



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

December 2024

Coastal Plain Oil and Gas Leasing Program Record of Decision



Prepared by:
U.S. Department of the Interior
Bureau of Land Management

Cover photo by Lisa Hupp (USFWS)
Publication Number: BLM/AK/PL-25/002+1610_933

Coastal Plain Oil and Gas Leasing Program

Record of Decision

**Prepared by:
U.S. Department of the Interior
Bureau of Land Management**

December 2024

This page intentionally left blank.

TABLE OF CONTENTS

Section	Page
1. INTRODUCTION	1
1.1 Background.....	1
2. DECISION.....	2
3. DECISION RATIONALE	6
3.1 Complies with Section 20001 of PL 115-97.....	6
3.2 Proper Balance of the Statutory Purposes of the Arctic Refuge	9
3.3 Practicable and Reasonable Mitigation Measures	9
4. ALTERNATIVES	10
4.1 Alternative A: No Action Alternative.....	11
4.2 Alternative B.....	11
4.3 Alternative C.....	11
4.4 Alternative D.....	11
4.5 Alternative D2.....	12
4.6 Alternatives Eliminated from Detailed Analysis	13
4.7 Environmentally Preferred Alternative.....	13
5. COMMUNITY ENGAGEMENT	13
5.1 Public Scoping	13
5.2 Scoping Issues.....	14
5.3 Leasing SEIS Process	15
5.4 Public Review of the Leasing SEIS.....	16
6. ADDITIONAL INFORMATION.....	16
6.1 Cooperating Agencies.....	16
6.2 National Historic Preservation Act Section 106 Consultation.....	16
6.3 Endangered Species Act Section 7 Consultation	16
6.4 Tribal Consultation	16
6.5 ANCSA Corporation Consultation	17
6.6 Compliance with Section 810 of the Alaska National Interest Lands Conservation Act	18
6.7 Consultation with Canadian Government.....	21
6.8 Environmental Justice.....	22
6.9 Floodplain Management and Protection of Wetlands.....	23
7. FINAL AGENCY ACTION.....	27
8. REFERENCES.....	28

TABLES Page

1	Draft Leasing SEIS Public Meetings	15
2	Leasing SEIS Government-to-Government Consultation Meetings.....	17
3	Leasing SEIS ANCSA Corporation Consultation Meetings.....	17
4	ANILCA Section 810 Hearings	20

MAPS Page

1	Coastal Plain Oil and Gas Leasing Program Area	3
2	Alternative D2.....	7
3	Alternative D2, Lease Stipulations	8

APPENDIX

A	Lease Stipulations and Required Operating Procedures
---	--

ACRONYMS AND ABBREVIATIONS

Full Phrase

AIDEA	Alaska Industrial Development and Export Authority
ANCSA	Alaska Native Claims Settlement Act
ANILCA	Alaska National Interest Lands Conservation Act of 1980
[Arctic] Refuge	Arctic National Wildlife Refuge
ASTAR	Arctic Strategic Transportation and Resources
BLM	Bureau of Land Management
CFR	Code of Federal Regulations
DOI	U.S. Department of the Interior
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
NEPA	National Environmental Policy Act of 1969
NMFS	National Marine Fisheries Service
NOAA	National Oceanographic and Atmospheric Administration
NSO	no surface occupancy
PL	Public Law
PLO	public land order
ROD	Record of Decision
ROP	Required Operating Procedure
SEIS	Supplemental Environmental Impact Statement
SO	Secretary's Order
U.S.	United States
USC	United States Code
USFWS	United States Fish and Wildlife Service

This page intentionally left blank.

Coastal Plain Oil and Gas Leasing Program Record of Decision

1. INTRODUCTION

This document constitutes the United States (U.S.) Department of the Interior (DOI) Record of Decision (ROD or Decision) for the November 2024 Coastal Plain Oil and Gas Leasing Program Supplemental Environmental Impact Statement (hereafter Leasing SEIS) prepared by the Bureau of Land Management (BLM) and U.S. Fish and Wildlife Service (USFWS) under the National Environmental Policy Act (NEPA). This ROD describes the leasing program Decision made herein, background and rationale for the approved Decision, and other related information.

1.1 Background

Section 20001 of the Tax Cuts and Jobs Act of 2017 (Public Law [PL] 115-97; Dec. 22, 2017) (hereafter Tax Act or 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 National Wildlife Refuge (Arctic Refuge). The Tax Act requires the BLM to offer two lease sales by December 22, 2021 and 2024, respectively, and for each sale to offer at least 400,000 acres containing those areas that have the highest potential for discovery of hydrocarbons.

The BLM and USFWS, as joint lead agencies, prepared the Leasing SEIS in accordance with NEPA, as amended, to address and cure deficiencies in the initial NEPA analysis in the 2019 Coastal Plain Oil and Gas Leasing Program Environmental Impact Statement (2019 EIS; BLM 2019) and the associated 2020 ROD. The BLM issued the Final Coastal Plain EIS in September 2019, and former Secretary of the Interior Bernhardt signed a ROD for the leasing program on August 17, 2020 (85 *Federal Register* 51754; DOI 2020), adopting Alternative B from the 2019 EIS and thereby making the entire approximately 1,563,500-acre “Coastal Plain,” as defined in the Tax Act, available for oil and gas leasing and potential exploration and development. In late 2020, four lawsuits were brought in U.S. District Court for the District of Alaska by several environment organizations, tribes, and States, challenging the adequacy and lawfulness of the 2019 EIS and 2020 ROD under NEPA and other statutes. Those cases have been stayed while the Leasing SEIS and this ROD were pending. Following issuance of the 2020 ROD, the BLM conducted its first lease sale in the Coastal Plain, publishing a notice of sale in the *Federal Register* on December 7, 2020, and opening bids on January 6, 2021. A total of nine tracts were leased to three lessees.

On June 1, 2021, Secretary of the Interior Haaland issued Secretary’s Order (SO) 3401, directing: (1) a new, comprehensive analysis of the environmental impacts of the leasing program (i.e., what came to be the Leasing SEIS) to address identified legal deficiencies in the 2019 EIS and 2020 ROD; and (2) a temporary halt on all leasing program activities in the Coastal Plain while the new environmental analysis was pending. SO 3401 identified multiple legal deficiencies in the underlying record supporting the program and leases, including, but not limited to: (1) insufficient analysis under NEPA, including failure to adequately analyze a reasonable range of alternatives in the 2019 EIS; and (2) failure in the 2020 ROD to properly interpret Section 20001 of the Tax Act. That same day, and in light of the identified legal deficiencies, the Principal Deputy Assistant Secretary for Land and Minerals Management issued decisions

to the three lessees, suspending operations on the leases while the new environmental analysis was conducted. One lessee, the Alaska Industrial Development and Export Authority (AIDEA), along with the Arctic Slope Regional Corporation, Kaktovik Iñupiat Corporation, and North Slope Borough, filed a lawsuit in U.S. District Court for the District of Alaska challenging the temporary halt of the program and lease suspensions. In August 2023, the District Court issued a decision upholding the temporary halt and lease suspensions, and the plaintiffs appealed the decision to the Ninth Circuit Court of Appeals, where the case is currently pending.

Two leases were subsequently cancelled and rescinded at the two lessees' request, and their lease payments were refunded. On August 19, 2022, the Principal Deputy Assistant Secretary for Land and Minerals Management issued an addendum to the remaining lessee's (AIDEA) suspension of operations decision, identifying an additional legal deficiency in the 2019 EIS regarding analysis of foreign greenhouse gas emissions.

On September 6, 2023, the Draft Leasing SEIS was released for public comment. That day the Deputy Secretary of the Interior issued a decision cancelling the remaining seven oil and gas leases, held by AIDEA, due to the pre-leasing legal deficiencies, and directed a refund of AIDEA's lease payments. AIDEA filed a lawsuit in U.S. District Court for the District of Columbia challenging cancellation of the leases. The case was subsequently transferred to the District of Alaska where the Court's decision is currently pending. There are currently no leased tracts within the Coastal Plain program area.

Pursuant to the Tax Act, the Coastal Plain leasing program area is composed of approximately 1,563,500 acres located within the approximately 19.3-million-acre Arctic Refuge (refer to **Map 1**, Coastal Plain Oil and Gas Leasing Program Area). Accordingly, the leasing program must consider and balance each of the Arctic Refuge purposes set out in section 303(2)(B) of Alaska National Interest Lands Conservation Act (ANILCA), as amended by Section 20001 of PL 115-97.

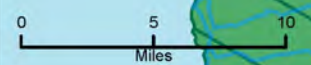
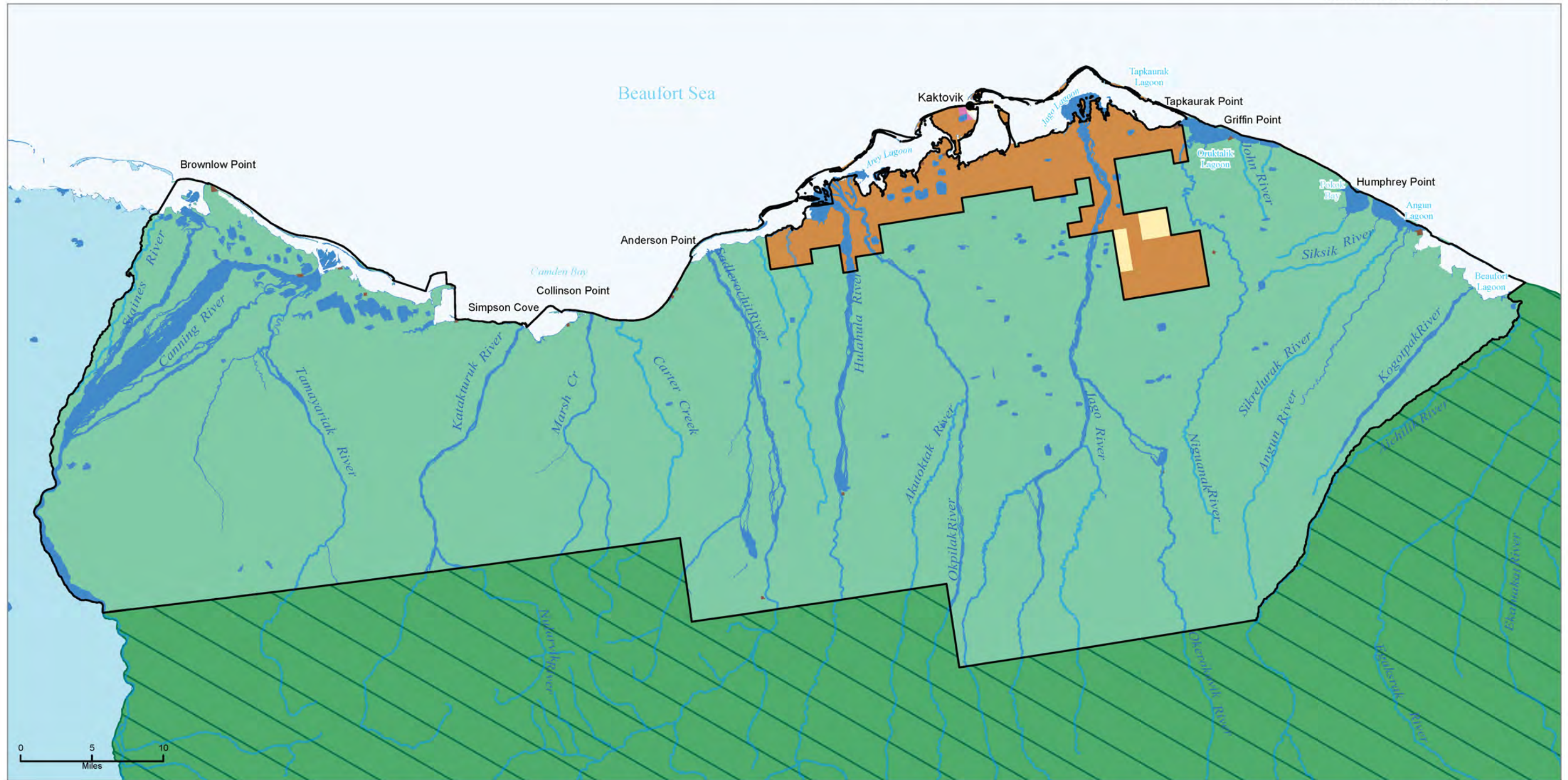
The Leasing SEIS serves to inform the BLM's implementation of the leasing program under PL 115-97, including the requirement to offer a second lease sale by December 22, 2024. The Leasing SEIS evaluates a broader range of leasing program alternatives than the 2019 EIS (**Chapter 4**, Alternatives) and addresses which lands to offer for lease and what terms and conditions to apply to leases and oil and gas activities. However, neither the Leasing SEIS nor this ROD authorizes specific on-the-ground oil and gas exploration or development activities. Future on-the-ground actions requiring BLM approval, including potential exploration and development proposals, would require further NEPA analysis based on the project-specific proposal.

2. DECISION

This ROD selects Alternative D2 from the November 2024 Final Leasing SEIS to govern the BLM's further administration of the Coastal Plain oil and gas leasing program. The Decision continues implementation of the Congressional directive to the Secretary in Section 20001(b)(2)(A) of PL 115-97 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 of the Arctic Refuge, as that area is defined by Section 20001(a)(1) of PL 115-97.

Coastal Plain Oil and Gas Leasing Program Area

U.S. DEPARTMENT OF THE INTERIOR | BUREAU OF LAND MANAGEMENT | ALASKA | COASTAL PLAIN OIL AND GAS LEASING PROGRAM RECORD OF DECISION



- U.S. Fish and Wildlife Service
- U.S. Fish and Wildlife Service, wilderness area
- Native-conveyed
- Native-selected
- State
- Native allotment
- Air Force
- Coastal Plain Oil and Gas Leasing Program Area boundary



Data source: BLM GIS 2022, USFWS GIS 2022
 Print date: 12/6/2024

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.

Map 1

This page intentionally left blank.

In so deciding, the ROD has the effect of lifting the halt of the leasing program activities imposed by SO 3401, which directed the temporary halt on leasing program activities while the new, comprehensive analysis of the leasing program's environmental impacts (i.e., the Leasing SEIS) was pending. That new analysis is now complete.

By adopting Alternative D2 from the Final Leasing SEIS, this Decision provides that the statutory minimum of 400,000 acres of the lands with highest hydrocarbon potential within the approximately 1,563,500-acre federally managed Coastal Plain program area will be available for leasing in the second lease sale mandated by the Tax Act, and potentially for subsequent seismic and drilling exploration and development. The remaining 1,163,500 acres will not be available for leasing or exploration in order to protect and conserve important surface resources and resource uses in these areas (refer to **Map 2**, Alternative D2, below). To further protect important surface resources and resource uses, of the 400,000 acres available for leasing, approximately 231,700 acres (58 percent) will be subject to no surface occupancy (NSO) stipulations, 84,300 acres (21 percent) will be subject to controlled surface use stipulations, and 3,100 acres (0.78 percent) will be subject to timing limitations. Approximately 80,900 acres (20 percent) will be subject to standard lease terms and conditions. Under Alternative D2 surface disturbance from oil and gas development activities is projected to occur on no more than 995 acres, the fewest of any action alternative analyzed in the Final Leasing SEIS.

The Decision in this ROD includes which lands to make available for leasing under the Coastal Plain program and the terms and conditions (i.e., lease stipulations and required operating procedures [ROPs]) to be applied to leases and authorizations for specific oil and gas activities. This ROD does not authorize any specific on-the-ground activity associated with the exploration for or development of oil and gas resources on the Coastal Plain. Future on-the-ground actions requiring BLM approval, including potential exploration and development proposals, would require further NEPA analysis based on the project-specific proposal and would be addressed in separate decisions.

The lease stipulations and ROPs listed in **Appendix A** are derived from Table 2-3 (Lease Stipulations and Required Operating Procedures by Action Alternative) of the Final Leasing SEIS, as applicable to Alternative D2, and are adopted by and incorporated into this Decision. **Map 3** illustrates the geographic scope of Alternative D2's lease stipulations.

The USFWS continues to manage all federal lands in the Coastal Plain as part of the Arctic Refuge, including both potential leased and unleased areas; however, the BLM manages all aspects of the oil and gas program, including issuing and administering oil and gas leases and issuing authorizations for all oil and gas activities conducted under the program.

Although Section 20001(a)(2) and (b)(2)(A) of PL 115-97 assigns sole responsibility to the BLM for administering the oil and gas program, all activities—including plan development; study development; and consideration of exceptions, modifications, and waivers for any operations that would be conducted on the surface of the Arctic Refuge—shall include coordination with the USFWS to ensure that its considerations as the surface management agency are taken into account. In addition, the BLM will coordinate with other appropriate federal, state, and North Slope Borough agencies, tribal governments, Alaska Native Claims Settlement Act (ANCSA) corporations, and other Native organizations as appropriate.

3. DECISION RATIONALE

This ROD reflects statutory, regulatory, and national policy considerations (refer to Appendix E of the Final Leasing SEIS). It is also based on review and substantive comments from federal, tribal, state, and local governments and agencies, the public, industry, and the cooperating agencies that participated in the Leasing SEIS process.

Compared with the other action alternatives, Alternative D2 provides the most comprehensive framework for addressing the diverse management needs of the Coastal Plain and its resources. It protects important subsistence resources and uses and recognizes important cultural links between tribes and the Coastal Plain and seeks to protect lands for values and resources important to the tribes. It contains lease stipulations and ROPs designed to maximize protection of key resources such as polar bears, caribou, vegetation, surface waters, ice-rich soils, and yedoma deposits.

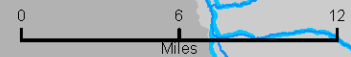
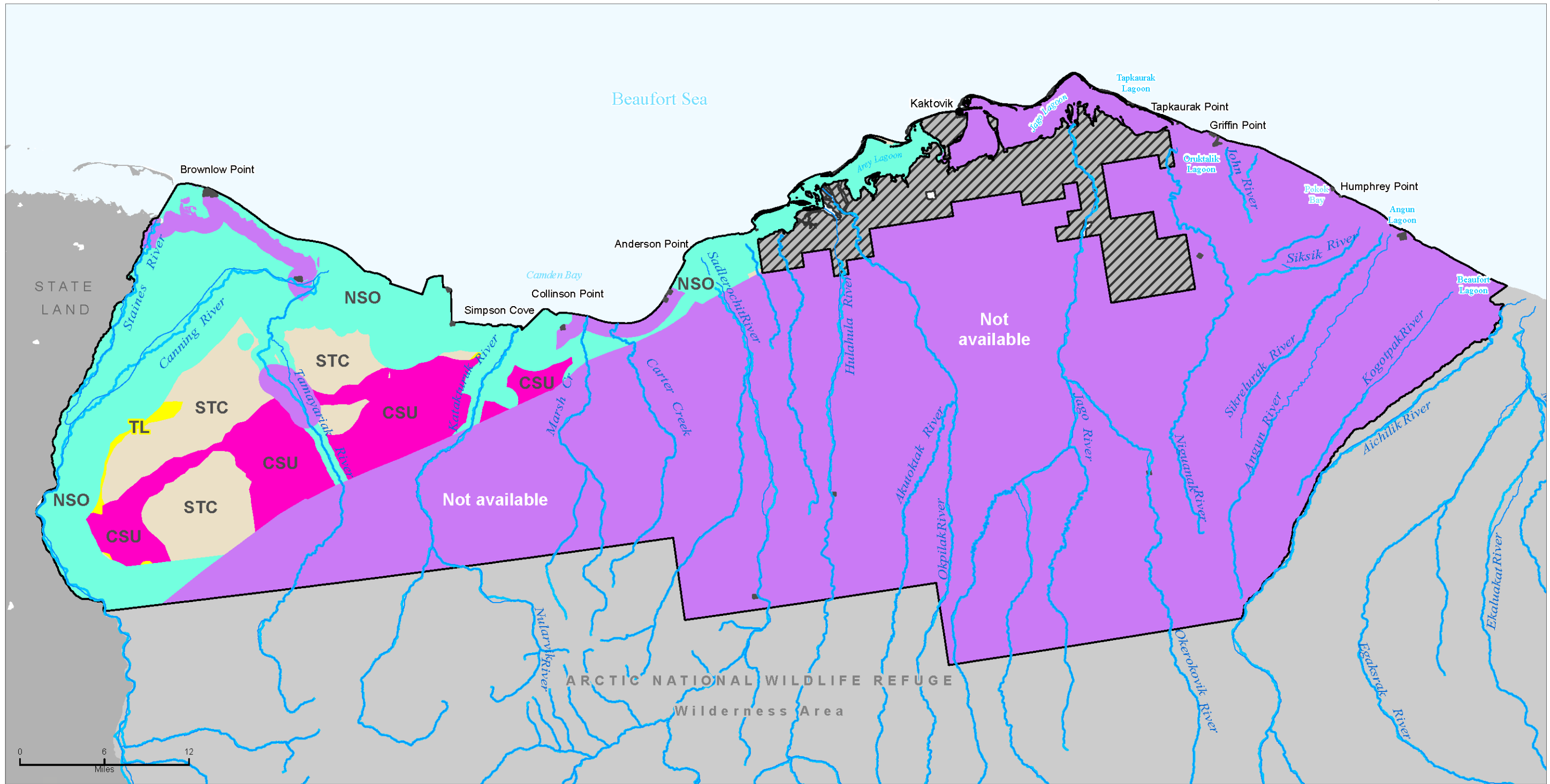
Alternative D2 provides the best combination of management options to meet the purpose of and need for the Coastal Plain oil and gas leasing program in consideration of the statutory requirements and management concerns identified through the Leasing SEIS process. It fulfills the directive of Section 20001 of PL 115-97 to administer an oil and gas leasing program on the Coastal Plain and ensures a proper balance of that statutory purpose with the other statutory purposes of the Arctic Refuge set out in Section 303(2)(B) of ANILCA, as amended by Section 20001 of PL 115-97.

3.1 Complies with Section 20001 of PL 115-97

This Decision complies with Section 20001 of PL 115-97, which 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, and to offer a second lease sale of at least 400,000 acres of lands with the highest hydrocarbon potential within the Coastal Plain by December 22, 2024. Alternative D2, adopted by this ROD, allows for continued administration of the leasing program and makes the statutorily required minimum of 400,000 acres of lands with the highest hydrocarbon potential available to be offered for lease in the second lease sale.

The Leasing SEIS and this Decision also correct the legal deficiency from the 2019 EIS and 2020 ROD related to interpretation of the 2,000-acre surface development provision in Section 20001(c)(3) of PL 115-97,¹ as identified in SO 3401, whereby the provision was incorrectly interpreted as imposing a 2,000-acre minimum that must be developed and action alternatives were accordingly limited to those having 2,000 acres of surface disturbance. The Leasing SEIS and this ROD correctly interpret this provision as imposing a 2,000-acre *limit* on the amount of allowable surface development in the Coastal Plain, not a *minimum*, and consequently consider new alternatives that are projected to result in less than 2,000 acres of surface development, including Alternative D2, adopted by this Decision, which the Final Leasing SEIS estimates could result in 995 acres of surface development. In particular, the inclusion of the phrase “up to” in Section 20001(c)(3) plainly indicates that less than 2,000 acres *may be* authorized in appropriate circumstances, such as for alternatives that make large areas unavailable for leasing or surface development and thus may

¹Section 20001(c)(3) provides: SURFACE DEVELOPMENT—In administering this section, the Secretary shall authorize up to 2,000 surface acres of Federal land on the Coastal Plain to be covered by production and support facilities (including airstrips and any area covered by gravel berms or piers for support of pipelines) during the term of the leases under the oil and gas program under this section.

