

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

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**Environmental Assessment**

**For the United States Army Corps of Engineers  
EA# DOI-BLM-LLAK010-2013-0012-EA Formerly listed as  
EA# DOI-BLM-LLAK010-2013-0003-EA**

**PREPARING OFFICE**

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





**Environmental Assessment**  
**For the United States Army Corps of Engineers**  
**EA# DOI-BLM-LLAK010-2013-0012-EA<sup>NaN</sup>**



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# Chapter 1.

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**Environmental Assessment**

For US Army Corps of Engineers.

EA# DOI-BLM-AK010-2013-0012-EA

Preparing Office: Arctic Field Office, 1150 University Avenue, Fairbanks, AK 99709

The United States Army Corps of Engineers (USACE) has requested authorization to continue cleanup of contaminants at the Umiat #9 Well Site in the Northeast (NE) Petroleum Reserve-Alaska (NPR-A) under a Right of Way authorization.

**Land Use Plans:**

Northeast National Petroleum Reserve-Alaska Supplemental Integrated Activity Plan/Environmental Impact Statement (IAP/EIS) dated 2008;

National Petroleum Reserve-Alaska Integrated Activity Plan Environmental Impact Statement 2012;

Colville River Special Area Management Plan 2008

**Applicant Address:**

Alaska District

P.O. Box 6898

JBER, Alaska 99506-0989

**Date:** January 4, 2013

**Lands Involved:**

Sections 5 & 6, Township 1 South, Range 1 West, Umiat Meridian

*Note that some of the formatting and sections differ slightly from the official signed version; however, the content of this online—accessible document is exactly the same as the original.*

**Introduction**

This Environmental Assessment (EA) has been prepared to meet requirements of the National Environmental Policy Act (NEPA), and to support U.S. Department of Interior (USDOI) Bureau of Land Management (BLM) decision-making on permits required to construct and implement the proposed project. The scope of this EA includes analysis of the effects of the proposed activity and alternatives. The United States Army Corps of Engineers (USACE) has requested authorization to continue cleanup of contaminants at the Umiat #9 Well Site in the Northeast (NE) Petroleum Reserve-Alaska (NPR-A) under a Right of Way authorization. USACE has contracted the work to Marsh Creek, LLC. The proposed project includes the removal, transportation and disposal of contaminated soil. This EA is tiered to the 2008 NE NPR-A Supplemental IAP/EIS (USDOI BLM, 2008 – hereinafter known as NE IAP/EIS2008), 2008 NE Record of Decision (NE ROD 2008) and the Colville River Special Area Management Plan (CRSAMP) and Decision Record (DR). It is also tiered to the EA completed by the USACE in January 2009 for the project. The scope of this EA includes analysis of the effects of the proposed activity and alternatives.

## **1.1. Need for Action**

The need for the action is established by the Legacy Well Program, which calls for the clean-up and remediation of previously-drilled well sites by the federal government in the NPR-A. As part of the Legacy Well strategy, the BLM identified several wells that require some level of remediation, and then prioritized these well for clean-up activities. The Umiat #9 well was prioritized as high due to the contaminated soils issue in the area surrounding the well, and clean-up activities at this site have been ongoing during the winter operational season since 2009.

## **1.2. Purpose of Action**

The purpose of the proposed action is to allow the applicant to conduct a cleanup operation that will remove contaminated soils from the area. The contaminants remain a present and future threat to human and ecological health unless removed.

## **1.3. Laws, regulations, other EAs that influence this EA**

Northeast IAP/EIS; Federal Land Policy Management Act (FLPMA); Alaska National Interest Lands Conservation Act; (ANILCA); and the Naval Petroleum Reserves Production Act (NPRPA).

## **1.4. Decision to be Made**

The BLM must conduct a project-specific NEPA analysis and determine whether the proposed project should be approved, rejected, or approved with modifications, and if additional mitigation is needed. This EA will be based on the findings, management controls, and protective measures of the 2008 NE ROD and the CRSAMP DR as well as other laws and regulations. The scope of this EA includes analysis that enables the BLM to select among alternatives that meet the purpose and need, and are within the BLM's jurisdiction (40 Code of Federal Regulations §1506.1(a)(2)).

## **1.5. Scoping and Issues**

Public notification of the environmental analysis was announced on November 29, 2012 in the NEPA Register on file at the Arctic Field Office Environmental Assessment web site ([http://www.blm.gov/ak/st/en/info/nepa/fdo\\_nepa\\_register/ar\\_nepa\\_reg\\_fy12.html](http://www.blm.gov/ak/st/en/info/nepa/fdo_nepa_register/ar_nepa_reg_fy12.html)). No public comments have been received through January 4, 2013. Development of the recent planning documents in NPR-A involved extensive input from other Federal agencies, the State, the North Slope Borough (NSB), thousands of individuals, and many institutions. BLM guidelines include a list of issues that are addressed, where applicable, in NEPA environmental assessments. Some elements are not present in the project area and are, therefore, not discussed further. Other elements may be minimally impacted, but have been thoroughly analyzed in the NE NPR-A IAP/EIS (2008) that this EA tiers to, and are therefore not addressed in this document. A listing of issues considered by the Arctic Field Office (AFO) Field Staff is provided in Table 1.1.

