



Arctic Waterways Safety Committee

March 18, 2019

BOEM Environmental Sciences

<https://www.boem.gov/akstudies/>

For Additional Information:

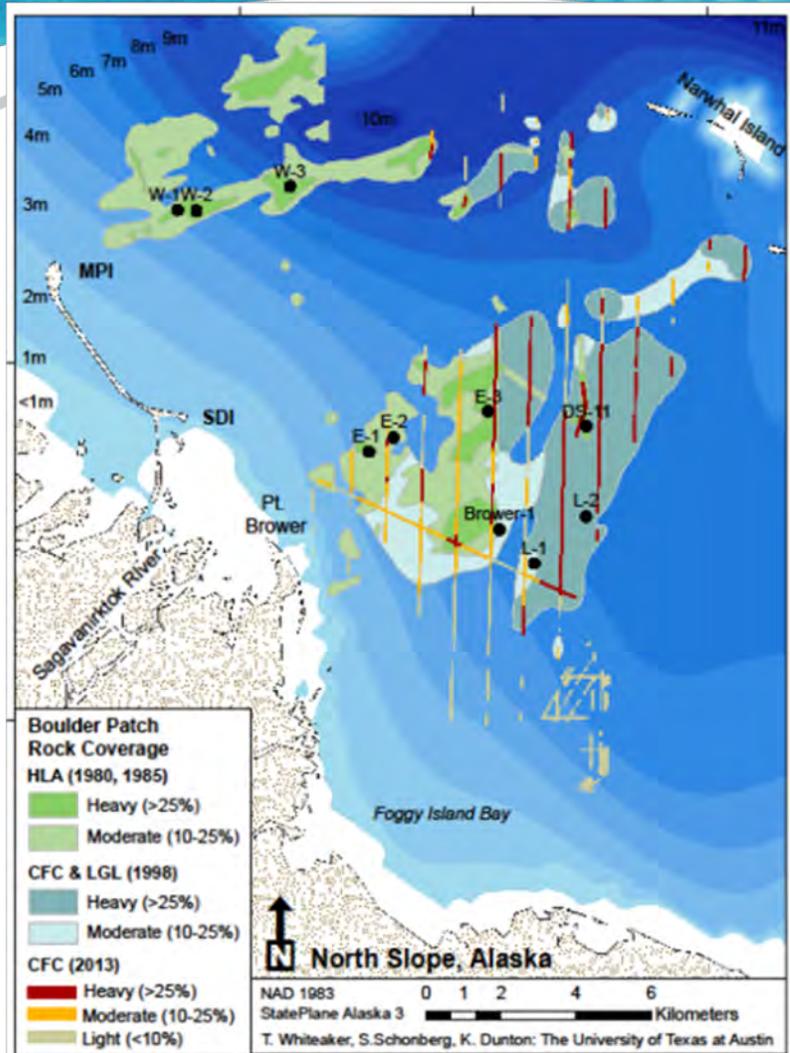
Cathy Coon, Chief, AK Environmental Sciences Mgt
(907) 334-5245, catherine.coon@boem.gov



Beaufort & Chukchi Seas Field Studies in 2019 Continuing Studies

BOEM sponsored Continuing Field Efforts				
Study	Area	Start Year	Contractors Partners	Field Dates
ANIMIDA III: Boulder Patch and Other Kelp Communities in the Development Area	Beaufort	2012	CESU-UT	July 10 – August 18, 2019
Ice Seal Movements & Foraging: Village-based satellite tracking & acoustic monitoring of ringed, bearded, & Spotted seals, and collection of TEK	Beaufort, Chukchi, Bering	2012	ADF&G	June – August 2019
Marine Arctic Ecosystems (MARES/EBES) – A Multi-Agency NOPP Partnership	Beaufort	2014	NOPP, Stantec Environmental Consulting	September – October 2019
Arctic Ecosystem Integrated Survey, Phase II (FWS): Seabird Community Structure and Seabird-Prey Dynamics	Chukchi, Bering	2017	USFWS	July – October 2019
Wave and Hydrodynamic Modeling in the Nearshore Beaufort Sea	Beaufort	2017	UAF/USGS/AOOS	Summer – Fall 2019
Marine Bird Distribution and Abundance in Offshore Waters	Chukchi, Bering	2017	USFWS	July – October 2019

