



Arctic National Wildlife Refuge U. S. Fish and Wildlife Service Summary of Activities



**Prepared for Eastern Interior and North Slope
Regional Advisory Councils. October 2020**

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Coronavirus (COVID-19) Pandemic

Beginning in early March 2020, Arctic Refuge staff began working from home to protect both themselves as well as Arctic Refuge communities from the spread of the COVID-19 disease. Many planned projects, events and activities had to be postponed, cancelled, or held virtually. By the summer months, the US Fish and Wildlife Service in Alaska had established safety guidelines allowing some limited field work to proceed while adhering to strict protocol for COVID-19 safety. The refuge continues to plan and conduct important surveys and field work within established safety guidelines.

Refuge Staffing Changes:



In May of 2020, Maria Berkeland was hired at Arctic NWR as the Permits specialist. Her primary role is the administration of special use permits for all permit types including scientific research and commercial activities such as air taxi, hunting guide, recreational guide and commercial film.



Tim Knudson was hired full-time in August 2020 as the Oil and Gas logistics coordinator. Tim's duties include coordination of logistical needs associated with the Arctic Coastal Plain research and monitoring needs.



Sara Wolman transferred to Arctic NWR from Alaska Peninsula/Becharof NWR in King Salmon as an Outreach/Visual Information Specialist. Sara assists with digital media support as well as other visitor services and outreach functions for the Refuge. She developed the Refuge's 60th Anniversary logo highlighted later in this report.

Oil and Gas Leasing Programs:

- NEPA Update – The Department of Interior released the Record of Decision (ROD) on the Arctic Coastal Plain Leasing EIS on August 17, 2020. The selected alternative is Alternative B which opens the entire area for oil and gas leasing.
- Field Projects/Research – Most field research projects planned in the Arctic Coastal Plain by Refuge staff and other researchers were cancelled this year due to COVID-19 concerns and limitations. In total, 19 individual research or inventory and monitoring projects had been planned in 2020 with 16 being completely canceled. Three projects carried on in a limited capacity while following strict COVID-19 safety guidelines.
 - Saint Mary's University of Minnesota worked on state and federal land north of Coldfoot, AK. Researchers collected data for the National Wetland Inventory with a few of their points located in Arctic NWR.
 - USGS carried out their annual maintenance check on the Hulahula River gauge.
 - USFWS Arctic LCC plans to get out in September as part of their frost and snow depth monitoring project in the Arctic Coastal Plain.

Biological Monitoring and Research

- Wildlife Research
 - Tundra Nesting Birds on North Slope -The Canning River Delta study site in Arctic Refuge was established in the late 1970s and has since become the primary tundra nesting bird research station for the refuge. Work at this location is a collaboration between Arctic National Wildlife Refuge, FWS External Affairs, FWS Migratory Birds, Manomet, Inc., the Wildlife Conservation Society, University of

Alaska Fairbanks, the U.S. Geological Survey, Alaska Department of Fish and Game, and Oregon Department of Fish and Wildlife. Due to travel restrictions because of COVID-19, we did not conduct work at the camp this year. However, Refuge staff and the Refuge Directorate Fellow were able to conduct work off the Dalton Highway in mid-July for the purpose of testing new tools for remotely monitoring nesting birds and tagging cackling geese to determine wintering areas. Cackling geese have increased 10 fold in this area over the last several decades and are now the most common waterbird at the study site. Our work seeks to track the post-breeding and wintering movements of cackling geese by attaching 25 g neck collars (about the weight of a single aa battery) that collect a GPS location every 15 minutes then transmits the data via cell towers when the birds enter areas of cell coverage in Canada and the lower 48. In prior years, all the birds that have reported spent at least some of the winter in Albuquerque, NM. Some of these birds wintering in Albuquerque have used our sister National Wildlife Refuge, Valle de Oro, and others grazed at school ballfields.



Figure 1. GPS/GSM derived locations of a cackling goose in December-February at ballfields at West Mesa High School in Albuquerque, NM. This bird was tagged the previous summer at her nest on the Canning River Delta.