**Table 1.1. Issues Considered in Evaluation Impacts**

<b>Resources/ Environmental Considerations for Issues and Analysis</b>	<b>Determination</b>	<b>Basis of Determination (See Note<sup>a</sup>)</b>
ACEC's	Not Present	
Air Quality	Minimally Impacted	Air quality impacts likely to remain below applicable ambient air quality standards and increments. Protection provided by: State of Alaska Air Non-Point and Mobile Program and regulations (18 AAC 50)
Cultural and Paleontological Resources	Minimally Impacted to Not Present	Archaeological and Cultural Resources Clearance by BLM required under the NHPA. Protection provided by: Section 106 of the National Historic Preservation Act, ROPs E-13
Environmental Justice	Minimally Impacted to Not Present	No disproportionately high and adverse human health or environmental effects to Nuiqsut residents has been identified for the proposed project. Impacts to subsistence use are not expected.
Fish	Potentially Affected	The potential for impacts on fish overwintering in water source lakes is increased if water use exceeds the standard in ROP B-2f. Protections from other potential impacts provided by NE NPR-A ROPs A-3 – A6, B-1, B-2, and C-2 – C-4; additional permit stipulations required by this EA (Section 4.4); and ADF&G Fish Habitat Permits. EFH assessment finding is <i>not likely to adversely affect</i> .
Flood Plains/Wetlands and Riparian Zones	Minimally Impacted	Protection provided by NE NPR-A ROPs A-4, A-5, C-2, C-3, EO11988 and EO11990
Invasive, Non-native species	Minimally Impacted to Not Present	BMP M-2 (NPR-A Draft IAP/EIS 2012) will ensure that invasive plants do not become an issue.
Native American Religious Concerns	Minimally Impacted to Not Present	No disproportionately high and adverse human health or environmental effects to Nuiqsut residents has been identified for the proposed project. Impacts to subsistence use are not expected. NE ROPs A-1 – A-7, B-1, B-2, and F-1. EO 12897
Recreation	Minimally Impacted	Protection Provided by: ROPs A-1,A-5,C-3,C-4,E-6, and F-1
Socialcultural Systems	Minimally Impacted	No disproportionately high and adverse effects to Nuiqsut residents have been identified for the proposed project. Impacts to subsistence use are not expected. Protection provided by NE ROPs A-1, A-3 – A-7, B-1, B-2, and F-1. EO 12897
Subsistence	Minimally Impacted	Umiat area is currently a highly industrialized area, and little subsistence hunting occurs near Umiat proper. ANILCA 810 Evaluation and Findings by BLM required. Additional protection provided by: NE ROPs A-1, A-3 - A-7, B-1, B-2, C-4, and F-1.
Threatened & Endangered Species Spectacled and Steller's	Not Present	
Threatened & Endangered Species Polar Bear	Not Present	
Critical Habitat for Polar Bear	Not present	

<b>Resources/ Environmental Considerations for Issues and Analysis</b>	<b>Determination</b>	<b>Basis of Determination (See Note<sup>a</sup>)</b>
Non threatened and endangered birds	Minimally Impacted	Snowy owls, gyrfalcons, raven and ptarmigan may inhabit the area during the operations period. No impacts expected other than those already covered in NE NPRA Final Supplemental IAP/EIS. Protection provided ROPs A-4 – A-6, E-9.
Non threatened and endangered mammals	Minimally Impacted	Caribou, grizzly bear, polar bear, wolf, wolverine and small mammals (weasel, rodents, and shrews) may inhabit the area. No impacts expected other than those already covered in NE NPRA Final Supplemental IAP/EIS. Protection provided in that document by NE ROPs A-2 – A-6, A-8, C-1, F-1, and H-3. Further protections provided by BMP M-1 from NPRA IAP/EIS (2012).
Vegetation	Minimally Impacted	Protection provided by ROP C-2 NE NPRA Final Supplemental IAP/EIS).
Visual Resource Management	Minimally Impacted	Protection provided by NE NPR-A ROPs A-1, A-3, A-4, A-5, A-6, C-2, C-3, C-4, and F-1.
Water Resources	Minimally Impacted	Applicants request to exceed the Requirement/Standard of Required Operating Procedure (ROP) B-2. Water Quality protected by frozen, snow-covered water bodies as well as USACE, EPA, ADEC, ADFG and ADNR required permits. Other protections provided by: NE ROPs A-1 – A-7, B-1, B-2, and C2 – C-4.
Waste (Hazardous/Solid)	Minimally Impacted	Basis for action. Protections provided by: EPA SPCC Plan and NPDES permit; State of Alaska regulations 18 AAC 30, 60, 62, 63, 72, and 75; NE ROPs A-1, and A-3 - A-7
Wild & Scenic Rivers	Not Present	
Wilderness Characteristics and Wild Lands	Minimally Impacted	Protection provided by NE NPR-A ROPs A-1, A-4, A-5, A-6, C-2, C-3, C-4, E-10, and E-13.
<p><b>Key to Table 1.3:</b>  AAC - Alaska Administrative Code  ACEC - Area of Critical Environmental Concern  ADFG - Alaska Department of Fish and Game  ADNR - Alaska Department of Natural Resources  ANILCA - Alaska National Interest Lands Conservation Act  BLM - Bureau of Land Management  CFR - Code of Federal Regulations Plan Oil Spill Discharge and Contingency Plan  EA - Environmental Assessment  EFH - Essential Fish Habitat  EO - Executive Order  EPA - Environmental Protection Agency  ESA - Endangered Species Act  IAP/EIS - Integrated Activity Plan/Environmental Impact Statement  LOA - Letter of Authorization  NE - Northeast  NHPA - National Historic Preservation Act  NPRa - National Petroleum Reserve in Alaska  ROP - Required Operating Procedure  SPCC - Spill Prevention, Control, and Countermeasures  USCOE - United States Corps of Engineers</p>		