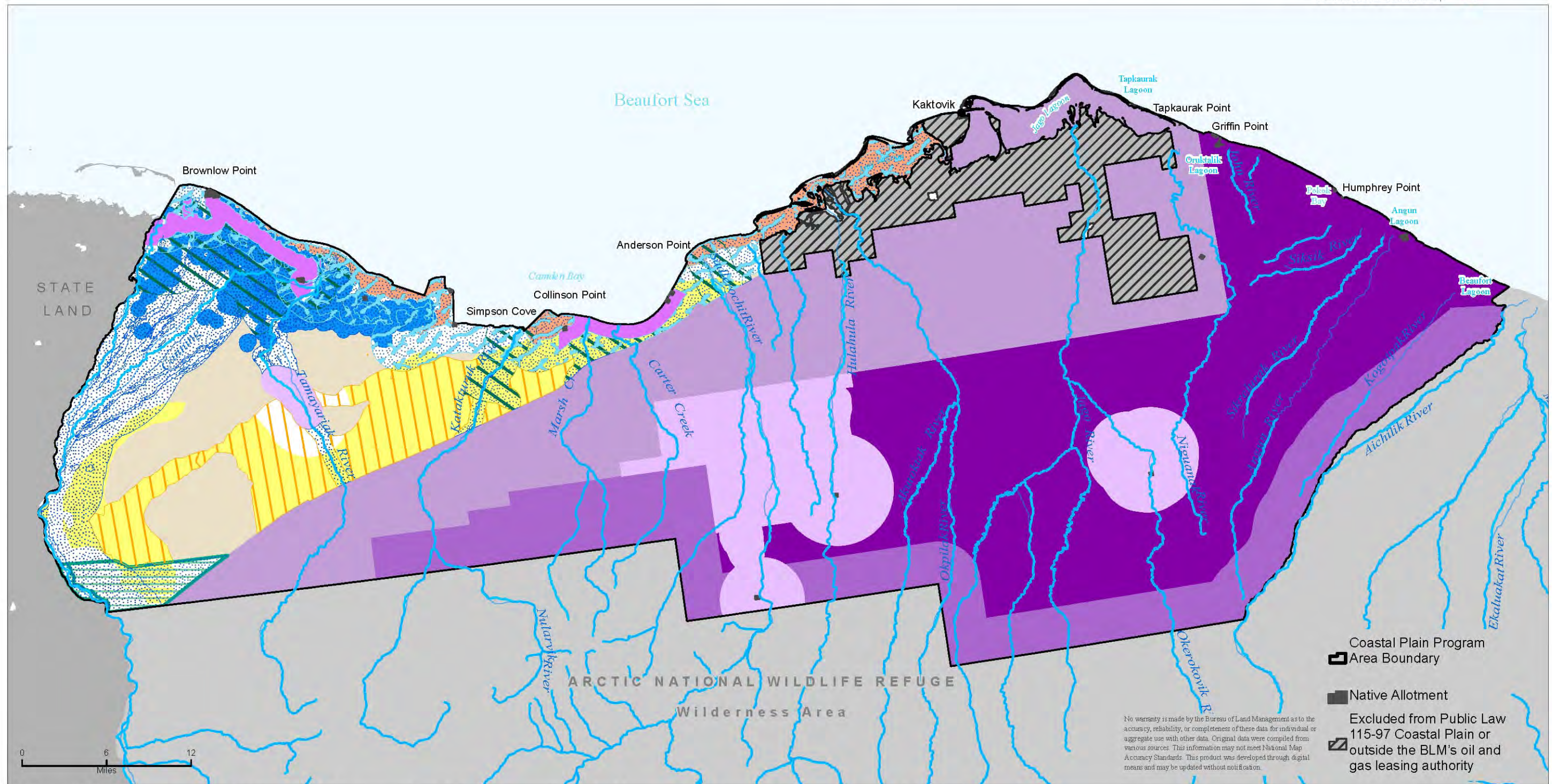


- Not available for lease sale (not available)
- Available for lease sale
- Subject to no surface occupancy (NSO)
- Subject to controlled surface use (CSU)
- Subject to timing limitations (TL)
- Subject to only standard terms and conditions (STC)
- Coastal Plain Program Area Boundary
- Native Allotment
- Excluded from Public Law 115-97
- Coastal Plain or outside the BLM's oil and gas leasing authority



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.

Data Source: BLM GIS 2022, USFWS GIS 2022
Print Date: 12/6/2024



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.

Not available for lease sale and not available for surface occupancy

- Lease stipulation 3—springs/aufeis
- Lease stipulation 10—Wilderness boundary
- Lease stipulation 6—Porcupine caribou calving habitat
- Lease stipulation 5—coastal polar bear river denning habitat
- Closed to medium hydrocarbon potential, not otherwise closed

Available for lease sale, subject to no surface occupancy

- Lease stipulation 1—rivers and streams
- Lease stipulation 2—Canning River delta and lakes
- Lease stipulation 4—nearshore marine, lagoon, and barrier island habitat, exploration

Available for lease sale, subject to controlled surface use

- Lease stipulation 5—coastal polar bear river denning habitat
- Lease stipulation 9—coastal area (NSO and TL)
- Lease stipulation 10—Wilderness boundary

Available for lease sale, subject to timing limitations

- Lease stipulation 6—caribou summer habitat, 2050 projected PCH post-calving
- Lease stipulation 4—nearshore marine, lagoon, and barrier island habitat

Available for lease sale, subject to timing limitations

- Lease stipulation 6—caribou summer habitat, 2050 projected PCH calving and post-calving

Available for lease sale:
Subject to only standard terms and conditions



Data source: BLM GIS 2022, USFWS GIS 2022
Print date: 12/6/2024

require fewer production and support facilities. In other words, that phrase makes clear that the provision is a limit, as explained more fully in the Lease Cancellation decision, dated September 6, 2023. The Leasing SEIS also revised the 2019 EIS's greenhouse gas analysis by considering changes in foreign consumption of oil and associated greenhouse gas emissions that may occur as a result of future Coastal Plain oil production, and thereby corrects the 2019 EIS's legal deficiency regarding its failure to consider such impacts, as identified in the August 19, 2022, addendum to AIDEA's suspension of operations decision.

3.2 Proper Balance of the Statutory Purposes of the Arctic Refuge

The Arctic National Wildlife Range (Range) was established in 1960 by Public Land Order (PLO) 2214 “[f]or the purpose of preserving unique wildlife, wilderness and recreational values....” In 1980, ANILCA redesignated and expanded the Range as part of the larger Arctic Refuge. It also designated much of the original Range as wilderness under the 1964 Wilderness Act and provided four conservation and subsistence purposes to guide future management of the Refuge, superseding the purpose of PLO 2214.² Section 20001(b)(2)(B) of PL 115-97 amended Section 303(2)(B) of ANILCA by adding a fifth purpose to the Refuge: “(v) to provide for an oil and gas program on the Coastal Plain.” Table 1-2 of the Leasing SEIS identifies the sections therein where impacts of oil and gas leasing on specific Arctic Refuge purposes are discussed.

While all of the action alternatives analyzed in the Leasing SEIS attempt to balance, to varying degrees, the conservation and subsistence purposes of the Arctic Refuge with oil and gas exploration and development, Alternative D2 best ensures the Refuge purposes will be carried out in conjunction with administration of an oil and gas leasing program in the Coastal Plain. This is the case because Alternative D2 contains lease stipulations and ROPs to protect resources and balance the uses addressed in the four pre-existing Arctic Refuge purposes while allowing surface occupancy use to support the fifth purpose. In this regard, Alternative D2's lease stipulations and ROPs are designed to maximize protection of key resources such as polar bears, caribou, vegetation, surface waters, ice rich soils, and yedoma deposits, while at the same time allowing the Coastal Plain's lands with the highest hydrocarbon potential to be accessed for oil and gas exploration and development.

3.3 Practicable and Reasonable Mitigation Measures

This Decision adopts all practicable and reasonable means to avoid or minimize environmental harm consistent with the directives in PL 115-97, including potential adverse direct, indirect, and cumulative impacts, through the lease stipulations and ROPs listed in **Appendix A**, which are designed to provide protection for a wide range of surface resources and non-oil and gas uses throughout the program area,

² The four purposes are:

- (i) to conserve fish and wildlife populations and habitats in their natural diversity including, but not limited to, the Porcupine caribou herd (including participation in coordinated ecological studies and management of this herd and the Western Arctic caribou herd), polar bears, grizzly bears, muskox, Dall sheep, wolves, wolverines, snow geese, peregrine falcons and other migratory birds and Arctic char and grayling;
- (ii) to fulfill the international treaty obligations of the United States with respect to fish and wildlife and their habitats;
- (iii) to provide, in a manner consistent with the purposes set forth in subparagraphs (i) and (ii), the opportunity for continued subsistence uses by local residents; and
- (iv) to ensure, to the maximum extent practicable and in a manner consistent with the purposes set forth in paragraph (i), water quality and necessary water quantity within the refuge.

including subsistence use. The lease stipulations and ROPs adopted herein will apply to all oil and gas activities authorized by the BLM in the Coastal Plain.

4. ALTERNATIVES

NEPA requires the development and consideration of a reasonable range of alternatives, including a No Action Alternative, to analyze potential impacts and guide decision-makers. Three key components to the alternatives were revisited for the Leasing SEIS: (1) the lease stipulations and ROPs; (2) the interpretation and application of the 2,000-acre surface development provision from PL 115-97; and (3) the areas to make available for leasing and seismic exploration activities.

The BLM held a 60-day public scoping period to solicit public input on the Leasing SEIS. Commenters suggested a variety of alternative concepts and revisions to the lease stipulations and ROPs that had been included in the 2019 EIS. To begin development of alternatives for analysis in the Leasing SEIS, the BLM and USFWS reviewed public comments that were submitted on the 2019 EIS, as well as those submitted during scoping for the Leasing SEIS, for any alternative concepts that may have been previously excluded from consideration but might now be relevant following SO 3401.

The BLM and USFWS held an alternatives development workshop with cooperating agencies to reexamine key concerns regarding the range of alternatives, develop a new suite of lease stipulations and ROPs that would address deficiencies from the 2019 EIS, and incorporate new information and data. After the initial alternatives workshop, the joint lead agencies convened 14 additional resource-focused meetings with representatives from the joint lead agencies and cooperating agencies to further refine and establish consensus on a revised suite of lease stipulations and ROPs for Alternative D in the Draft Leasing SEIS (refer to **Section 5.1**, Public Scoping).

The joint lead agencies updated the range of alternatives from the 2019 EIS, including the No Action Alternative (Alternative A) and Alternatives B, C, and D. Following public input and feedback received during the 2023 Draft Leasing SEIS comment period, the joint lead agencies developed a new alternative (Alternative D2, preferred alternative) based on Alternative D in the Draft Leasing SEIS.

To address the remaining components of the new range of action alternatives for the Leasing SEIS, the BLM revised the reasonably foreseeable development scenario to determine the effects of issuing leases. The acres of estimated surface disturbance for Alternatives C and D were revised to allow for analysis of less than 2,000 acres of disturbance (refer to Appendix C of the Leasing SEIS). The original hypothetical development assumptions were revised and applied proportionally across the new range of Leasing SEIS alternatives to estimate the number of acres that reasonably could be developed under each alternative. Alternative D2 was developed based on similar considerations. Additionally, under the new action alternatives seismic exploration activities would be limited to only those areas available for leasing, effectively reducing the areas where seismic exploration could occur under Alternatives C, D, and D2.

The action alternatives analyzed in the Leasing SEIS and described below include lease stipulations and ROPs that contain measures to avoid or mitigate surface damage and minimize ecological disturbance throughout the program area while balancing the five statutory purposes of the Arctic Refuge. The alternatives respond to the purpose of and need for action, including the statutory requirement to establish and administer a competitive oil and gas program in the Coastal Plain in the Arctic Refuge and to offer a second lease sale by December 22, 2024.

4.1 Alternative A: No Action Alternative

Under Alternative A, the No Action Alternative, no federal minerals in the Coastal Plain would be offered for future oil and gas leasing. 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 in the Arctic Refuge and to offer at least two lease sales by December 22, 2024. It also would not meet the purpose of the Arctic Refuge to provide for an oil and gas program in the Coastal Plain, set out in Section 303(2)(B)(v) of ANILCA, as amended by PL 115-97. Under this alternative, current management actions would be maintained, and resource trends would be expected to continue, as described in the Arctic Refuge Revised Comprehensive Conservation Plan (USFWS 2015).

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 offer a total of two lease sales and to permit associated oil and gas activities; however, Alternative A was carried forward for analysis to provide a baseline for comparing impacts under the action alternatives, as required by NEPA.

4.2 Alternative B

Alternative B uses the same lease stipulations and ROPs as Alternative B from the 2019 EIS, with minor edits where appropriate. Land within the program area that would be available for lease sale and applicable stipulations are shown in Map 2-1, Alternative B, and Map 2-2, Alternative B, Lease Stipulations, of the Leasing SEIS. Alternative B from the 2019 EIS was the alternative that was adopted by the 2020 ROD. This alternative would offer the opportunity to lease the entire program area with the fewest acres with NSO stipulations; it would provide certain protections in the form of other lease stipulations and ROPs that would apply to oil and gas activities to reduce potential impacts. An estimated 2,000 acres of surface development would occur under Alternative B. Once 2,000 acres of surface development was reached, then no additional development would be allowed pursuant to Section 20001(c)(3) of the Tax Act. Seismic exploration would be allowed to occur across the entire Coastal Plain program area.

4.3 Alternative C

Alternative C includes the same lease stipulations and ROPs as Alternative D1 in the 2019 EIS, with minor edits where appropriate. Land within the program area that would be available for lease sale and applicable stipulations are shown in Map 2-3, Alternative C, and Map 2-4, Alternative C, Lease Stipulations, of the Leasing SEIS. As compared with Alternative D1 in the 2019 EIS, the key changes under this alternative for the Leasing SEIS include the following: seismic exploration would only be allowed in areas available for lease sale, and the estimated total area of surface development is 1,464 acres (a reduction of 536 acres). Under Alternative C, portions of the Coastal Plain would not be available for lease sale (refer to Table 2-1 of the Leasing SEIS). In addition, a large portion of the area available for lease sale would be subject to NSO stipulations. In some instances, more prescriptive ROPs are included under Alternative C than under Alternative B.

4.4 Alternative D

Alternative D addresses the NEPA deficiency identified by the Secretary in SO 3401 regarding the failure of the 2019 EIS to adequately analyze a reasonable range of alternatives and is derived from Alternative D2 in the 2019 EIS. Land within the program area that would be available for lease sale and applicable stipulations are shown in Map 2-5, Alternative D, and Map 2-6, Alternative D, Lease Stipulations, of the Leasing SEIS. This alternative incorporates more protective lease stipulations and ROPs than any

alternative previously analyzed, has the most acres with NSO stipulations, and stresses adherence to the four conservation and subsistence-oriented statutory purposes of the Arctic Refuge. Alternative D also includes considerations for climate change impacts through facility location and construction, and coordination with local communities to help ensure protections for public health, safety, and the environment. Alternative D was developed collaboratively by the joint lead agencies, with input from cooperating agencies, and Indigenous knowledge from tribal representatives. The estimated area of surface development under Alternative D is 1,040 acres. Additionally, seismic exploration would only be allowed in areas available for leasing.

4.5 Alternative D2

In response to public comments on the Draft Leasing SEIS, the BLM and USFWS developed a new alternative for the Final Leasing SEIS offering the Tax Act's statutory minimum acreage of 400,000 acres for a second lease sale in the northwest portion of the program area, which has the highest potential for the discovery of hydrocarbons. Lands in the medium and low hydrocarbon potential areas are closed to leasing under this alternative. Alternative D2 is derived from Alternative D (above) while focusing on the area that has the highest hydrocarbon potential. The alternative also addresses additional public requests to expand protections for key resources, including polar bears and caribou. Alternative D2 includes new areas of no leasing in the coastal areas around the Canning and Staines Rivers and around Camden Bay to provide additional protections for maternal polar bear denning and coastal movement (Lease Stipulation 5) and expands the no leasing area in the medium hydrocarbon potential area, that corresponds to critical Porcupine Caribou Herd calving areas. The U.S. Fish and Wildlife Service received a submission from the Native Village of Venetie Tribal Government, Arctic Village Council, and Venetie Village Council that the core Porcupine Caribou Herd Habitat calving grounds is a Sacred Site under Executive Order 13007.

To ensure a proper balance of the five statutory purposes of the Arctic Refuge and to allow for a feasible oil and gas leasing program, Alternative D2 refines three specific stipulations from Alternative D to allow for more surface occupancy in the high hydrocarbon potential area. Stipulation 1 (Rivers) removes a 0.25-mile buffer around "all unnamed rivers" due to constraints on surface occupancy, given that ROP 3, which is designed to minimize the impact of contaminants from refueling operations on fish, wildlife, and the environment, in effect protects the unnamed rivers from contamination due to a 500-foot setback identified in the ROP. Lease Stipulation 3 (Springs and Aufeis) was modified to decrease the no leasing buffer from 3 miles to 1 mile, which prohibits leasing and infrastructure adjacent to or above the perennial Tamayariak Spring and associated aufeis field.

Lease Stipulation 12 (Ice Rich Soils and Yedoma Deposits) was revised to remove NSO restrictions but retains the key consideration for climate change impacts through facility design and construction to accommodate the thaw subsidence anticipated over the design life in areas of ice-rich soils and yedoma deposits.

The estimated amount of surface development under Alternative D2 is 995 acres, the lowest of the four action alternatives. Seismic exploration would only be allowed in areas available for leasing. Areas of the Coastal Plain available for lease sale and applicable stipulations for Alternative D2 are shown in **Map 2**, Alternative D2, and **Map 3**, Alternative D2, Lease Stipulations.

4.6 Alternatives Eliminated from Detailed Analysis

Five alternatives were considered but eliminated from detailed analysis in the Leasing SEIS. This is because the alternatives did not meet the purpose of and need for an oil and gas leasing program consistent with PL 115-97, were not reasonable or practicable, or would not have been meaningfully different from the action alternatives analyzed in detail in the Leasing SEIS. These alternatives are described in Section 2.4 of the Leasing SEIS.

Alternatives C and D2 from the 2019 EIS were not carried forward for analysis in the Leasing SEIS. Alternative C was dismissed from further analysis in the Leasing SEIS because it would not have been meaningfully different from the action alternatives brought forward for analysis, particularly Alternative B. Alternative D2 from the 2019 EIS was used to derive Alternative D in the 2023 Draft Leasing SEIS, which in turn was used to develop new Alternative D2 in the Final Leasing SEIS. Additional information about the Leasing SEIS is available online at the project website, at: <https://eplanning.blm.gov/eplanning-ui/project/2015144/510>.

4.7 Environmentally Preferred Alternative

When considering the human, social, economic, and natural environments, the joint lead agencies have determined that Alternative D2 is the environmentally preferable alternative (40 Code of Federal Regulations [CFR] 1505.2). The DOI defines the environmentally preferable alternative as the one that causes the least damage to the biological and physical environment and best protects, preserves, and enhances historical, cultural, and natural resources.

Alternative D2 complies with the Tax Act's statutory minimum of 400,000 acres for a second lease sale in the program area within the highest hydrocarbon potential area, while precluding leasing in medium and low hydrocarbon lands. It also precludes leasing in the coastal areas around the Canning and Staines Rivers and Camden Bay containing sensitive polar bear denning habitat and coastal movement corridors, caribou insect relief areas, and migratory bird nesting habitat. Alternative D2 provides the greatest degree of protection to key resources, including polar bears and maternal polar bear denning habitat and Porcupine Caribou Herd calving areas. Alternative D2 has the lowest estimated amount of surface development among the action alternatives analyzed in the Final Leasing SEIS, and seismic exploration would be limited to the areas available for lease sale, which would further reduce impacts on key resources. Lease stipulations and ROPs for Alternative D2 also include facility design and construction considerations to accommodate thaw subsidence anticipated in areas of ice-rich soils and yedoma deposits. Overall, Alternative D2 contains the most protective measures across the program area compared with the other action alternatives.

5. COMMUNITY ENGAGEMENT

The BLM and USFWS considered public comments throughout the Leasing SEIS process. The following list highlights major steps in the public involvement process. For more information on public involvement, see Chapter 4 of the Leasing SEIS.

5.1 Public Scoping

Formal scoping for the Leasing SEIS began on August 4, 2021, with the publication in the *Federal Register* of a Notice of Intent to prepare the Leasing SEIS. The Notice of Intent notified the public of the 60-day public scoping period to solicit public comment and identify preliminary issues for analysis. The scoping comment period ended on October 4, 2021.

The BLM conducted six virtual public scoping meetings in September of 2021 to notify the public of the Leasing SEIS. The USFWS was not yet identified as a joint lead agency during the SEIS public scoping period. Each scoping meeting included a presentation by the BLM that described the background and purposes of the SEIS, the project schedule, and further public involvement opportunities. Additionally, the BLM maintains a project website with information related to the development of the Leasing SEIS: <https://eplanning.blm.gov/eplanning-ui/project/2015144/510>. The website includes background documents, maps, information on public meetings, and contact information.

The BLM received 210 unique written submissions during the public scoping period. Overall, 1,555 substantive scoping comments were identified. The Final Leasing SEIS Scoping Report is available on the project website (<https://eplanning.blm.gov/eplanning-ui/project/2015144/510>).

5.2 Scoping Issues

The following summaries highlight key issues identified during scoping and addressed in the Leasing SEIS. The full list of summaries is available in the final scoping report.

- **NEPA and alternatives**—Commenters requested changes to the existing alternatives, revisions of the lease stipulations or ROPs, and consideration in the Leasing SEIS of new data and best available science, particularly related to terrestrial wildlife, birds, and special status species (such as polar bears).
- **Fish and wildlife**—Commenters stated concerns about the impacts on fish and wildlife, including caribou and other large terrestrial mammals, marine mammals, migratory birds, and fish and other aquatic species. Potential impacts on the Porcupine Caribou Herd were of particular concern. Commenters requested that the SEIS evaluate the use and importance of the program area to herd movement during different life stages and seasons and how the proposed program might affect calving grounds, insect-relief areas, and migration routes.
- **Special status species**—Commenters noted that the proposed program could reduce and fragment available terrestrial denning habitat for the Southern Beaufort Sea subpopulation of polar bear, which is a species listed as threatened under the Endangered Species Act. Commenters requested that the BLM analyze impacts on all special status species, including marine mammals, such as ringed seals, bearded seals, and bowhead whales.
- **Air quality and climate**—Commenters asked for a more comprehensive analysis of the alternatives' direct, indirect, and cumulative impacts on air quality and greenhouse gas emissions.
- **International agreements**—Commenters asked how the BLM would respect and adhere to agreements with Canada, particularly regarding migratory and transboundary species such as the Porcupine Caribou Herd. Commenters noted several agreements and memoranda of understanding of concern.
- **2,000-acres of surface development**—Commenters requested clarification of what types of facilities are included in the 2,000-acre surface development limit, as described in Section 20001(c)(3) of PL 115-97 and asked the BLM to consider alternatives with different amounts of surface development.
- **Subsistence and sociocultural systems**—Commenters noted that certain local tribes are culturally tied to the Coastal Plain and the Porcupine Caribou Herd and requested that the BLM analyze impacts on the tribes' traditional way of life. They asked that the BLM consider the positive and negative economic changes to communities, impacts on the traditional subsistence-based economy,

food scarcity, changes to access to traditional subsistence use areas, and impacts on subsistence food resources.

5.3 Leasing SEIS Process

The Environmental Protection Agency (EPA) published the Notice of Availability of the Draft Leasing SEIS in the *Federal Register* on September 8, 2023, initiating a 45-day public comment period. In response to public comments received, the comment period was extended an additional 15 days to November 7, 2023, for a total of 60 days.