Figure 2. Arctic Refuge Directorate Fellow collecting data at a cackling goose nest south of Prudhoe Bay. Photo credit – Sadie Ulman

- Pilot Study of Remote Monitoring Tools for Use with Small Mammals - Lemmings are a keystone species in the high Arctic. Traditional ecological knowledge and scientific research indicate lemming populations undergo dramatic fluctuations, and many predators (e.g., owls, foxes, and jaegers) prey almost exclusively on lemmings during high abundance years. When lemmings are scarce, predators may shift their diet to more abundant prey, such as ground-nesting birds or their eggs. In Alaska, research suggests peak lemming abundance often corresponds with increased reproductive effort and ground nesting birds nest survival. This summer, Refuge staff began developing novel remote tools for monitoring lemmings in Arctic Refuge. Remote monitoring techniques reduce handling (and therefore disturbance and stress to animals), cut costs, and provide larger sample sizes to answer more complex ecological questions. The methods being evaluated are: 1) RFID loggers to passively ‘recapture’ tagged small mammals, and 2) small triggered game cameras repurposed for capturing images of small mammals for abundance estimates. If successful, this method will be implemented at multiple sites in Arctic Refuge to study lemming ecology. Data on lemming population dynamics will be used to assess the relationships between predators, small mammals, and breeding success of tundra nesting birds in an area potentially impacted by the changing climate and industrialization.

This pilot study was originally intended to occur at the Canning River Delta in Arctic Refuge during the summer of 2020, but due to COVID-19 related disruptions, the project was modified and instead occurred, in collaboration with Alaska Department of Fish and Game and the National Park Service, at Creamer's Field Migratory Bird Refuge in Fairbanks. Staff redesigned the study plan to utilize voles and mice as surrogate species for lemmings until normal annual work resumes.



Figure 3. A tundra vole captured at Creamer's Field Migratory Bird Refuge with a Sherman trap. The vole is fitted with a subcutaneous PIT tag which is "read" by the RFID loggers being tested. We also fitted ear tags on PIT-tagged individuals, so that they are distinctly visible on the motion-triggered game cameras used in tandem with the RFID logger.

- Wildlife Monitoring

- Dall's Sheep

1. Two aerial Dall's Sheep surveys were carried out over the past year. During July 5-16, 2019 a USFWS team of four planes, pilots, and observers surveyed the Western Arctic Refuge Survey Area. The team documented 542 sheep within the survey area. Data is still being analyzed to determine overall sheep populations and densities for the survey area (using aerial distance sampling technique).

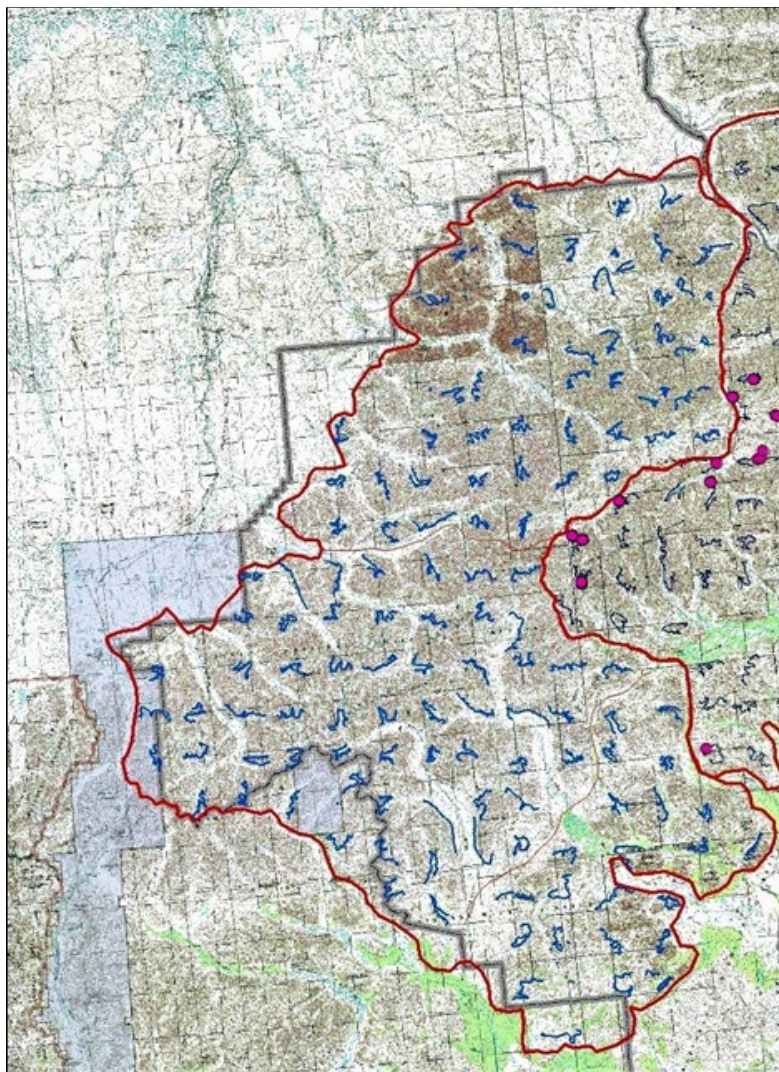


Figure 4. Western Arctic Refuge Dall's Sheep Survey Area



Figure 5. Group of Ewes and Lambs observed during the 2019 Western Arctic Refuge Survey

