM Public Information Center, located on the first floor in the James M. Fitzgerald United States Courthouse and Federal Building, 222 W. 7th Avenue, Anchorage, Alaska, or at the public meetings.

The 45-day public comment period for the Leasing EIS begins with the Notice of Availability published by the Environmental Protection Agency in the *Federal Register*. The precise dates of the comment period, as well as information about public meetings and subsistence hearings pursuant to Section 810 of the Alaska National Interest Lands Conservation Act, will be posted on our website at www.blm.gov/Alaska.

Submitted comments will be publicly available and may be published as part of the Final Leasing EIS. Before including your address, phone number, email address, or other personal identifying information in your comment, be aware that your entire comment, including your personal identifying information, may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so. All submissions from organizations and businesses and from individuals identifying themselves as representatives or officials of organizations and businesses will be available for public inspection in their entirety.

For additional information about the public comment process or the Leasing EIS, please go to the program website at: <https://www.blm.gov/programs/planning-and-nepa/plans-in-development/alaska/coastal-plain-eis>

Sincerely,



Ted A. Murphy
Acting State Director

Coastal Plain Oil and Gas Leasing Program Draft Environmental Impact Statement

- Lead Agency:** United States (US) Department of the Interior, Bureau of Land Management (BLM)
- Cooperating Agencies:** US Fish and Wildlife Service, US Environmental Protection Agency (EPA), State of Alaska, North Slope Borough, Native Village of Kaktovik, Native Village of Venetie Tribal Government, Venetie Village Council, and the Arctic Village Council
- Proposed Action:** In accordance with the Section 20001 of Public Law 115-97 (PL 115-97), establish and administer a competitive oil and gas program for the leasing, development, production, and transportation of oil and gas in and from the Coastal Plain in the Arctic National Wildlife Refuge (Arctic Refuge).
- Abstract:** The BLM will establish and administer an oil and gas leasing program for the Coastal Plain in the Arctic Refuge, as required by PL 115-97. The Coastal Plain Oil and Gas Leasing Program Draft Environmental Impact Statement (Leasing EIS) will inform the BLM's implementation of PL 115-97, Section 20001(c)(1), which requires the BLM to hold multiple oil and gas lease sales. The Leasing EIS considers three action alternatives. The No Action Alternative, Alternative A, is included for comparison only; it does not meet the purpose and need of the EIS. Alternatives B, C, and D propose a range of the extent of the Coastal Plain that would be available for lease sale—from 66 to 100 percent of the 1.56 million-acre Coastal Plain—while balancing biological and ecological concerns. These alternatives also include lease stipulations and required operating procedures designed to mitigate impacts on resources and their uses. Alternative D contains two sub-alternatives, Alternatives D1 and D2, for varied analysis of caribou summer habitat lease stipulations. There is no preferred alternative. The Leasing EIS considers and analyzes the environmental impact of these various leasing alternatives, including the areas to offer for sale, and the indirect impacts that could result in consideration of the hypothetical development scenario. These include potential effects from future on-the-ground post-lease activities on climate and meteorology, air quality, noise, physiography, geology and minerals, petroleum resources, paleontological resources, sand and gravel, soil, water, solid and hazardous waste, vegetation and wetlands, wildlife, landownership and uses, cultural resources, subsistence uses and resources, sociocultural systems, environmental justice, recreation, visual resources, special designations (including marine protected areas, eligible and suitable wild and scenic rivers, and wilderness characteristics, qualities, and values), transportation, public health, and the economy.
- Review Period:** The review period on the Leasing EIS is 45 calendar days. The review period began when the EPA published a notice of availability in the *Federal Register* on December 28, 2018. The comment period ends on February 11, 2019.
- Further Information:** Contact Nicole Hayes of the BLM at (907) 271-4354 or visit the Leasing EIS website at <https://goo.gl/HVo5Mj>.

Executive Summary

INTRODUCTION

The United States (US) Department of the Interior (DOI), Bureau of Land Management (BLM), Alaska State Office, is preparing this environmental impact statement (EIS) in accordance with the National Environmental Policy Act of 1969, as amended (NEPA), to implement an oil and gas leasing program in the Arctic National Wildlife Refuge (Arctic Refuge) Coastal Plain. Congress identified the Coastal Plain in Section 1002 of the Alaska National Interest Lands Conservation Act of 1980 (ANILCA) for its oil and natural gas potential; legislation was passed in December 2017 lifting a prohibition on oil and gas development imposed by Section 1003 of ANILCA and requiring BLM to implement an oil and gas leasing program. The Coastal Plain program area is composed of approximately 1,563,500 acres in the approximately 19.3-million-acre Arctic Refuge (**Map I-1**, Program Area, in **Appendix A**). The oil and gas leasing program must also consider the Arctic Refuge purposes set out in Section 303(B)(2) of ANILCA, as amended, and modified by Section 20001 of Public Law (PL) 115-97 (Dec. 22, 2017) (PL 115-97).

