

Bureau of Land Management (BLM) Alaska Arctic District Office

October 2022 Update on BLM North Slope Permitting and Activities

BI	M Arctic District Office Management Overview	3
Or	ngoing and Recently Completed Permits and Projects	5
	National Petroleum Reserve in Alaska Integrated Activity Plan / Environmental Impact Statement (NPR-A IAP/EIS)	5
	Willow Prospect Master Development Plan Environmental Impact Statement	7
	Oil and Gas Leasing Program for the Coastal Plain of the Arctic National Wildlife Refuge	9
	Greater Mooses Tooth One and Two	. 10
	BLM Hydrological Monitoring	. 11
	BLM Soil Temperature and Sonic Snow Depth Sensor Installation and Monitoring	. 13
	North Slope Borough Community Winter Access Trails Right-of-Way	. 15
	Native Village of Barrow Debris Removal at Skull Cliff LORAN	. 17
	BLM Studies and Research Programmatic Environmental Assessment	. 18
	ADF&G Nuiqsut Subsistence Fisheries Study	. 21
	Monitoring Polycyclic Aromatic Hydrocarbons (PAHs) in Sediments of the Colville River and Subsistence Fishes Important to the Community of Nuiqsut	. 22
	Caribou in the NPR-A	. 23
	Teshekpuk Lake Observatory, Drew Point and Point Lonely	. 24
	ASTAC fiber optic line route between Utqiagvik and Atqasuk	. 26
	University of Alaska Museum Earth Science Coordinator Patrick Druckenmiller	. 27
	Archeological Survey in the Eastern NPR-A	. 28
	Tukuto Lake Mapping in South-Central NPR-A	. 29
	Legacy Wells Program Update	. 31
	NPR-A Working Group	. 33
	North Slope Science Initiative	. 34
	Federal Muskox Hunt Game Management Unit 26A	. 34
	Fire Season on the North Slope	. 35
BI	M Arctic Office Staff Information	. 36
	Contact Info	. 37
	Permitting Links	. 37

BLM Arctic District Office Management Overview

The BLM's Arctic District Office, based in Fairbanks, Alaska, manages 22.6 million acres of public lands within the National Petroleum Reserve in Alaska, an additional 1 million acres of surface management outside of the NPR-A, and 1.6 million acres of subsurface estate in the Coastal Plain area of the Arctic National Wildlife Refuge, all on Alaska's North Slope.

The BLM assumed management of the NPR-A in 1976 when the Naval Petroleum Reserves Production Act (NPRPA) transferred the Reserve from the Navy to the Department of Interior, and the NPRPA is the guiding legislation for oil and gas leasing, exploration and development within the Reserve.



The NPR-A includes approximately 23 million acres of public lands and constitutes the largest contiguous block of public lands managed anywhere in the United States. Four predominantly Iñupiaq (Alaska Native) communities (Utqiaġvik, Atqasuk, Nuiqsut, and Wainwright) and their corresponding Alaska Native Claims Settlement Act village corporation lands are located within the

NPR-A. The Arctic Office has a Field Station in Utqiagvik (Barrow) and two remote logistic facilities in NPR-A: Inigok and Umiat.

In the northeast corner of the NPR-A, oil development is expanding westward from the Colville River Delta. There are currently 293 leases covering 2,593,249 acres in the NPR-A and ConocoPhillips Alaska, Inc. (CPAI) is the largest leaseholder (167 out of 305 leases).

For oil production, Greater Mooses Tooth-1 was approved in 2015 as a 12-acre pad which at full capacity can hold 33 wells. Currently 7 wells have been drilled for production of the Lookout Participating Area. Production began in October 2018, peaked at approximately 13,500 barrels per day but has since dropped to roughly 2,500 barrels per day. Greater Mooses Tooth-2- was approved in 2018 as a 14-acre pad that can hold up to 48 wells. It produced first oil December 12, 2021, estimated peak production is 30,000 BPD.



NPR-A Leases as of January 2022

The Arctic District Office also manages the Central Arctic Management Area (CAMA) Wilderness Study Area (WSA), which consists of eight separate tracts of land (totaling 259,000 acres) located between the NPR-A and the Dalton Corridor. Subsistence hunting and personal recreation are allowed in the WSA, and the BLM authorizes land use of the area for commercial activities such as float trips, wildlife viewing and guided hunts. Within CAMA is also the 29,000-acre Nigu-Iteriak Critical Environmental Concern (ACEC) that was established to protect geological and cultural resources. Arctic District also manages the CAMA's Mesa Site, which is the first well-documented Paleoindian site discovered in the North American Arctic and a key source of information about the

peopling of the new world. There are no facilities, maintained trails or roads leading to or within the CAMA. Recreational vehicle use is limited to subsistence users; other users typically access the area via aircraft and raft.

Ongoing and Recently Completed Permits and Projects¹

BLM's Arctic District Office generally completes 40-50 National Environmental Policy Act (NEPA) actions annually, including numerous Categorical Exclusions and Environmental Assessments, for a variety of different projects including activities related to oil and gas development, special recreation permits (SRPs), Rights-of-Ways (ROWs) and permits for research. Staff worked on 3 large-scale Environmental Impact Statements (EISs) in 2020, two of which are ongoing. Many of the office's ongoing and recent permits are described below.

National Petroleum Reserve in Alaska Integrated Activity Plan / Environmental Impact Statement (NPR-A IAP/EIS)

Management of the National Petroleum Reserve in Alaska (NPR-A) is governed by the Naval Petroleum Reserve Production Act (NPRPA), which affects how the land is managed and the types of uses that are authorized. For example, the NPRPA does not allow the Bureau of Land Management (BLM) to designate areas of critical environmental concern (ACECs) or allow hard rock mining in the NPR-A. The NPRPA requires the Secretary of the Interior to conduct oil and gas leasing and development within the NPR-A, and to protect significant subsistence resources, recreation, fish and wildlife, historical values, and/or scenic values to the extent it is consistent with oil and gas exploration and development. Other uses that do not interfere with oil and gas leasing and development and are not explicitly exempted can also be considered.

In addition, the Department of the Interior and Related Agencies' Fiscal Year 1981 Appropriations Act exempted the NPR-A from Section 202 of the Federal Land Policy Management Act (FLPMA). Section 202 requires the BLM to prepare land use plans (called Resource Management Plans) that describe allowable multiple uses and sustainable yield. Because of the exemption from FLPMA Section 202 and that the NPRPA is a dominant-use statute, BLM develops an Integrated Activity Plan (IAP) for the NPR-A that does not consider sustained yield and multiple uses.