Beaufort Sea Boulder Patch, Nearshore Fish, Long Term Ecological Research



2019 Cruise Plan - R/V Proteus, Central and Eastern Alaskan Beaufort Sea

- July 10-15: BOEM Boulder Patch studies in Stefansson Sound
- July 16-31: USGS/BOEM fisheries sampling Simpson Lagoon, Stefansson Sound, and Camden Bay
- Aug 1-9: NSF BLE-LTER Field Sampling in Stefansson Sound and in the vicinity of Barter Island
- Aug 10-16: USGS/BOEM fisheries sampling, Kaktovik and Jago Lagoons
- Aug 17-18: Transit to Prudhoe Bay, complete instrument deployments in Stefansson Sound

Also, the Kaktovik Oceanography Program is the third week of August (12-17th). This week-long K-12 experiential field program for kids allows them to work alongside a variety of scientists in the fields of fisheries, ecology, geology and chemistry and use a variety of instruments from the R/V Proteus.

Ice Seal Movements and Foraging: Village-based Satellite Tracking of Ringed and Bearded Seals

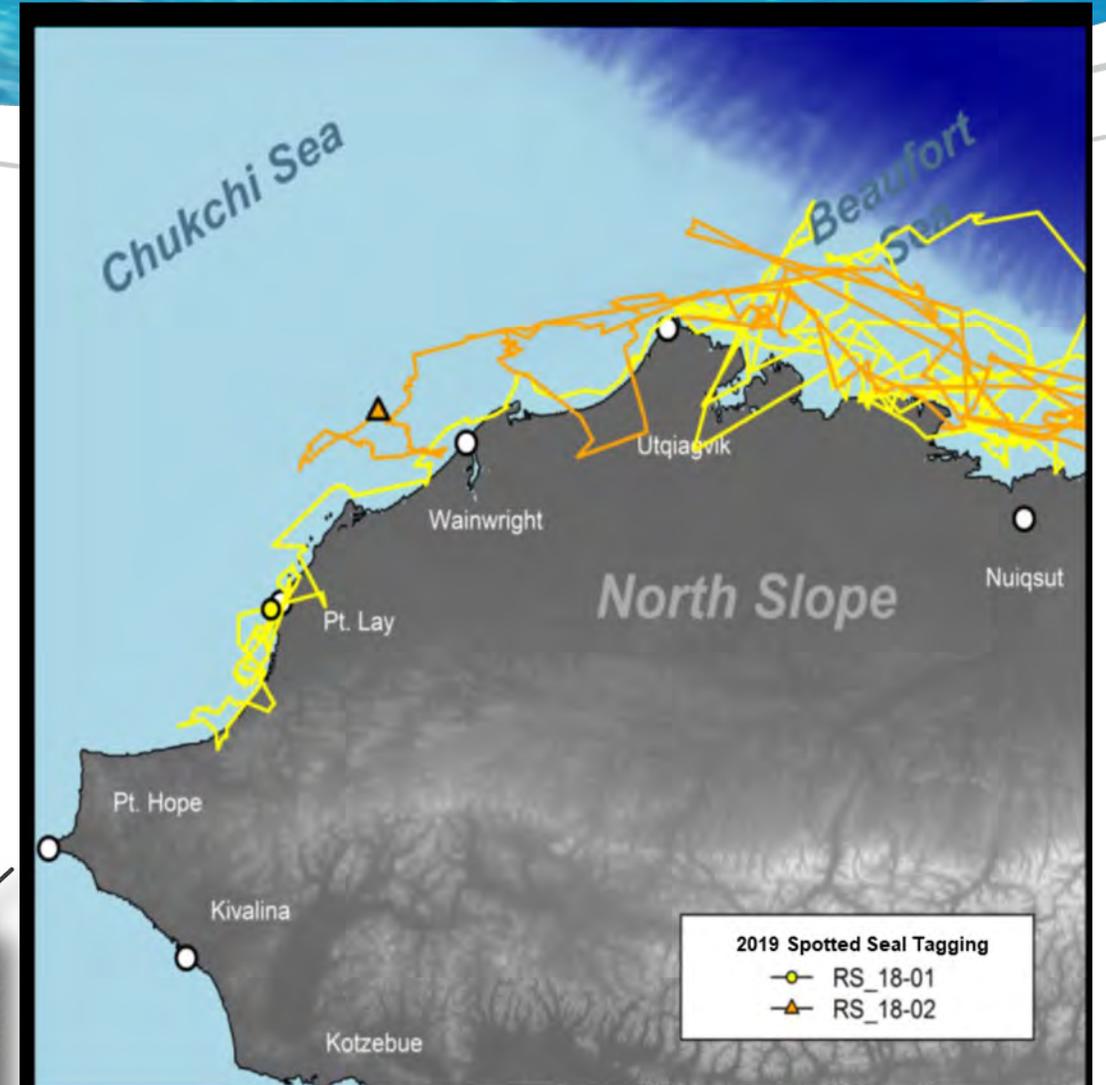
To determine the seasonal movement and foraging behaviors of ice seals. The objectives of the study are:

- Determine seasonal and yearly movement patterns of adult and juvenile ice seals with a focus on the open water season.
- Document site fidelity and migration routes of ice seals.
- Document habitat use areas and foraging behavior, such as foraging location within the water column during specific times of year.