PURPOSE AND NEED

Section 20001 of PL 115-97 requires the Secretary of the Interior, acting through the BLM, to establish and administer a competitive oil and gas program for the leasing, development, production, and transportation of oil and gas in and from the Coastal Plain area within the Arctic Refuge. Further, Section 20001 of PL 115-97 requires that at least two lease sales be held by December 22, 2024, and that each sale offer for lease at least 400,000 acres of the highest hydrocarbon potential (HCP) lands within the Coastal Plain, allowing for up to 2,000 surface acres of Federal land to be covered by production and support facilities.

The BLM is undertaking this Coastal Plain Oil and Gas Leasing Program Environmental Impact Statement (Leasing EIS) to implement the leasing program consistent with PL 115-97. The Leasing EIS will serve to inform BLM's implementation of PL 115-97, Section 20001(c)(1), which is the requirement to hold multiple lease sales. It may also inform post-lease activities, including seismic and drilling exploration, development, and transportation of oil and gas in and from the Coastal Plain. Specifically, the Leasing EIS considers and analyzes the environmental impact of various leasing alternatives, including the areas to offer for sale, and the indirect impacts that could result in consideration of the hypothetical development scenario. The alternatives analyze various terms and conditions (i.e., lease stipulations and required operating procedures [ROPs]) to be applied to leases and associated oil and gas activities, to properly balance oil and gas development with protection of surface resources.

Future on-the-ground actions requiring BLM approval, including potential exploration and development proposals, would require further NEPA analysis based on the site-specific proposal. Potential applicants would be subject to the terms of the lease; however, the BLM Authorized Officer may require additional site-specific terms and conditions before authorizing any oil and gas activity based on the project level NEPA analysis.

DECISIONS TO BE MADE

The BLM's decisions will include which tracts of land will be offered for lease and the terms and conditions to be applied to such leases and subsequent authorizations for oil and gas activities. The decisions evaluated in this Leasing EIS and its record of decision (ROD) would not authorize any on-the-ground activity associated with the exploration or development of oil and gas resources on the Coastal Plain.

PROGRAM AREA

The US Fish and Wildlife Service (USFWS) is the predominant land manager in the program area. Other lands in the Coastal Plain include Alaska Native lands conveyed pursuant to Alaska Native Claims Settlement Act (ANCSA) and Native allotments (see **Table ES-1** and **Map I-1** in **Appendix A**). The program area excludes a northern coastal portion of Air Force-administered lands near Kaktovik. Lands outside the BLM's oil and gas leasing authority are those excluded from the definition of the Coastal Plain in PL 115-97, Native conveyed, and Native selected lands.

Table ES-1
Land Administration

Included in PL 115-97 Coastal Plain and Subject to the BLM's Oil and Gas Leasing Authority	Acres	Included in PL 115-97 Coastal Plain but Outside the BLM's Oil and Gas Leasing Authority	Acres
USFWS-managed lands, including submerged lands	1,562,600	Native-conveyed	24,400
Native allotment	900	Native-selected	4,400
Total	1,563,500	Total	28,800

Source: BLM Geographic Information Systems (GIS) 2018

Note: Acreages are rounded up or down to nearest 100.

SCOPING AND ISSUES

As part of the scoping process, the BLM considered public comments provided during scoping meetings held in Anchorage, Arctic Village, Fairbanks, Kaktovik, Utqiagvik, and Venetie, Alaska, and in Washington, DC, during May and June 2018, when developing the alternatives for analysis in the Leasing EIS. It also considered input from cooperating agencies, tribes, and Native corporations. For more information on the scoping process, see the final scoping report on the BLM's project website: <https://goo.gl/HVo5Mj>.

Issues such as fish and wildlife, including the Porcupine caribou herd (PCH), special status species, including polar bear, analysis of oil and gas activities, and subsistence use and traditional ways of life, were identified during scoping and addressed in this Leasing EIS. The full list of issue summaries is available in the final scoping report.

ALTERNATIVES

Alternative A—No Action Alternative

Under Alternative A (No Action Alternative), no federal minerals in the Coastal Plain would be offered for future oil and gas lease sales after the ROD for this EIS is signed. Alternative A would not comply with the directive under PL 115-97 to establish and administer a competitive oil and gas program for leasing, developing, producing, and transporting oil and gas in and from the Coastal Plain. Under this alternative, current management actions would be maintained, and resource trends are expected to continue, as described in the Arctic National Wildlife Refuge Revised Comprehensive Conservation Plan (CCP) (USFWS 2015a).