In response to former Secretary Zinke's 2017 Secretary Order 3352 that directed the BLM to "development of a revised Integrated Activity Plan for the NPR-A that strikes an appropriate statutory balance of promoting development while protecting surface resources", the BLM completed the NPR-A Final Integrated Activity Plan Environmental Impact Statement (IAP EIS) in June 2020.

<u>¹</u>*This is not a complete list. See BLM's online NEPA page for all permitting*: <u>https://eplanning.blm.gov/epl-frontoffice/eplanning/lup/lup_register.do</u>

On December 31, 2020, the BLM signed the Record of Decision for the NPR-A Integrated Activity Plan. This Plan officially replaced the 2013 IAP and makes approximately 18.6 million acres available for oil and gas leasing and development while providing protections to surface resources.

On January 20, 2021, President Biden issued Executive Order 13990 – Protecting Public Health and the Environment and Restoring Science To Tackle the Climate Crisis. Section 2 of the Order directs the heads of all agencies to review all agency actions promulgated, issued, or adopted between January 20, 2017, and January 20, 2021, that are or may be inconsistent with, or present obstacles to, the policy set forth in Section 1 of the Executive Order, and as appropriate and consistent with applicable law, to consider whether to take any additional agency actions to fully enforce the policy.

On April 16, 2021, Secretary Haaland issued Secretary's Order 3398, which revoked Secretary's Order 3352 (2017), finding it inconsistent with or to present obstacles to the policy set forth in Executive Order 13990, and directed the Department of Interior to review and revise, as necessary, all policies and instructions that implemented Secretary's Order 3352 or that are otherwise inconsistent with the policy set forth in Executive Order 13990. The Department of Interior has identified the 2020 IAP as one such policy warranting review under Secretary's Order 3398, and subsequently directed the BLM to conduct an evaluation of the 2020 IAP/EIS, associated subsistence evaluation, and existing biological opinions to determine whether they remain adequate under the National Environmental Policy Act, Section 810 of the Alaska National Interest Lands Conservation Act, and Endangered Species Act to assist and inform the Department in making a final decision regarding the NPR-A IAP, including potential issuance of a new ROD selecting another plan alternative from the 2020 IAP/EIS.

Until the evaluation has been completed, the BLM will not offer tracts in an oil and gas lease sale in the NPR-A in areas newly opened to leasing under the 2020 Record of Decision.

On January 7, 2020, the BLM provided the status of its evaluation to the Department. The BLM-Alaska drafted a Determination of NEPA Adequacy (DNA) to assess new circumstances and information that may have arisen since the completion of the 2020 IAP/EIS and its associated subsistence evaluation to determine whether additional analysis is necessary prior to the potential adoption of a different alternative from the 2020 IAP/EIS in a new ROD. The BLM has made a finding that the existing 2020 IAP/EIS and its subsistence evaluation are adequate and additional analysis is unnecessary to adopt a different alternative from the 2020 IAP/EIS. The BLM identified Alternative A, the No Action alternative analyzed in the 2020 IAP/EIS as its preferred alternative.

In April 2022, a new ROD was issued for this preferred alternative that provides for management of the NPR-A consistent with the 2013 IAP, while including certain more protective lease stipulations and operating procedures for threatened and endangered species from the 2020 IAP/EIS.



Management under the 2022 Record of Decision

Willow Prospect Master Development Plan Environmental Impact Statement

The BLM initiated a master development plan EIS to evaluate development of the Willow oil prospect in August 2018. The proposed Willow project consists of a central processing facility, infrastructure pads, up to five drill pads with up to fifty wells on each pad, access and infield roads, an airstrip, pipelines, a gravel mine, and updates to an existing dock at Oliktok Point to support module delivery via sealift barges- The BLM published the Willow Master Development Plan Final Environmental Impact Statement (EIS) on August 14, 2020, and signed the Record of Decision in October 2020.





Location of the Willow Master Development Plan Project Area

The BLM was sued for failure to comply with the National Environmental Policy Act in producing the Willow EIS and a stay was issued for the Willow project in February 2021 while the lawsuit proceeded through the court system. A subsequent ruling from the Alaska District Court in August 2021 remanded the EIS to the BLM to address two identified deficiencies related to the range of alternatives and the analysis of foreign greenhouse gas emissions. The Biological Opinion for the Willow project was also remanded to the USFWS.

The BLM developed a new alternative in response to the Court's ruling and published a Draft Supplemental EIS on July 15, 2022 for a 45 day public comment period, which ended on August 29, 2022. The new alternative reduced the total number of drill sites to four and made other project refinements to reduce impacts consistent with the Court's direction. BLM is working on preparing responses to public comments and anticipates publishing the Final Supplemental EIS in the fourth quarter. There is a mandatory 30 day waiting period between the Final SEIS and publication of a Record of Decision. For more information, contact the BLM's project manager, Stephanie Rice, at srice@blm.gov.

Oil and Gas Leasing Program for the Coastal Plain of the Arctic National Wildlife Refuge

In September 2019 and in connection with Public Law 115-97 (Tax Act) the BLM completed the Coastal Plain Oil and Gas Leasing Final Environmental Impact Statement (EIS) and then issued a Record of Decision (ROD) in August 2020. The Tax Act established that the Secretary of the Interior, acting through the BLM, shall establish a competitive oil and gas program for the leasing, development, production, and transportation of oil and gas in and from the Coastal Plain of the Arctic National Wildlife Refuge (Coastal Plain). Per the Tax Act, the Secretary shall manage the oil and gas program on the Coastal Plain in a manner similar to the administration of lease sales under the Naval Petroleum Reserves Production Act of 1976 (NPRPA). The Tax Act included the requirement to hold not fewer than two area-wide lease sales within 10 years. The 2020 ROD approved a program to implement the Tax Act. The first lease sale was held on January 6, 2021. On January 19, 2021, the BLM issued leases on nine of the tracts. On June 1, 2021, the Secretary of the Interior issued Secretary's Order 3401 which directed "a temporary halt on all Department activities related to the leasing program in the Arctic Refuge pending a new, comprehensive analysis of the potential environmental impacts of the Program to address identified legal deficiencies. On August 4, 2021, a Notice of Intent was published in the Federal Register Kicking off the Supplemental EIS process. The comment period for this scoping period ended on October 4, 2021.

The purpose of the current public EIS process is to determine the scope of issues to be addressed and to identify the significant issues, including any legal deficiencies in the 2019 Final EIS/2020 ROD, related to an oil and gas leasing program within the Coastal Plain.