USFWS - United States Fish & Wildlife Service
<p><b>Potentially Affected:</b> The proposed action or alternative could result in potential impacts to resource or issues to the level that additional mitigation may be required, or there is a need to evaluate potentially significant issues.</p> <p><b>Minimally Impacted:</b> Resources or issues would not be affected to a degree requiring further analysis because either the expected impacts from the proposed action and alternative would be minimal, or standard protections (e.g., ROPs and Stipulations from overriding BLM plans or other legal protections) would reduce impacts. Minimally impacted resources or issues will not be analyzed further in this EA.</p> <p><b>Not Present:</b> Resources or issues are not expected to be affected by the proposed action or alternatives because activities would occur at a different time or place. Resource or issues not present will not be analyzed further in the EA.</p>

<sup>a</sup>Determination tiered from: 2008 NE IAP/EIS Vo1. 2, Chap. 4; 2008 NE ROD; and laws and regulations as noted.

## 1.6. Public Involvement

Public notification of the environmental assessment was announced on November 29, 2012 in the NEPA Register on file at the Fairbanks District Office NEPA web site ([http://www.blm.gov/ak/st/en/info/nepa/fdo\\_nepa\\_register.html](http://www.blm.gov/ak/st/en/info/nepa/fdo_nepa_register.html)). The BLM has discussed ongoing clean-up activity at the Umiat #9 site, and other Legacy Wells, with the NPR-A Subsistence Advisory Panel at numerous meetings since 2009.

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## **Chapter 2. Alternatives Including the Proposed Action**

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## 2.1. Introduction

The proposed project is the continuation of ongoing clean-up and remediation of the Umiat #9 Legacy Well site in the NE NPR-A. The proposed activity will occur in winter 2012-2013, with all contaminated soil removed.

## 2.2. Description of Alternatives

### 2.2.1. Alternative A: No Action

The no action alternative would be to deny the applicant's request to conduct the cleanup of contaminants at and around the Umiat # 9 Legacy Well. This would result in the area to remain contaminated. The No Action Alternative is inconsistent with the existing management policy of the Fairbanks District Office, but its analysis is required by NEPA.

### 2.2.2. Alternative B: Proposed Action

The applicant Thomas M. Kretschmar, with the United States Army Corps of Engineers (USACE) has requested a renewal of an authorization to perform remedial activities associated with investigation/removal/disposal of polychlorinated biphenyl (PCB) and petroleum, oil, and lubricant (POL) impacted soils, at Umiat #9 Legacy Well on lands within the National Petroleum Reserve in Alaska (NPR-A). This would be a continuation of the project started in 2009, and authorized under the Bureau of Land Management (BLM) Case File number FF095495. The USACE expects the work to be completed in 2013 but is requesting the renewal for five years.

The objectives of the proposed activity are to safely remove, transport and dispose of an estimated 2,400 tons of PCBs and POL contaminated soil remaining in the vicinity of Test Well #9 and a burn pit area located approximately 500 feet from the well head. This removal requires the construction of approximately 2 miles of ice road from the Umiat airstrip to Test Well #9. To that end, the USACE through its contractor Marsh Creek, has requested concurrence on the use of three lakes from which water will be removed in support of the ice-road construction as well as several ice road crossings (Tables 2.1a, 2.1b and 2.2).

The USACE also proposed to conduct confirmation soil sampling at the Test Well #9 and burn pit areas. All activities shall be conducted in compliance with Resource Conservation and Recovery Act (RCRA), Toxic Substances Control Act (TSCA), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Superfund Amendments and Reauthorization Act (SARA), 18 AAC 75 Oil and Other Hazardous Substances Pollution Control, and 18 AAC 78 Underground Storage Tanks procedures, as applicable.

Lake ID	Latitude (N) (NAD83)	Longitude (W) (NAD83)	Max Depth (feet)	Surface Area (acres)	Volume (MG)	Sensitive Fish Species Captured
RTS07118	69.38109	152.14035	10.0	16.8	23.02	None

RTS07124	69.38015	152.18760	5.0	9.1	10.75	None
M0681	69.37870	152.11830	5.1	15.8	16.50	none
<b>Table 2.1b.</b> Water sources on BLM lands for winter 2012-2013 operations.						
Lake ID	Resistant Fish Species Captured <sup>b</sup>	15% of Water Under 7 ft of Ice (MG)	30% of Water Under 5 ft of Ice (MG)	35% of Total Lake Volume (MG)	Liquid Water Volume Requesting (MG)	Ice Aggregate Volume Requesting (MG)
RTS07118	NS	--	0.91	--	0.91	3.69
RTS07124	none	--	--	3.76	2.15 liquid + ice	
M0681	noe	--	--	5.77	3.33 liquid + ice	

<sup>a</sup>Source: Renaissance (2007)

**Table 2.1. Water sources on BLM lands for winter 2012-2013 operations.**

<b>Table 2.2.</b> Approximate stream crossings on BLM lands for 2012-2013 operations.					
Stream Name	BLM Crossing Identifier	Latitude (NAD83)	Longitude (NAD83)	NHD COMID <sup>a</sup>	ADF&G Anadromous Waters Catalog Number
Seabee Creek	X1	69.3717	152.1582	72362971	--
Unnamed tributary to Seabee Creek	X2	69.3733	152.1604	72362873	--
Unnamed tributary to Seabee Creek	X3	69.3746	152.1649	72362873	--
Unnamed tributary to Seabee Creek	X4	69.3784	152.1671	72362949	--

<sup>a</sup>National Hydrography Dataset Common Identifier (COMID) for stream segment.