In September and October 2023, the joint lead agencies held public meetings to receive comments on the Draft Leasing SEIS. Public meetings were held in Utqiagvik, Venetie, Arctic Village, Fort Yukon, Anchorage, and Fairbanks. In conjunction with the Draft Leasing SEIS public meetings, the BLM held subsistence hearings in Utqiagvik, Venetie, Arctic Village, and Fort Yukon, pursuant to Section 810(a) of ANILCA. An ANILCA Section 810 subsistence hearing was also held in Kaktovik on March 21, 2024.

The public meeting schedule was published on the project website as the meeting dates and locations were finalized (<https://eplanning.blm.gov/eplanning-ui/project/2015144/510>). Public notices for the meetings were placed in newspapers with circulations in or near the locations where the public meetings were held. These newspapers included the *Anchorage Daily News*, *Fairbanks Daily News Miner*, and *Arctic Sounder*. The joint lead agencies also distributed public notices via press releases, emails, and flyers. Additionally, meeting information was distributed via social media, including the BLM and USFWS Facebook pages, as well as circulated through community-specific Facebook groups. Information was also posted on the project website, where the public was able to download a copy of the Draft Leasing SEIS and provide their comments on the document. The public meetings held during the comment period are detailed below (**Table 1**).

Table 1
Draft Leasing SEIS Public Meetings

Date	Time (Alaska Standard)	Location
September 22, 2023	9:00 a.m.	Virtual Public Meeting
September 25, 2023	5:00 p.m.	Utqiagvik
September 26, 2023	5:00 p.m.	Venetie
September 28, 2023	5:00 p.m.	Arctic Village
October 6, 2023	9:00 a.m.	Virtual Public Meeting
October 9, 2023	12:00 p.m.	Fort Yukon
October 11, 2023	5:00 p.m.	Virtual Public Meeting
October 16, 2023	5:00 p.m.	Anchorage
October 17, 2023	1:00 p.m.	Virtual Public Meeting
October 23, 2023	5:00 p.m.	Fairbanks

Comments were received by postal mail, email, online comment form through the BLM's ePlanning website, and verbal testimony at public meetings. A total of 112,963 comment letter submissions were received; 792 of them were considered unique submissions and 112,171 were part of form letter campaigns. Overall, more than 1,800 substantive comments were identified.

5.4 Public Review of the Leasing SEIS

After the Final Leasing SEIS was published November 5, 2024 (Notice of Availability for the Final Supplemental EIS published in the Federal Register on November 8, 2024), the BLM received and considered comments and additional information submitted to the BLM by the public and various stakeholders. The few comments received were generally similar to and consistent with the comments received during the development of the Draft Leasing SEIS; they have been included in the decision file and considered by the BLM prior to executing this ROD. The BLM reviewed all comment submissions received after the release of the Final Leasing SEIS to determine if the information presented significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts, consistent with 40 CFR 1502.9(d). As a result of that review, the BLM finds that existing analysis in the Final Leasing SEIS remains adequate and does not require supplementation.

6. ADDITIONAL INFORMATION

6.1 Cooperating Agencies

The joint lead agencies contacted governmental agencies in multiple ways, most notably through inviting or accepting requests for such agencies to participate as cooperating agencies in the development of the Leasing SEIS, as defined in 40 CFR 1508.1(g). Cooperating agencies included the EPA, State of Alaska, Native Village of Kaktovik, Iñupiat Community of the Arctic Slope, Native Village of Venetie Tribal Government, Venetie Village Council, and Arctic Village Council. Their participation in the Leasing SEIS process does not constitute their approval of the analysis, conclusions, or alternatives presented in the Leasing SEIS; for these, the joint lead agencies are solely responsible. Cooperating agencies assisted in developing the alternatives, shaping the lease stipulations and ROPs, providing new data for inclusion, and reviewing and providing input on the Draft Leasing SEIS.

6.2 National Historic Preservation Act Section 106 Consultation

The BLM has consulted with the Alaska State Historic Preservation Office, in accordance with Section 106 of the National Historic Preservation Act. The BLM has a responsibility to consider the effects of the leasing program on historic properties, which are properties listed on or eligible for listing on the National Register of Historic Places. Formal consultations with the State Historic Preservation Office may also be required during implementation of individual projects. The 2020 Programmatic Agreement remains in effect for the purpose of this Leasing SEIS process.

6.3 Endangered Species Act Section 7 Consultation

Consultation was previously completed for the Coastal Plain leasing program with both the USFWS and the National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS) under Section 7 of the Endangered Species Act. Consultation with the USFWS and NMFS was reinitiated as part of developing the Leasing SEIS to address changes to the range of alternatives and mitigation measures. Biological Assessments were submitted to USFWS and NMFS on May 15, 2024. The reinitiated Section 7 consultations concluded with a Programmatic Biological Opinion issued by USFWS on November 15, 2024, and a Letter of Concurrence issued by the NMFS to the BLM on December 3, 2024.

6.4 Tribal Consultation

The joint lead agencies consulted with federally recognized tribal governments during preparation of the Leasing SEIS and identified 15 tribes potentially affected by the leasing program. Consistent with DOI policy on government-to-government consultation with the tribes (SO 3403), the BLM first sent a letter of

notification and inquiry on August 18, 2021, to the following 15 identified tribal governments: Arctic Village Council, Iñupiat 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, Native Village of Stevens, Circle Village Council, and Native Village of Eagle. In its letter, the joint lead agencies offered these entities the opportunity to participate in formal government-to-government and National Historic Preservation Act Section 106 consultations, to participate as NEPA cooperating agencies, or to simply receive information about the project.

The joint lead agencies held government-to-government consultation meetings with the following tribal governments: Arctic Village Council, Venetie Village Council, Native Village of Venetie Tribal Government, Native Village of Kaktovik, and Iñupiat Community of the Arctic Slope.

Table 2
Leasing SEIS Government-to-Government Consultation Meetings

Date	Location	Tribal Government
June 27–28, 2022	Arctic Village	Arctic Village Council, Venetie Village Council, and Native Village of Venetie Tribal Government
September 13–14, 2022	Arctic Village	Arctic Village Council, Venetie Village Council, and Native Village of Venetie Tribal Government
October 18, 2022	Anchorage	Arctic Village Council, Venetie Village Council, and Native Village of Venetie Tribal Government
October 26–27, 2022	Kaktovik	Native Village of Kaktovik
February 13, 2023	Kaktovik	Native Village of Kaktovik
May 9, 2023	Virtual (Teams)	Native Village of Kaktovik, Iñupiat Community of the Arctic Slope
September 27, 2023	Venetie	Native Village of Venetie Tribal Government, Venetie Village Council
September 29, 2023	Arctic Village	Arctic Village Council, Native Village of Venetie Tribal Government
December 15, 2023	Utqiagvik	Iñupiat Community of the Arctic Slope
December 19, 2023	Kaktovik	Native Village of Kaktovik

6.5 ANCSA Corporation Consultation

The joint lead agencies also contacted ANCSA corporations to offer the opportunity to participate in consultation on the Leasing SEIS process. The joint lead agencies held consultation meetings with the Kaktovik Iñupiat Corporation and Arctic Slope Regional Corporation.

Table 3
Leasing SEIS ANCSA Corporation Consultation Meetings

Date	Location	Corporation
October 26–27, 2022	Kaktovik	Kaktovik Iñupiat Corporation
February 13, 2023	Kaktovik	Kaktovik Iñupiat Corporation
November 21, 2023	Anchorage	Arctic Slope Regional Corporation
December 19, 2023	Kaktovik	Kaktovik Iñupiat Corporation

6.6 Compliance with Section 810 of the Alaska National Interest Lands Conservation Act

Section 810(a) of ANILCA, 16 United States Code (USC) 3120(a), requires that an evaluation of subsistence uses and needs be completed for any federal determination to “withdraw, reserve, lease, or otherwise permit the use, occupancy, or disposition of public lands.” As such, an evaluation of potential impacts on subsistence under ANILCA Section 810(a) was completed for the Leasing SEIS (refer to Appendix F, ANILCA Section 810 Evaluation, of the Final Leasing SEIS). ANILCA requires that such an evaluation consider the following three specific issues: (1) the effect of use, occupancy, or disposition of public lands on subsistence uses and needs; (2) the availability of other lands for the purposes sought to be achieved; and (3) other alternatives that would reduce or eliminate the use, occupancy, or disposition of public lands needed for subsistence purposes.

In a Section 810 analysis, the following three factors are considered when determining if a significant restriction of subsistence uses and needs may result from the proposed action, alternatives, or in the cumulative case: (1) reduction in the abundance of harvestable resources used for subsistence purposes; (2) reduction in the availability of resources used for subsistence caused by alteration of their distribution, migration patterns, or location; and (3) legal or physical limitations on access of subsistence users to harvestable resources. Each alternative in the Leasing SEIS was analyzed according to these factors. ANILCA Section 810 also requires that cumulative impacts be analyzed.

An alternative would be considered to significantly restrict subsistence uses if, after consideration of protection measures, such as lease stipulations or ROPs, it can be expected to substantially reduce the opportunity to use subsistence resources. Substantial reductions are generally caused by large reductions in resource abundance, a major redistribution of resources, extensive interference with access, or major increases in the use of those resources by non-subsistence users.

If the analysis determines that the proposed action, alternatives, or cumulative case may significantly restrict subsistence uses, the BLM is required to notify the State of Alaska and appropriate regional and local subsistence committees. It also must conduct ANILCA Section 810 hearings in potentially affected communities.

The following discussion summarizes the ANILCA Section 810 evaluation for the Decision in this ROD. The Section 810 evaluation draws on the detailed analysis contained in Chapter 3 and the appendices of the Leasing SEIS, particularly subsistence uses and resources (refer to Appendix F of the Final Leasing SEIS). The analysis contained in the Leasing SEIS disclosed potential impacts on subsistence use and resources from the range of management action alternatives proposed, as well as from cumulative effects.

810 Findings

Based on the ANILCA Section 810 final evaluation (Final Leasing SEIS, Appendix F), Alternative D2 will not result in a significant restriction in subsistence uses. Potential impacts on subsistence resources and access from future oil and gas exploration, development, and production would be minimal, or they would be adequately mitigated by stipulations and ROPs under which lessees must operate. A positive determination pursuant to ANILCA Section 810 is not required.

The goal of the cumulative case analysis presented in Chapter 3 of the Final Leasing SEIS is to evaluate the incremental impact of the actions considered in the Leasing SEIS, in conjunction with all past, present, and reasonably foreseeable future activities in on near the Coastal Plain—specifically, in the Kaktovik,

Nuiqsut, Arctic Village, and Venetie subsistence use areas. Past and present actions analyzed as having the most potential to significantly restrict abundance, availability, or access of subsistence resources are:

- Oil and gas exploration, development, and production on the North Slope
- Transportation
- Subsistence activities
- Recreation and tourism
- Community development
- Climate change

Reasonably foreseeable future actions include:

- Seismic exploration
- Expansion of the CD5, Nuna, GMT1, and GMT2 developments in the Colville River region
- Development of the Willow, Nuna, and Nanushuk projects in the Colville River region
- Development projects in the Beaufort Sea, including the existing Endicott and Northstar projects and proposed Liberty project
- Continued development of the Point Thomson project
- Development of a natural gas pipeline from the North Slope to Cook Inlet (Alaska LNG Pipeline)
- Infrastructure projects, including those developed through the Arctic Strategic Transportation and Resources (ASTAR) program
- Ongoing recreational activity
- Continued and increased marine vessel traffic and air traffic
- Ongoing impacts of climate change

The cumulative case, when taken in conjunction with Alternative D2 as presented in the Final Leasing SEIS, may result in a significant restriction to subsistence uses for the community of Kaktovik due to a potential decrease in access to fish, marine mammals, caribou, and waterfowl. A positive determination pursuant to ANILCA Section 810 was made.

Notice and Hearings

ANILCA Section 810(a) provides that there shall be no “withdrawal, reservation, lease, permit, or other use, occupancy, or disposition of the public lands which would significantly restrict subsistence uses,” until the federal agency gives the required notice and offers a hearing in accordance with ANILCA Section 810(a)(1) and (2). The BLM provided notice in the Draft Leasing SEIS that it made a positive finding pursuant to ANILCA Section 810 that the cumulative case presented in the Final Leasing SEIS met the “may significantly restrict” threshold for Kaktovik. As a result, a public hearing was held in the potentially affected community of Kaktovik; in addition, at the request of the Gwich’in Tribes, public hearings were held in Arctic Village, Venetie, Fort Yukon, and Utqiagvik despite those communities not having a positive “may significantly restrict” finding. Notice of these hearings was provided in the *Federal Register* and in local media with coverage to all villages on the North Slope. The hearing dates and times were posted on the BLM’s website at <https://eplanning.blm.gov/eplanning-ui/project/2015144/510>.

Table 4
ANILCA Section 810 Hearings

Date	Location
September 25, 2023	Utqiagvik
September 26, 2023	Venetie
September 28, 2023	Arctic Village
October 9, 2023	Fort Yukon
March 21, 2024	Kaktovik

Final Determinations

If a significant restriction of subsistence uses is found, the BLM may only allow a proposed land use after it makes the following three determinations: (1) a significant restriction of subsistence uses would be necessary, consistent with sound management principles for the use of public lands; (2) the proposed activity would involve the minimal amount of public land necessary to accomplish the purpose of the use, occupancy, or other disposition; and (3) reasonable steps would be taken to minimize adverse effects on subsistence uses and resources resulting from such actions.³

As described below, the BLM has determined that, after consideration of all Coastal Plain program alternatives, the subsistence evaluation, and public hearings, such a significant restriction of subsistence uses as would occur under the cumulative case is necessary and consistent with sound management principles for the utilization of the Coastal Plain. Alternative D2 will involve the minimal amount of public land necessary for the BLM to fulfill the Secretary of the Interior’s responsibilities under PL 115-97, and reasonable steps have been taken to minimize the adverse impacts on subsistence uses and resources arising from this action.

1. *Significant restriction of subsistence use is necessary, consistent with sound management principles for the utilization of public lands.*

The BLM undertook the Leasing SEIS to fulfill the Secretary of the Interior’s responsibilities under ANILCA and PL 115-97. Section 20001(c)(1)(A) of PL 115-97 directs the Secretary to offer two lease sales in the program area before December 22, 2024. In accordance with Section 20001(c)(1)(B), each sale must offer not fewer than 400,000 acres in areas with the highest hydrocarbon potential. Section 20001(c)(3) allows for up to 2,000 surface acres of federal land in the program area to be covered by production and support facilities.

Alternative D2 provides the opportunity, subject to appropriate conditions developed through the NEPA process, to conduct the second of two lease sales in the program area. These conditions include lease stipulations and ROPs that incorporate protective measures that will minimize impacts to important subsistence resources and subsistence use areas.

The cumulative case, in conjunction with Alternative D2, could significantly restrict subsistence uses for the community of Kaktovik. The BLM determined that such a significant restriction is necessary, consistent

³ 16 USC 3120(a)(3)(A), (B), and (C).

with sound management principles for the use of the public lands, and for the BLM to fulfill the Secretary of the Interior's responsibilities under PL 115-97, described above.

2. *The proposed activity will involve the minimal amount of public land necessary to accomplish the purposes of such use, occupancy, or other disposition.*

Alternative D2 involves the minimal amount of public land necessary to comply with the directives of PL 115-97: 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 and to offer for leasing in the second lease sale not fewer than 400,000 acres in areas with the highest hydrocarbon potential. Alternative D2 includes numerous lease stipulations and ROPs that apply across the Coastal Plain for protection of specific habitats and site-specific resources and uses, while allowing reasonable opportunity for necessary infrastructure to support oil and gas exploration and development. Other alternatives that would make more acres available for leasing or surface occupancy and that otherwise contain less restrictive lease stipulations and ROPs were analyzed, and it was determined Alternative D2 best implements the oil and gas program as required by PL 115-97 consistent with the four conservation and subsistence purposes of the Arctic Refuge. Under Alternative D2, important subsistence habitats along rivers and streams, as well as nearshore marine, lagoon, and barrier island habitats, contain NSO restrictions, to ensure the habitat is protected for important subsistence uses and resources.

3. *Reasonable steps will be taken to minimize adverse impacts upon subsistence uses and resources resulting from such actions.*

Alternative D2 contains several lease stipulations and ROPs that were designed to minimize adverse impacts to subsistence uses and resources, such as:

- Lease Stipulation 1 specifically minimizes impacts on subsistence cabins and campsites, as well as minimizing the disruption of subsistence activities.
- Lease Stipulation 4 protects fish and wildlife habitat and minimizes impacts on subsistence activities.
- ROP 7 ensures that permitted activities do not create human health risks by contaminating subsistence foods.
- ROP 18 protects subsistence uses and access to subsistence hunting and fishing areas and minimizes the impact of oil and gas activities on air, land, water, fish, and wildlife resources.
- ROP 20 protects subsistence use and access to subsistence hunting and fishing, anadromous fish, and non-subsistence hunting and fishing.
- ROP 23 minimizes disruption of caribou movement and subsistence use.

Given these protections, as well as other lease stipulations and ROPs that serve to directly protect various subsistence resources or their habitat, Alternative D2 includes reasonable steps to minimize adverse impacts on subsistence uses and resources.

6.7 Consultation with Canadian Government

The DOI coordinated and exchanged information with representatives of the Canadian government for the development of the Leasing SEIS.

6.8 Environmental Justice

Executive Orders 12898 and 14096 direct federal agencies, to the greatest extent practicable and permitted by law, to achieve environmental justice by identifying and addressing disproportionately high and adverse human health or environmental effects of proposed federal actions on minority and low-income populations and on tribal populations. Section 3.4.5 of the Leasing SEIS identified direct and indirect impacts that may affect the communities of Kaktovik, Nuiqsut, Arctic Village, and Venetie.

This Decision avoids, minimizes, and mitigates potential adverse impacts on these populations. It accomplishes this primarily through adopting measures that protect subsistence resources, access to those resources, and public health; by monitoring operators' activities to ensure compliance with requirements; and through other monitoring to assess the effectiveness of lease stipulations and ROPs and help adapt management to better meet resource and use objectives:

- Lease Stipulation 1 minimizes adverse impacts to subsistence habitat and resources, as well as cultural and paleontological sites, by requiring setbacks for certain rivers and creeks that contain these resources.
- Lease Stipulation 4 protects fish and wildlife habitat and minimizes impacts on subsistence activities by limiting development activities in nearshore marine, lagoon, and barrier island habitats of the Southern Beaufort Sea. This stipulation also requires that lessees/operators/contractors develop and implement an impact and conflict avoidance and monitoring plan to assess, minimize, and mitigate the effects of infrastructure and its use on nearshore marine area habitats and their use by wildlife and people.
- Lease Stipulation 6 minimizes disturbance and hindrance to caribou movement during sensitive calving, post-calving, and insect-relief periods by precluding leasing within the Porcupine Caribou Herd comprehensive calving area and requiring lessees/operators to submit an Adaptive Research and Management Plan to carry out monitoring and research and evaluate existing and ongoing impact mitigation efforts.
- ROP 6 contains specific requirements related to avoiding, minimizing, or mitigating impacts on air quality for various phases of development to prevent degradation of the air and lands and to protect health.
- ROP 7 contains requirements aimed at ensuring that permitted activities do not create human health risks by contaminating subsistence foods.
- ROP 18 requires the design, construction, operation, and maintenance of roads to be done in consultation with affected subsistence users, to protect subsistence use and access to subsistence hunting and fishing areas.
- ROP 36 requires the lessee/operator/contractor to coordinate directly with affected communities to provide opportunities for subsistence users to participate in planning and decision-making to prevent unreasonable conflicts between subsistence uses and other activities.
- ROP 38 prohibits lessees/operators/contractors in work status from hunting, trapping, and fishing in order to minimize impacts from non-local hunting, trapping, and fishing activities on subsistence resources.

Based on these and other lease stipulations and ROPs that serve to protect various cultural resources, subsistence resources and their habitat, and human health and the environment generally, this Decision includes reasonable measures to minimize adverse impacts on minority, low-income, and tribal populations.

In addition to these and other lease stipulations and ROPs, the BLM will consider alternatives to avoid adverse effects and incompatible development to protect the various cultural resources, subsistence resources and their habitat, and human health and the environment, before any on-the-ground activities are approved. This will be done through subsequent NEPA analysis, which will be conducted before any exploration or development permits or approvals are issued. Compliance with Executive Order 12898 will be undertaken at these subsequent stages through consideration of all practicable alternatives and additional mitigation, as appropriate.

6.9 Floodplain Management and Protection of Wetlands

The following findings are based on a comprehensive impact analysis completed in compliance with Executive Orders 11988 and 11990 in the Leasing SEIS (refer to Sections 3.2.10 and 3.3.1).

Executive Order 11988—Floodplain Management

Executive Order 11988, concerning the protection of floodplains, requires an agency to provide leadership and to take action to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities. Pursuant to the order, the agency has a responsibility to:

1. Evaluate the potential effects of any actions that may take place in a floodplain;
2. Ensure that its planning programs and budget requests reflect consideration of flood hazards and floodplain management; and
3. Prescribe procedures to implement the policies and requirements of Executive Order 11988.

Additional requirements are as follows:

1. Before taking an action, each agency shall determine whether the proposed action will occur in a floodplain and the evaluation required will be included in any statement prepared under Section 102(2)(C) of the NEPA (42 U.S.C. 4332(2)(C)).
2. If an agency has determined to, or proposes to conduct, support, or allow an action to be located in a floodplain, the agency shall consider alternatives to avoid adverse effects and incompatible development in the floodplains. If the head of the agency finds that the only practicable alternative consistent with the law and with the policy presented in this order requires siting in a floodplain, the agency shall, prior to taking action,
 - a. design or modify its action in order to minimize potential harm to or within the floodplain, consistent with regulations and
 - b. prepare documentation explaining why the action is proposed to be located in the floodplain.

The following discussion summarizes methods under the alternative adopted by this Decision, Alternative D2, to avoid to the extent possible potential impacts on floodplains at the leasing stage, recognizing additional requirements may be required if the NEPA analysis for project-specific activities identifies the need for site-specific mitigation measures.

River floodplains and deltas encompass approximately 24.6 percent of the Coastal Plain program area. Floodplains will be protected to the greatest extent practicable, primarily through lease stipulations and ROPs incorporated into this ROD (see **Appendix A**), including but not limited to:

- Lease Stipulation 1 minimizes the disruption of natural flow patterns and changes to water quality and the disruption of natural functions resulting from the loss or change to vegetative and physical characteristics of floodplain and riparian areas, springs, and auefs.
- ROP 3 prohibits refueling equipment within 500 feet of the active floodplain of any waterbody except for small caches (up to 210 gallons) for motorboats, float planes, ski planes, and small equipment, such as portable generators and water pumps.
- ROP 16 prohibits exploratory drilling in fish-bearing rivers and streams and other aquatic habitats with confirmed fish presence and the habitats connected by perennial or temporary aquatic water to locations with confirmed fish presence.
- ROP 22 requires single-span bridges if technically feasible, to allow for sheet flow and floodplain dynamics and to ensure passage of fish and other organisms.
- ROP 24 requires gravel mine site design, construction, and reclamation be done in accordance with an approved plan. The plan must consider the design and construction of gravel mine sites inside or outside of active floodplains, as well as the location of gravel mine sites to serve as water reservoirs in active flood plains for future use.

In addition to these and other lease stipulations and ROPs, the BLM will consider alternatives to avoid adverse effects and incompatible development in the floodplains before any on-the-ground activities are approved. This will be done through subsequent project-specific NEPA analysis, which will be conducted before any construction or operation permits or approvals are issued. Compliance with Executive Order 11988 will be undertaken at these subsequent stages through consideration of all practicable alternatives and additional mitigation in order to ensure that all possible protection is provided for floodplain functions and values.