Supplemental analysis may include (but is not limited to):

- Revision of reasonably foreseeable development (RFD) and areas available for leasing
- An alternative allowing for less than 2,000 acres of surface development
- Updated analysis of greenhouse gas emissions
- New information related to subsistence resources (e.g., fish, marine mammals, caribou) and subsistence use/access
- A wider range of potential development outcomes
- Revision of lease stipulations and required operating procedures

The USFWS is a joint-lead on the development of the Supplemental EIS. The cooperating agencies currently are the State of Alaska, the Native Village of Venetie Tribal Government, the Venetie Village Council, and the Arctic Village Council.

Information received during the scoping process will influence the development of the Supplemental EIS and guide the scope of the environmental analysis. The BLM will work collaboratively with interested parties to identify the management decisions best suited to local, regional, and national needs and concerns.

For additional information please refer to the project NEPA Register (ePlanning) websites at:

• August 2020 Record of Decision: <u>https://eplanning.blm.gov/eplanning-ui/project/102555/510</u>

BLM Alaska State and Arctic Office October 2022 North Slope Permitting & Activities Update

• Supplemental EIS: <u>https://eplanning.blm.gov/eplanning-ui/project/2015144/510</u>



Land Status within the Coastal Plain Leasing EIS

For more information, contact the BLM's project manager, Serena Sweet, at <u>ssweet@blm.gov</u>, or Planning and Environmental Specialist Stephanie Kuhns at skuhns@blm.gov.

Greater Mooses Tooth One and Two

BLM approved Greater Mooses Tooth One (GMT1) in the Greater Mooses Tooth Unit in 2015 as a 12-acre pad which at full capacity will hold 33 wells. GMT1 is an Alpine satellite pad connected by road to CD5 and was the first drill site on federal leases within the NPR-A. BLM, Arctic Slope Regional Corporation (ASRC) and Kuukpik Corporation share land and mineral rights for the overall project. Presently, GMT1 has a total of 7 wells, 2 of which are currently producing oil. Average production is 2,000 barrels of oil per day.

Please visit the Greater Mooses Tooth One website² for the Final EIS and Record of Decision.

² https://eplanning.blm.gov/epl-front-

office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage¤tPageId=50912

BLM approved the Greater Mooses Tooth Two (GMT2) project in 2018 as a 14 acre pad that can hold up to 48 wells. GMT2 components include a drill pad on federally managed (Kuukpik Corporation selected but not conveyed) lands approximately 16 miles west/southwest of Nuiqsut, and pipelines and a road connecting GMT2 to GMT1. Ten wells have been drilled and are producing oil and an 11th well is currently being drilled. Average production is currently 20,000 barrels of oil per day.

Please visit the Greater Mooses Tooth 2 Website³ for the Final EIS and Record of Decision.



Location of Greater Mooses Tooth One and Two

BLM Hydrological Monitoring

Beginning in the early 2000s, BLM established a network of aquatic monitoring sites that have continued to expand in conjunction with proposed oil and gas (O&G) development. This monitoring effort not only helps ensure the BLM fulfills its responsibility to encourage environmentally responsible development of energy on public lands, but it provides an opportunity to evaluate the

³ https://www.blm.gov/programs/planning-and-nepa/plans-in-development/alaska/GMT2-SEIS

effectiveness of BLM Required Operating Procedures (ROPs). The workload associated with maintaining this comprehensive network is possible due to a long-standing collaboration with the University of Alaska Fairbanks (UAF) Water and Environmental Research Center (WERC). To date, this long-term monitoring network includes:

- 6 river gauging sites
- 8 smaller stream gauging sites
- 13 lake monitoring sites
- 5 meteorological sites

In 2022, the Arctic District Office fish biologist, in collaboration with UAF hydrologist Chris Arp, visited all river and stream gauging sites to monitor water level, discharge, and temperature. These long-term data are not only used to inform infrastructure and route planning but are critical for analyzing potential impacts of proposed development in environmental reviews. In addition, various continuous water quality parameters (i.e., pH, turbidity, dissolved oxygen, etc.) were monitored at smaller stream sites, which are thought to be more susceptible to changes in water quality than larger rivers. These data, collected pre- and post-development, helps the BLM to assess if permitted activities are impacting water quality. Monitoring efforts during 2022 also included routine maintenance of meteorological sites that continuously record various climatological parameters (i.e., rainfall, air temperature, snow, etc.) to provide a time series dataset from which to evaluate changes in environmental conditions. Finally, because lake-stream networks dominate much of the Arctic Coastal Plain, ongoing monitoring of ice thickness, lake levels, outlet flow, and temperature at 13 lakes is critical to characterize regional water budgets.

During these routine site visits, we observed a large lake (i.e., Harry Potter Lake/Lake M0007) that had been monitored since 2018 was very close to draining into a nearby meandering stream within the proposed Willow development area. Surface water was noticeably flowing over a lakeshore-stream divide in early June with active headwater erosion of ice-rich permafrost soils apparent by late June. Nearby communities, permittees, and operators in the area were notified of the imminent lake drainage event at this time. In early July 2022 this point breached, draining almost the entire lake within 12 hours. Water level and turbidity sensors and time-lapse cameras captured this rapid lake drainage event at high resolution. This fortunate and detailed observation this event adds to a growing body of research on the impact of lake drainage on arctic hydrology and hazard forecasting in a region with an increasing human footprint.



BLM Soil Temperature and Sonic Snow Depth Sensor Installation and Monitoring

In late September 2019 the BLM Arctic District Office installed soil temperature sensors and sonic snow depth sensors at eight locations along the North Slope Borough's Community Winter Access Trail (CWAT) corridor to better assist in the monitoring of soil temperatures and snow depths. Thermistors were installed within approximately 30-150 meters (m) of the expected winter 2019-2020 CWAT location, as site conditions allowed. During August of 2022 BLM RDO installed an additional 4 soil temperature sensor cables and sonic snow depth sensors along the "newly permitted" segments of the CWAT ROW running from Barrow down to Atqasuk and over to Wainwright. Including the 4 stations installed in 2022, BLM now has a total of 14 soil and snow stations installed within the NPR-A.

The crew drilled in frozen soil with a flighted auger and collected all frozen soil shavings excavated from the holes. Crew members installed digital temperature sensing cable down the holes and connected them to a transmitting data logging unit, Sonic Depth Sounders (SDS), and mounting hardware above grade with markers to make the sites more visible. The mounting poles are 1.5-2.0 m above surface elevation. The crew used the mineral soil shavings collected from excavation to slurry, backfill, and refreeze the sensors and dug a shallow narrow trench from the thermistor installation site to the data logger. Trenched cables were encased in a polymer conduit for added protection from wildlife. Crew members surveyed each site with GPS, marking a snow course for ground truthing snow-depth measurements during subsequent winter field studies. Three markers at each site (spaced in an L-shaped pattern) consist of s-takes with a mounting bracket sunken 15 to 30 cm deep and connected to a flexible, reflective breakaway pole designed to be resilient if hit or run over by snow machine drivers or equipment operators.