**Table 2.2. Approximate stream crossings on BLM lands for 2012-2013 operations.**

The USACE's contractor would have a small office/shop/lab, a warm up shack, and a toilet set up on the ice pad near Umiat # 9 to support daily operations. Personnel would sleep, eat and shower at the UIC Camp. The planned start date for the proposed action is February 1, 2013.

All work on the tundra would occur during the winter months. During the summer they would conduct stick picking activities and inspections.

## 2.4. Conformance

The proposed action is in conformance with the NE IAP/EIS and ROD 2008, the CRSAMP and DR, Naval Petroleum Reserves Production Act (NPRPA), Federal Land Policy Management Act (FLPMA), Alaska National Interest Lands Conservation Act (ANILCA), and the Endangered Species Act.

In the NE IAP/EIS 2008, the BLM evaluated the direct, indirect, and cumulative effects of hazardous material or debris removal in the NPR-A. The analysis may be found under 'Activities Not Associated with Oil and Gas Exploration and Development. This analysis concluded that the stipulations and ROPs provided adequate protection for surface resources and subsistence activities in the planning area.

Only the resource identified in Table 1.1 as being potentially affected by the proposed action, fish, will be analyzed in this EA.

# **Chapter 3. Affected Environment**

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Environmental characteristics of the general project area have been extensively described in the documents listed below, to which this analysis is tiered:

- Record of Decision, Northeast National Petroleum Reserve-Alaska, Supplemental Integrated Activity Plan/Environmental Impact Statement, July 16, 2008; and
- Colville River Special Area Management Plan, July 2008

Environmental characteristics of the general project area have been extensively described in the documents listed below, to which this analysis is tiered:

### **3.1. Fish**

Details on all fish species in the region, including general distributions and life histories, can be found in the NE IAP/EIS (2008). Of the three water source lakes on BLM lands that may be used for USACE 2012-13 winter operations, only Lake RTS07118 is inhabited by fish, the ninespine stickleback (*Pungitius pungitius*) (Renaissance 2007). For consideration of water use limits (ROP B-2), fish in lakes are classified according to their susceptibility to low levels of dissolved oxygen. Alaska blackfish (*Dallia pectoralis*) and ninespine stickleback are considered “resistant” due to their greater tolerance to low dissolved oxygen while all other species in the region are considered “sensitive.”

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# **Chapter 4. Environmental Impacts**

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Environmental impacts to resources located in the NE NPR-A have been extensively described in the documents listed below, to which this analysis is tiered:

- Record of Decision, Northeast National Petroleum Reserve-Alaska, Supplemental Integrated Activity Plan/Environmental Impact Statement, July 16, 2008; and
- Colville River Special Area Management Plan, July 2008

Only the resource identified in Table 1.1 as being potentially affected by the proposed action, fish, will be analyzed in this EA.

## **4.1. Fish**

### **4.1.1. No-Action Alternative**

Under the No-Action Alternative, USACE would not conduct a clean-up at a well-site on BLM-managed land, in which case there would be no need for water from lakes to construct ice roads and pads. As a result there would be no impacts to fish at the sites evaluated in this EA.

### **4.1.2. Proposed Action**

As identified in Table 1.1 the potential for impacts on fish overwintering in water source lakes is increased if water use exceeds the standard in ROP B-2f. For the USACE's 2012-2013 winter well plugging program in the NPR-A, they are requesting to use ice aggregate at Lake RTS07118 in addition to the maximum liquid water volume typically allowed for use (Table 2.1a-b - Water-Sources Table), which requires additional approval under BLM's ROP B-2f. This ice aggregate would come from within the 4-ft (and shallower) contour of each lake where ice will become naturally grounded during typical winter conditions, a practice commonly permitted by ADF&G and BLM in conjunction with additional monitoring. As snow removal is not permitted beyond this 4-ft contour, this activity should not contribute to additional lake freeze-down. In the existing areas of oil exploration and development on the Arctic coastal plain, lakes pumped solely for winter exploration activities have recharged in the spring, including at some lakes where additional ice aggregate has been utilized (Streever et al. 2001; URS 2001; Baker 2002; Hinzman et al. 2006; Baker 2007; Holland et al. 2008). Additionally, lakes used for winter water sources in the foothills near Umiat were observed to be recharged in the early summer (Hilton and Lilly 2009a) and continued discharging from their outlets in September (Hilton and Lilly 2009b). The BLM has also granted an exception to ROP B-2f during other winter oil and gas operations in the NE NPR-A without a negative outcome. Furthermore, at the lake where the USACE is requesting an exception to ROP B-2f, ADF&G Division of Habitat is requiring additional work that will help evaluate if the lake water levels recharge in spring. Specifically, the Fish Habitat Permit for this lake states:

“...Ice removal in succeeding years will be contingent upon receipt of information denoting measured recharge of the lake or a developed predictive method to determine if a particular lake has adequate drainage area and recharge capabilities to support sustained use beyond current recommended levels.”

The documentation of winter-pumped lakes recharging in this general region, the successful implementation of an exception to ROP B-2f by the BLM in other years, and the additional

monitoring or modeling required by ADF&G support the BLM's decision to grant approval for the use of ice aggregate in addition to maximum liquid water quantities at Lake RTS07118. This exception from BLM only pertains to the 2012-13 winter exploration season and consideration for water use in future years beyond the guidelines outlined in ROP B-2 will depend on the results and observations from this season.