Executive Order 11990—Protection of Wetlands

Executive Order 11990, concerning the protection of wetlands, requires that the BLM consider factors relevant to the proposal's effect on the survival and quality of wetlands. Factors to be considered include the following:

1. Public health, safety, and welfare; including water supply, quality, recharge and discharge, pollution; flood and storm hazards; and sediment and erosion;
2. Maintenance of natural systems; including conservation and long-term productivity of existing flora and fauna, species and habitat diversity and stability, hydrologic utility, fish, wildlife, timber, and food and fiber resources; and,
3. Other uses of wetlands in the public interest, including recreation, scientific, and cultural uses.

Under the order, in furtherance of the NEPA (42 U.S.C. 4331(b)(3)), to improve and coordinate federal plans, functions, programs, and resources so that the nation may attain the widest range of beneficial uses of the environment without degradation and risk to health or safety, the agency, to the extent permitted by law, shall avoid undertaking or providing assistance for new construction located in wetlands unless the head of the agency finds:

1. There is no practicable alternative to such construction, and
2. The proposed action includes all practicable measures to minimize harm to wetlands which may result from such use. In making this finding the head of the agency may take into account economic, environmental and other pertinent factors.

The following discussion summarizes the evaluation of impacts and findings to wetlands as presented in the Final Leasing SEIS for Alternative D2, as applicable to this Decision. It also identifies protective mitigation measures developed to avoid to the extent possible potential impacts on wetlands.

Most of the landscape in the Coastal Plain program area is considered wetlands, and National Wetlands Inventory data indicate that at least 96 percent of the program area is classified as wetlands or waters of the U.S. The program area is largely undisturbed, and wetland structure and function are intact.

Potential impacts on vegetation and wetlands from seismic exploration include changes in plant community composition and structure, altered hydrology, compacted soil, and by direct damage to aboveground structures, such as tussocks or woody stems and branches. The most susceptible vegetation types to seismic impacts correspond to drier tundra types, typically saturated wetlands or possibly uplands. Potential effects on vegetation and wetlands from seismic operations are avoided, minimized, and mitigated through ROPs 11, 12, and 15 (see **Appendix A**).

Compaction of the soil and surface organic layers is also a potential effect of ice-road construction. ROP 11 requires operational and design criteria for the protection of stream banks and freshwater resources, by minimizing soil compaction and the breakage, abrasion, compaction, or displacement of vegetation.

The primary impact on vegetation and wetland types from development activities is permanent loss of those types due to the placement of fill for the construction of roads, pads, vertical support members for pipeline footings, and gravel excavation. The removal of surface layers for gravel extraction in material sites may also result in loss of vegetation and wetlands that may be recovered through reclamation. The potential loss as a result of these types of activities would be limited to a small fraction of the Coastal Plain.

During construction, vegetation and wetland plant community composition can be altered through the deposition of dust and gravel spray from vehicle traffic, alterations to drainage patterns from drifted snow, impounded drainages, the potential for introduction of invasive or noxious nonnative plants, and the potential for oil, water, and drilling mud spills to the tundra surface.

After construction is complete, gravel from roads, pads, and airstrips would be the main dust source; dust fallout from vehicle traffic could increase turbidity and contaminant loads in ponds, lakes, creeks, streams and rivers, and wetlands that are next to roads and construction areas. Dust particles may reduce plant growth by smothering the vegetation and may reduce wetland function by introducing pollutants. Many of the ROPs provide protections for water resources and are designed to minimize disruptions to natural flow patterns and impacts on water quality, such as: ROPs 2, 3, 8, 9, 11, 12, 15, 17, and 21. ROP 43 was specifically designed to prevent the introduction or spread of nonnative, invasive species in the Coastal Plain.

Due to continuous permafrost, pipelines on the North Slope of Alaska are typically constructed above ground, which introduces the potential for damage due to oil spills and less severe long-term effects of shading and snow accumulation on vegetation and wetlands below the pipeline. Spill effects would range

in severity and impacts would be evaluated on a case-by-case basis. Lease Stipulations 4 and 9 and ROP 33 require operators to develop adequate spill response plans before construction begins.

Wetter vegetation types tend to provide important wildlife habitat function; thus, the NSO protections preferentially preserve some high functioning wetlands from impacts of road and pad construction in many riparian areas. Furthermore, the NSO areas in the high hydrocarbon potential zone includes 231,700 acres, or 58 percent of Herbaceous (Wet), which is the most common vegetation type within that land use category. The high hydrocarbon potential zone includes a large area in the Staines and Canning River deltas and the wettest terrain in the program area.

Placement and construction of gravel pads, roads, air access facilities, culverts, and bridges could affect natural drainage patterns. This would come about by creating new channels, inundating dry areas, causing ground surface subsidence under some seismic trails, and starving wetlands of water on the downstream side of roads. Also, gravel roads and pads tend to increase the occurrence of thermokarst next to the footprint edge, with ponded areas extending into the adjacent tundra and altering the vegetation and wetland plant community structure. Additionally, water withdrawals to support components of oil and gas activities under Alternative D2 would affect the water levels of lakes used as water sources and any connected waterbody, such as streams or wetlands.

Wetlands would be protected to the greatest extent practicable, primarily through lease stipulations and ROPs (see **Appendix A**) incorporated into this ROD. In addition to the lease stipulations and ROPs, the BLM will consider alternatives to avoid adverse effects and incompatible development in the wetlands before any on-the-ground activities are approved. This will be done through subsequent project-specific NEPA analysis, which will be conducted before any construction or operation permits or approvals are issued. Compliance with Executive Order 11990 will be undertaken at these subsequent stages through consideration of all practicable alternatives and mitigation measures in order to ensure that harm to wetland functions and values is minimized.

7. FINAL AGENCY ACTION

For the reasons set forth above, I hereby adopt Alternative D2 of the Coastal Plain Oil and Gas Leasing Program Final Supplemental Environmental Impact Statement as described herein, subject to the lease stipulations and required operating procedures developed for that alternative, as reflected in this Record of Decision. My approval of this Decision constitutes the final decision of the Department of the Interior and, in accordance with the regulations at 43 CFR 4.410(a)(3), is not subject to appeal under Departmental regulations at 43 CFR Part 4.



Laura Daniel-Davis
Acting Deputy Secretary
U.S. Department of the Interior

DEC 08 2024

Date

8. REFERENCES

BLM (United States Department of the Interior, Bureau of Land Management). 2019. Coastal Plain Oil and Gas Leasing Program, Final Environmental Impact Statement. Anchorage, Alaska.

DOI (United States Department of the Interior). 2020. Record of Decision (ROD) for the Final Environmental Impact Statement (EIS) for the Coastal Plain Oil and Gas Leasing Program.

USFWS (United States Fish and Wildlife Service). 2015. Arctic National Wildlife Refuge Revised Comprehensive Conservation Plan. Final Environmental Impact Statement, Vol. 1. Internet website: <https://www.fws.gov/home/arctic-ccp/>.

Appendix A

Lease Stipulations and Required
Operating Procedures

This page intentionally left blank.

TABLE OF CONTENTS

Section	Page
A.1	APPLICABILITY OF REQUIREMENTS AND STANDARDS A-1
A.1.1	Lease Stipulations A-1
A.1.2	Required Operating Procedures A-1
A.2	LEASE STIPULATIONS AND REQUIRED OPERATING PROCEDURES A-2
A.2.1	Lease Stipulations A-2
A.2.2	Required Operating Procedures A-13

This page intentionally left blank.

Appendix A. Lease Stipulations and Required Operating Procedures

A.1 APPLICABILITY OF REQUIREMENTS AND STANDARDS

A.1.1 Lease Stipulations

Appropriate stipulations are attached to the lease when the BLM issues it. As part of a lease contract, stipulations are specific to the lease. All oil and gas activity permits issued to a lessee must comply with the lease stipulations appropriate to the activity under review, such as exploratory drilling or production pad construction.

A stipulation included in an oil and gas lease could be subject to a waiver, exception, or modification, as appropriate. The objective of a stipulation must be met before a waiver, exception, or modification would be granted. Waivers, exceptions, and modifications are:

- A waiver—A permanent exemption to a stipulation on a lease
- An exception—A one-time exemption to a lease stipulation, determined on a case-by-case basis
- A modification—A change attached to a lease stipulation, either temporarily or for the life of the lease

The BLM Authorized Officer may authorize a modification to a lease stipulation only if the officer determines that the factors leading to the stipulation have changed sufficiently to make the stipulation no longer justified; the proposed operation would still have to meet the objective stated for the stipulation.

While the BLM may grant a waiver, exception, or modification of a stipulation through the permitting process, it may also impose additional requirements through permitting terms and conditions to meet the objectives of any stipulation. This would be the case if the BLM Authorized Officer considers that such requirements are warranted to protect the land and resources, in accordance with the BLM's responsibility under relevant laws and regulations. Note that PL 115-97 requires that the BLM shall issue any rights-of-way or easements across the Coastal Plain for the exploration, development, production, or transportation necessary to carry out the Tax Act. It should be noted that a ROW or easement could be granted even in areas closed to leasing or with a NSO stipulation. The Authorized Officer will issue a waiver, exception, or modification to a lease stipulation or ROP only following 30 days of public notice. Moreover, the Authorized Officer must document their decision and rationale for any waiver, exception, or modification in writing.

A.1.2 Required Operating Procedures

The ROPs describe the protective measures that the BLM would impose on applicants during the permitting process. Similar to stipulations, the objective of a ROP must be met in order for exceptions, modifications, or waivers to be granted.

Any applicant requesting authorization for an activity from the BLM will have to address the applicable ROPs in one of the following ways:

- Before submitting the application (e.g., performing and documenting subsistence consultation or surveys)
- As part of the application proposal (e.g., including in the proposal statements that the applicant will meet the objective of the ROP and how the applicant intends to achieve that objective)
- As a term imposed by the BLM in a permit or right-of-way authorization

At the permitting stage, the BLM Authorized Officer would not include those ROPs that, because of their location or other inapplicability, are not relevant to a specific land use authorization application. Note also that at the permitting stage, the BLM Authorized Officer may establish additional requirements as warranted to protect the land, resources, and uses in accordance with the BLM's responsibilities under relevant laws and regulations.

A.2 LEASE STIPULATIONS AND REQUIRED OPERATING PROCEDURES

A.2.1 Lease Stipulations

Protections that Apply in Select Biologically Sensitive Areas

Lease Stipulation 1 – Rivers and Streams

Objective: Minimize the disruption of natural flow patterns and changes to water quality; the disruption of natural functions resulting from the loss or change to vegetative and physical characteristics of floodplain and riparian areas, springs, and aufeis; the loss of spawning, rearing, or overwintering fish habitat; the loss of cultural and paleontological resources; the loss of raptor habitat; the disruption to polar bear denning habitat; impacts on subsistence cabins and campsites; the disruption of subsistence activities; impacts on hunting and recreation, and impacts on scenic and other resource values. Protect the water quality, quantity, and diversity of fish and wildlife habitats and populations associated with springs and aufeis across the Coastal Plain.

Requirement/Standard: (NSO) Permanent oil and gas facilities, including gravel pads, roads, airstrips, and pipelines, are prohibited in the streambed and within the described setback distances outlined below, from the southern boundary of the Coastal Plain to the stream mouth. For streams that are entirely in the Coastal Plain, the setback extends to the head of the stream, as identified in the National Hydrography Dataset. Pipelines and road crossings that are essential to carry out operations would be permitted through setback areas in accordance with Section 20001(c)(2) of PL 115-97, which requires issuance of rights-of-way or easements across the Coastal Plain for the exploration, development, production, or transportation necessary to carry out Section 20001. Gravel mines could be permitted in setback areas near rivers and streams that do not support resident, anadromous, or endemic fish populations.

Exceptions: All exception requests will be coordinated between the BLM Authorized Officer and the USFWS as surface manager.

1. Setbacks may not be practical in river deltas; in these situations, an exception may be granted by the Authorized Officer if the operator can demonstrate: (1) there are no practical alternatives to locating facilities in these areas; (2) the proposed action would maintain resource functions; (3)

permanent facilities are designed to withstand a 100-year flood; and (4) the proposed action complies with other applicable laws.

2. In NSO areas a one-time exception may be granted by the Authorized Officer if the operator can demonstrate: (1) there are no practical alternatives to accessing subsurface resources; (2) the proposed action would maintain resource functions; and (3) the proposed action complies with other applicable laws.
 - a. Canning/Staines River: From the western boundary of the Coastal Plain to 3 miles east of the eastern edge of the active floodplain
 - b. Hulahula River: 4 miles in all directions from the active floodplain
 - c. Sadlerochit Spring Creek: 3 miles in all directions from the active floodplain
 - d. Aichilik River: 3 miles from the eastern edge of the Coastal Plain boundary
 - e. The following rivers and creeks would have a 1-mile setback from the active floodplain:
 - i. Sadlerochit River
 - ii. Jago River
 - iii. Itkilyariak Creek
 - f. The following rivers and creeks would have a 0.5-mile setback from the active floodplain:
 - i. West Fork Tamayariak River
 - ii. Middle Fork Tamayariak River
 - iii. Tamayariak River
 - iv. Katakturuk River
 - v. Nularvik River
 - vi. Okerokovik River
 - vii. Niguanak River
 - viii. Angun River
 - ix. Kogotpak River
 - x. Okpilak River
 - xi. Marsh Creek
 - xii. Carter Creek
 - g. The following rivers and creeks would have a 0.25-mile setback from the active floodplain:
 - i. Kajutaakrok River
 - ii. Nataroatuk River
 - iii. Akutotuk River
 - iv. Okpirourak Creek
 - v. Sikrelurak River
 - vi. Igilatvik River
 - vii. John River
 - viii. Pokok River
 - ix. Kimikpaurauk River
 - x. Siksik River

Lease Stipulation 2 – Canning River Delta and Lakes

Objective: Protect and minimize adverse effects on the water quality, quantity, and diversity of fish and wildlife habitats and populations, subsistence resources, and cultural resources; protect and minimize the disruption of natural flow patterns and changes to water quality, the disruption of natural functions resulting from the loss or change to vegetation and physical characteristics of floodplain and riparian areas; the loss of passage, spawning, rearing, or overwintering habitat for fish; the loss of cultural and paleontological resources; and adverse effects to migratory birds.

Requirement/Standard: (NSO) Permanent oil and gas facilities, including gravel pads, roads, airstrips, and pipelines, are prohibited within 0.5 miles of the active floodplain of any waterbody in T9N R24E, T9N R25E, T8N, R24E, T8N R25E, T8N R26E, T8N R27E within the Canning and Tamayariak watersheds. Pipelines and road crossings that are essential to carry out operations may be considered through setback areas in accordance with Section 20001(c)(2) of PL 115-97, which requires issuance of rights-of-way or easements across the Coastal Plain for the exploration, development, production, or transportation necessary to carry out Section 20001.

Exceptions: All exception requests will be coordinated between the BLM Authorized Officer and the USFWS as surface manager.

1. In NSO areas a one-time exception may be granted by the Authorized Officer if the operator can demonstrate: (1) there are no practical alternatives to accessing subsurface resources; (2) the proposed action would maintain resource functions; and (3) the proposed action complies with other applicable laws.

Lease Stipulation 3—Springs/Aufeis

Objective: Protect the water quality, quantity, and diversity of fish and wildlife habitats and populations associated with springs and aufeis across the Coastal Plain. River systems with springs provide year-round habitat and host the most diverse and largest populations of fish, aquatic invertebrates, and wildlife; they are associated with major subsistence activity and cultural resources. An aufeis is a unique feature associated with perennial springs. It helps sustain river flow during summer and provides insect relief for caribou. Because the subsurface flow paths to perennial springs are unknown and could be disturbed by drilling, use buffer areas around the major perennial springs that support fish populations in which no leasing is permitted. Also, minimize the disruption to polar bear denning habitat.

Requirement/Standard:

- a. No leasing and no new infrastructure would be permitted within 3 miles adjacent to or above Sadlerochit Spring (04N031E) nor within a 1-mile buffer in all directions from the active floodplain from Sadlerochit Spring to its confluence with Itkilyariak Creek and downstream to a location 1 mile below the point at which Itkilyariak Creek enters the Sadlerochit River and along the associated aufeis formation (04N031E and 05N031E).
- b. No leasing and no new infrastructure would be permitted within 4 miles adjacent to or above the perennial spring at Fish Hole 1 on the Hulahula River (05N032E) nor within 1 mile of the associated aufeis field (05N032E and 06N032E).

- c. No leasing and no new infrastructure would be permitted within 1 mile adjacent to or above the perennial Tamayariak Spring, and no new infrastructure would be permitted within 1 mile of the associated aufeis field (07N026E).
- d. No leasing and no new infrastructure would be permitted within 3 miles adjacent to or above the perennial Okerokovik Spring (04N036E) and associate aufeis field.

Before drilling, the lessee/operator/permittee would conduct studies to ensure drilling or other surface activities would not disrupt flow to or from the perennial springs and waste injection wells would not contaminate any perennial springs. Study plans would be developed in consultation with the BLM, USFWS, Tribal Governments, State of Alaska, and other agencies, as appropriate and incorporate local indigenous knowledge, when available.

Lease Stipulation 4—Nearshore marine, lagoon, and barrier island habitats of the Southern Beaufort Sea within the boundary of the Coastal Plain

Objective: Protect fish and wildlife habitat, including that for waterfowl and shorebirds, caribou insect relief, marine mammals, and polar bear summer and winter coastal habitat; preserve air and water quality; and minimize impacts on subsistence activities, recreation, historic travel routes, and cultural resources in the nearshore marine area. Also, minimize the disruption to polar bear denning habitat and disturbance to bears using near shore areas.

Requirement/Standard: (NSO) Exploratory well drill pads, production well drill pads, or a CPF for oil or gas would not be permitted in nearshore marine waters, lagoons, or barrier islands within the boundaries of the Coastal Plain.

Exceptions: All exception requests will be coordinated between the BM Authorized Officer and the USFWS as surface manager.

1. In NSO areas a one-time exception may be granted by the Authorized Officer if the operator can demonstrate: (1) there are no practical alternatives to accessing subsurface resources; (2) the proposed action would maintain resource functions; and (3) the proposed action complies with other applicable laws.
2. The BLM Authorized Officer may approve infrastructure necessary for oil and gas development in these critical and sensitive habitats, such as barge landings, docks, spill response staging and storage areas, and seawater pipelines if the operator can demonstrate: (1) there are no practical alternatives to locating such facilities in these areas; (2) the proposed action would maintain resource functions; and (3) the proposed action complies with other applicable laws. Approval would be on a case-by-case basis, in consultation with the USFWS, NMFS or both as appropriate, local Tribal Governments, subsistence users, and other Arctic Refuge users or user groups, as appropriate.
 - a. All lessees/operators/contractors involved in authorized activities in nearshore marine waters must coordinate construction and use infrastructure with all other prospective Arctic Refuge users or user groups.
 - b. Before conducting open water activities, the lessee/operator/contractor would consult with the Alaska Eskimo Whaling Commission, the NSB, Alaska Nanuut Co-management Council, the Inuvialuit-Inupiat Agreement, and local whaling captains' associations to

minimize impacts on subsistence whaling and other subsistence activities of the communities of the North Slope. In a case in which the BLM authorizes permanent oil and gas infrastructure in the nearshore marine area, the lessee/operator/contractor shall develop and implement an impact and conflict avoidance and monitoring plan which would utilize a monitoring and adaptive management approach. This plan would be used to assess, minimize, and mitigate the effects of the infrastructure and its use on these nearshore marine area habitats and their use by wildlife and people.

- c. (TL) Oil and gas activities such as drilling, seismic exploration, and testing, are not allowed on the major nearshore marine waters, lagoons, barrier islands, and coastal islands between May 15 and November 1 or when sea ice edge (as defined by Fetterer et al. 2017) is 10 miles distant or greater from the coast each season, whichever is later. Requests for approval of any activities between November 2-May 14 must be submitted in advance and must be accompanied by evidence and documentation that demonstrates to the Authorized Officer (who will review in coordination with the USFWS) that the actions or activities meet all the following criteria:
- i. Exploration would not unreasonably conflict with subsistence uses or significantly affect seasonally concentrated fish and wildlife resources. The location of exploration and related activities would be sited to not pose a hazard to navigation by the public using high-use, subsistence-related travel routes into and through the nearshore marine waters, as identified by the NSB and the Native Village of Kaktovik, recognizing that marine and nearshore travel routes change over time and are subject to shifting environmental conditions.
 - ii. Design and construct facilities to minimize impacts on subsistence uses, travel corridors, and seasonally concentrated fish and wildlife resources.
 - iii. Daily operations, including use of support vehicles, watercraft, and aircraft, alone or in combination with other past, present, and reasonably foreseeable activities, would be conducted to minimize impacts on subsistence and other public uses, travel corridors, and seasonally concentrated fish and wildlife resources.
 - iv. The location of oil and gas facilities, including artificial islands, platforms, associated pipelines, ice or other roads, and bridges or causeways, would be sited and constructed to not pose a hazard to public navigation, using traditional high-use subsistence-related travel routes into and through the major coastal lagoons and bays, as identified by the community of Kaktovik and the NSB.
 - v. Operators would be responsible for developing comprehensive prevention and response plans, including Oil Discharge Prevention and Contingency Plans and Spill Prevention, Control, and Countermeasure plans and maintain adequate oil spill response capability to effectively respond during periods of ice, broken ice, or open water, based on the statutes, regulations, and guidelines of the USFWS, EPA, Alaska Department of Environmental Conservation (ADEC), and the Bureau of Safety and Environmental Enforcement (BSEE), as well as ROPs, stipulations, and policy guidelines of the BLM.

Lease Stipulation 5—Coastal Polar Bear Denning River Habitat

Objective: Minimize disturbance to denning polar bears, and disturbance or alteration of key river and creek maternal denning habitat areas.

Requirement/Standard: Comply with ESA and MMPA requirements, with the following additional requirements/standards applying from the coastline to 5 miles inland within the program area boundary.

Exceptions: All exception requests will be coordinated between the BLM Authorized Officer and the USFWS as surface manager.

1. In NSO areas a one-time exception may be granted by the Authorized Officer if the operator can demonstrate: (1) there are no practical alternatives to accessing subsurface resources; (2) the proposed action would maintain resource functions; and (3) the proposed action complies with other applicable laws.
2. No leasing: From the coast to 1-mile inland along the coastline of the critical denning habitat in the Northwest portion of the 1002 Area near the Canning/Staines Rivers and in the Camden Bay area.
 - a. (NSO) From the coastline to 5 miles inland, no permanent oil and gas infrastructure would be permitted within 1 mile of potential polar bear denning habitat on the Canning/Staines River, Niguanak River, Katakturuk River, Marsh Creek, Carter Creek, and Sadlerochit River, and all associated tributaries as defined by Durner et al. (2006).
 - b. Any infrastructure permitted within 5 miles inland of the coastline must be designed to avoid impeding polar bears seeking to establish or leave dens inland.
 - c. (TL) From the coastline to 5 miles inland, between October 30 and April 30 of any year, the lessee/operator/contractor would not conduct oil and gas activities, such as drilling, seismic exploration, and testing, within 1 mile of potential polar bear denning habitat on the Niguanak River, Katakturuk River, Marsh Creek, Carter Creek, Canning/Staines and Sadlerochit River, and all associated tributaries as defined by Durner et al. (2006), unless the BLM Authorized Officer, in coordination with the USFWS, approves alternative protective measures.
 - d. (TL) From the coastline to 2 miles inland, between October 30 and April 30 of any year, the lessee/operator/contractor would not conduct oil and gas activities, such as drilling, seismic exploration, and testing.