BLM Arctic staff expects to continue monitoring efforts indefinitely. Arctic Office staff anticipate that equipment and loggers will function with little to no maintenance required for extended periods, but summer monitoring procedures allow for annual site visits to upload additional logger points and repair non-functioning equipment as needed. Site visits (at least one per year) would involve one helicopter landing and take-off with no additional ground disturbance.

Winter monitoring efforts will focus on snow depth data collection at up to eight sites, with one to three visits annually to each site by helicopter or snow-machine as conditions allow. Winter monitoring will consist of taking 50 snow depth measurements and five density measurements per

site. Surface disturbance will be limited to the walking trail and a few small, freshly cut faces in the snow profile to collect density measurements. Each snow survey effort would have a total of eight landings and take-offs for a maximum of 24 landings and take-offs.

If it is determined that monitoring should cease, then the above-ground portion of the installation (conduits, buried cables, and snow course markers) can be removed with minimal disturbance to surface vegetation and negligible soil thermal regime effects.

During December of 2021 BLM conducted snow road prepacking monitoring and snow sampling along the CWAT trail. Snow density and hardness were characterized at points along the route both before and after the prepacking and post-packing freeze-up. This field work allows BLM to better understand industry methodologies as well as evaluate the effectiveness of Required Operating Procedures (ROPs) and Stipulations for permitted activities in the NPR-A.

North Slope Borough Community Winter Access Trails Right-of-Way

The BLM Arctic District Office permitted the North Slope Borough (NSB) Community Winter Access Trails (CWAT) in fall 2017 with a 5-year Right-of-Way. The CWAT involves annual winter construction of improved snow trails for use by residents along historically established Rolligon trails between Utqiagvik, Atqasuk, Wainwright, Point Lay, and Drill Site 2P (on the east side of the Colville River). This project focuses on maintaining existing trails and managing public safety. The five-year permit authorizes the CWAT from winter 2017-18 through winter 2022-23.

In winter 2019 the Arctic District amended the Right-of-Way (ROW) for the CWAT to include a route between Wainwright and Atqasuk. The ROW was also amended to authorize the installation of two safety shacks along the CWAT route, which would provide heat, shelter, and basic facilities for CWAT travelers.

In winter 2021, the Arctic District Office amended the current ROW to add two new snow trails including a new route from Wainwright to the Village of Point Lay and a route to Wainwright that would use a more traditional trail from Utqiagvik. The request would also add three safety shelters on these snow trails.



Location of CWAT and Associated Safety Shacks



Black line Shows the New Snow Trail to Wainwright



Snow Trail from Wainwright to Point Lay

This project is expected to demonstrate the NSB's capability to provide winter overland access to its communities located adjacent to or within the National Petroleum Reserve in Alaska (NPRA). The NSB coordinates the establishment and development of the winter access trails. Eskimos, Inc. serves as the NSB's prime contractor for the winter trails and is responsible for the subcontractors conducting work on the trails.

Commercial operators wishing to use the CWAT are permitted separately by the BLM.

Please visit the CWAT ePlanning website for complete information.

Native Village of Barrow Debris Removal at Skull Cliff LORAN

The Native Village of Barrow in Utqiagvik, Alaska, is removing debris at the former Skull Cliff Long Range Aid to Navigation (LORAN) site through a Cooperative Agreement with the U.S.Army Corps of Engineers under the Native American Lands Environmental Mitigation Program (NALEMP). NALEMP is a Department of Defense program that provides federally recognized tribes an active role in environmental cleanup resulting from past Department of Defense activities. The Skull Cliff LORAN site was built in 1947 and included a power house, barracks, a transmitter building, a 625foot tall LORAN tower, and other infrastructure. It was closed in 1951, and all of the structures associated with the site have been demolished. Between 1976 and 1978, more than 3,000 tons of debris and 2,200 barrels were removed from the site, including the LORAN tower. In 2019, the Native Village of Barrow began work to remove debris remaining at the site. Large debris was cut or broken into manageable sizes, and winches were used to remove wooden pilings from the ground. If a piling couldn't be removed, then it was cut off below the ground surface, and the underground portion left in place. Much of the debris was removed from the site, however there are 538 wooden pilings staged on site for removal.

The Native Village of Barrow and the U.S. Corps of Engineers have a new cooperative agreement to complete additional work at the Skull Cliff LORAN site consisting of removing additional pilings from the ground and transporting all of the debris off site for disposal, including the wooden pilings and other trash stockpiled on the site as part of the previous cleanup effort. The Native Village of Barrow would remove pilings and other debris and stage them on site in the fall of 2022. In the spring of 2023, snowmachines would be used to haul the staged debris to Utqiagvik for proper disposal. BLM has renewed the Right of Way for the portion of the activity that is on BLM managed public land.

BLM Studies and Research Programmatic Environmental Assessment

The BLM is in the early stages of developing an Environmental Assessment (EA) that will describe and analyze the impacts of numerous studies, research, monitoring and inspections conducted annually in the National Petroleum Reserve in Alaska. The EA will include caribou monitoring and collaring and surveys for grizzly bear, numerous different bird species, soils, vegetation, cultural resources, paleontological resources, wolverine, fish, and lakes, and hydrologic surveys. The EA will also consider annual BLM inspections and monitoring including those for legacy wells, oil and gas activities, permit inspections, and special recreation permits. Aircraft use will be the major issue associated with these activities.

For aviation, we have already begun to analyze previous data in order to be able to compare it over the course of several years. The initial analysis involved data from summer 2021 and compared the number of takeoffs and landings across different categories, the number of permitted flights vs. the actual number of flights during the aviation season, and spatial data. Information presented to the NPR-A Working Group is shown below. We plan to include analysis of past years in order to have a better understanding of potential trends over time and to potentially find mitigation measures for aircraft use that has the potential to disturb subsistence users on the landscape. Additionally, the new requirement for permittees to provide the BLM with the tracks of their flights will allow for a better understanding of the use of airspace in the NPR-A going forward.