2. Dan Shelden (Pilot) and William Leacock (Biologist) conducted a minimum count sheep survey in the Arctic Village Sheep Management Area (AVSMA) from August 8 through August 13, 2020. Operations were based out of the Arctic National Wildlife Refuge Visitor Station at Arctic Village. The AVSMA was broken down into 5 survey areas, roughly Red Sheep Creek to Cane Creek, Cane Creek to Flatrock Creek, Chandalar River to Water Creek, Water creek to Spring Creek, and the Junjik River to Crow Nest Creek. A total of 279 sheep were documented within the AVSMA. The previous survey, conducted in 2012, documented 309 sheep within the AVSMA, but did not survey the Junjik River to Crow Nest Creek survey area. Detailed composition data is still being analyzed.

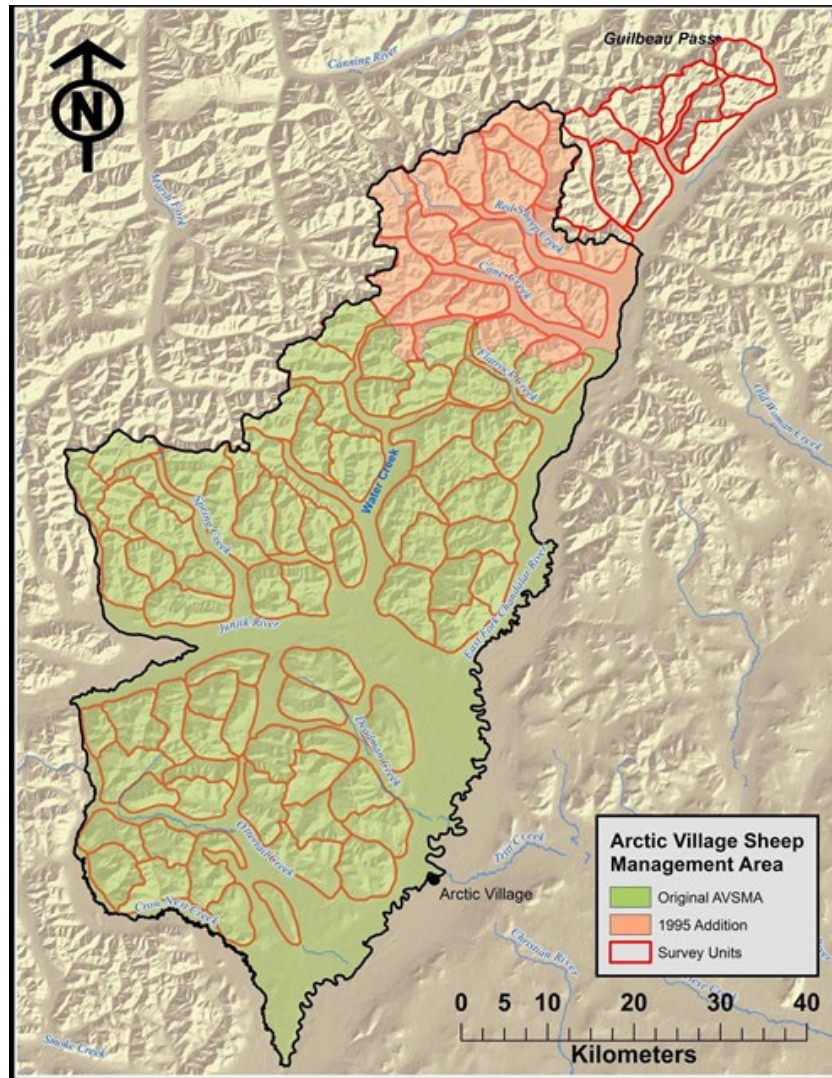


Figure 6. The Arctic Village Sheep Management (AVSMA) survey area

- Moose

Two aerial moose surveys were carried out in 2019 – one in April and one in October. These surveys were conducted using a Cessna 185 aircraft. Surveys were flown at altitudes of 500 - 1000 feet AGL (150 - 300 m) with airspeeds of 70-90mph (110-145 kph). All moose were counted and were identified as either unknown adult, calf, cow, or bull. From April 1-5 Dan Shelden and William Leacock surveyed the area from the Sadlerochit east to the Kongakut River. Survey drainages included the Sadlerochit, Hulahula, Jago, Okpilak, Egaksrak, Ekaluakat, and Kongakut. They counted 155 moose in the survey area, an increase over the number (94) observed in 2018. One moose was observed in the Okirourak drainage; eight moose were recorded in the Hula Hula drainage;

and 146 moose were documented in the Kongakut drainage. A small number of Dall sheep, three musk oxen (a single bull and a cow-bull pair); several wolves; several fox; and two wolf kill sites – a Dall sheep and a moose were also observed. During October 15-17, 2019, Dan Shelden and Timothy Knudson surveyed the area from the Jago River west to the Canning River. They documented 11 moose inhabiting the area. They observed 3 bulls and 1 cow in the Sadlerochet area and 5 cows and 2 bulls in the Okpirourak area. Additionally, they documented 25 Musk oxen, 4 bears, 6 Dall sheep, and 910 caribou within the survey area.

Public Use Management