Lease Stipulation 6—Caribou Calving, Post-calving, and Insect Relief

Note: All lands in the Arctic Refuge Coastal Plain are recognized as habitat of the PCH and CAH and would be managed to allow for unhindered movement and use by caribou. The portion of the CAH range that could be affected is encompassed within the range of the PCH.

- a. **PCH projected calving and post-calving habitat areas** are defined following those identified by Severson et al. (2021) for the projected 2050-2059 ranges.
- b. **PCH comprehensive calving habitat area** is inclusive of current PCH calving habitat, defined as the area used in the 2019 FEIS (BLM 2019) for calving (based on annual 95 percent contours calculated using kernel density estimation of parturient female caribou locations May 26-June 10 during more than 40 percent of the years surveyed), plus the addition of portions of PCH projected calving habitat area (Severson et al. 2021).

- c. **PCH comprehensive post-calving habitat area** is inclusive of current PCH post-calving habitat, defined as the area used in the 2019 FEIS (BLM 2019) for post-calving (based on annual 95 percent contours calculated using kernel density estimation of parturient female caribou locations May 26-June 10 during more than 40 percent of the years surveyed), plus the addition of portions of PCH projected post-calving habitat area (Severson et al. 2021).

Objective: Minimize disturbance and hindrance of caribou to allow for unhindered movement and use by caribou within the 1002 Area, particularly during the sensitive calving, post-calving, and insect relief periods, and maintain caribou access to summer habitats, including calving and post-calving. Avoid Disrupting or breaking up caribou aggregations during calving, post-calving, and insect-relief periods. Minimize disturbance to polar bear denning habitat and to bears using nearshore areas.

Requirement/Standard:

(No leasing) No leasing would be allowed in the PCH comprehensive calving habitat area.

(CSU) No CPFs would be allowed in the PCH comprehensive post-calving habitat area. Well pads, roads, airstrips, and pipelines would be permitted, in accordance with **ROP 23** and **ROP 23.1**. Infrastructure would be limited across the area to 100 acres per township, not to exceed 510 acres total in this area.

(TL) Construction activities using heavy equipment, excluding drilling from existing production pads, would be suspended in the PCH comprehensive post-calving habitat area no later than May 15 through no earlier than July 28, unless approved by the BLM Authorized Officer, in consultation with the appropriate federal (including Arctic Refuge staff, USFWS, and BLM), state, and NSB regulatory and resource agencies.

The intent of this requirement is to restrict activities that would disturb caribou during calving, post-calving, and insect-relief periods. If caribou arrive in the Coastal Plain before May 15, or if they remain in the area past July 28 in significant numbers (greater than approximately 10 percent of the estimated calving cow population or 1,000 during insect-relief periods), construction activities using heavy equipment would be suspended. The lessee shall submit with the development proposal a stop work plan that considers this, and any other mitigation related to caribou early arrival or late departure. The intent of this latter requirement is to provide flexibility to adapt to changing climate conditions that may occur during the life of fields in the region.

The lessee/operator/contractor would develop an Adaptive Research and Management Plan (ARMP) to identify research needs, carry out monitoring and research efforts, evaluate existing/ongoing management and mitigation efforts, quantify impacts, and identify management changes when necessary. This plan would be submitted to USFWS (including Arctic Refuge staff), BLM, and the International Porcupine Caribou Herd Technical Committee for review and approval. The lessee would provide adequate funds to implement this monitoring program. BLM and USFWS would hire an organization or agency to carry out this monitoring program.

As part of the ARMP, caribou occupancy and movement would be monitored from May 15 through August 20. Also, the permittee or contractor would coordinate with local Tribal governments to involve Tribal observers in these observation efforts. The details of how this coordination would occur must be outlined in the ARMP. Based on these observations, traffic would be stopped temporarily to allow crossing by 10 or more caribou. Sections of road would be evacuated whenever a large number of caribou (approximately

100 or more) approach the road within 2 miles (May 15-July 28). The permittee shall submit with the development proposal a vehicle use plan consistent with or exceeding provisions in the ARMP (see **ROP 23.1**) that considers these and any other mitigation to minimize or prevent caribou/vehicle interactions during the post-calving period.

- a. The following ground and air traffic restrictions would apply to permanent oil and gas-related roads in the areas and time periods indicated:
 - a. (TL) Within the PCH comprehensive calving and post-calving habitat areas, from May 15 through July 28, traffic speed shall not exceed 15 miles per hour when caribou are within 2.0 mile of the road. Additional strategies may include limiting trips and using convoys and different vehicle types, to the extent practicable. The lessee shall submit with the development proposal for review and approval by BLM Authorized Officer in consultation with the USFWS a vehicle use plan consistent with or exceeding provisions in the ARMP (see **ROP 23.1**) that considers these and any other mitigation. The plan shall include collection of data on vehicle traffic (counts, times, speed, etc.) and caribou interactions. The BLM Authorized Officer, in coordination with local Tribal Governments, the USFWS, and the International PCH Technical Committee would require adjustments if resulting disturbance is determined to be unacceptable.
 - 1) Major equipment, materials, and supplies to be used at oil and gas work sites in the PCH projected post-calving habitat area should be stockpiled prior to the period of May 15 through July 28 to minimize road traffic during that period.

Operators of aircraft used for permitted activities would maintain an altitude of at least 2,000 feet above ground level over both the PCH comprehensive caribou calving and post-calving habitat areas, unless doing so would endanger human life or violate safe flying practices. See ROP 34 for additional conditions.

Lease Stipulation 7—Porcupine Caribou Primary Calving Habitat Area

See **Lease Stipulation 6**.

Lease Stipulation 8—Porcupine Caribou Post-Calving Habitat Area

See **Lease Stipulation 6**.

Lease Stipulation 9—Coastal Area

Objective: Protect nearshore marine waters, lagoons, barrier islands, coastlines, and their value as fish and wildlife habitat, including for waterfowl, loons, shorebirds, and marine mammals; minimize the hindrance or alteration of caribou movement in caribou coastal insect-relief areas; minimize hindrance or alteration of polar bear use and movement in coastal habitats; protect and minimize disturbance from oil and gas activities to nearshore marine habitats for polar bears and seals; prevent loss and alteration of important coastal bird habitat; prevent impacts on nearshore marine subsistence resources and activities; and minimize impacts on historic travel routes and cultural resources in coastal areas.

Requirement/Standard: (NSO) From the coastline to 2 miles inland, no permanent oil and gas infrastructure would be permitted.

Exceptions: All exception requests will be coordinated between the BLM Authorized Officer and the USFWS as surface manager.

In NSO areas a one-time exception may be granted by the Authorized Officer if the operator can demonstrate: (1) there are no practical alternatives to accessing subsurface resources; (2) the proposed action would maintain resource functions; and (3) the proposed action complies with other applicable laws.

(TL) Oil and gas activities such as drilling, seismic exploration, and testing, are not allowed on the major nearshore marine waters, lagoons, barrier islands, and coastal islands between May 15 and November 1 or when sea ice edge (as defined by Fetterer et al. 2017) is 10 miles distant or greater from the coast each season, whichever is later.

Before beginning exploration or development within 2 miles inland of the coastline, the lessee/operator/contractor, with local traditional knowledge experts, would develop and implement an impact and conflict avoidance and monitoring plan to assess, minimize, and mitigate the effects of the infrastructure and its use on these coastal habitats and their use by fish, wildlife and people.

The impact and conflict avoidance and monitoring plan would utilize a monitoring and adaptive management approach. Operators would be responsible for developing comprehensive prevention and response plans, including Oil Discharge Prevention and Contingency Plans and spill prevention, control, and countermeasure plans and maintain adequate oil spill response capability to effectively respond during periods of broken ice or open water, based on the statutes, regulations, and guidelines of the EPA, ADEC, and the BSEE, as well as ROPs, stipulations, and policy guidelines of the BLM.

Lease Stipulation 10—Wilderness Boundary

Objective: Protect wilderness values in the Mollie Beattie Wilderness Area.

Requirement/Standard:

- a. (No leasing) Areas within 3 miles of the Mollie Beattie Wilderness Area would not be offered for lease and would not be available for surface occupancy.
- b. (NSO) Surface occupancy, including exploratory and production well drill pads, structures and facilities, and gravel and ice roads, would not be allowed within 3 miles of the southern and eastern boundaries of the Coastal Plain where they are near designated wilderness. To the extent practicable, aircraft operations would be planned to minimize flights below 2,000 feet when flying within 3 miles of the Mollie Beattie Wilderness Area boundary, where not otherwise closed to leasing.

Exceptions: All exception requests will be coordinated between the BLM Authorized Officer and the USFWS as surface manager.

In NSO areas a one-time exception may be granted by the Authorized Officer if the operator can demonstrate: (1) there are no practical alternatives to accessing subsurface resources; (2) the proposed action would maintain resource functions; and (3) the proposed action complies with other applicable laws.

To the extent practicable, aircraft operations would be planned to minimize flights below 2,000 feet when flying within 3 miles of the Mollie Beattie Wilderness Area boundary.

Lease Stipulation 11—Native Allotments

Objective: Ensure Native allotment owners maintain control over use of their land.

Requirement/Standard: Use of the surface of Native allotments for the construction and maintenance of improvements is prohibited unless written consent to transverse the allotment is obtained from the allotment owner.

Lease Stipulation 12—Ice-rich Soils and Yedoma Deposits

Objective: Prevent additional heat input to all ice-rich soils and yedoma deposits which are thawing and melting due to climate change generating unstable landforms (i.e., thermokarst) and surface disturbances such as subsidence and hydrologic changes. Minimize disturbance to polar bear denning habitat.

Requirement/Standard: Design and construct all infrastructure, including oil and gas facilities, wells, pipelines, and gravel roads and pads, to accommodate the thaw subsidence anticipated over the design life in areas of ice-rich soils and edema deposits.

Lease Stipulation 13—Master Development Plan

Objective: Minimize the areal extent of development and redundant infrastructure by a single operator and among multiple operators.

Requirement/Standard: BLM Authorized Officer, in coordination with the USFWS as the surface manager, must approve a Master Development Plan for each field development. Master Plans shall address:

- a. Compact design – Operators shall design all surface infrastructure with the smallest possible footprint. Development and production infrastructure must avoid creating ponds and other minimally-utilized areas bounded by gravel including gravel roads.
- b. Joint use of surface infrastructure – Operators shall develop comprehensive facility sharing agreements to maximize co-use of:
 - i. construction infrastructure including barge landing docks, gravel pads for material storage, gravel mines, construction water sources, and construction service centers.
 - ii. all permanent surface facilities including gravel roads, gravel drill sites, central production facility (CPF) pads, processing facilities, gravel airstrips, pipelines, power generating facilities and transmission lines, sea water treatment plants, base camps, and oil field service centers.

Standardized facility sharing agreements for future use by others shall be required as a condition of development. Subsequent development shall utilize these agreements to minimize the overall development footprint. Where two or more parties are developing on the same timeline, joint construction and co-use of surface facilities shall be required as a design basis for each party to minimize the overall development footprint.

Lease Stipulation 14 – Polar Bear Den Detection, Avoidance, Monitoring, and Reporting

Objective: Minimize disturbance to denning polar bears.

Requirement/Standard:

- a. In order to limit disturbance around known polar bear dens:
 - i. *Attempt to locate polar bear dens.* Lessees/operators/contractors seeking to carry out onshore activities during the denning season must conduct two separate surveys for

occupied polar bear dens in all denning habitat within 1.6 km (1 mi) of proposed activities using aerial infrared (AIR) imagery. The first survey must occur between the dates of November 25 and December 15, and the second between the dates of December 5 and December 31. AIR surveys will be conducted during darkness or civil twilight and not during daylight hours. Ideal environmental conditions during surveys would be clear, calm, and cold. If there is blowing snow, and form of precipitation, or other sources of airborne moisture, use of AIR detection is not advised. Flight crews will record and report environmental parameters including air temperature, dew point, wind speed and direction, cloud ceiling, and percent humidity, and a flight log will be provided to BLM and USFWS within 48 hours of the flight. A scientist with experience in the in-air interpretation of AIR imagery will be on board to analyze the AIR data in real time. The data (infrared video) will be made available for viewing by BLM and USFWS immediately upon return of the survey aircraft to the base of operations. All observed or suspected polar bear dens must be reported to BLM and USFWS prior to the initiation of activities.

- ii. *Observe the exclusion zone around known polar bear dens.* Lessees/operators/contractors must observe a 1.6-km (1-mi) operational exclusion zone around all known polar bear dens during the denning season (approximately November–April, or until the female and cubs leave the areas). Should previously unknown occupied dens be discovered within 1 mi of activities, work must cease and the BLM and USFWS contacted for guidance. The BLM and USFWS would evaluate these instances on a case-by-case basis to recommend the appropriate action. Potential actions may range from cessation or modification of work to conducting additional monitoring, and the holder of the authorization must comply with any additional measures specified.
- iii. *Use the den habitat map developed by the US Geological Survey (USGS).* This product will help locate potential polar bear dens when conducting activities in the coastal areas of the Beaufort Sea. This measure helps identify the location of potential polar bear dens and ensures they are considered when conducting activities in the coastal areas of the Beaufort Sea.
- iv. *Polar bear den restrictions.* Restrict the timing of the activity to range from cessation or modification of work to conducting additional monitoring, and the holder of the authorization must comply with any additional measures specified.

b. In order to limit disturbance around known polar bear dens:

Monitoring requirements

- i. Develop and implement a site-specific, BLM and USFWS-approved marine mammal monitoring and mitigation plan to monitor and evaluate the effectiveness of mitigation measures and the effects of activities on polar bears, and the subsistence use of this species.
- ii. Provide trained, qualified, and BLM and USFWS-approved onsite observers to carry out monitoring and mitigation activities identified in the marine mammal monitoring and mitigation plan.
- iii. For offshore activities, provide trained, qualified, and BLM and USFWS-approved observers on board all operational and support vessels to carry out monitoring and mitigation activities identified in the marine mammal monitoring and mitigation plan.
- iv. Cooperate with the BLM and USFWS and other designated Federal, State, and local agencies to monitor the impacts of Industry activities on polar bears. Where information is

insufficient to evaluate the potential effects of activities on polar bears, and the subsistence use of this species, operators may be required to participate in joint monitoring and/or research efforts to address these information needs and ensure the least practicable impact to these resources.

Reporting requirements

Lessees/operators/contractors must report the results of monitoring and mitigation activities to the BLM and USFWS.

- a. In-season monitoring reports
 - i. Activity progress reports. Notify the BLM and USFWS at least 48 hours prior to the onset of activities; provide the BLM and USFWS weekly progress reports of any significant changes in activities and/or locations; and notify the BLM and USFWS within 48 hours after ending of activities.
 - ii. Polar bear observation reports. Report all observations of polar bears and potential polar bear dens, during any Industry activity. Information in the observation report must include, but is not limited to: (1) Date, time, and location of observation; (2) Number of bears; (3) Sex and age; (4) Observer name and contact information; (5) Weather, visibility, sea state, and sea-ice conditions at the time of observation; (6) Estimated closest distance of bears from personnel and facilities; (7) Industry activity at time of sighting; (8) Possible attractants present; (9) Bear behavior; (10) Description of the encounter; (11) Duration of the encounter; and (12) Mitigation actions taken.
- b. Notification of LOA incident report. Report all bear incidents during any Industry activity. Reports must include: (1) All information specified for an observation report; (2) A complete detailed description of the incident; and (3) Any other actions taken.
- c. Final report. The results of monitoring and mitigation efforts identified in the marine mammal monitoring and mitigation plan must be submitted to the BLM and USFWS for review within 90 days of project completion or, for multi-year activities, within 90 days of the end of each annual reporting period. Information in the final report must include: (1) Copies of all observation reports submitted under an authorization; (2) A summary of the observation reports; (3) A summary of monitoring and mitigation efforts, including areas, total hours, total distances, and distribution; (4) Analysis of factors affecting the visibility and detectability of polar bears during monitoring; (5) Analysis of the effectiveness of mitigation measures; (6) Analysis of the distribution, abundance, and behavior of polar bears observed; and (7) Estimates of “take” as defined by the MMPA and its implementing regulations.

A.2.2 Required Operating Procedures

Waste Prevention, Handling, Disposal, Spills, and Public Safety

Required Operating Procedure 1

Objective: Protect public health, safety, and the environment by disposing of solid waste and garbage, in accordance with applicable federal, State, and local laws and regulations.

Requirement/Standard: Areas of operation would be left clean of all debris. All solid waste and industry-derived trash originating from permitted activities are required to be properly containerized while on-site or removed from the area of operation and activity.

Required Operating Procedure 2

Objective: Minimize impacts on the environment from nonhazardous and hazardous waste generation. Encourage procedures, processes and a cultural environment which foster continuous improvement of environmental stewardship. Protect the health and safety of oil and gas field workers, local communities, Coastal Plain subsistence users, Coastal Plain recreationists, and the general public. Avoid human-caused changes in predator populations. Minimize attracting predators, particularly bears, to human use areas.

Requirement/Standard: The lessee/operator/contractor would prepare and implement a comprehensive waste management plan for all phases of exploration, development, and production, including seismic activities. The plan would include methods and procedures to use bear resistant containers for all waste materials and classes. The plan would be submitted to the BLM Authorized Officer for approval, in consultation with the USFWS, and other federal, State, and NSB regulatory and resource agencies, as appropriate (based on agency legal authority and jurisdictional responsibility), as part of a plan of operations or other similar permit application.

Management decisions affecting waste generation would be addressed in the following order of priority: (1) prevention and reduction, (2) recycling, (3) treatment, and (4) disposal. The plan would consider and take into account the following requirements:

- a. Methods to avoid attracting wildlife to food and garbage: The plan would identify precautions that are to be taken to avoid attracting wildlife to food and garbage. The use of bear-resistant containers for all waste would be required.
- b. Disposal of putrescible waste: Requirements prohibit burying garbage. Lessees/operators/contractors would have a written procedure to ensure that rotting waste would be handled and disposed of in a manner that prevents the attraction of wildlife. All rotting waste would be incinerated, backhauled, or composted in a manner approved by the BLM Authorized Officer. All solid waste, including incinerator ash, would be disposed of in an approved waste-disposal facility, in accordance with EPA and ADEC regulations and procedures.
- c. Disposal of human waste: Burying human waste is prohibited, except as authorized by the BLM Authorized Officer. The use of human waste receptacles should be used when possible and remain bear resistant to minimize attraction.
- d. Disposal of pumpable waste products: Except as specifically provided, the BLM requires that all pumpable solid, liquid, and sludge waste be disposed of by injection, in accordance with the applicable regulations and procedures. On-pad temporary muds and cuttings storage, as approved by the ADEC, would be allowed as necessary to facilitate annular injection and backhaul operations.
- e. Disposal of wastewater and domestic wastewater: The BLM prohibits wastewater discharges or disposal of domestic wastewater into bodies of fresh, estuarine, and marine water, including wetlands, unless authorized by an Alaska Pollutant Discharge Elimination System (APDES) or State permit. See Lease Stipulation 3 for additional requirement/standard.

Prevention of the release of poly- and perfluoroalkyl substances: At facilities where fire-fighting foam is required, use fluorine-free foam unless other state or federal regulations require AFFF use. If AFFF use is required, contain, collect, treat, and properly dispose of all runoff, wastewater from training events, and, to the greatest extent possible, from any emergency response events. All discharges must be reported to the

ADEC Spill Response Division, Contaminated Sites Program. Measures should also be taken to fully inform workers/trainees of the potential health risks of fluorinated foams and to specify appropriate personal protective equipment to limit exposure during training and use. Training events shall be conducted in lined areas or basins to prevent the release of poly- and perfluoroalkyl substances associated with AFFF.

All plans for waste prevention, handling, disposal, spills, and public safety will comply with the Arctic National Wildlife Refuge's CCP.

Required Operating Procedure 3

Objective: Minimize the impact of contaminants from refueling operations on fish, wildlife, and the environment.

Requirement/Standard: Permanent fuel storage stations within the setback distances identified in **Lease Stipulation 1** is prohibited. Refueling equipment within 500 feet of the active floodplain of any waterbody is prohibited. Temporary or seasonal fuel storage stations would be at least 500 feet from any waterbody, except for small caches (up to 210 gallons) for motorboats, float planes, ski planes, and small equipment, such as portable generators and water pumps. The BLM Authorized Officer, in coordination with the USFWS, may allow storage and operations at areas closer than the stated distances if properly designed and maintained to account for local hydrologic conditions.

Required Operating Procedure 4

Objective: Minimize conflicts from the interaction between humans and bears during oil and gas activities.

Requirement/Standard:

- a. Implement policies and procedures to conduct activities in a manner that minimizes adverse impacts on polar bears, their habitat, and their availability for subsistence uses.
- b. Implement adaptive management practices, such as temporal or spatial activity restrictions, in response to the presence of polar bears or polar bears engaged in a biologically significant activity, must be used to avoid interactions with and minimize impacts to them and their availability for subsistence uses.
- c. Cooperate with the BLM, USFWS and other designated federal, state, and local agencies to monitor and mitigate the impacts of Industry activities on polar bears through reporting the monitoring data to BLM and USFWS.
- d. Designate trained and qualified personnel (hired locally whenever possible) to monitor for the presence of polar bears, initiate mitigation measures, and monitor, record, and report the effects of Industry activities on polar bears.
- e. Provide polar bear awareness training that incorporates Indigenous knowledge, when available, to personnel.
- f. Contact affected subsistence communities and hunter organizations including the Alaska Nannut Co-Management Commission to discuss potential conflicts.
- g. Polar bears: The lessee/operator/contractor, as a part of lease operation planning, would prepare and implement polar bear-interaction plans to minimize conflicts between polar bears and humans. These polar bear interaction plans would be developed in consultation with local Tribal

Governments and the community of Kaktovik and approved by the BLM and USFWS. These plans must include:

- i. The type of activity and where and when the activity would occur (i.e., a plan of operation);
 - ii. A food, waste, and other “bear attractants” management plan;
 - iii. Personnel training policies, procedures, and materials;
 - iv. Site-specific polar bear interaction risk evaluation and mitigation measures;
 - v. Polar bear avoidance and encounter procedures; and
 - vi. Polar bear observation and reporting procedures.
- h. Grizzly bears: The lessee/operator/contractor would prepare and implement a grizzly bear interaction plan as necessary, in consultation with, and approved by the BLM and ADFG. The interaction plans would include appropriate Traditional knowledge on bear/human interactions, when available.

Required Operating Procedure 5

Objective: Reduce air quality impacts.

Requirement/Standard: All oil and gas operations (vehicles and equipment) that burn diesel fuels must use ultra-low sulfur diesel, as defined by the EPA.

Required Operating Procedure 6

Objective: Prevent unnecessary or undue degradation of the air and lands and protect health.

Requirement/Standard:

- a. All relevant projects and permitted uses would comply with all applicable NAAQS/ AAAQS and ensure AQRVs are protected under the Clean Air Act, or other applicable statutes.
- b. Prior to initiation of a NEPA analysis for an application to develop a CPF, production pad/well, airstrip, road, gas compressor station, or other potential air pollutant emission source (hereafter called project), the BLM Authorized Officer, in coordination with the USFWS, may require the project proponent to provide a minimum of 1 year of baseline ambient air monitoring data for pollutants of concern. Such a determination would be made in consultation with the EPA/ADEC and with the permittee, to assess the technical practicability of any new data collection. This would apply if no representative air monitoring data are available for the project area or if existing representative ambient air monitoring data are insufficient, incomplete, or do not meet minimum air monitoring standards set by the ADEC or the EPA. If it is determined that baseline monitoring is required, this pre-analysis data must meet ADEC and EPA air monitoring standards and cover the year before the submittal. Pre-project monitoring would not be required when the life of the project is less than 1 year.
- c. For an application to develop a CPF, production pad/well, airstrip, road, gas compressor station, or other potential substantial air pollutant emission source:
 - i. The project proponent shall prepare and submit for approval an emissions inventory that includes quantified emissions of regulated air pollutants from all direct and indirect sources related to the proposed project, including reasonably foreseeable air pollutant emissions of criteria air pollutants, VOCs, hazardous air pollutants, and GHGs estimated for each year for the life of the project. The estimated emissions inventory would be used to identify

pollutants of concern and to determine the appropriate form of air analysis to be conducted for the proposed project.