2021 Permitted vs. Actual Takeoffs/Landings



2021 Aviation by User Category





2021 Permittee Spatial Flight Data



2021 BLM Spatial Flight Data

ADF&G Nuiqsut Subsistence Fisheries Study

It is policy in Title VIII of the Alaska National Interest Lands Conservation Act that "the utilization of the public lands in Alaska is to cause the least adverse impact possible on rural residents who depend upon subsistence uses of the resources of such lands". BLM further emphasizes its resource protection mission for subsistence in Environmental Impact Statements for the NPR-A (NPR-A IAP/EIS, GMT1 EIS, GMT2 EIS, and Willow MDP EIS). Sustainable fisheries management in Alaska requires a solid understanding of harvest estimates as well as the social context in which harvest occurs. Baseline subsistence harvest information, collected systematically over time, is needed both for established state and federal management processes and for planning and impact assessment efforts. This information can only be acquired by working directly with village members to help determine whether characteristics of the fishery (catch composition, effort, areas utilized, etc.) are changing over time and if local fish resources that provide for this harvest are being affected by land-use or shifting environmental conditions.

The village of Nuiqsut in the northeast NPR-A is largely surrounded by oil and gas exploration and development, including several activities on BLM-managed lands in the region. The primary subsistence fishery in Nuiqsut is the fall under-ice harvest of Arctic cisco, which is very well tracked and has been monitored for about the last 30 years through funding from ConocoPhillips Alaska. However, there is much more sparse and scattered information on the harvest extent and areas of use and timing for other fish species. For example, fisheries getting less attention include burbot in the spring and broad whitefish during the summer and fall. The last known work in Nuiqsut regarding non-Arctic cisco fish harvest was 2006, and that was a very limited effort. Due to this developing data gap, the BLM solidified a financial assistance agreement in FY2020 with the Alaska Department of Fish and Game Division (ADF&G) Division of Subsistence in order for specialists experienced in this field to conduct the work.

In this project, ADF&G subsistence researchers will document harvests of Arctic fishes in order to produce community estimates of annual harvest and document local knowledge about patterns of use, abundance and health of fish stocks, and social factors that have affected fishing practices over time. Additionally, they will collect data to conduct a social network analysis of the sharing and distribution of fish resources within Nuiqsut and between Nuiqsut households and other communities. Social network analysis investigates the roles and patterns of cooperation and exchange within a community and helps to document the social organization of wild food production as a defining feature of subsistence economies. As such, it clarifies the effect of a change in resource availability or accessibility on the entire community rather than just harvesting households. These details are important as impact assessment efforts, particularly in the development of project alternatives and mitigative measures, need to consider the ecological and social importance of subsistence fisheries. This project will span three years (2021 - 2023).

Survey administration and key respondent interview fieldwork occurred for the first year of data collection on April 18-23, 2022. ADF&G staff surveyed 63 of 103 eligible households in the community

(61% sample) and interviewed 6 fishers. Researchers conducted additional fieldwork in July 2022 for participant observation of the summer broad whitefish fishery. Unfortunately, river conditions were such that Nuiqsut fishers were not setting net (high water levels had brought debris downstream), but ADF&G staff were able to participate in rod-and-reel fishing for grayling with several local fishers along key stretches of the Colville River and were able to conduct an additional key respondent interview.



Grayling Fishing on the Colville River, July 2022 (Photo credit

Data from the initial round of household harvest surveys and key respondent interviews are currently being analyzed. Upcoming fieldwork for this project includes travel to Nuiqsut in November 2022 for the arctic cisco fishery and a second round of household harvest survey data collection in January 2023 pending community approval.

Monitoring Polycyclic Aromatic Hydrocarbons (PAHs) in Sediments of the Colville River and Subsistence Fishes Important to the Community of Nuiqsut

The village of Nuiqsut in the northeast National Petroleum Reserve in Alaska (NPR-A) is largely surrounded by oil and gas (O&G) exploration and development, including a number of activities on BLM-managed lands in the region. Community members of Nuiqsut have expressed concerns regarding Polycyclic Aromatic Hydrocarbons (PAHs), a group of organic contaminants ubiquitous

BLM Alaska State and Arctic Office October 2022 North Slope Permitting & Activities Update

in the environment. Within the NPR-A, a previous study to assess baseline concentrations of PAHs was conducted over the course of seven years, with distinct collection events in 2004, 2005, 2008, and 2010. The results of this study indicated concentrations of PAHs fish were low, often below detection limits. However, these sampling efforts primarily occurred prior to the development of permanent O&G facilities within the NPR-A, as construction of the first permanent O&G drill site began in 2013, with first oil produced in 2015. Two additional gravel drill sites were subsequently permitted and began producing oil in 2018 and 2021, respectively.

In addition, some community members feel that PAH contamination may be associated with whitefishes infected with *Saprolegnia*, a water mold that can result in a fish disease called Saprolegniosis. This water mold was first found on broad whitefish by Nuiqsut fishermen during the fall of 2013. The occurrence of this mold has since been observed on additional whitefish species, including humpback whitefish, Arctic cisco, and least cisco (2020). While Saprolegniosis tends to be associated with fish that have physical wounds on their skin or are under stress, some causes of wounding and stress can be pollution, crowding, changes in environment (water temperature, salinity, water flow), and production (especially spawning males).

With the increase in O&G activity near areas that serve as important aquatic habitats, a follow-up monitoring effort to evaluate PAH levels in fish tissues and sediments is warranted to ensure that the Village of Nuiqsut, the North Slope Borough, and BLM are effective at protecting these sensitive aquatic ecosystems and comply with BLM's Required Operating Procedures (ROPs). The overarching goal of this project is to conduct a monitoring effort to evaluate potential changes in PAH concentrations in sediments and fish tissues within areas of the NPR-A and to assess whether elevated PAH levels are associated with fish infected with *Saprolegnia*. The BLM Arctic District Office, in collaboration with the North Slope Borough (NSB) Department of Wildlife Management (DWM), secured an agreement with contaminants specialists at the Mote Marine Laboratory to conduct analyses of PAH levels in fish tissues and sediments of the Colville River delta. As part of the agreement, a written report summarizing the study results would be provided as well as a presentation of the results to community members of Nuiqsut. This multi-year project is scheduled to begin in October of 2022.

Caribou in the NPR-A

The North Slope is home to four barren ground caribou herds, three of which use habitat within the NPR-A. The Western Arctic herd (WAH), which numbers an estimated 188,000 animals as of 2021, primarily utilizes lands in the northwest corner of Alaska, from the Seward Peninsula across the western and central Brooks Range to Utqiagvik. The Teshekpuk caribou herd (TCH), numbering 56,000 animals as of 2017, has its range in the central Arctic Coastal Plain, with most animals in the herd remaining in this area year-round. The Central Arctic herd (CAH), numbering 28,000 animals in 2017, is found centered around the Sagavanirktok River between the Colville River in the west and Canning River in the east. The Porcupine caribou herd (PCH), which numbers 218,000 animals as of 2017, has a range that includes the northeastern corner of Alaska east of the Canning River and stretches into Canada's Yukon Territory.