- Visitor use trends – Refuge staff reviewed available data to assess changes to visitor use trends in Arctic Refuge that have occurred since the Public Use Summary for Arctic Refuge was published in April 2010. The rise in popularity of polar bear viewing has been the most substantial change in visitor use on Arctic Refuge over the past 10 years. Recorded visitation of other types, and in other places, has remained comparable to trends reported from 2001 to 2009.
- Polar Bear viewing – Per USFWS directive, Special Use Permits for Polar Bear Viewing were not issued for 2020. Arctic Refuge staff based in Kaktovik continue to support the community to address potential issues that emerge during the season when bears are present in large numbers around the community. Due to the continuing public health safety concerns related to the COVID -19 pandemic, the U.S. Fish and Wildlife Service’s Marine Mammals Management (MMM) program will be suspending their annual polar bear monitoring activities for fall 2020.
- Arctic NWR domestic animal regulation – Following the directive in the 2015 Revised Comprehensive Conservation Plan, Arctic NWR drafted a new regulation that would prohibit certain types of domestic pack animals (sheep, goats, and camelids) on Refuge lands to mitigate disease transmission potential to wild ungulates, primarily Dall sheep. The regulation was included in a broader national USFWS hunt/fish package and is in the process of being finalized. As part of this regulatory process, the USFWS held a hearing in order to solicit public comment. Due to COVID-19 restrictions and limitations on in person meetings, particularly in larger groups, the public hearing was held virtually using an online meeting platform.

- Clarify new regulations for the Arctic Village Sheep Management Area (AVSMA) – The State Board of Game recently passed a new state hunt opportunity that would occur within the boundary of the federally designated AVSMA. The area was labeled as “Eastern Brooks Range Management Area” and it directly overlays the Federal AVSMA (Figure 7). There was some early confusion as to whether the AVSMA area was open to non-qualified users during both the Youth Hunt in early August and during the winter hunt beginning in October (Figure 8). The area is not open to either hunt on Federal lands within the special management area (over 99% of the area). Refuge staff is working with Regional communications specialists to address how best to communicate the current status of the AVSMA to the public.