- ii. Air quality modeling may be required for the purposes of analyzing project direct, indirect, or cumulative impacts on air quality. The BLM would base its determination to require air quality modeling on:
 - 1) the magnitude of potential air emissions from the project;
 - 2) proximity to a federally mandated Class I area;
 - 3) proximity to a population center;
 - 4) location within or proximity to a nonattainment or maintenance area;
 - 5) meteorological or geographic conditions;
 - 6) existing air quality conditions;
 - 7) magnitude of existing development in the area; or
 - 8) issues identified during the NEPA process.

The BLM would determine the information required for a project-specific modeling analysis through the development of a modeling protocol for each analysis. The BLM would consult with appropriate federal (including federal land managers), State, and/or local agencies regarding modeling to inform its modeling decision and avoid duplication of effort.

- iii. The BLM may require the proponent to provide an emissions reduction plan that includes a detailed description of operator-committed measures to reduce project-related air pollutant emissions, including, but not limited to, criteria pollutants, GHGs, heavy metals, mercury, and fugitive dust.
- d. Air monitoring or air modeling reports will be provided to the BLM; federal land managers; federal, state, local community, or affected Tribal governments; and other interested parties, annually or at a frequency set by the BLM Authorized Officer.
- e. The BLM may require monitoring for the life of the project based on:
 - i. the magnitude of potential air emissions from the project;
 - ii. proximity to a federally mandated Class I area;
 - iii. proximity to a population center;
 - iv. location within or proximity to a nonattainment or maintenance area;
 - v. meteorological or geographic conditions;
 - vi. existing air quality conditions;
 - vii. magnitude of existing development in the area; or
 - viii. issues identified during the NEPA process.
- f. If ambient air monitoring or air quality modeling indicates that project-related emissions cause or contribute to impacts, unnecessary or undue degradation of the lands including AQRVs, exceedances of the NAAQS/AAAQS, or fails to protect health (either directly or through use of subsistence resources), then the BLM may require changes to a project proposal or propose mitigation to reduce air impacts. Project changes and mitigation measures will be analyzed through appropriate NEPA analysis to determine effectiveness.

- g. Publicly available reports on air quality baseline monitoring, emissions inventory, and modeling results developed in conformance with this ROP shall be provided by the project proponent to the NSB and to local communities and Tribal Governments in a timely manner.

Required Operating Procedure 7

Objective: Ensure that permitted activities do not create human health risks by contaminating subsistence foods.

Requirement/Standard: A lessee/operator/contractor proposing a permanent oil and gas development would design and implement a monitoring study of contaminants in locally used subsistence foods. The monitoring study preparers would examine subsistence foods for all contaminants that could be associated with the proposed development. The study would identify the level of contaminants in subsistence foods before the proposed permanent oil and gas development and would monitor the level of these contaminants throughout the operation and abandonment phases. The study would include coordinating with Tribal Governments to include Indigenous knowledge of contaminants to subsistence foods, when available. If ongoing monitoring detects a measurable and persistent increase in a contaminant in subsistence foods, the operator would design and implement a study to determine how much, if any, of the increase originates from the operator's activities. If the study preparers determine that a portion of the increase in contamination is caused by the operator's activities, the BLM Authorized Officer in coordination with the USFWS may require changes in the operator's processes to reduce or eliminate emissions of the contaminant. The design of the study must meet the approval of the BLM Authorized Officer and Tribal Governments, who may coordinate with appropriate entities before approving the study design. The BLM Authorized Officer, in coordination with the USFWS, and Tribal Governments, may require or authorize changes in the design of the studies throughout the operations and abandonment period or terminate or suspend studies if results warrant.

Water Use for Permitted Activities

Required Operating Procedure 8

Objective: In flowing waters (rivers, springs, and streams), ensure water of sufficient quality and quantity to conserve fish, waterbirds, and wildlife populations and habitats in their natural diversity.

Requirement/Standard: The removal of ice aggregate from aufeis fields identified in **Lease Stipulation 3** and aufeis fields along the Canning River is prohibited. The removal of ice aggregate from grounded areas 4 feet deep or less may be authorized from rivers on a site-specific basis.

Winter Water Use

- a. Withdrawal of unfrozen water from springs, rivers, and streams during winter (onset of freeze-up to break-up) is prohibited.

Summer Water Use

- a. Water withdrawals from springs identified in Lease Stipulation 3 is prohibited. Withdrawal of unfrozen water would be prohibited from the following rivers that support resident, anadromous, or endemic fish populations:
 - i. Canning/Staines River
 - ii. West Fork Tamayariak River
 - iii. Middle Fork Tamayariak River

- iv. Tamayariak River
 - v. Itkilyariak Creek
 - vi. Hulahula River
 - vii. Aichilik River
 - viii. Sadlerochit River
 - ix. Sadlerochit Spring Creek
- b. Requests for summer water use from rivers and streams that do not support populations of resident, anadromous, or endemic fish must be made separately, and the volume allowance would be evaluated on a case-by-case basis. Approval from the BLM Authorized Officer in coordination with the USFWS and local traditional knowledge holders is required.
 - c. Additional modeling or monitoring may be required to assess water level and water quality conditions before, during, and after water use from any river in summer.

Required Operating Procedure 9

Objective: Maintain natural hydrologic regimes in soils surrounding lakes and ponds, and maintain populations of, and adequate habitat for, fish, birds, and aquatic invertebrates.

Requirement/Standard: Withdrawal of unfrozen water from lakes or artificial water reservoirs and the removal of ice aggregate from grounded areas 4 feet deep or less during winter (onset of freeze-up to break-up) and withdrawal of water from lakes or artificial water reservoirs during the summer may be authorized on a site-specific basis, depending on water volume and depth, the fish community, and connectivity to other lakes or streams and adjacent bird nesting habitat. Implement policies and procedures to conduct activities in a manner that minimizes adverse impacts on fish, their habitat, and their availability for subsistence uses.

Current water use guidelines are as follows:

All Water Use

- a. Any water intake structures in fish-bearing or non-fish-bearing waters would be designed, operated, and maintained to prevent fish entrapment, entrainment, or injury. Note: All water withdrawal equipment must be equipped with and use fish screening devices approved by the BLM and ADFG, Division of Habitat.
- b. Additional modeling or monitoring is required to assess water level, water quality conditions, and recharge before, during, and after water use from all lakes to ensure natural hydrologic regime, water quality, and aquatic habitat connectivity for birds and fish species.
- c. Local Traditional knowledge will be used, when available, in monitoring and modeling efforts.
- d. A daily record of water removed as unfrozen water or ice aggregate (separately) must be maintained and submitted to the BLM with the weekly report of activities. Submitting water and ice use in the format specified by the BLM is required. These modeling and monitoring efforts must include local traditional knowledge, when available, to define the natural hydrologic regime, water quality, and aquatic habitat for birds to understand impacts.
- e. The BLM must be notified within 48 hours of any observation of dead or injured fish on water source intake screens, in the hole being used for pumping, or within any portion of ice roads or

pads. If observed at a particular lake, pumping must cease temporarily from that hole until additional preventative measures are taken to avoid further impacts on fish.

- f. The BLM must be notified within 48 hours if water removal exceeds the volume approved at any lake.

Winter Water Use

- a. Lakes with sensitive fish (i.e., any fish except ninespine stickleback or Alaska blackfish): unfrozen water available for withdrawal is limited to 15 percent of calculated volume deeper than 7 feet. When both ice and water are being withdrawn, withdrawal is limited to 20 percent of the calculated lake volume if the conditions in (b) above are met.
- b. Lakes with only nonsensitive fish (i.e., ninespine stickleback or Alaska blackfish): unfrozen water available for withdrawal is limited to 30 percent of calculated volume deeper than 5 feet. When both ice and water are being withdrawn, withdrawal is limited to 20 percent of the calculated lake volume if the conditions in (b) above are met.
- c. Lakes with no fish, regardless of depth: water available for use is limited to 20 percent of total lake volume.
- d. Compacting snow cover or removing snow from fish-bearing water bodies would be prohibited, except at approved ice road crossings, water pumping stations on lakes, or areas of grounded ice.

Summer Water Use

- a. Requests for summer water use must be made separately, and the volume allowance would be evaluated on a case-by-case basis. Approval from the BLM Authorized Officer in coordination with the USFWS is required.

Winter Overland Moves and Seismic Work

The following ROPs apply to overland and over-ice moves, seismic work, and any similar cross-country vehicle use and heavy equipment on surfaces without roads during winter. These restrictions do not apply to the use of such equipment on ice roads after they are constructed.

Required Operating Procedure 10

Objective: Protect grizzly bear, polar bear, and seal denning and birthing locations.

Requirement/Standard:

In addition to any NMFS MMPA requirements: Prior to operating in the nearshore areas (≤ 3 m water depth) during the ice-covered season (between approximately November-June of any year), a lessee/operator/contractor working in seal lair habitat would conduct a survey to detect seal lairs, in consultation with the NMFS, throughout the planned area of activities.

- a. Grizzly bear dens: Cross-country use of all vehicles, equipment, and oil and gas activity is prohibited within 1.0 miles of occupied grizzly bear dens identified by the ADFG or the USFWS, unless alternative protective measures are approved by the BLM Authorized Officer, in coordination with the USFWS, ADFG and Tribal Governments.
- b. Polar bear dens: Cross-country use of vehicles, equipment, oil and gas activity, and seismic survey activity is prohibited within 1 mile of known, observed, or suspected polar bear dens, unless

alternative protective measures are approved by the BLM Authorized Officer, in coordination with the USFWS and Tribal Governments, and are consistent with the MMPA and the ESA.

Polar bear and seal mitigation measures.

- a. In order to limit disturbance around known polar bear dens:
 - i. *Attempt to locate polar bear dens.* Operators seeking to carry out onshore activities during the denning season must conduct two separate surveys for occupied polar bear dens in all denning habitat within 1.6 km (1 mi) of proposed activities using aerial infrared (AIR) imagery. The first survey must occur between the dates of November 25 and December 15, and the second between the dates of December 5 and December 31. AIR surveys will be conducted during darkness or civil twilight and not during daylight hours. Ideal environmental conditions during surveys would be clear, calm, and cold. If there is blowing snow, and form of precipitation, or other sources of airborne moisture, use of AIR detection is not advised. Flight crews will record and report environmental parameters including air temperature, dew point, wind speed and direction, cloud ceiling, and percent humidity, and a flight log will be provided to BLM and USFWS within 48 hours of the flight. A scientist with experience in the in-air interpretation of AIR imagery will be on board to analyze the AIR data in real time. The data (infrared video) will be made available for viewing by BLM and USFWS immediately upon return of the survey aircraft to the base of operations. All observed or suspected polar bear dens must be reported to BLM and USFWS prior to the initiation of activities.
 - ii. *Observe the exclusion zone around known polar bear dens.* Operators must observe a 1.6-km (1-mi) operational exclusion zone around all known polar bear dens during the denning season (approximately November–April, or until the female and cubs leave the areas). Should previously unknown occupied dens be discovered within 1 mi of activities, work must cease and the BLM and USFWS contacted for guidance. The BLM and USFWS would evaluate these instances on a case-by-case basis to recommend the appropriate action. Potential actions may range from cessation or modification of work to conducting additional monitoring, and the holder of the authorization must comply with any additional measures specified.
 - iii. *Use the den habitat map developed by the US Geological Survey (USGS).* This product will help locate potential polar bear dens when conducting activities in the coastal areas of the Beaufort Sea. This measure helps identify the location of potential polar bear dens and ensures they are considered when conducting activities in the coastal areas of the Beaufort Sea.
 - iv. *Polar bear den restrictions.* Restrict the timing of the activity to range from cessation or modification of work to conducting additional monitoring, and the holder of the authorization must comply with any additional measures specified.
- b. In order to limit disturbance around known polar bear dens:

Monitoring requirements

- a. Develop and implement a site-specific, BLM and USFWS-approved marine mammal monitoring and mitigation plan to monitor and evaluate the effectiveness of mitigation measures and the effects of activities on polar bears, and the subsistence use of this species.

- b. Provide trained, qualified, and BLM and USFWS-approved onsite observers to carry out monitoring and mitigation activities identified in the marine mammal monitoring and mitigation plan.
- c. For offshore activities, provide trained, qualified, and BLM and USFWS-approved observers on board all operational and support vessels to carry out monitoring and mitigation activities identified in the marine mammal monitoring and mitigation plan.
- d. Cooperate with the BLM and USFWS and other designated Federal, State, and local agencies to monitor the impacts of Industry activities on polar bears. Where information is insufficient to evaluate the potential effects of activities on polar bears, and the subsistence use of this species, operators may be required to participate in joint monitoring and/or research efforts to address these information needs and ensure the least practicable impact to these resources.

Reporting requirements

Operators must report the results of monitoring and mitigation activities to the BLM and USFWS.

- a. In-season monitoring reports
 - i. *Activity progress reports.* Notify the BLM and USFWS at least 48 hours prior to the onset of activities; provide the BLM and USFWS weekly progress reports of any significant changes in activities and/or locations; and notify the BLM and USFWS within 48 hours after ending of activities.
 - ii. *Polar bear observation reports.* Report all observations of polar bears and potential polar bear dens, during any Industry activity. Information in the observation report must include, but is not limited to: (1) Date, time, and location of observation; (2) Number of bears; (3) Sex and age; (4) Observer name and contact information; (5) Weather, visibility, sea state, and sea-ice conditions at the time of observation; (6) Estimated closest distance of bears from personnel and facilities; (7) Industry activity at time of sighting; (8) Possible attractants present; (9) Bear behavior; (10) Description of the encounter; (11) Duration of the encounter; and (12) Mitigation actions taken.
- b. *Incident report.* Report all bear incidents during any Industry activity. Reports must include: (1) All information specified for an observation report; (2) A complete detailed description of the incident; and (3) Any other actions taken.
- c. *Final report.* The results of monitoring and mitigation efforts identified in the marine mammal monitoring and mitigation plan must be submitted to the BLM and USFWS for review within 90 days of project completion or, for multi-year activities, within 90 days of the end of each annual reporting period. Information in the final report must include: (1) Copies of all observation reports submitted under an authorization; (2) A summary of the observation reports; (3) A summary of monitoring and mitigation efforts, including areas, total hours, total distances, and distribution; (4) Analysis of factors affecting the visibility and detectability of polar bears during monitoring; (5) Analysis of the effectiveness of mitigation measures; (6) Analysis of the distribution, abundance, and behavior of polar bears observed; and (7) Estimates of “take” as defined by the MMPA and its implementing regulations.

In order to limit disturbance of activities to seal lairs in the nearshore area (<3 m water depth):

Specific to seismic operations:

- a. Before the seismic survey begins, the operator would conduct a sound source verification test to measure the distance of vibroseis sound levels through grounded ice to the 120 dB re 1 μ Pa threshold in open water and water within ungrounded ice. Once that distance is determined, it would be shared with the BLM and NMFS. The distance would be used to buffer all on-ice seismic survey activity operations from any open water or ungrounded ice throughout the project area. The operator would draft a formal study proposal that would be submitted to the BLM and NMFS for review and approval before the activity begins.
- b. Before the seismic survey begins, the operator would work closely with regulators to ensure that mitigation measures are developed that are consistent with the Marine Mammal Protection Act and agency marine mammal guidelines, and take into account practicability, site-specific information, and project activity details.

For all activities:

- a. Maintain airborne sound levels of equipment below 100 dB re 20 μ Pa at 66 feet. If different equipment would be used than was originally proposed, the applicant must inform the BLM Authorized Officer and share sound levels and air and water attenuation information for the new equipment.
- b. On-ice operations after May 1 would employ a full-time trained PSO on vehicles to ensure all basking seals are avoided by vehicles by at least 500 feet and would ensure that all equipment with airborne noise levels above 100 dB re 20 μ Pa were operating at distances from observed seals that allowed for the attenuation of noise to levels below 100 dB. All sightings of seals would be reported to the BLM using a NMFS-approved observation form.
- c. Ice paths must not be greater than 12 feet wide. No driving beyond the shoulder of the ice path or off planned routes unless necessary to avoid ungrounded ice or for other human or marine mammal safety reasons. On-ice driving routes should minimize travel over snow/ice/topographical features that lead to birthing lair development.
- d. No unnecessary equipment or operations (e.g., camps) would be placed or used on sea ice.

Required Operating Procedure 11

Objective: Protect stream banks and freshwater sources, existing vegetations and hydrology, and polar bear denning habitat. Minimize soils compaction and the breakage, abrasion, compaction, or displacement of vegetation.

Requirement/Standard:

- a. Ground operation would be allowed when soil temperature at 12 inches below the tundra surface (defined as the top of the organic layer) reaches 23 °F and 3 inches measured snow water equivalent (SWE). Ground operations would cease when the spring snowmelt begins (approximately May 5 in the foothills, where elevations reach or exceed 500 feet, and approximately May 15 in the northern coastal areas). The exact dates would be determined by the BLM Authorized Officer in coordination with the USFWS. USFWS/BLM would release a weekly tundra travel report online.

- b. Low ground pressure vehicles used for off-road travel would be defined by the BLM Authorized Officer in coordination with the USFWS. These vehicles would be selected and operated in a manner that eliminates direct impacts on the tundra caused by shearing, scraping, or excessively compacting it.
Note: This provision does not include the use of heavy equipment required during ice road construction; however, heavy equipment would not be allowed on the tundra until conditions in “a,” above, are met.
- c. Bulldozing tundra mat and vegetation, trails, or seismic lines is prohibited. Clearing or smoothing drifted snow is allowed, to the extent that the tundra mat is not disturbed. Only smooth pipe snow drags would be allowed for smoothing drifted snow.
- d. To reduce the possibility of excessive compaction, local traditional knowledge holders would be consulted on the most practical sites for routes. Additionally, vehicle operators would avoid using the same routes and water crossings for multiple trips if excessive tundra disturbance is detected or necessitated by serious safety or environmental concerns and approved by the BLM Authorized Officer in coordination with the USFWS. It may be environmentally preferred to use the same travel corridor in sequential years. This provision does not apply to hardened snow trails or ice roads.
- e. Ice roads and water crossings would be designed and located to avoid the most sensitive and easily damaged tundra types as much as practicable. Ice roads may not use the same route each year; offsets may be required to avoid using the same route or track in subsequent years.
- f. Conventional ice road construction may not begin until off-road travel conditions are met (as described in “a,” above) within the ice road route and approval to begin construction is given by the BLM Authorized Officer in coordination with the USFWS.
- g. Seismic operations and winter overland travel may be monitored by agency representatives, and the operator may be required to accommodate the representative during operations.
- h. Incidents of damage to the tundra would be reported to the BLM Authorized Officer within 72 hours of occurrence using a standardized incident report form. Follow-up corrective actions would be determined in consultation with and approved by the BLM Authorized Officer in coordination with the USFWS.
- i. Provide the BLM with an as-built of all ice roads, snow trails, and ice pads after the infrastructure is completed. Data must be in the form of Environmental Systems Research Institute shapefiles referencing the North American Datum of 1983.

Required Operating Procedure 12

Objective: Maintain natural spring (breakup) runoff patterns and fish passage, minimize flooding from human-made obstructions, prevent streambed sedimentation and scour, and protect water quality and stream banks.

Requirement/Standard:

- a. Crossing of waterway courses shall be made using a low-angle approach. Crossings that are reinforced with additional snow or ice (“bridges”) shall be removed, breached, or slotted before spring breakup. Ramps shall be removed to the extent possible without damaging stream banks. Ramps and bridges shall be substantially free of soil and debris.

- b. The permittee shall provide the BLM with any ice thickness and water depth data collected at ice road or snow trail stream crossings during the pioneering stage of road/trail construction.
- c. The permittee shall conduct on-site monitoring of streamflow prior to installing ice or snow bridge to determine the site-specific natural flow regime during the spring.
- d. At the end of operations in spring, the permittee must provide the BLM with photographs of all stream crossings that have been removed, breached, or slotted.

Required Operating Procedure 13

Objective: Avoid additional freeze-down of aquatic habitat harboring overwintering fish and aquatic invertebrates that fish prey on.

Requirement/Standard: BLM Authorized Officers, in coordination with the USFWS and in consultation with local traditional knowledge holders, must approve construction of the primary ice road or snow trail route along streambeds without grounded ice is prohibited unless it can be demonstrated (by collection of ice thickness and liquid water depths) that there will be no additional impacts from such travel to overwintering fish. Rivers, streams, and lakes shall be crossed at areas of grounded ice whenever possible.

Some travel up and down streambeds would be allowed by the individual vehicles collecting snow from river drifts or ice aggregate from the channel (where snow is less than 4 feet deep).

Required Operating Procedure 14

Objective: Minimize the effects of high-intensity acoustic energy from seismic surveys on fish.

Requirement/Standard: Seismic surveys would not be conducted over unfrozen water with fish overwintering potential (water 6 feet deep or greater, ice plus liquid depth). Proposed actions should include local traditional knowledge, when available, to help define potential overwintering areas.

Required Operating Procedure 15

Objective: Reduce changes in snow distribution associated with the use of snow fences to protect water quantity and wildlife habitat, including snow drifts used by denning polar bears.

Requirement/Standard: The use of snow fences to reduce or increase snow depth requires permitting by the BLM Authorized Officer in coordination with USFWS. Snow fences shall not be sited within 5 miles of the coast.

Oil and Gas Exploratory Drilling

Required Operating Procedure 16

Objective: Protect water quality in fish-bearing water bodies and minimize alteration of riparian habitat.

Requirement/Standard: Exploratory drilling is prohibited in fish-bearing rivers and streams and other aquatic habitats with confirmed fish presence and the habitats connected by perennial or temporary aquatic water to locations with confirmed fish presence. On a case-by-case basis, the BLM Authorized Officer in coordination with the USFWS may consider exploratory drilling in floodplains of rivers and streams that do not support resident, anadromous, or endemic fish populations.

Required Operating Procedure 17

Objective: Minimize surface impacts from exploratory drilling.

Requirement/Standard: Construction of gravel roads and pads would be prohibited for exploratory drilling. Use of a previously constructed road or pad may be permitted if it is environmentally preferred.

Facility Design and Construction

Required Operating Procedure 18

Objective: Protect subsistence use and access to subsistence hunting and fishing areas.

Requirement/Standard: All roads (snow, ice, or gravel) must be designed, constructed, maintained, and operated to create minimal environmental impacts and to avoid or minimize impacts on subsistence use and access to subsistence hunting and fishing areas. The BLM Authorized Officer in coordination with the USFWS would consult with appropriate entities before approving construction of roads. Subject to approval by the BLM Authorized Officer, the construction, operation, and maintenance of oil and gas field roads would be the responsibility of the lessee/operator/contractor, unless the construction, operation, and maintenance of roads are assumed by the appropriate governing entity.

BLM will consult with Tribal Governments on road design, construction, and use to avoid and minimize environmental and subsistence impacts.

Required Operating Procedure 19

Objective: Protect water quality and the diversity of fish, aquatic invertebrates, and wildlife populations and habitats.