Alternative A would not meet the purpose and need of the action, which is the BLM's implementation of PL 115-97, including the requirement to hold multiple lease sales and to permit associated post-lease oil and gas activities; however, Alternative A is being carried forward for analysis to provide a baseline for comparing impacts under the action alternatives, in accordance with the Council on Environmental Quality (CEQ) NEPA regulations.

Alternative B

The entire program area under Alternative B could be offered for lease sale, and there would be the fewest acres with no surface occupancy (NSO) stipulations. In addition to applicable lease stipulations, several ROPs would apply to post-lease oil and gas activities to reduce potential impacts. Approximately 1,563,500 acres would be offered for lease, 359,400 acres would be subject to a NSO stipulation, and 585,400 acres would be subject to timing limitations (TLs). Standard terms and conditions would apply to approximately 618,700 acres.

Alternative C

The entire program area could also be offered for lease sale under Alternative C; however, a large portion of the program area would be subject to NSO. The BLM would rely on the same ROPs as under Alternative B to reduce potential impacts from post-lease oil and gas activities. Approximately 1,563,500 acres would be offered for lease, 932,500 acres would be subject to NSO, and 317,100 acres would be subject to TLs. Standard terms and conditions would apply to approximately 313,900 acres.

Alternative D

Under Alternative D, portions of the Coastal Plain would not be offered for lease sale to protect biological and ecological resources. In addition, a large portion of the remaining area would be subject to NSO. In some instances, more prescriptive ROPs are analyzed under Alternative D, than under Alternatives B and C.

Alternative D contains two sub-alternatives, Alternatives D1 and D2, for the issue of caribou summer habitat. The two sub-alternatives use different approaches to mitigate impacts on caribou summer habitat through lease stipulations. Under both sub-alternatives, approximately 1,037,200 acres would be offered for lease, 708,600 acres would be subject to NSO, and 123,900 acres would be subject to controlled surface use (CSU). Alternative D1 would have no areas subject to TLs but would have approximately 204,700 acres subject to standard terms and conditions. Alternative D2 would have approximately 204,700 acres of TLs and no areas subject to standard terms and conditions.

The complete list of lease stipulations and ROPs under each alternative are presented in **Table 2-2** in **Chapter 2**.

HYPOTHETICAL DEVELOPMENT SCENARIO

The BLM developed a hypothetical development scenario for oil and gas exploration, development, production, and abandonment in the PL 115-97 Coastal Plain. The agency used this to analyze the environmental impacts of leasing and development over approximately the next 50 years. An estimated 427,900 acres of the program area has high potential for petroleum resources, 658,400 acres have medium potential, and 477,200 acres have low potential. This hypothetical baseline scenario assumes all potentially productive areas can be open under standard lease terms and conditions, except those areas outside the BLM's oil and gas leasing authority. This hypothetical baseline scenario allows decision-makers to analyze the effect that different discretionary management decisions could have on future oil and gas activities in the program area. The BLM then developed different hypothetical scenarios, with different terms and conditions relating to environmental protection, so that a range of impacts on resources could be analyzed.

The program area contains an estimated 7.687 billion barrels of technically recoverable oil and 7.04 trillion cubic feet (TCF) of technically recoverable natural gas (Attanasi 2005). Due to high costs associated with operating in the Arctic, it is extremely unlikely that all technically recoverable resources would be produced. The US Energy Information Administration estimated that a total of approximately 3.4 billion

barrels of oil (BBO) would be produced in the Arctic Refuge by 2050 (Van Wagner 2018). Estimated natural gas production from the Coastal Plain ranges from 0 to 7 TCF of gas produced (Attanasi 2005). See **Appendix B** for more information on development potential, assumptions behind potential estimates, and estimates for the baseline future hypothetical development scenario for petroleum.

IMPACT ANALYSIS

Issuance of oil and gas leases under the directives of Section 20001(c)(1) of PL 115-97 would have no direct impacts on the environment because by itself a lease does not authorize any on the ground oil and gas activities; however, a lease does grant the lessee certain rights to drill for and extract oil and gas subject to further environmental review and reasonable regulation, including applicable laws, terms, conditions, and stipulations of the lease. The impacts of such future exploration and development activities that may occur because of the issuance of leases are considered potential indirect impacts of leasing. Such post-lease activities could include seismic and drilling exploration, development, and transportation of oil and gas in and from the Coastal Plain. Therefore, the analysis in Chapter 3 is of potential direct, indirect, and cumulative impacts from on-the-ground post-lease activities, which can be considered potential indirect impacts of leasing.

The geographic scope of the analysis includes marine vessel traffic from the shore of the refuge to Dutch Harbor, Alaska. Direct and indirect impacts cannot be analyzed on a site-specific basis within this EIS, but they are analyzed for the program area generally, based on the hypothetical development scenario. Additional site-specific analyses would be conducted during the permit review process for subsequent exploration and development applications.