## **4.2. Cumulative Effects**

Cumulative impacts result from the incremental addition of past, present, and reasonably foreseeable actions. Each action may be individually minor by itself, but when added to others could become significant over a period of time. Concurrent to the proposed clean-up activity by the applicant, oil and gas exploratory drilling will be occurring by LINC Energy Operations, Inc. on their leases near Umiat. As part of their application, Linc, Inc. has applied to the Alaska Department of Natural Resources to permit the removal of water from two of the same lakes (RTS07118 and RTS07124) that the USACE has requested to remove water from during the 2012/2013 operational season. An additional stipulation (Section 4.4) requires that USACE, through its contractor Marsh Creek, coordinate a detailed water sharing and tracking plan with LINC to reduce the potential for water removal to exceed the permitted quantities.

### **4.2.1. Fish**

As discussed in the 2008 NE IAP/EIS (Section 4.7.7), restricted winter habitat for fish makes many species highly vulnerable to the impacts associated with water withdrawal from lakes for the creation of ice roads and ice pads. Some effects may accumulate, but based on federal and state protective measures, effects to fish at the lake population level are not anticipated.

## **4.3. Mitigation and Monitoring**

The BLM will incorporate the following additional mitigation measures into approvals for the USACE ROW permit. USACE shall:

1. When applicant or their contractor is conducting any activity associated with this authorization they will provide the BLM with a weekly activities summary report via e-mail to: [dwixon@blm.gov](mailto:dwixon@blm.gov).
2. Provide the BLM with copies of any reports required by other agencies.
3. The portions of excavation that might end up below grade are to be contoured to assure no pooling of water. Backfilling shall occur if any discrete holes which would collect surface water are created during removal of contaminated soils.

The following permit stipulations implement practices that will further reduce the likelihood of impacts to fish habitat and water resources on BLM lands (adapted from Noel et al. 2008). USACE shall:

4. Provide the BLM with an as-built of all ice roads, snow trails, and ice pads at the time the infrastructure is completed. Data should be in the form of ESRI shapefile(s) referencing the North American Datum of 1983 (NAD83).

5. Post a sign on the access road to each lake being utilized as a water source, clearly identifying the lake by its number.
6. Maintain a daily record of water removed as liquid or ice aggregate from each lake utilized as a water source and provide the BLM with this record weekly in conjunction with the progress report. A formatted spreadsheet provided by the BLM must be used for reporting.
7. Immediately cease pumping and notify the BLM within 24 hours if water removal exceeds the volume approved at any lake.
8. Provide the BLM with photographs documenting the condition of all ice and snow road channel crossings that have been “removed, breached, or slotted” (per ROP C-3) at the end of the winter operation period. Geographic coordinates (latitude/longitude) of a crossing must accompany each set of photos. **ROP C-3 Clarification:** ROP C-3 requires that any “bridges” created at stream crossings be breached or removed before spring breakup. A stream channel crossing is a "bridge" only if additional layers of snow, ice, and/or liquid water are added to the crossing (not including streambank ramps). If additional layers are added to a crossing, then ROP C-3 applies and the crossing must be breached before spring breakup
9. Provide the BLM any data or photographs collected at water source lakes regarding an evaluation of spring recharge
10. Coordinate with the concurrent LINC Energy Operations, Inc. oil and gas exploration project at Umiat to ensure that the total permitted water withdrawal volume of Lakes RTS07118 and RTS07124 is not exceeded; both USACE, through their contractor Marsh Creek, and LINC have requested to use water from these lakes. Water removal (liquid or ice) from these lakes shall not begin until the BLM has been provided with and approved a coordination plan between Marsh Creek and LINC that explicitly explains how the water and ice from these lakes will be shared, how water and ice removed will be measured, and the manner in which total water removal will be tracked collaboratively between these entities.

#### 4.4. Summary of Environmental Consequences

The potential issue identified in the evaluation of the proposed action for this EA was fish. The analysis found that impacts would be short term and localized and that mitigation measures in Appendix A would adequately reduce any adverse effects to fish in the area. Likewise, the analysis also found that additional mitigation measures in Section 4.5 would adequately reduce any adverse effects to fish which would also be short term and localized. The proposed action would not contribute to significant cumulative effects to fish in the proposed project areas.

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# **Chapter 5. Consultation and Coordination**

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## **5.1. Agencies, Organization, Persons Consulted**

Public notification of the Environmental analysis is on file at the Arctic Field Office and available on the Arctic Field Office Environmental Assessment web site.

## **5.2. List of Preparers**

Susan Flora, Environmental Scientist  
Richard Kemnitz, Hydrologist  
Michael Kunz, Archaeologist  
Stacey Fritz, Anthropologist/Subsistence Specialist  
Debbie Nigro, Wildlife Biologist  
Roger Sayre, NEPA Specialist  
Matthew Whitman, Fish Biologist  
Donna Wixon, Natural Resource Specialist  
Dave Yokel, Wildlife Biologist

## **5.3. ANILCA Requirements**

### **810 Subsistence Evaluation**

This action is not likely to cause any significant restriction to the subsistence resources of the area.

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# Chapter 6. Bibliography

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Baker, M. Jr. 2007. Colville River Delta Lakes Recharge Monitoring and Analysis. Report 110919-MBJ-RPT-001, prepared for ConocoPhillips Alaska, Anchorage.

CRSAMP BLM 2008. Colville River Special Area Management Plan. July.