In 2018, BLM entered into a cooperative agreement with USGS to study the effects of road traffic volume and timing within the Kuparuk oilfield on CAH caribou movements. Findings indicate that during summer seasons caribou select for areas further from roads as well as for areas with lower traffic volume and were less likely to cross roads as traffic volume increased. However, as with previous research, this study also indicates that as mosquito harassment increases, caribou will avoid roads less. These findings have management implications and will help to inform mitigation strategies for future potential development in the region. Researchers are finalizing a manuscript for publication within the next year.

Teshekpuk Lake Observatory, Drew Point and Point Lonely

The Arctic Office granted Dr. Benjamin Jones with the University of Alaska Fairbanks (UAF) a Right-of-Way (ROW) to use the Naval Arctic Research Laboratory Cabin located at Teshekpuk Lake and to maintain meteorological stations on public land at Teshekpuk Lake, Point Lonely, and Drew Point. Jones maintains and operates meteorological stations that provide information for UAF, other researchers, and federal agencies including the Bureau of Land Management (BLM).

Jones was previously permitted for this under the United States Geological Survey (USGS). Jones has used and rehabilitated the NARL cabin and shed since 2010 and continues to maintain the site's visual aspect. The intention is to maintain the Teshekpuk site as a limited-use, long-term ecological Arctic research facility.

Jones uses the sites year-round and would base camp activities out of the NARL cabin. Typically, two to four people at a time would be involved in research activities. Access in the winter/spring would be via snow machine.





Location of Teshekpuk Lake Observatory



Erosion at Drew Point (Photo credit B. Jones- UAF)

ASTAC fiber optic line route between Utqiagvik and Atqasuk

The BLM Arctic Office approved a Right-of-Way Grant in July 2019 for the Arctic Slope Telephone Association Cooperative, Inc.'s (ASTAC) to install and use a terrestrial fiber optic cable laid on the ground surface connecting Atqasuk to Utqiaġvik. The grant will expire on Dec. 31, 2039. To date there has been no installation of cable.

ASTAC completed winter and summer surveys of the route of the route in 2018. The 65-mile long route follows the Walakpa Gas Field Pipeline to its southern terminus, and then it continues south toward Atqasuk paralleling a commonly used winter travel corridor. This route avoids eider nesting concentrations south of Utqiagvik, avoids most known camps, cabins, and cultural resources, and minimizes larger stream crossings. The cable will be elevated to cross Niklavik Creek, Inaru River, and Nigisaktuvik River.

ASTAC was approved a Right-of-Way amendment in February 2021 to use of the community winter access trails (CWAT) between Utqiagvik, Atqasuk, Wainwright, Nuiqsut, and Drill Site 2P for the purpose of supporting logistics for telecommunications operations and projects. ASTAC plans to use approved low-impact tundra travel vehicles to navigate the trails while hauling freight and transporting individuals.



Location of ASTAC fiber optic line route

University of Alaska Museum Earth Science Coordinator Patrick Druckenmiller

Dr. Patrick Druckenmiller conducted paleontological expeditions to the Colville River in the National Petroleum Reserve in Alaska (NPR-A) to excavate a highly productive dinosaur bonebed in the Prince Creek Formation between late March and mid-April of 2021 and 2022.

Dr. Druckenmiller's paleontological work was authorized through 2022 under a paleontological permit (AA095305) which was issued by the Bureau of Land Management (BLM) Alaska State Office. The Arctic District Office is responsible for issuing land use permits to accompany paleontological permits. The projects involved up to eight crewmembers travelling by truck from Fairbanks to Deadhorse (overnighting at Coldfoot and Deadhorse) before proceeding on oil company roads past the DS2P Pad and along the CWAT to the Colville River. They then deployed snow machines to access the camp site on a gravel bar along the Colville River. Dr. Druckenmiller 's crew made multiple trips to haul gear and personnel to the site, and crewmembers lodged in Arctic Oven tents heated with wood stoves.

Most recently in April 2022, Druckenmiller, along with a small crew from the University of Alaska Museum of the North and BLM archaeologist Joe Keeney, conducted winter excavation work near Ocean Point to retrieve samples from the Prince Creek bone bed. The crew camped on state land across the Colville and spent two weeks at the site in the NPR-A removing frozen sediments containing bone dating to approximately 75 million years ago. Excavation involved removing intact blocks of frozen sediment from the side of the bluff that runs along the west side of the Colville River to collect a sample of the bone layer. The winter methods were necessary due to the instability of the thawing sediments in the summer, which pose significant safety hazards to personnel if material breaks loose above the worksite. In the winter, the bluff sediments are frozen solid, stable, and safe to work below while excavating. The crew was able to retrieve between 1-2 cubic yards of material from the bone bed that contains a variety of bones from different dinosaur species and other animals that lived with them. The University of Alaska Museum of the North is still studying the samples and the results and findings are forthcoming. The 2022 crew was joined by a documentary film crew of four people filming for a documentary for the documentary streaming service Curiosity Stream. Druckenmiller's 2021 work in the NPR-A was featured in an episode of NOVA that aired on PBS in January 2022.

BLM Alaska State and Arctic Office October 2022 North Slope Permitting & Activities Update



Archeological Survey in the Eastern NPR-A

BLM archaeologist Joe Keeney has been conducting ongoing proactive archaeological survey work in the eastern NPR-A. The goal of this helicopter-based survey was to 1) identify and record previously undocumented archaeological or paleontological sites in the area, and 2) revisit known sites in the area to monitor their condition and update locational information using high-precision GPS. The archaeology crew would visually search for landforms and settings where identification of cultural materials would be likely and/or possible and would land at those locations to inspect the areas on foot or (in some cases) by low-level overflights (note: the crew avoided low level overflights when animals—namely caribou—were present). In addition, the archaeology crews visit sites outside the main survey area to record and map those sites and/or monitor their conditions, especially those along the Beaufort Sea coast that are actively eroding at a high rate.



As most of the overall land area used for permits authorized by the BLM Arctic district Office relates to overland transportation, the archaeology crew focused on surface sites, which are most susceptible to overland transportation. As buried sites are protected by the overlying sediments and vegetation and less likely to be disturbed by overland transportation, the archaeology crew limited the amount of subsurface testing (i.e., small-scale digging to identify the presence of buried materials) during this project.

Keeney, aided by one or two archaeologists hired as seasonal employees working for BLM, conducted a survey in the summer of 2022 over two weeks between July 21-26 and August 20-23. The crew focused most of the survey efforts within 60 miles of Inigok and Umiat. The 2022 archaeology crew aerially surveyed approximately 54,330 acres in search of suitable areas for more intensive survey on-foot. The 2021 crew surveyed 215 acres on foot, which resulted in seven newly documented sites and monitoring and updated mapping at 13 sites. Keeney plans to conduct another 2 weeks of similar survey in the eastern NPR-A in 2023.