The study focus – work with subsistence hunters and their communities to collect samples from harvested seals for analysis to monitor the status and health of each species.

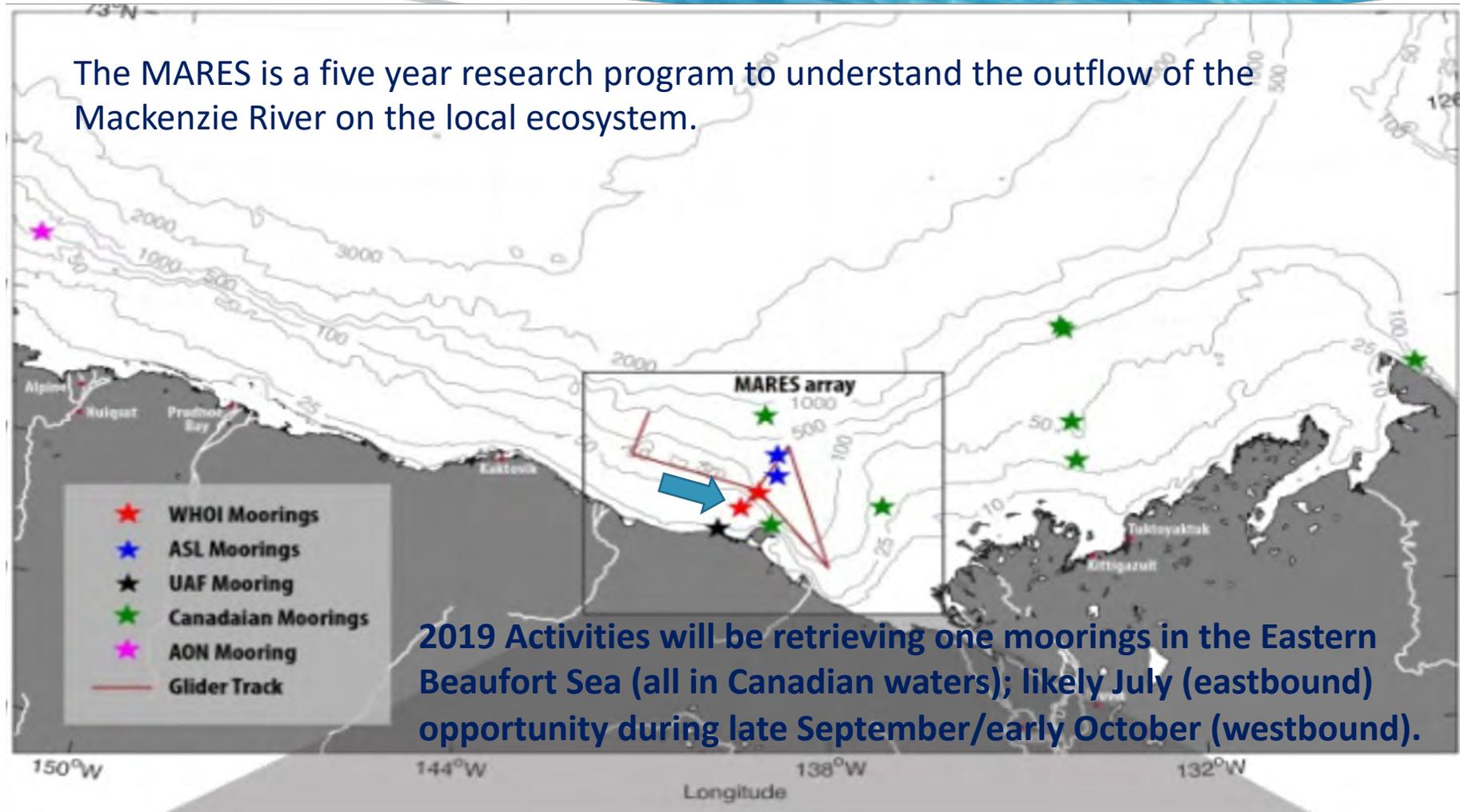
Spotted seal fieldwork planned from June through August 2019 in Peard Bay and Dease Inlet using small vessels

Sincere thanks to hunters and whalers for sharing of TK / IK and help capturing and tagging animals.