Requirement/Standard:

- a. Permanent oil and gas facilities, including roads, airstrips, and pipelines, are prohibited within 500 feet, as measured from the active floodplain of any waterbody, unless further setbacks are stipulated under Lease Stipulations 1, 2, or 3. Essential pipeline and road crossings in setback areas outlined in Lease Stipulation 3 would be prohibited. Essential pipeline and road crossings would be permitted by the BLM Authorized Officer in coordination with the USFWS and in consultation with local traditional knowledge holders, and in accordance with PL 115-97 in setback areas outlined in Lease Stipulations 1 and 2, following coordination with the appropriate entities.
- b. Temporary winter exploration and construction camps are prohibited on frozen lakes and river ice.
- c. Siting temporary winter exploration and construction camps on river sand and gravel bars is allowed. Where trailers or modules must be leveled and the surface is vegetation, they would be leveled using blocking in a way that preserves the vegetation.

Required Operating Procedure 20

Objective: Maintain free passage of marine, estuarine, and freshwater fish species, protect subsistence use and access to subsistence hunting and fishing and anadromous fish, and protect subsistence use and access to subsistence and non-subsistence hunting and fishing.

Requirement/Standard:

- a. Causeways and docks are prohibited in river mouths and deltas. Artificial gravel islands and permanent bottom-founded structures are prohibited in river mouths and active stream channels on river deltas.
- b. Causeways, docks, artificial islands, and bottom-founded drilling structures would be designed to ensure free passage of marine and anadromous fish and to prevent significant changes to nearshore oceanographic circulation patterns and water quality characteristics. A monitoring program, developed in coordination with appropriate entities (e.g., USFWS, NMFS, State of Alaska, or NSB or local traditional knowledge holders), would be required to address the objectives of water quality and free passage of fish.

Required Operating Procedure 21

Objective: Minimize impacts of the development footprint.

Requirement/Standard: Permanent facilities would be designed and located to minimize the development footprint and impacts on other purposes of the Arctic Refuge. Issues and methods that are required include:

- a. Using extended-reach drilling for production drilling to minimize the number of pads and the network of roads between pads
- b. Sharing facilities with existing development
- c. Collocating all oil and gas facilities with drill pads, except airstrips, docks, base camps, and seawater treatment plants (STPs)
- d. Using gravel-reduction technologies, e.g., insulated or pile-supported pads
- e. Using approved impermeable liners under gravel infrastructure to minimize the potential for hydrocarbon and other hazardous materials spills to migrate to underlying ground.
- f. Harvesting and properly maintaining the tundra organic layer within gravel pad footprints for use in rehabilitation
- g. Coordinating facilities with infrastructure in support of adjacent development
- h. Locating facilities and other infrastructure outside areas identified as important for wildlife habitat, subsistence uses, and recreation at distances needed to protect from disturbance.
- i. Where aircraft traffic is a concern, balancing gravel pad size and available supply storage capacity with potential reductions in the use of aircraft to support oil and gas operations
- j. Facilities and infrastructure will be designed to minimize alteration of sheetflow/overland flow.
- k. Where gravel is brought in from outside of the Coastal Plain, require the use of Certified Weed-Free Gravel
- l. Avoid road construction for the sole purpose of ensuring pipeline integrity or other types of monitoring (e.g., lakes, air quality), to the greatest extent practical.
- m. Minimize acreage in each constructed pond.

Required Operating Procedure 22

Objective: Reduce the potential for ice-jam flooding, damage from aufeis, impacts on wetlands and floodplains, erosion, alteration of natural drainage patterns, and restriction of fish passage.

Requirement/Standard:

- a. To allow for sheet flow and floodplain dynamics and to ensure passage of fish and other organisms, single-span bridges are preferred over culverts, if technically feasible. When necessary, culverts could be constructed on smaller streams, if they are large enough to avoid restricting fish passage or adversely affecting natural stream flow.
- b. The BLM would require fish sampling at any stream crossing where flow is channelized. The permittee would be required to gather these data, or this requirement may be waived if an acceptable dataset already exists and is approved by the BLM Authorized Officer in coordination with the USFWS and local traditional knowledge holders. Alternatively, the permittee may assume fish presence and design accordingly.
- c. A minimum of one year of hydrologic data (i.e., permanent stage data and discharge measurements) must be collected at stream and marsh crossings. Additional years of hydrologic data collection may be required if further information is needed to inform the crossing structure design.
- d. To ensure that crossings provide for fish passage, all proposed crossing designs would adhere to the Best Management Practices (BMPs) outlined in Fish Passage Design Guidelines, developed by the USFWS Alaska Fish Passage Program, USFWS Culvert Design Guidelines for Ecological Function (USFWS 2020), McDonald & Associates (1994), Stream Simulation: An Ecological Approach to Providing Passage for Aquatic Organisms at Road-Stream Crossings (USFS 2008), and other generally accepted best management procedures prescribed by the BLM Authorized Officer, in coordination with the USFWS and local traditional knowledge holders. When available, crossing design and construction would include local traditional knowledge of fish, erosion, natural drainage, ice-jamming, aufeis, wetlands, floodplains, and stream flow.
- e. To maintain natural flow regimes, construction of in-river training structures would be prohibited in rivers that support resident, anadromous, or endemic fish populations.
- f. In addition to the BMPs outlined in the aforementioned documents for stream simulation design, the design engineer would ensure that crossing structures are designed for aufeis, permafrost, sheet flow, additional freeboard during breakup, and other unique conditions of the arctic environment.
- g. All roads and crossing structures must be maintained in a manner that prevents off road disturbance.

Required Operating Procedure 23

Objective: Minimize disruption of caribou movement and subsistence use.

Requirement/Standard: Pipelines and roads will be designed to allow the free movement and habitat use of caribou and the safe, unimpeded passage of those participating in subsistence activities. Listed below are the accepted design practices.

- a. Aboveground pipelines would be elevated a minimum of 7 feet, as measured from the top of the tussocks to the bottom of the pipeline at vertical support members (VSMs).
- b. In areas where facilities or terrain would funnel caribou movement or impede subsistence or public access, ramps of appropriate angle and design over pipelines, buried pipelines, or pipelines buried under roads may be required by the BLM Authorized Officer in coordination with the USFWS and Tribal Governments. Include extra measures to prevent external corrosion at these locations.
- c. A minimum distance of 500 feet between pipelines and roads would be maintained. Where it is not feasible, alternative pipeline routes, designs, and possible burial under the road for pipeline road

crossings would be considered by the BLM Authorized Officer in coordination with the USFWS and Tribal Governments.

- d. Aboveground pipelines would have a nonreflective finish.
- e. When laying out oil and gas field developments, lessees would orient infrastructure to avoid impeding caribou migration and to avoid corralling effects.
- f. Before the construction of permanent facilities is authorized, the lessee would provide funding to USFWS to design and carry out a study of caribou movement and spatial use. The lessee/operator/contractor would develop an Adaptive Research and Management Plan (ARMP) to identify research needs, carry out monitoring and research, evaluate existing/ongoing management and mitigation efforts, quantify impacts, and identify management changes when necessary. This plan will be submitted to USFWS, BLM, and the International Porcupine Caribou Herd Technical Committee for review and approval. The lessee will provide adequate funds to implement this monitoring program. BLM/USFWS will hire a consulting company to carry out this monitoring program (see ROP 23.1).
- g. Facilities will be sited to avoid local traditional caribou harvesting areas through coordination with Tribal Governments. Where avoidance of traditional harvesting areas is not possible, agencies, companies, and harvesters will negotiate a compensation agreement to acknowledge loss of harvest opportunities as a result of lack of traditional access.
- h. In recognition of the uncertainty around the formation, movements, and dispersion of large aggregations (>5,000) of caribou, satellite location data would be evaluated daily by the Porcupine Caribou Technical Committee and Canadian agency counterparts who monitor PCH movements and locations. If a large aggregation of caribou is within 30 km of any infrastructure, associated activity related to identified infrastructure would be subject to the provisions of the Emergency Closure Plans (see ROP 23.1).
- i. A vehicle use management plan would be developed by the lessee/operator/contractor and approved by the BLM Authorized Officer, in coordination with the USFWS, consultation with Tribal Governments, the appropriate federal, State, and NSB regulatory and resource agencies. The management plan would minimize or mitigate displacement during calving, post-calving and insect-relief periods and would avoid disruptions to caribou movements and vehicle collisions. By direction of the BLM Authorized Officer in coordination with the USFWS, traffic may be stopped throughout a defined area whenever necessary to prevent displacement of caribou. The monitoring plan will include collection of data on vehicle traffic (counts, times, speed, etc.) and caribou interaction.
- j. Lessee/operator/contractor will study and produce a report in coordination with BLM, USFWS, and Tribal Governments on Gwich'in and Iñupiaq knowledge of road and pipeline impacts to caribou movement and subsistence use. BLM, USFWS, and Tribal Governments must review and approve this report prior to road and pipeline construction to inform best design practices.

Required Operating Procedure 23.1

Objective: To ensure monitoring and research in place to implement a caribou Adaptive Research and Management Plan (ARMP).

Requirement/Standard: The lessee/operator/contractor would develop an ARMP to identify research needs, evaluate existing/ongoing management and mitigation efforts, quantify impacts, and identify management

changes when necessary. This plan would be submitted to USFWS, BLM, and the International Porcupine Caribou Herd Technical Committee (PCTC) for review and approval. The lessee would provide adequate funds to implement this monitoring program. BLM and USFWS would hire an organization or agency to carry out this monitoring program. The ARMP would be initiated after leasing and before the facility planning stage and will include but not be limited to:

- a. Formation of an ARMP Steering Committee, including staff from the BLM, USFWS, the PCTC, and Tribal representatives, to oversee the ARMP and its implementation
 - i. The PCTC would prioritize projects that address research questions.
- b. Development of an ARMP monitoring program with full industry engagement,
- c. Development of an accessible and comprehensive data repository,
- d. Annual monitoring and evaluation program,
- e. In consultation with BLM, USFWS, the PCTC, industry representatives, and Tribal Governments, develop, standardize, and modify as necessary operational mitigation plans and procedures, including but not limited to:
 - ii. Traffic management plans
 - iii. Emergency closure plans (stop work plans)
 - iv. Aircraft use plan (see ROP 34)

Required Operating Procedure 24

Objective: Minimize the impact of mineral materials mining on air, land, water, fish, and wildlife resources.

Requirement/Standard: Gravel mine site design, construction, and reclamation would be done in accordance with a plan approved by the BLM Authorized Officer in coordination with the USFWS and local traditional knowledge holders. The plan would take into consideration the following:

- a. Construction of gravel mine sites would be prohibited from the following rivers that support resident, anadromous, or endemic fish populations:
 - i. Canning/Staines River
 - ii. West Fork Tamayariak River
 - iii. Middle Fork Tamayariak River
 - iv. Tamayariak River
 - v. Itkilyariak Creek
 - vi. Hulahula River
 - vii. Aichilik River
 - viii. Sadlerochit River
 - ix. Sadlerochit Spring Creek
- b. Design and construction of gravel mine sites may be considered at locations inside or outside of the active floodplain
- c. Design and construction of gravel mine sites that may also serve as water reservoirs may be considered in active floodplains, except for rivers or creeks that support resident, anadromous, or endemic fish populations as outlined in Lease Stipulation 1 and identified above.

- d. Potential storage and reuse of sod/overburden for the mine site or at other disturbed sites on the North Slope.
- e. All constructed water storage reservoirs shall be a sufficient distance from drill sites, fueling stations, or other temporary or permanent site that generates or maintains more than 220 gallons of fuel, drilling fluids, or other hazardous materials to avoid contamination via surface or groundwater of the storage reservoir; the lessee shall implement a water quality and contaminants monitoring program for any constructed water storage facility. The monitoring program would be described in the Mine Plan.
- f. If any sand or gravel mining is proposed at outcrops or cliffs, the lessee/permittee/operator would map suitable raptor nesting habitat and conduct surveys for known raptor nest sites prior to submitting a Plan of Operations. This information would be used in the development of Mine Plans to show how mine sites would be located and designed to minimize impacts to suitable raptor nesting habitat and nesting raptors.

Required Operating Procedure 25

Objective: Avoid human-caused changes in predator populations on ground-nesting birds.

Requirement/Standard:

- a. Lessee/operator/contractor would use best available technology to prevent facilities from providing nesting, denning, or shelter sites for ravens, raptors, and foxes. The lessee/operator/contractor would provide the BLM Authorized Officer with an annual report on the use of oil and gas facilities by ravens, raptors, and foxes as nesting, denning, and shelter sites. This report will be shared with local traditional knowledge holders upon request.
- b. Feeding of wildlife and allowing wildlife to access human food or odor-emitting waste would be prohibited.

Required Operating Procedure 26

Objective: Minimize the risk of migrating birds being attracted to and colliding with oil and gas related infrastructure during low light conditions.

Requirement/Standard: All structures would be designed to direct artificial exterior lighting, from August 1 to October 31, inward and downward, rather than upward and outward, unless otherwise required by the Federal Aviation Administration (FAA).

Required Operating Procedure 27

Objective: Minimize the impacts to bird species from direct interaction with oil and gas facilities.

Requirement/Standard:

- a. To reduce the possibility of birds colliding with aboveground utility lines (power and communication), such lines would be limited in extent and exceptions would be rare. Exceptions would be limited to the following situations:
 - i. Overhead power or communication lines may be allowed when located entirely within the boundaries of a facility pad;
 - ii. Overhead power or communication lines may be allowed when engineering constraints at a specific location make it infeasible to bury or connect the lines to a VSM; or

- iii. Overhead power or communication lines may be allowed in situations when human safety would be compromised by other methods.
 - iv. If exceptions are granted allowing overhead wires, overhead wires would be clearly marked along their entire length to improve visibility to low-flying birds. Such markings would be developed through consultation with the USFWS and local traditional knowledge holders.
- b. To reduce the likelihood of birds colliding with them, communication towers would be located, to the extent practicable, on existing pads and as close as possible to buildings or other structures and on the east or west side of buildings or other structures. Towers would be designed to reduce both bird strikes and raptor nesting. Support wires associated with communication towers, radio antennae, and other similar facilities, would be avoided to the extent practicable. If support wires are deemed necessary, they would be clearly marked along their entire length to improve visibility to low-flying birds. Such markings would be developed through consultation with the USFWS.

Required Operating Procedure 28

Objective: Use ecological mapping (or equivalent) as a tool to assess fish and wildlife habitat before developing permanent facilities to conserve important habitat types.

Requirement/Standard: An ecological land classification map (or similar instrument) that incorporates available Traditional knowledge of the area would be developed before approval of facility construction. The map would integrate geomorphology, surface form, and vegetation including BLM sensitive plant species and habitat for BLM sensitive fish and wildlife species, local Traditional knowledge when available, and ice rich soils and locations of yedoma deposits, at a scale and level of resolution and position accuracy adequate for detailed analysis of development alternatives. The map would be prepared in time to inform siting of facilities and to plan an adequate number of seasons of ground-based wildlife surveys needed, if deemed necessary by the BLM Authorized Officer in coordination with the USFWS. A separate map shall be developed displaying detailed water flowlines and small-scale delineation of drainage catchments based on LIDAR (or other high-accuracy surface imaging) to inform facility location. Consider climate change modeling of ecosystem changes and key ecological regions before the exact facility location and facility construction is approved.

Required Operating Procedure 29

Objective: Protect cultural resources.

Requirement/Standard: The lessee/operator/contractor shall adhere to the conditions and stipulations of the Coastal Plain's Section 106 Programmatic Agreement (PA) or otherwise assist BLM with carrying out the requirements of the PA.

Required Operating Procedure 29.1

Objective: Protect paleontological resources.

Requirement/Standard: The lessee/operator/contractor shall, in consultation with the federal agencies, refer to available resources to avoid impacting areas known to contain, or likely to contain, paleontological resources. If any potential paleontological resource is found, the lessee/operator/contractor would notify the BLM Authorized Officer and would suspend all operations in the immediate area until she or he coordinates with the USFWS and issues a written authorization to proceed.

Required Operating Procedure 30

See **ROP 24**.

Required Operating Procedure 31

Objective: Prevent or minimize the loss of raptors due to electrocution by power lines.

Requirement/Standard: Comply with the most up-to-date, industry-accepted, recommended practices for raptor protection on power lines. Current accepted standards were published in Reducing Avian Collisions with Power Lines: The State of the Art in 2012, by the Avian Power Line Interaction Committee (APLIC 2012) and are updated as needed.

Required Operating Procedure 32

Objective: Avoid and reduce temporary impacts on productivity from disturbance near Steller's or spectacled eider nests.

Requirement/Standard: Ground-level vehicle or foot traffic within 200 meters (656 feet) of occupied Steller's or spectacled eider nests, from June 1 through July 31, would be restricted to existing thoroughfares, such as pads and roads. Construction of permanent facilities, placement of fill, alteration of habitat, and introduction of high noise levels within 200 meters (656 feet) of occupied Steller's or spectacled eider nests would be prohibited. Between June 1 and August 15, support/construction activity that must occur off existing thoroughfares, require BLM and USFWS-approved nest surveys to be conducted during mid-June before the activity is approved. Data collected from Steller's or spectacled eider nesting habitats would be used to evaluate whether the action could occur based on a 200-meter (656-foot) buffer around known nests or if the activity would be delayed until after mid-August once ducklings are mobile and have left the nest site. The BLM would also work with the USFWS to conduct oil spill response training in riverine, marine, and intertidal areas outside sensitive nesting/brood-rearing periods. If these activities must take place during the nesting and brood-rearing periods surveys for nesting and/or brood-rearing eiders would be required. The protocol and timing of nest or brood surveys for Steller's or spectacled eiders would be determined in cooperation with, and must be approved by, the USFWS. Surveys would be supervised by biologists who have previous experience with Steller's or spectacled eider nest surveys. The survey results would be provided to the NSB upon request.

Required Operating Procedure 33

Objective: Provide information to be used in monitoring and assessing wildlife movements during and after construction.

Requirement/Standard: The operator/lessee will provide representation, in the form of ArcGIS-compatible shapefiles, of the footprint of all temporary and new permanent infrastructure construction would be provided to the BLM Authorized Officer, the USFWS Arctic Refuge Manager, State of Alaska, appropriate Tribal Governments, and NSB by the operator. During the planning and permitting phase, GIS shape files representing proposed footprint locations would be provided. Within 6 months of construction completion, shapefiles of all temporary and new permanent infrastructure footprints would be provided. Infrastructure includes all ice, snow and gravel roads, ice and gravel pads, facilities built on pads, pipelines, mines, reservoirs, islands, docks, and independently constructed power lines (as opposed to those incorporated in pipeline design). ArcGIS compatible shapefiles would also be provided for all proposed water sources. Gravel pads would be included as polygon features. Roads, pipelines, and power lines may be represented

as line features but must include ancillary data to denote such data as width and number of pipes. Poles for power lines may be represented as point features. Ancillary data would include construction beginning and ending dates.

Required Operating Procedure 34

Objective: Minimize the effects of low-flying aircraft on wildlife, subsistence activities, local communities, and recreationists of the area, including hunters and anglers.

Requirement/Standard: The operator would ensure that operators of aircraft used for permitted oil and gas activities and associated studies (such as cultural resource surveys) maintain altitudes according to the following guidelines (*Note: This ROP is not intended to restrict flights necessary to survey wildlife to gain information necessary to meet the stated objectives of the lease stipulations and ROPs; however, such flights would be restricted to the minimum necessary to collect such data and should consider other technologies, such as remote sensing and drones, in order to minimize impacts from aircraft*):

- a. The lessee/operator/contractor would review and report on local Traditional Knowledge, as available, of the effects of low-flying aircraft on wildlife, subsistence activities, and local communities prior to construction to inform best operations principles. The lessee/operator/contractor would consult with Tribal Governments, BLM, and USFWS throughout the review. Tribal Governments, BLM, and USFWS would review, request changes, or finalize the report prior to operation.
- b. Land users would submit an aircraft use plan as part of an oil and gas exploration or development proposal, which includes a plan to monitor flights and includes a reporting system for subsistence hunters to easily report flights that disturb subsistence harvest. The plan would address strategies to minimize impacts on subsistence hunting and associated activities, including the number of flights, type of aircraft, and flight altitudes and routes, and would also include a plan to monitor flights. Proposed aircraft use plans would be reviewed by the appropriate Alaska Native or subsistence organization. Consultations with these same agencies would be required if unacceptable disturbance is identified by subsistence users. Adjustments, including possible suspension of all flights, may be required by the BLM Authorized Officer, in coordination with the USFWS and Tribal Governments, if resulting disturbance is determined to be unacceptable. The number of takeoffs and landings to support oil and gas operations with necessary materials and supplies would be limited to the maximum extent practical and consistent with prudent operation of facilities.
- c. Use of aircraft, especially rotary wing aircraft, would be kept to a minimum near known subsistence camps and cabins or during sensitive subsistence hunting periods (e.g., spring goose hunting, summer caribou) and when recreationists are present.
- d. Operators of aircraft used for permitted activities would maintain an altitude of at least 2,000 feet above ground level (except for takeoffs and landings) within 0.5 miles of cliffs identified as raptor nesting sites, and over PCH comprehensive caribou calving and post-calving areas, or within 1 mile of polar bear denning habitat (as identified by USGS polar bear den habitat maps) between October 30 and April 30, unless doing so would endanger human life or violate safe flying practices. An exception to flight altitudes may be approved by the BLM Authorized Officer, in coordination with the USFWS and Tribal Governments, after coordination and review of the aircraft use plan to

accommodate requirements to fly lower for some required activities (e.g., archaeological clearance).

- e. Avoid operation of aircraft over parturient caribou and caribou calves between May 20 and July 20. This window may be shifted earlier if parturient caribou move towards calving grounds before May 20 due to warming climate conditions.
- f. Prohibit landing helicopters in PCH comprehensive calving and post-calving habitat areas from May 20 through July 20 to avoid disturbing cow-calf pairs unless doing so would endanger human life or violate safe flying practices.
- g. Pursuing running wildlife is hazing. Hazing wildlife by aircraft pilots is prohibited, unless otherwise authorized. If wildlife begins to run as an aircraft approaches, the aircraft is too close, and the operator must break away.
- h. Avoid operation of aircraft over snow goose staging areas between August 15 and September 30. Necessary overflights during this timeframe should avoid areas of heavy snow goose concentrations.
- i. To avoid impacts on productivity of breeding birds, aircraft take-offs and landings must be minimized at unimproved sites during the nesting season.
- j. When polar bears are present:
 - i. Operators of support aircraft should conduct their activities at the maximum distance (greater than 1 mile) possible from polar bears.
 - ii. Aircraft would not operate at an altitude lower than 457 meters (2,000 feet) within 805 meters (0.5 miles) of polar bears observed on ice or land. Helicopters may not hover or circle above such areas or within 805 meters (0.5 miles) of such areas. When weather conditions do not allow a 457-meter (2000-foot) flying altitude, operators would take precautions to avoid flying directly over or within 805 meters (0.5 miles) of these areas.
 - iii. Operators would avoid flying over areas where polar bears are known to congregate during different seasons (for example, along the coastline from August to October) when practicable.
 - iv. Plan all aircraft routes to minimize any potential conflict with known subsistence polar bear hunting activity.
 - v. To minimize disturbance of unobserved polar bears, aircraft operations will maintain an altitude of 2,000 feet above ground level when safe and operationally possible.

Oil and Gas Field Abandonment

Required Operating Procedure 35

Objective: Ensure ongoing and long-term reclamation of land to its previous condition and use.