Tukuto Lake Mapping in South-Central NPR-A

BLM archaeologist Joe Keeney, Drs. Josh Reuther (Archaeological curator, University of Alaska Museum of the North) and François Lanoë (Assistant Research Professor, University of Arizona), and UAF graduate student Haley McCaig conducted a collaborative project aimed at understanding the design and strategies associated with caribou drive line systems. Located 32 miles west of Ivotuk in the southern NPR-A, the Tukuto Lake Archaeological District contains several known archaeological sites dating to approximately 600-1,500 years ago, including several habitation sites with houses, cache pits, and numerous caribou bones, along with several miles of lines of stone cairns used as part of a drive system to efficiently herd caribou into an area for hunting large numbers. Excavations at Tukuto Lake

occurred in the 1970s and 1980s, focusing on sites immediately around the lake; however, until the work in 2022, there was virtually no documentation of the expansive driveline sites west of the lake (e.g., XHP-00288).

The 2022 work involved recording (photographing, notation, and detailed mapping with sub-meter GPS) the drivelines and other nearby features, and attempting to recover organic material (animal bone, wood, seeds, etc.) underneath the stones that could be used for radiocarbon dating when the drive systems were built. The 2022 crew limited excavation to two small (50x50cm) test pits at one of the driveline sites near Tukuto Lake, which were backfilled after completion. Crewmembers carefully lifted rocks along the driveline to locate materials suitable for dating and replaced all stones in their original positions (no larger stone features were disassembled). The 2022 crew successfully mapped three sites consisting of lines of cairns, hunting blinds, cache pits, and stone tool making debris near Tukuto Lake. The archaeological team limited artifact collection to only organic materials recovered beneath the rocks and materials recovered from the subsurface tests; all materials are now housed at the University of Alaska Museum of the North. Results from 2022 will determine the need for additional archaeological fieldwork at Tukuto Lake in the future, but additional visits are likely to map additional driveline sites beyond what could be reached in 2022.

The Tukuto Lake archaeology crew based out of a spike camp at Tukuto Lake, accessing the location via fixed wing to Ivotuk and helicopter between Ivotuk and Tukuto Lake. Helicopter use associated with this project was limited to accessing and departing Tukuto Lake, requiring three direct point-to-point flights each way. Fuel onsite was limited to propane cannisters for cooking and a 5-gal can of gasoline for a generator, all stored within the bear fence. The crew packed out all trash and human waste.

Keeney, Reuther, and Lanoë will be seeking to collaborate on this project with holders of traditional and historic knowledge from North Slope Borough communities. People interested in helping with this project can contact BLM archaeologist Joe Keeney at 907-474-2312 or jkeeney@blm.gov.



Legacy Wells Program Update

Background

Between 1944 and 1982, the U.S. Navy and the U.S. Geological Survey drilled 136 wells on Alaska's North Slope to explore for oil and gas resources within what is now the National Petroleum Reserve in Alaska (NPR-A). In 1976, BLM was given responsibility for managing the NPR-A, and in 1982 BLM inherited the responsibility for the legacy wells. Many of the legacy wells were not properly plugged or abandoned, and surface debris or contaminated soil may have been left in place. The BLM prepared the NPR-A 2013 Legacy Wells Summary Report and the NPR-A 2020 Legacy Wells Strategic Plan to assess the condition of each well and prioritize remediation of the wells.

2022/2023 Winter Season

The BLM has a contract to complete plugging and abandonment (P&A) activities at the Iko Bay legacy well. The contractor would mobilize to the well via a winter snow trail and complete P&A activities. Attempts to plug and abandon the Iko Bay legacy well in 2016 and 2017 were unsuccessful due to down-hole conditions.

Legacy Wells Upcoming Work:

The BLM contractor completed plugging and abandonment of the Omualik Test Well 1, Oumalik Core 2, Oumalik Core 11, Oumalik Core 12, and East Oumalik legacy wells over the 2021/2022 winter season. Contaminated soil encountered during the P&A activities remains on site, and additional work is needed to remove it. The BLM is currently working on a removal action plan.

The BLM completed the NPR-A 2020 Legacy Wells Strategic Plan, and continues to work on updating the 2013 Legacy Wells Summary Report. The BLM has prepared a programmatic Environmental Assessment for planned P&A activities at the following legacy wells over the next 10 years:

- Cape Halkett
- East Topagoruk
- Fish Creek
- Koalak
- Knifeblade 1
- Knifeblade 2
- Knifeblade 2A
- Meade
- Skull Cliff
- Topagoruk
- Tulageak



Location of Legacy Wells within the NPR-A

More Information:

More information on legacy wells can be found on the BLM Alaska website at: <u>https://www.blm.gov/programs/energy-and-minerals/oil-and-gas/alaska-legacy-wells</u>

Photos of the 2017/2018 winter plugging and abandonment activities are available on the BLM Alaska Flickr site: https://www.flickr.com/photos/blmalaska/albums

Contact Information:

Melody Debenham, Physical Scientist: <u>kdebenham@blm.gov</u> or (907) 474-2307 Allie Schoessler, Petroleum Engineering Technician: <u>aschoessler@blm.gov</u> or (907) 267-1244

NPR-A Working Group

This group provides the forum for North Slope communities to provide meaningful, regular input to on-going management decisions and proposed activities (e.g. oil and gas leasing) and developments (e.g. pipelines) in the National Petroleum Reserve in Alaska (NPR-A).

In response to comments and in consultation with local governments, Native corporations, and tribal entities, the group was established by the February 2013 NPR-A Integrated Activity Plan/Environmental Impact Statement (IAP/EIS).

The NPR-A Working Group consists of representatives from North Slope local governments, Native corporations, and tribal entities. BLM Alaska regularly attends meetings and oversees the contract for a facilitator, but BLM does not control or manage the group. Meetings were held from 2015 to July 2020. The group reformed in August 2021 after a hiatus and Voice of the Arctic is contracted to facilitate the meetings as of July 2021.

The group meets regularly and informs BLM about community concerns on a range of issues associated with activities within the NPR-A, including: oil and gas leasing, land use conflicts, exploration, and infrastructure projects supporting onshore and offshore oil and gas development, such as production facilities and pipelines.

The NPR-A Working Group also serves as a forum to collect additional scientific information and traditional knowledge about wildlife populations and needs. The group's input can inform potential adjustments to the boundaries of special areas. Similarly, if wildlife migration patterns are altered by future development in the NPR-A, the working group can provide important feedback about areas where additional protection of surface values should be considered.