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# **Chapter 7. Appendix A**

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Renewal 2012-2015*

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## 7.1. APPENDIX A

### NE IAP/EIS ROD

#### Stipulations and Required Operating Procedures

#### Waste Prevention, Handling, Disposal, Spills, Air Quality, and Public Health and Safety:

##### *A-1 Required Operating Procedure*

Objective: Protect the health and safety of oil field workers and the general public by disposing of solid waste and garbage in accordance with applicable Federal, state, and local law and regulations.

Requirement/Standard: Areas of operation shall be left clean of all debris.

##### *A-3 Required Operating Procedure*

Objective: Minimize pollution through effective hazardous-materials contingency planning.

Requirement/Standard: For oil- and gas-related activities, a Hazardous Materials Emergency Contingency Plan shall be prepared and implemented before transportation, storage, or use of fuel or hazardous substances. The plan shall include a set of procedures to ensure prompt response, notification, and cleanup in the event of a hazardous substance spill or threat of a release. Procedures applicable to fuel and hazardous substances handling (associated with transportation vehicles) shall consist of Best Management Practices (BMPs) if approved by the AO. The plan shall include a list of resources available for response (e.g., heavy-equipment operators, spill-cleanup materials or companies), and names and phone numbers of Federal, state, and NSB contacts. Other Federal and state regulations may apply and require additional planning requirements. All appropriate staff shall be instructed regarding these procedures. In addition contingency plans related to facilities **developed** for oil production shall include requirements to:

- a. provide refresher spill-response training to NSB and local community spill-response teams on a yearly basis,
- b. plan and conduct a major spill-response field-deployment drill annually,
- c. prior to production and as required by law, develop spill prevention and response contingency plans and participate in development and maintenance of the North Slope Subarea Contingency Plan for Oil and Hazardous Substances Discharges/Releases for the National Petroleum Reserve - Alaska operating area. Planning shall include development and funding of detailed (e.g., 1:26,000 scale) environmental sensitivity index maps for the lessee's operating area and areas outside the lessee's operating area that could be affected by their activities. (The specific area to be mapped shall be defined in the lease agreement and approved by the AO in consultation with appropriate resource agencies). Maps shall be completed in paper copy and geographic information system format in conformance with the latest version of the U.S. Department of Commerce, National Oceanic and Atmospheric Administration's Environmental Sensitivity Index Guidelines. Draft and final products shall be peer reviewed and approved by the AO in consultation with appropriate Federal, state, and NSB resource and regulatory agencies.

##### *A-4 Required Operating Procedure*

Objective: Minimize the impact of contaminants on fish, wildlife, and the environment, including wetlands, marshes and marine waters, as a result of fuel, crude oil, and other liquid chemical spills. Protect subsistence resources and subsistence activities. Protect public health and safety.

Requirement/Standard: Before initiating any oil and gas or related activity or operation, including field research/surveys and/or seismic operations, lessees/permittees **shall develop a comprehensive spill prevention and response contingency plan** per 40 CFR § 112 (Oil Pollution Act). The plan shall consider and take into account the following requirements:

- a. On-site Clean-up Materials. Sufficient oil-spill-cleanup materials (absorbents, containment devices, etc...) shall be stored at all fueling points and vehicle-maintenance areas and shall be carried by field crews on all overland moves, seismic work trains, and similar overland moves by heavy equipment.
- b. Storage Containers. Fuel and other petroleum products and other liquid chemicals shall be stored in proper containers at approved locations. Except during overland moves and seismic operations, fuel, other petroleum products, and other liquid chemicals designated by the AO that in total exceed 1,320 gallons shall be stored within an impermeable lined and diked area or within approved alternate storage containers, such as over packs, capable of containing 110% of the stored volume. In areas within 500 feet of water bodies, fuel containers are to be stored within appropriate containment.
- c. Liner Materials. Liner material shall be compatible with the stored product and capable of remaining impermeable during typical weather extremes expected throughout the storage period.
- d. Permanent Fueling Stations. Permanent fueling stations shall be lined or have impermeable protection to prevent fuel migration to the environment from overfills and spills.
- e. Proper Identification of Containers. All fuel containers, including barrels and propane tanks, shall be marked with the responsible party's name, product type, and year filled or purchased.
- f. Notice of Reportable Spills. Notice of any reportable spill (as required by 40 CFR § 300.125 and 18 AAC § 75.300) shall be given to the AO as soon as possible, but no later than 24 hours after occurrence.
- g. Identification of Oil Pans (*"duck ponds"*). All oil pans shall be marked with the responsible party's name.

#### ***A-5 Required Operating Procedure***

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

Requirement/Standard: Refueling of equipment within 500 feet of the active floodplain of any water body is prohibited. Fuel storage stations shall be located at least 500 feet from any water body with the exception of small caches (up to 210 gallons) for motor boats, float planes, ski planes, and small equipment, e.g. portable generators and water pumps, will be permitted. The AO may allow storage and operations at areas closer than the stated distances if properly designed to account for local hydrologic conditions.

#### ***A-6 Required Operating Procedure***

Objective: Minimize the impact on fish, wildlife, and the environment from contaminants associated with the exploratory drilling process.

Requirement/Standard: Surface discharge of reserve-pit fluids is prohibited.

### ***A-7 Required Operating Procedure***

Objective: Minimize the impacts to the environment of disposal of produced fluids recovered during the **development** phase on fish, wildlife, and the environment.

Requirement/Standard: Discharge of produced water in upland areas and marine waters is prohibited.

### ***A-9 Required Operating Procedure***

Objective: Reduce air quality impacts.