If leases were explored and developed, the following general impacts would be expected from future oil and gas exploration, development, and production activities:

- Potential impacts on subsistence users, both from impacts on subsistence species and from direct disturbance of hunts, displacement of resources from traditional harvest areas, and hunter avoidance of industrialized areas
- Impacts on water quality caused by water extraction and construction of ice roads and pads, gravel mining, and wastewater discharges from a central processing facility (CPF)
- Impacts from routine activities on air quality due to release of pollutants
- Greenhouse gas (GHG) emissions from exploration and development
- Potential impacts on birds from predators and increased human presence
- Potential impacts on marine mammals, including human-polar bear interactions; vehicle, aircraft and boat traffic and noise disturbance; and accidental, unplanned take by vessel strikes or oil spills
- Impacts on terrestrial mammals, including disturbance from vehicle and aircraft noise, human presence, and habitat fragmentation and loss
- Disturbance and loss of permafrost, vegetation, and wetlands
- Potential impacts on state employment, labor income, and revenues
- Potential impacts on North Slope Borough (NSB) employment, income, and revenue
- Potential impacts on cultural resources by lease development
- Visual impacts from infrastructure and artificial light
- Loss or reduced quality of some access to recreation and use opportunities around areas leased for energy infrastructure

Residents of Kaktovik are the primary users of the program area and would therefore be most likely to experience potential impacts from future development. The community of Nuiqsut could experience impacts on caribou, waterfowl, and fish harvests from development. Residents of Arctic Village, Venetie, and other communities that use the PCH and Central Arctic Caribou Herd (CAH) could experience potential impacts from future development on caribou and, to a lesser extent, waterfowl. Most visitors to the Arctic Refuge come specifically to locations within the program area. With expected increases in recreation, coupled with decreased access to recreation in areas, users of the Coastal Plain would be likely to experience impacts from future post-lease development.

COLLABORATION AND COORDINATION

The BLM is the lead agency for this EIS. Cooperating agencies are the USFWS, US Environmental Protection Agency (EPA), State of Alaska, NSB, Native Village of Kaktovik, Native Village of Venetie Tribal Government, Venetie Village Council, and the Arctic Village Council.

The BLM, as the lead federal agency, consulted with federally recognized tribal governments during preparation of this EIS. The BLM has contacted the Arctic Village Council, Inupiat Community of the Arctic Slope, Native Village of Kaktovik, Venetie Village Council, Native Village of Venetie Tribal Government, Beaver Village Council, Birch Creek Tribal Council, Chalkyitsik Village Council, Gwichyaa Zhee Gwich'in Tribal Government (Fort Yukon), Naqsrarmiut Tribal Council (Anaktuvuk Pass), Native Village of Barrow Iñupiat Traditional Government, Native Village of Nuiqsut, and Native Village of Stevens. The BLM offered these entities the opportunity to participate in formal government-to-government consultation, to participate as cooperating agencies, or to simply receive information about the project. The dates and locations of government-to-government meetings that have taken place are provided in **Appendix C**.

The BLM is also consulting with the Arctic Slope Regional Corporation (ASRC) and Kaktovik Iñupiat Corporation (KIC) under the DOI's Policy for Consultation with ANCSA Corporations. The BLM also held consultations with Doyon, Limited, to discuss the EIS process (see **Appendix C**).

The BLM is consulting with the Alaska State Historic Preservation Office (SHPO), in accordance with Section 106 of the National Historic Preservation Act of 1966 (NHPA). This is to determine how proposed activities could affect cultural resources listed on or eligible for listing on the National Register of Historic Places (NRHP).

To comply with Section 7(a)(2) of the Endangered Species Act of 1973 (ESA), the BLM began consulting with the USFWS and National Marine Fisheries Service (NMFS) early in the EIS process. Both provided input on issues, data collection and review, and alternatives development. The BLM is consulting with the USFWS and NMFS to identify ESA issues and to develop the draft biological assessment.

Section 810 of ANILCA focuses on issues related to the effects of proposed activities on subsistence use. An ANILCA Section 810 notice and public hearing process is required if a proposed action may significantly restrict subsistence uses and needs. A preliminary evaluation and proposed finding of effects on subsistence uses and needs from actions that could be undertaken under the four alternatives considered in this EIS is provided in **Appendix E**. The preliminary evaluation finds that the cumulative case, when taken in conjunction with Alternatives B, C, D1, and D2 may significantly restrict subsistence uses and needs for the community of Kaktovik. Due to these preliminary findings, a public subsistence hearing will be held in the potentially affected community of Kaktovik.