The first face-to-face meeting of the NPR-A Working Group occurred on July 26-27, 2022 in Utqiagvik. Unfortunately, BLM representatives had to attend remotely due to their flight not landing in the community because of poor weather conditions. Meeting topics included review of the Working Group charter, co-management discussions, the Willow and Coastal Plain SEIS, the NPR-A IAP, aviation in the NPR-A, and air quality.

North Slope Science Initiative

The overall goal of the North Slope Science Initiative is to ensure compliance with NSSI's legislative mandate (2005 Energy Policy Act, Sec 348(b) to "...maintain and improve public and agency access to accumulated and ongoing research..." that can be used "...to address the individual and cumulative effect is of past, on going and anticipated development activities. Through an assistance agreement from BLM to UAA we ensure the design and maintenance of NSSI public websites (https://northslopescience.org, https://northslopescience.org/catalog, and https://northslopescience.org/nuiqsut) that facilitate the discovery, distribution and archival of science-based data, developing new data and providing multi-agency decision support capacity. UAA also provides employment opportunities for UAA students that promote DOI/BLM science objectives.

Federal Muskox Hunt Game Management Unit 26A

As a result of Federal Wildlife Proposal 22-55, the Bureau of Land Management Arctic District Office issued 6 federal draw permits for a muskox subsistence hunt on federally managed lands in the Western Portion of Game Management Unit 26A. The hunt area includes that portion of the unit west of the eastern shore of Admiralty Bay where the Alaktak River enters, following the Alaktak River to 155°00'W longitude, south to the GMU 26A border. This hunt is open to only federally qualified subsistence users residing in the eligible communities of Anaktuvuk Pass, Atqasuk, Utqiagvik, Nuiqsut, Point Hope, Point Lay, and Wainwright. The season for this hunt is August 1, 2022 to March 15, 2023, and is subject to closure at the discretion of the Arctic District Manager.



Fire Season on the North Slope

This summer, 5 fires were discovered on the North Slope, and all were a result of lightning strikes. Although these fires resulted in burning tussocks and tundra, no suppression action was taken because these fires were not threatening any identified surface values. All the fires burned into natural barriers and received precipitation from storms throughout the summer which caused them to go out naturally. All the fires were identified by satellite technology. The Rainbow fire was spotted by Visible Infrared Imaging Radiometer Suite (VIIRS) which a sensor attached to a joint NASA/NOAA satellite that detects heat signatures which is processed by UAF then displayed on the Alaska Fire Maps hosted by the AFS. The Kigalik fires were found by an Alaska Fire Service (AFS) GIS Specialist who was searching for fire scares and found what we call "Black Spots" which are fires that started and naturally went out without fire suppression organizations knowing about them. All the fires on the slope were managed by the AFS, Galena Zone located in Galena, AK. The largest fire (335 acres) was the Rainbow Fire #551 which was discovered on 7/11/2022 and was declared out on 7/31/2022.



Aerial view of the Rainbow Fire #551 (Photo Credit J. Keeney- BLM)

BLM Arctic Office Staff Information

Arctic District currently has a staff of 15 people. The Arctic District Office, located in Fairbanks, Alaska, manages surface resources in the NPR-A. We have a Community Outreach Specialist located in the community of Nuiqsut and are hoping to start the hiring process for a position in Utqiagvik soon. Currently our office is working with our human resources department, so it may be some time before that position is advertised.

Heather Savage is trained to issue USFWS subsistence hunting permits through the Federal Subsistence Management Program. These permits allow holders to harvest additional caribou, beyond their individual take limit on behalf of specific community members who cannot or are unable to harvest caribou themselves. For additional information please refer to: <u>https://www.doi.gov/subsistence</u>.

The office has a budget of approximately \$3.7 million. Roughly \$1.7 million is spent on labor and about \$1 million on our aviation program (a 100-day helicopter and fixed wing contract, fuel and runway maintenance). Much of the rest is spent through agreements and partnerships with UAF, USGS, USFWS, ADF&G and NSB on various hydrology, fish and wildlife monitoring studies.

Contact Info

BLM Arctic District Office Manager: Shelly Jones: <u>njones@blm.gov</u>, 907-474-2310 (office); 907-371-6915 (cell)

BLM Arctic District Office Permitting and Compliance Supervisor: Donna Wixon: <u>dwixon@blm.gov</u>, 907-474-2301

BLM Arctic District Office Resources Supervisor: Ted Inman: tinman@blm.gov, 907-474-2311

BLM Arctic District Office Planner: Sarah LaMarr: slamarr@blm.gov, 907-474-2200

BLM Willow Master Development Plan/EIS Project Lead: Stephanie Rice: srice@blm.gov; 907-271-3202

BLM Legacy Wells Program: Melody Debenham: kdebenham@blm.gov, 907-474-2307

BLM Arctic District Office Fish Biologist: Katie Drew: ksdrew@blm.gov, 907-474-2315

BLM Arctic District Office Wildlife Biologist: Heather Savage: hsavage@blm.gov, 907-474-2314

BLM Arctic District Office Wildlife Biologist: Debbie Nigro: dnigro@blm.gov, 907-474-2324

BLM Arctic District Office Archaeologist: Joe Keeney: jkeeney@blm.gov, 907-474-2312

BLM Arctic District Anthropologist: Beth Mikow: emikow@blm.gov, 907-474-2309

BLM Arctic District Soil Scientist: Matthew Ferderbar: mferderbar@blm.gov, 907-474-2325

BLM Arctic District Natural Resource Specialist: Tyler Fish: tfish@blm.gov, 907-474-2302

BLM Arctic District Natural Resource Specialist: Ashley Sabatino: asabatino@blm.gov, 907-474-2303

BLM Arctic District Realty Specialist: Lonnie Bryant: lbryant@blm.gov, 907-474-2306

BLM Community Outreach Specialist: Jamie Kasak: jkasak@blm.gov, 907-474-2301

Permitting Links

- BLM Alaska Webpage: <u>https://www.blm.gov/alaska</u>
- BLM Arctic Office Permitting email: blm_ak_arctic_permitting@blm.gov
- BLM National Petroleum Reserve in Alaska (NPR-A) Webpage: <u>https://www.blm.gov/programs/energy-and-minerals/oil-and-gas/about/alaska/NPR-A</u>
- BLM ePlanning (NEPA): <u>https://eplanning.blm.gov/epl-frontoffice/eplanning/lup/lup_register.do</u>

- Allows online review of and comment on BLM planning and implementation projects. This site also simplifies document searches by enabling searches by geographic location, project resource type, project year, and other specific fields.
- BLM NPR-A News Facebook Page: <u>https://www.facebook.com/BLM.NPRA.SAP/</u>