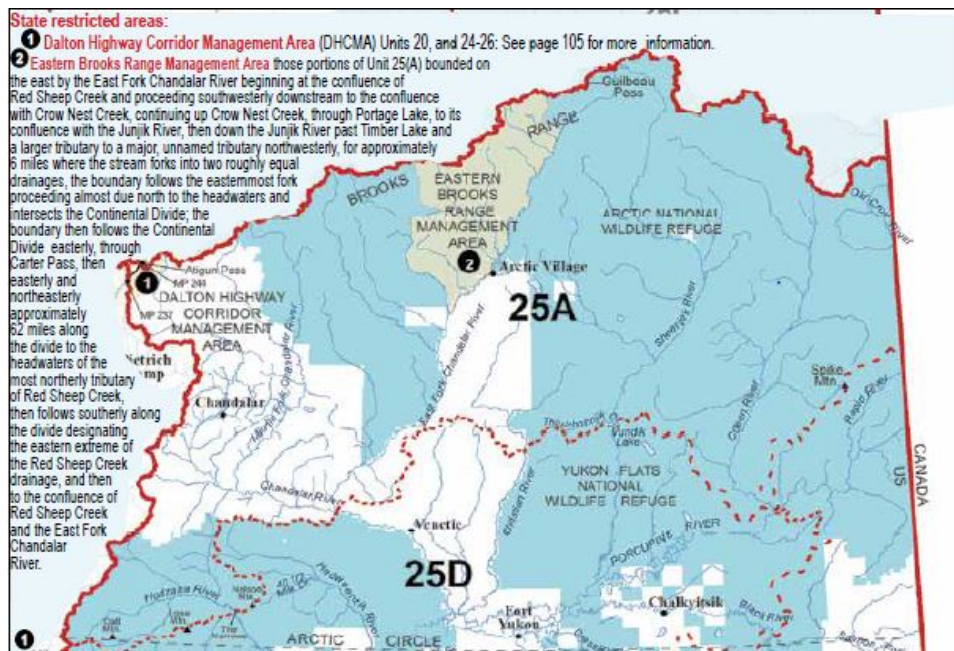


Figure 7. 2020-2021 Alaska Hunting Regulations, page 132

R	25A	Eastern Brooks Range Management Area	One ram with full-curl horn or larger. Youth hunt only	HT	Aug 1-Aug 5
			OR One ram with 3/4 curl horn or less every four regulatory years by permit available online at http://hunt.alaska.gov or in person in Fairbanks and Kaktovik beginning Sept 10. The use of aircraft for access to hunt sheep and to transport harvested sheep is prohibited in this hunt except into and out of the Arctic Village and Kaktovik airports. No motorized access from the Dalton Highway	RS595	Oct 1-April 30

Figure 8. 2020-2021 Alaska Hunting Regulations, page 135

- Ivishak Wild and Scenic River Values investigation – Arctic NWR staff, with the support of Regional planning staff and other river management professionals, began the process to define the water quality, free-flowing condition, and Outstandingly Remarkable Values for the 3 designated Wild and Scenic Rivers on the Refuge, including the Ivishak. Defining a designated river’s values is mandated by the Wild and Scenic Rivers Act. Refuge staff conducted a field assessment of the Ivishak River by floating it in July 2020. This allowed staff to better assess and thereby define the river characteristics Congress sought to maintain and enhance by including the Ivishak River in the National Wild and Scenic River System.



Figure 9. Rafts at the ready on the Ivishak River – July 2020

- Atigun River Gorge Safety Information – Staff developed safety information about floating the Atigun River Gorge and posted it in a variety of locations along the Dalton Highway, including on a temporary kiosk at the put-in where the highway crosses the river.
- Procurement of new boat to support activities along the Beaufort Coast - In August, Arctic NWR staff delivered a 24’ Kingfisher boat to Kaktovik. The Refuge looks forward to using the boat in support of FWS and community priorities including: monitoring Refuge visitors, assisting with local Search and Rescue operations, responding to spills or other environmental hazards, addressing fish/wildlife issues, and supporting coastal habitat research.

- Kaktovik school delivery permitting – Arctic Refuge, working with community leaders, expedited a permit for over-ice transport of materials and equipment to Kaktovik for the construction of a temporary school to be used in place of the Harold Kaveolook School, which was lost to a fire in February. As of August 10, 2020, building of the temporary school was close to completion and classes were set to begin on schedule in late August.

Public Outreach and Environmental Education

- 60th Anniversary of the Arctic National Wildlife Refuge – 2020 marks the 60th Anniversary of the establishment of the Arctic National Wildlife Refuge in 1960. Although COVID-19 dampened the intended recognition and celebration for 2020, Refuge and USFWS staff are moving forward with plans to more fully celebrate the Refuge’s 60th Anniversary virtually in 2020 and perhaps on the Refuge in 2021 if travel and field restrictions ease.



- Arctic Interagency Visitor Center - Due to the on-going COVID-19 situation the Arctic Interagency Visitor Center in Coldfoot, AK opened on July 1 rather than the traditional start date of May 24. The Center's hours were also reduced to noon to 8:00 p. Applying an abundance of caution, it was decided that Refuge staff would not be assisting with staffing the Center. The Arctic Interagency Visitor Center is operated through a long-standing and successful partnership between the Bureau of Land Management, National Park Service, United States Fish and Wildlife Service, and Alaska Geographic.