Requirement/Standard: Concurrent with implementation of the requirement for adoption of use of ultra low sulfur diesel in the “North Slope Ultra Low Sulfur Diesel Transition Agreement,” as amended, between the State of Alaska, BP Exploration (Alaska) Inc. and ConocoPhillips Alaska, Inc., or implementation of federal regulations requiring use of “ultra low sulfur” diesel within NPR-A if these regulations take effect prior to the “Transition Agreement,” all oil and gas operations (vehicles and equipment) that burn diesel fuels must use “ultra low sulfur” diesel as defined by the Alaska Department of Environmental Conservation – Division of Air Quality, subject to its availability. The use of alternative diesel fuel may be considered and approved by BLM’s Authorized Officer on a case-by-case basis.

## **Water Use for Permitted Activities:**

### ***B-1 Required Operating Procedure***

Objective: Maintain populations of, and adequate habitat for, fish and invertebrates.

Requirement/Standard: Water withdrawal from rivers and streams during winter is prohibited.

### ***B-2 Required Operating Procedure***

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

Requirement/Standard: Water withdrawal from lakes may be authorized on a site-specific basis depending on water volume, and depth, and fish population and species diversification. Current water withdrawal requirements specify:

**a.** Lakes that are  $\geq 7$  feet with sensitive fish (any fish except ninespine stickleback or Alaska blackfish), water available for withdrawal is limited to 15% of calculated volume deeper than 7 feet; lakes that are between 5 and 7 feet with sensitive fish, water available for withdrawal would be calculated on a case by case basis.

**b.** Lakes that are  $\geq 5$  feet with only non-sensitive fish (i.e., ninespine stickleback or Alaska blackfish), water available for withdrawal is limited to 30% of calculated volume deeper than 5 feet.

- c. Any lake with no fish present, regardless of depth, water available for withdrawal is up to 35% as specified within the permit.
- d. A water-monitoring plan may be required to assess draw down and water quality changes before, during, and after pumping any fishbearing lake or lake of special concern.
- e. The removal of naturally grounded ice may be authorized from lakes and shallow rivers on a site-specific basis depending upon its size, water volume, and depth, and fish population and species diversification.
- f. Removed ice aggregate shall be included in the 15% or 30% withdrawal limits—whichever is the appropriate case—unless otherwise approved.
- g. Any water intake structures in fish bearing or non-fish bearing waters shall be designed, operated, and maintained to prevent fish entrapment, entrainment, or injury. Note: All water withdrawal equipment must be equipped and must utilize fish screening devices approved by the Alaska Department of Natural Resources (ADNR).
- h. Compaction of snow cover or snow removal from fish-bearing water bodies shall be prohibited except at approved ice road crossings, water pumping stations on lakes, or areas of grounded ice.

The following lease stipulations and ROPs apply to overland moves, seismic work, and any similar cross-country vehicle use of heavy equipment on nonroaded surfaces during the winter season. These restrictions do not apply to the use of such equipment on ice roads after they are constructed.

### **Winter Overland Moves and Seismic Work:**

#### ***C-1 Required Operating Procedure***

Objective: Protect grizzly bear, polar bear, and marine mammal denning and/or birthing locations.

#### Requirement/Standard:

- a. Cross-country use of heavy equipment and seismic activities is prohibited within ½ mile of occupied grizzly bear dens identified by the ADFG unless alternative protective measures are approved by the AO in consultation with the ADFG.
- b. Cross-country use of heavy equipment and seismic activities is prohibited within 1 mile of known or observed polar bear dens or seal birthing lairs. Operators shall consult with the USFWS and/or NOAA Fisheries, as appropriate, before initiating activities in coastal habitat between October 30 and April 15.

#### ***C-2 Required Operating Procedure***

Objective: Protect stream banks, minimize compaction of soils, and minimize the breakage, abrasion, compaction, or displacement of vegetation.

#### Requirement/Standard:

- a. Ground operations shall be allowed only when frost and snow cover are at sufficient depths to protect the tundra. Ground operations shall cease when the spring snowmelt begins (approximately

May 5 in the foothills area where elevations reach or exceed 500 feet and approximately May 15 in the northern coastal areas). The exact dates will be determined by the AO.

**b.** Only low-ground-pressure vehicles shall be used for on-the-ground activities off ice roads or pads. A list of approved vehicles can be obtained from the AO. Limited use of tractors equipped with wide tracks or “shoes” will be allowed to pull trailers, sleighs or other equipment with approved undercarriage. Note: This provision does not include the use of heavy equipment such as front-end loaders and similar equipment required during ice road construction.

**c.** Bulldozing of tundra mat and vegetation, trails, or seismic lines is prohibited; however, on existing trails, seismic lines or camps, clearing of drifted snow is allowed to the extent that the tundra mat is not disturbed.

**d.** To reduce the possibility of ruts, vehicles shall avoid using the same trails for multiple trips unless necessitated by serious safety or superseding environmental concern. This provision does not apply to hardened snow trails for use by low-ground-pressure vehicles such as Rolligons.

**e.** The location of winter ice roads shall be designed and located to minimize compaction of soils and the breakage, abrasion, compaction, or displacement of vegetation. Offsets may be required to avoid using the same route or track in the subsequent year.

**f.** Motorized ground-vehicle use within the CRSA associated with overland moves, seismic work, and any similar use of heavy equipment shall be minimized within the Colville River Raptor, Passerine, and Moose Area from April 15 through August 5, with the exception that use will be minimized in the vicinity of gyrfalcon nests beginning March 15. Such use will remain ½ mile away from known raptor nesting sites, unless authorized by the AO.

### ***C-3 Required Operating Procedure***

Objective: Maintain natural spring runoff patterns and fish passage, avoid flooding, prevent streambed sedimentation and scour, protect water quality and protect stream banks.