Requirement/Standard:

- a. Oil and gas infrastructure, including gravel pads, roads, airstrips, wells and production facilities, would be removed and the land reclaimed on an ongoing basis, starting as soon as possible after extraction is completed.
- b. Before final abandonment, land used for oil and gas infrastructure—including well pads, production facilities, access roads, and airstrips—would be reclaimed to ensure eventual restoration of ecosystem function and to restore general wilderness characteristics. The leaseholder would

develop and implement a BLM and USFWS-approved abandonment and reclamation plan which would be provided to the NSB upon request. The plan would describe short-term stability, visual, hydrological, and productivity objectives and steps to be taken to ensure timely ecosystem restoration to the land's previous hydrological, vegetation, and habitat condition, wild and scenic river (WSR) eligibility/suitability, and intent to restore general wilderness characteristics of the area. The BLM Authorized Officer, in coordination with the USFWS, may grant exceptions to satisfy stated environmental or public purposes.

- c. Reclamation shall include but not be limited to:
- i. Saving and properly maintaining topsoil to ensure seed source remains viable of topsoil for final application after reshaping of disturbed areas have been completed;
 - ii. Adequate and approved measures to control erosion, landslides, and water runoff;
 - iii. Adequate and approved measures to isolate, remove, or control toxic materials, including soil testing where applicable;
 - iv. Reshaping the area disturbed, application of viable topsoil, and revegetation of disturbed areas, where reasonably practicable; and
 - v. Rehabilitation of fisheries and wildlife habitat.

When reclamation of each of the disturbed area has been completed, the BLM Authorized Officer in coordination with the USFWS shall be notified so that an inspection of the area can be made. The survey results would be provided to the NSB upon request.

Subsistence Consultation for Permitted Activities

Required Operating Procedure 36

Objective: Provide opportunities for subsistence users to participate in planning and decision-making to prevent unreasonable conflicts between subsistence uses and other activities.

Requirement/Standard: The lessee/operator/contractor would coordinate directly with affected communities, using the following guidelines:

- a. Before submitting an application to the BLM for exploration or development, the applicant would work with directly affected subsistence communities, the Native Village of Kaktovik, NSB, and the North Slope and Eastern Interior Alaska Subsistence Regional Advisory Councils in the development of a subsistence access plan. They would discuss access, siting, timing, and methods of their proposed operations to help discover local traditional and scientific knowledge. This is to minimize impacts on subsistence uses. Through this coordination, the applicant would make every reasonable effort, including such mechanisms as conflict avoidance agreements (CAAs) and mitigating measures, to ensure that proposed activities would not result in unreasonable interference with subsistence activities. In the event that no agreement is reached between the parties, the BLM Authorized Officer in coordination with the USFWS would work with the involved parties and determine which activities would occur, including the time frames.
- b. Applicants would submit documentation of coordination as part of operation plans to the North Slope and Eastern Interior Alaska Subsistence Regional Advisory Councils for review and comment. Applicants must allow time for the BLM to conduct formal government-to-government consultation with Native Tribal governments if the proposed action requires it.

- c. A plan would be developed that shows how the activity, in combination with other activities in the area, would be scheduled and located to prevent unreasonable conflicts with subsistence activities. The plan would also describe the methods used to monitor the effects of the activity on subsistence use. The plan would be submitted to the BLM Authorized Officer in coordination with the USFWS as part of the plan of operations. The plan would address the following items:
 - i. A detailed description of the activities to take place (including the use of aircraft).
 - ii. A description of how the applicant would minimize or address any potential impacts identified by the BLM Authorized Officer and the USFWS during the coordination process.
 - iii. A detailed description of the monitoring to take place, including process, procedures, personnel involved, and points of contact both at the work site and in the local community.
 - iv. Communication elements to provide information on how the applicant would keep potentially affected individuals and communities up-to-date on the progress of the activities and locations of possible, short-term conflicts (if any) with subsistence activities. Communication methods could include holding community open house meetings, workshops, newsletters, and radio and television announcements.
 - v. Procedures necessary to facilitate access by subsistence users to conduct their activities.
 - vi. Barge operators requiring a BLM permit would be required to demonstrate that barging activities would not have unmitigable adverse impacts, as determined by NMFS, on the availability of marine mammals to subsistence hunters.
 - vii. All operators of vessels over 50 feet in length engaged in operations requiring a BLM permit must have an automatic identification system transponder system on the vessel.
- d. Permittees who propose transporting facilities, equipment, supplies, or other materials by barge to the Coastal Plain in support of oil and gas activities in the Arctic Refuge would notify and coordinate with the Alaska Eskimo Whaling Commission, the appropriate local community whaling captains' associations, and the NSB to minimize impacts from the proposed barging on subsistence whaling.
- e. For polar bears: Operators must minimize adverse impacts on the availability of polar bears for subsistence uses.
 - i. Community consultation. Applicants must consult with potentially affected communities and appropriate subsistence user organizations to discuss potential conflicts with subsistence polar bear hunting caused by the location, timing, and methods of operations and support activities.
 - ii. Plan of Cooperation (POC). If conflicts arise, the applicant must address conflict avoidance through the development and implementation of a BLM and USFWS-approved POC.

Required Operating Procedure 37

Objective: Avoid conflicts between subsistence activities and seismic exploration.

Requirement/Standard: In addition to the coordination process described in **ROP 36** for permitted activities, before seismic exploration begins, applicants would notify the local search and rescue organizations in proposed seismic survey locations for that operational season. For the purpose of this standard, a potentially affected cabin or campsite is defined as one used for subsistence purposes and located within the boundary

of the area subject to proposed geophysical exploration or within 1 mile of actual or planned travel routes used to supply the seismic operations.

- a. Because of the large land area covered by typical geophysical operations and the potential to affect a large number of subsistence users during the exploration season, the permittee/operator would notify all potentially affected subsistence use cabin and campsite users.
- b. The official recognized list of subsistence users of cabins and campsites is the NSB's most current inventory of cabins and campsites, which have been identified by the subsistence users' names.
- c. A copy of the notification letter, a map of the proposed exploration area, and the list of potentially affected users would also be provided to the office of the appropriate Native Tribal government.
- d. The BLM Authorized Officer would prohibit seismic work within 1 mile of any known subsistence use cabin or campsite, unless an alternate agreement between the owner or user is reached through the consultation process and presented to the BLM Authorized Officer.
- e. Each week, the permittee would notify the appropriate local search and rescue of the operational location in the Coastal Plain. This notification would include a map indicating the extent of surface use and occupation, as well as areas previously used or occupied during the operation. The purpose of this notification is to give hunters up-to-date information regarding where seismic exploration is occurring and has occurred, so that they can plan their hunting trips and access routes accordingly. A list of the appropriate search and rescue offices to be contacted can be obtained from the coordinator of the North Slope and Eastern Interior Alaska Subsistence Regional Advisory Councils in the BLM's Arctic District Office.

Required Operating Procedure 38

Objective: Minimize impacts from non-local hunting, trapping, and fishing activities on subsistence resources.

Requirement/Standard: Hunting, trapping, and fishing by lessees/operators/contractors would be prohibited when persons are on work status. This is defined as the period during which an individual is under the control and supervision of an employer. Work status is terminated when workers' shifts ends, and they return to a public airport or community (e.g., Kaktovik, Utqiagvik, or Deadhorse). Use of operator/permittee facilities, equipment, or transport for personnel access or aid in hunting, trapping, and fishing would be prohibited.

Required Operating Procedure 39

See **ROP 36**.

Orientation Programs Associated with Permitted Activities

Required Operating Procedure 40

Objective: Minimize cultural and resource conflicts.

Requirement/Standard: All personnel involved in oil and gas and related activities would be provided with information concerning applicable lease stipulations, ROPs, standards, and specific types of environmental, social, traditional, and cultural concerns that relate to the region. The operator would ensure that at least once each year, all personnel involved in permitted activities would attend an orientation program designed in coordination with local traditional knowledge holders. The proposed orientation program would be

submitted to the BLM Authorized Officer in coordination with the USFWS for review and approval and would accomplish the following:

- a. Provide sufficient detail to notify personnel of applicable lease stipulations and ROPs and to inform individuals working on the project of specific types of environmental, social, traditional, and cultural concerns that relate to the region.
- b. Address the importance of not disturbing archaeological, paleontological, and biological resources and habitats, including endangered species, fisheries, bird colonies, and marine mammals, and provide guidance on how to avoid disturbance, including on the preparation, production, and distribution of information cards on endangered or threatened species.
- c. Be designed to increase personnel's sensitivity and understanding of community values, customs, and lifestyles in areas in which personnel would be operating.
- d. Include information concerning avoidance of conflicts with subsistence and pertinent mitigation.
- e. Include information for aircraft personnel concerning subsistence activities and areas and seasons that are particularly sensitive to disturbance by low-flying aircraft; of special concern is aircraft use near traditional subsistence cabins and campsites, flights during spring goose hunting and fall caribou and moose hunting seasons, and flights near potentially affected communities.
- f. Provide that individual training would be transferable from one facility to another, except for elements of the training specific to a site.
- g. Include on-site records of all personnel who attend the program for so long as the site is active, though not to exceed the 5 most recent years of operations; this record would include the name and dates of attendance of each attendee.
- h. Include a module discussing bear interaction plans to minimize conflicts between bears and humans.
- i. Provide a copy of 43 CFR 3163 regarding noncompliance assessment and penalties to on-site personnel.
- j. Include training designed to ensure strict compliance with local and corporate drug and alcohol policies; this training would be offered to the NSB Health Department for review and comment.
- k. Include employee training on how to prevent transmission of communicable diseases, including sexually transmitted diseases, to the local communities; this training would be offered to the NSB Health Department for review and comment.

In order to limit disturbance around known polar bear dens:

Monitoring requirements.

- i. Develop and implement a site-specific, BLM and USFWS-approved marine mammal monitoring and mitigation plan to monitor and evaluate the effectiveness of mitigation measures and the effects of activities on polar bears, and the subsistence use of this species.
- ii. Provide trained, qualified, and BLM and USFWS-approved onsite observers to carry out monitoring and mitigation activities identified in the marine mammal monitoring and mitigation plan.

- iii. For offshore activities, provide trained, qualified, and BLM and USFWS-approved observers on board all operational and support vessels to carry out monitoring and mitigation activities identified in the marine mammal monitoring and mitigation plan.
- iv. Cooperate with the BLM and USFWS and other designated Federal, State, and local agencies to monitor the impacts of Industry activities on polar bears. Where information is insufficient to evaluate the potential effects of activities on polar bears, and the subsistence use of this species, operators may be required to participate in joint monitoring and/or research efforts to address these information needs and ensure the least practicable impact to these resources.

Reporting requirements.

- a. Operators must report the results of monitoring and mitigation activities to the BLM and USFWS.
 - i. In-season monitoring reports
 - 1) *Activity progress reports.* Notify the BLM and USFWS at least 48 hours prior to the onset of activities; provide the BLM and USFWS weekly progress reports of any significant changes in activities and/or locations; and notify the BLM and USFWS within 48 hours after ending of activities.
 - 2) *Polar bear observation reports.* Report all observations of polar bears and potential polar bear dens, during any Industry activity. Information in the observation report must include, but is not limited to: (1) Date, time, and location of observation; (2) Number of bears; (3) Sex and age; (4) Observer name and contact information; (5) Weather, visibility, sea state, and sea-ice conditions at the time of observation; (6) Estimated closest distance of bears from personnel and facilities; (7) Industry activity at time of sighting; (8) Possible attractants present; (9) Bear behavior; (10) Description of the encounter; (11) Duration of the encounter; and (12) Mitigation actions taken.
 - 3) *Incident report.* Report all bear incidents during any industry activity. Reports must include: (1) All information specified for an observation report; (2) A complete detailed description of the incident; and (3) Any other actions taken.
 - 4) *Final report.* The results of monitoring and mitigation efforts identified in the marine mammal monitoring and mitigation plan must be submitted to the BLM and USFWS for review within 90 days of the expiration of an authorization. Information in the final report must include: (1) Copies of all observation reports submitted under an authorization; (2) A summary of the observation reports; (3) A summary of monitoring and mitigation efforts, including areas, total hours, total distances, and distribution; (4) Analysis of factors affecting the visibility and detectability of polar bears during monitoring; (5) Analysis of the effectiveness of mitigation measures; (6) Analysis of the distribution, abundance, and behavior of polar bears observed; and (7) Estimates of “take” as defined by the MMPA and its implementing regulations

Summer Vehicle Tundra Access

Required Operating Procedure 41

Objective: Protect stream banks and water quality; minimize compaction and displacement of soils; minimize the breakage, abrasion, compaction, or displacement of vegetation; protect cultural and paleontological resources; maintain populations of and adequate habitat for birds, fish, and caribou and

other terrestrial mammals; and minimize impacts on subsistence activities. Minimize potential for degrading bluff line impacts along stream banks that provide polar bear denning habitat.

Requirement/Standard: On a case-by-case basis, the BLM Authorized Officer, in coordination with the USFWS and appropriate Tribal Governments, may permit low-ground-pressure vehicles to travel off gravel pads and roads during times other than those identified in **ROP 11**. Permission for such use would be granted only after an applicant has completed the following:

- a. Submitted studies of the impacts on soils and vegetation of the low-ground-pressure vehicle(s) as equipped. The AK-DNR off-road tundra vehicle certification qualifies as an acceptable study. Other studies satisfactory to both the BLM Authorized Officer and the USFWS would also be considered. These studies would reflect use of such vehicles under conditions like those of the route proposed and would demonstrate that the proposed use would have no more than minimal impacts on soils and vegetation. Alternatively, the most current list of summer off-road vehicles approved by the State may be used to fulfill this requirement.
- b. Submitted surveys satisfactory to the BLM Authorized Officer and USFWS, in coordination with the local community, of subsistence uses of the area as well as of the soils, vegetation, hydrology, wildlife, and fish (and their habitats), paleontological and archaeological resources, and other resources, as required by the BLM Authorized Officer.
- c. Designed or modified the use proposal to minimize impacts to the satisfaction of the BLM Authorized Officer and the USFWS; design steps to achieve the objectives and based on the studies and surveys may include timing restrictions (generally it is considered inadvisable to conduct tundra travel before August 1 to protect ground-nesting birds), shifting work to winter, rerouting, and not proceeding when certain wildlife are present or subsistence activities are occurring.

General Wildlife and Habitat Protection

Required Operating Procedure 42

Objective: Minimize disturbance of wildlife or alteration and hinderance of wildlife movements through the Coastal Plain.

Requirement/Standard:

- a. Prior to vehicle use, the lessee/operator/contractor would consult with BLM, USFWS, and Tribal Governments to consider and understand vehicle caused disturbance of wildlife or alteration and hindrance of wildlife movements throughout the Coastal Plain.
- b. BLM, USFWS, and Tribal Governments would review and request changes to lessee/operator/contractor operations to minimize disturbance.
- c. Following wildlife with ground vehicles or aircraft is prohibited. Particular attention would be given to avoid disturbing caribou and polar bears.
- d. Avoid and minimize the disturbance to loafing, brood-rearing and nesting birds to the extent practicable.

Also see **ROP 34**.

Required Operating Procedure 43

Objective: Prevent the introduction or spread of nonnative, invasive species in the Coastal Plain.

Requirement/Standard:

- a. Ensure that all equipment, supplies (including gravel, lumber, erosion control material), and vehicles (including helicopters, planes, boats, off-road vehicles, trucks, tracked vehicles, and barges) intended for use are free of invasive species, such as but not limited to BLM priority invasive plants as defined in BLM Instructional Memorandum (IM) 2022-008 (or current version of the related policy IM) and invasive vertebrates and invertebrates, before transiting into the Coastal Plain. Standard stipulations for invasive species management shall be required as applicable by permitted activities (BLM IM 2022-08, Attachment 1).
- b. Survey annually along roads, drilling platforms, and barge access points for invasive species and begin effective eradication measures on evidence of their introduction.
- c. Before beginning operations into the Coastal Plain, submit a plan, for BLM approval, detailing the methods for: 1) cleaning equipment, supplies, and vehicles, including off-site disposal of cleaning fluids or materials and detected organisms, and 2) early detection surveys, and eradication response measures (including post treatment monitoring) for all invasive species, noxious plants and animals, and weeds.

Required Operating Procedure 44

Objective: Minimize loss of populations and habitat for plant species designated as sensitive by the BLM and USFWS Refuge Resources of Concern in Alaska.

Requirement/Standard: If a development is proposed in an area that provides potential habitat for a BLM sensitive plant species and USFWS Refuge Resources of Concern, the development proponent, in coordination with local traditional knowledge holders, and/or the NSB, would conduct surveys at appropriate times of the summer season and in appropriate habitats for the sensitive plant species. The results of these surveys and plans to minimize impacts would be submitted to the BLM with the application for development.

Required Operating Procedure 45

Objective: Minimize loss of individuals, populations, and habitat for species designated as sensitive by the BLM in Alaska and as USFWS Refuge Resources of Concern.

Requirement/Standard: If a development is proposed in an area that provides potential habitat for BLM sensitive species and USFWS Refuge Resources of Concern, the development proponent, in coordination with local traditional knowledge holders, and/or the NSB, would conduct surveys at appropriate times of the year and in appropriate habitats to detect the presence of BLM sensitive species and the USFWS Refuge Resources of Concern. The results of these surveys and plans to minimize impacts would be submitted to the BLM with the application for development.

Marine Vessel Traffic-Associated Activities

Required Operating Procedure 46

Objective: Minimize impacts on marine mammals from vessel traffic.

Requirement/Standard:

General Vessel Traffic

- a. Operational and support vessels would be staffed with dedicated PSOs, hired locally whenever possible, to alert crew of the presence of marine mammals and to initiate adaptive mitigation responses.
- b. When weather conditions require, such as when visibility drops, support vessel operators must reduce speed and change direction, as necessary (and as operationally practicable), to avoid the likelihood of injuring marine mammals.
- c. The transit of operational and support vessels is not authorized before July 1. This operating condition is intended to allow marine mammals the opportunity to disperse from the confines of the spring lead system and minimize interactions with subsistence hunters. Exemption waivers to this operating condition may be issued by the NMFS and USFWS, in coordination with local Tribal governments, on a case-by-case basis, based on a review of seasonal ice conditions and available information on marine mammal distributions in the area of interest.
- d. Vessels may not be operated in such a way as to separate members of a group of marine mammals from other members of the group.
- e. Operators should take reasonable steps to alert other vessel operators in the vicinity of marine mammals.
- f. Operators should report any dead or injured listed marine mammals to NMFS and the BLM and USFWS.
- g. Vessels will not allow tow lines to remain in the water when not towing, all closed loops will be cut, and all trash will be retained on board for disposal in secure landfills, thereby reducing the potential for marine mammal entanglement.
- h. The lessees will implement measures to minimize risk of spilling hazardous substances. These measures will include: avoiding operation of watercraft in the presence of sea ice to the extent practicable and using fully operational vessel navigation systems composed of radar, chartplotter, sonar, marine communication systems, and satellite navigation receivers, as well as Automatic Identification System for vessel tracking.

Vessels in Vicinity of Whales

- a. Vessel operators would avoid groups of three or more whales by staying at least 1 mile away. A group is defined as being three or more whales observed within a 1,641-foot (500 meter) area and displaying behaviors of directed or coordinated activity (e.g., group feeding).
- b. Lessees will coordinate with the Alaska Eskimo Whaling Commission to enter into a Conflict Avoidance Agreement such that vessel activities do not occur during sensitive whaling periods. All boat and barge traffic will be scheduled to avoid periods when bowhead whales are migrating through the area. Boat, hovercraft, barge, and aircraft will remain at least 12 miles from Cross Island during the bowhead whale subsistence hunting consistent with the CAA.

- c. The transit of operational and support vessels through the North Slope region is not authorized prior to July 1. This operating condition is intended to allow marine mammals the opportunity to disperse from the confines of the spring lead system and minimize interactions with subsistence hunters. Exemption waivers to this operating condition may be issued by NMFS on a case-by-case basis, based upon a review of seasonal ice conditions and available information on marine mammal distributions in the area of interest.
- d. If the vessel approaches within 1 mile of observed whales, except when providing emergency assistance to whalers or in other emergency situations, the operator would take reasonable precautions to avoid potential interaction with the whales by taking one or more of the following actions, as appropriate:
 - i. Reducing vessel speed to less than 5 knots within 900 feet of the whale
 - ii. Steering around the whale if possible
 - iii. Operating the vessel to avoid causing a whale to make multiple changes in direction, avoiding sudden or multiple course changes
 - iv. Checking the waters around the vessel to ensure that no whales are within 164 feet of the vessel prior to engaging the propellers. Reducing vessel speed to 9 knots or less when weather conditions reduce visibility to avoid the likelihood of injury to whales
 - v. Vessels shall not exceed speeds of 10 knots in order to reduce potential whale strikes
 - vi. If a whale approaches the vessel and if maritime conditions safely allow, the engine will be put in neutral and the whale will be allowed to pass beyond the vessel. If the vessel is taken out of gear, vessel crew will ensure that no whales are within 50 m of the vessel when propellers are re-engaged, thus minimizing risk of marine mammal injury.
- e. Vessels will stay at least 1000 feet away from cow-calf pairs, feeding aggregations, or whales that are engaged in breeding behavior. If the vessel is approached by cow-calf pairs, it will remain out of gear as long as whales are within 984 feet of the vessel (consistent with safe operations)
- f. Consistent with NMFS marine mammal viewing guidelines (<https://alaskafisheries.noaa.gov/pr/mm-viewing-guide>), operators of vessels will, at all times, avoid approaching marine mammals within 300 feet. Operators will observe direction of travel and attempt to maintain a distance of 300 feet or greater between the animal and the vessel by working to alter course or slowing the vessel.
- g. Special consideration of North Pacific right whale and their critical habitat:
 - i. Vessel operators will avoid transit through North Pacific right whale critical habitat. If such transit cannot be avoided, operators must post a dedicated PSO on the bridge and reduce speed to 10 knots while in the North Pacific right whale critical habitat. Alternately, vessels may transit at no more than 5 knots without the need for a dedicated PSO.
 - ii. Vessel operators will remain at least 800 meters from all North Pacific right whales and avoid approaching whales head-on, consistent with vessel safety.
 - iii. Operators will maintain a ship log indicating the time and geographic coordinates at which vessels enter and exit North Pacific right whale critical habitat.

Vessels in Vicinity of Pacific Walrus and Polar Bears

- a. Operators should take all reasonable precautions, such as reduce speed or change course heading, to maintain a minimum operational exclusion zone of 0.5 miles around groups of feeding walrus.

- b. Except in an emergency, vessel operators would not approach within 0.5 miles of observed polar bears, within 0.5 miles of walrus observed on ice, or within 1 mile of walrus observed on land.
- c. For Polar Bears:
 - i. Operational and support vessels must be staffed with dedicated marine mammal observers to alert crew of the presence of polar bears and initiate mitigation responses.
 - ii. Vessels must maintain the maximum distance possible from polar bears. No vessel should approach within an 805-meter (0.5-mile) radius of polar bears observed on land or ice.
 - iii. Vessels must avoid areas of active or anticipated polar bear subsistence hunting activity as determined through community consultations.
 - iv. The BLM and USFWS may require trained marine mammal monitors on the site of the activity or on board any vessel or vehicles to monitor the impacts of Industry's activity on polar bear.

Vessels in Vicinity of Seals

- a. Vessels used as part of a BLM-authorized activity would be operated in a manner that minimizes disturbance to wildlife in the coastal area. Vessel operators would maintain a 1-mile buffer from the shore when transiting past an aggregation of seals (primarily spotted seals) when they have hauled out on land, unless doing so would endanger human life or violate safe boating practices.

Vessel Transit through Steller Sea Lion Critical Habitat/Near Major Rookeries and Haulouts

- a. Vessels will remain 3 nautical miles (nm) (5.5 km) from all Steller sea lion rookery sites listed in paragraph 50 CFR 224.103 (d)(1)(iii). The vessel operator will not purposely approach within 3 nm of any major Steller sea lion rookery or haulout unless doing so is necessary to maintain safe conditions.

This page intentionally left blank.