- Importance of Harvest and Hunter Effort Reporting

Federal Subsistence Hunt Application Wildlife - Registration -FS2502 - 2020/21 - Dall Sheep		Permit No.
Federal Land Unit: Arctic NWR - Arctic Village Sheep Mgmt Area	Unit(s) & Subunit(s): 25A ARCTIC VILLAGE	AK Hunting License Number:
Applicant's Name (First, Middle Initial, Last):	Date of Birth (mm/dd/yyyy):	Telephone Number:
Mailing Address:	Physical Address:	
Applicant's Signature X _____ I certify that I am a rural resident as defined by 50 CFR 100.4 and 36 CFR 242.4. I have read and understand the conditions on the permit and agree to comply with them and applicable regulations as found in 50 CFR 100 and 36 CFR 242.	Community of Primary Residence:	Issuing Agent (Print):
Federal Subsistence Harvest Report Permit Number: Permittee's Name: Permit Event: FS2502 - 2020/21	NON-TRANSFERABLE UNIT: 25A ARCTIC VILLAGE SEASON: 08/10/20 thru 04/30/21 LEGAL: Two Ram Sheep with one ram sheep per permit. Successful Harvest: <u>Must</u> return permit Harvest Report within 5 days after taking an animal. Unsuccessful or did not Hunt: <u>Must</u> return permit Harvest Report within 15 days after the close of the season.	
1. Did you hunt? Yes ___ No ___ Did you use a designated hunter where allowed? Yes ___ No ___ 2. A. How many days did you hunt? _____ B. How did you get to hunt area? (Circle your primary method of getting to where you started walking) 1. Airplane 3. Boat 5. Snow machine 7. Highway Vehicle 2. Horse/Dog Sled 4. 3/4-Wheeler 6. Other off road vehicle 8. No vehicle used C. Specific Locations _____ D. Subunit Hunted _____ E. Did you take an animal? Yes ___ No ___ 3. A. Date taken _____ (mm/dd/yyyy) B. Sex of animal: Male ___ Female ___	INTERNET REPORTING http://fws.gov/alaska/harvestreport UNIQUE CODE Not Available for this Permit	
FEDERAL PERMIT PERMIT NO: REGULATORY YEAR: 2020/21 HUNT NO: FS2502 UNIT(S): 25A ARCTIC VILLAGE SEASON: 08/10/20 thru 04/30/21 SPECIES: Dall Sheep LEGAL: Two Ram Sheep with one ram sheep per permit. CONDITIONS: See Back Permit must be in your possession while hunting or transporting the animal taken. You must also show this permit to any person authorized to enforce Federal law who requests it. Failure to return the harvest report will result in you being ineligible to receive a permit for the following regulatory year, and may result in a fine.		QMB Control No. 1018-0076 Expires 06/30/21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 Print Name: _____ X _____ Hunter's Signature JAN FEB MAR APR MAY JUN FWS Form 3-2320 REV 10/13

- Harvest and Hunter effort reporting is important to the hunters and wildlife managers because:
 - Confirms the importance of wildlife for food & cultural needs
 - Shows the hunters commitment to be part of the wildlife management process
 - Is a tool for protecting wildlife from overharvest
 - Helps to provide healthy wildlife populations for future generations
 - Above is a sample federal permit for sheep hunting in the Arctic Village Sheep Management area in Unit 25A. Refuge staff in cooperation with the Arctic Village Council staff are working closely with issuing permits and harvest/hunter effort reporting.

- Science and Culture Camps

The annual Camp Goonzhii in Arctic Village and Kaktovik Oceanography program were both cancelled for 2020 due to COVID-19. The Refuge plans to host both camps in 2021.

- Virtual Festivals

- Arctic Refuge Virtual Bird Festival is scheduled for November 8-14, 2020. Visit www.arcticbirdfest.com for more information.
- Arctic Refuge successfully co-hosted Virtual Dragonfly Day on July 11, 2020 with Kanuti Refuge, Yukon Flats Refuge, Fairbanks Northstar Borough Parks and Recreation, and The Friends of Alaska National Wildlife Refuges. The objectives of the event was to emphasize the role of dragonflies in Alaska's habitat and engage the public with dragonfly education materials in an online manner. Participants were able to watch videos, participate in trivia, download and color artwork designed by Sara Wolman, and more. The virtual event engaged 70k users in Alaska and in the Lower 48.



Lake Darner illustrated by Sara Wolman. The Lake Darner is the largest species in Alaska.