Requirement/Standard: Crossing of waterway courses shall be made using a low-angle approach. Snow and ice bridges shall be removed, breached, or slotted before spring breakup. Ramps and bridges shall be substantially free of soil and debris. Except at approved crossings, operators are encouraged to travel a minimum of 100 feet from known overwintering fish streams and lakes.

### ***C-4 Required Operating Procedure***

Objective: Avoid additional freeze-down of deep-water pools harboring over-wintering fish and invertebrates used by fish.

Requirement/Standard: Travel up and down streambeds is prohibited unless it can be demonstrated that there will be no additional impacts from such travel to over-wintering fish or the invertebrates they rely on. Rivers and streams shall be crossed at shallow riffles from point bar to point bar whenever possible.

## **Facility Design and Construction**

### ***E-9 Required Operating Procedure***

Objective: Avoidance of human-caused increases in populations of predators of ground nesting birds.

Requirement/Standard:

- a. Lessee shall utilize best available technology to prevent facilities from providing nesting, denning, or shelter sites for ravens, raptors, and foxes. The lessee shall provide the AO with an annual report on the use of oil and gas facilities by ravens, raptors and foxes as nesting, denning, and shelter sites.
- b. Feeding of wildlife is prohibited and will be subject to noncompliance regulations.

***E-10 Required Operating Procedure***

Objective: Prevention of migrating waterfowl, including species listed under the Endangered Species Act, from striking oil and gas and related facilities during low light conditions.

Requirement/Standard: Illumination of all structures between August 1 and October 31 shall be designed to direct artificial exterior lighting inward and downward, rather than upward and outward, unless otherwise required by the Federal Aviation Administration.

***E-13 Required Operating Procedure***

Objective: Protect cultural and paleontological resources.

Requirement/Standard: Lessees shall conduct a cultural and paleontological resources survey prior to any ground-disturbing activity. Upon finding any potential cultural or paleontological resource, the lessee or their designated representative shall notify the AO and suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the AO.

**Use of Aircraft for Permitted Activities:**

***F-1 Required Operating Procedure***

Objective: Minimize the effects of low-flying aircraft on wildlife, traditional subsistence activities, and local communities.

Requirement/Standard: The lessee shall ensure that aircraft used for permitted activities 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 objective of the stipulations and ROPs. **However, flights necessary to gain this information will be restricted to the minimum necessary to collect such data**):

- a. Aircraft shall maintain an altitude of at least 1,500 feet above ground level (AGL) when within ½ mile of cliffs identified as raptor nesting sites from April 15 through August 15 and within ½ mile of known gyrfalcon nest sites from March 15 to August 15, unless doing so would endanger human life or violate safe flying practices. Permittees shall obtain information from the BLM necessary to plan flight routes when routes may go near falcon nests.
- b. Aircraft shall maintain an altitude of at least 1,000 feet AGL (except for takeoffs and landings) over caribou winter ranges from December 1 through May 1, unless doing so would endanger human life or violate safe flying practices. Caribou wintering areas will be defined annually by the AO. The AO will consult directly with the Alaska Department of Fish and Game in annually defining caribou winter ranges.

c. Land user shall submit an aircraft use plan as part of an oil and gas exploration or development proposal. **The plan shall address strategies to minimize impacts to subsistence hunting and associated activities, including but not limited to the number of flights, type of aircraft, and flight altitudes and routes, and shall also include a plan to monitor flights.** Proposed aircraft use plans should be reviewed by appropriate Federal, state, and Borough agencies. Consultations with these same agencies will be required if unacceptable disturbance is identified by subsistence users. Adjustments, including possible suspension of all flights, may be required by the AO 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 should be limited to the maximum extent possible. During the design of proposed oil and gas facilities, larger landing strips and storage areas should be considered so as to allow larger aircraft to be employed, resulting in fewer flights to the facility.

d. Use of aircraft, especially rotary wing aircraft, near known subsistence camps and cabins or during sensitive subsistence hunting periods (spring goose hunting and fall caribou and moose hunting) should be kept to a minimum.

e. Aircraft used for permitted activities shall maintain an altitude of at least 2,000 feet AGL (except for takeoffs and landings) over the Teshekpuk Lake Caribou Habitat Area (Map 1) from May 20 through August 20, unless doing so would endanger human life or violate safe flying practices. Aircraft use (including fixed wing and helicopter) by oil and gas lessees in the Goose Molting Area (Map 2) should be minimized from May 20 through August 20, unless doing so would endanger human life or violate safe flying practices.

#### **Subsistence Consultation for Permitted Activities:**

##### ***H-3 Best Management Practice***

Objective: Minimize impacts to sport hunting and trapping species and to subsistence harvest of those animals.

##### **Other:**

##### ***M-1 Best Management Practice***

Objective: Minimize disturbance and hindrance of wildlife, or alteration of wildlife movements through the NPR-A.

Requirement/Standard: Chasing wildlife with ground vehicles is prohibited. Particular attention will be given to avoid disturbing caribou

##### **M-2 Best Management Practice**

Objective: Prevent the introduction, or spread, of non-native, invasive plant species in the NPR-A.

Requirement/Standard: Certify that all equipment and vehicles (intended for use either off or on roads) are weed-free prior to transporting them into the NPR-A. Monitor annually along roads for non-native invasive species, and initiate effective weed control measures upon evidence of their introduction. Prior to operations in the NPR-A, submit a plan for the BLM's approval, detailing the methods for cleaning equipment and vehicles, monitoring for weeds and weed control.