Marine Arctic Ecosystems Study (MARES)

The MARES is a five year research program to understand the outflow of the Mackenzie River on the local ecosystem.



2019 Activities will be retrieving one moorings in the Eastern Beaufort Sea (all in Canadian waters); likely July (eastbound) opportunity during late September/early October (westbound).

Wave and Hydrodynamic Modeling in the Nearshore Beaufort Sea

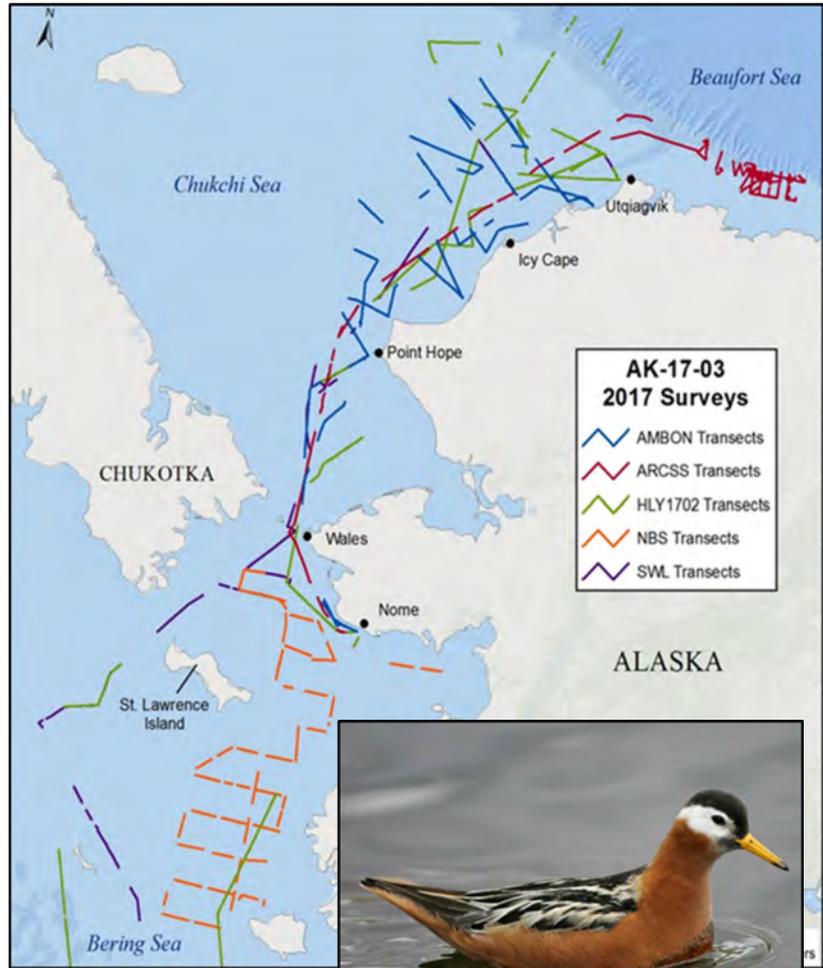
2019 Field Schedule

Multibeam sonar surveys, and CTD sampling
Using R/V Ukpik

- Real-time wave data from a buoy off NE of Narwhal Island in Summer/Fall 2019
- Wave buoy is 20+ miles from Cross Island to nearest mooring
- Real-time met station
- Most of the vessel-based work concentrated in- and around- Foggy Island Bay (red shaded area)
- Final mooring recoveries in 2020
- Field work will be scheduled to avoid whaling activities



Marine Bird Distribution and Abundance in Offshore Waters on existing research cruises



- Conduct marine bird surveys to understand the distribution, abundance, and habitat requirements of marine birds.
- Identify the physical and biological factors that influence the abundance, distribution, and community composition of marine birds.

USFWS At-Sea Surveys in Bering-Chukchi-Beaufort (2019)

Project	Date	Region
DBO-3Oceans	July 12-24	Northern Bering/Chukchi
DBO-NCIS	August 2-24	Northern Bering/Chukchi
NBS- fisheries survey	August 8-21	Northern Bering/Chukchi
ArcticIERP (3-legs)	August 1 – October 1	Northern Bering/Chukchi



Arctic Integrated Ecosystem Survey, Phase II

Project Period
August 1 – October 4, 2019

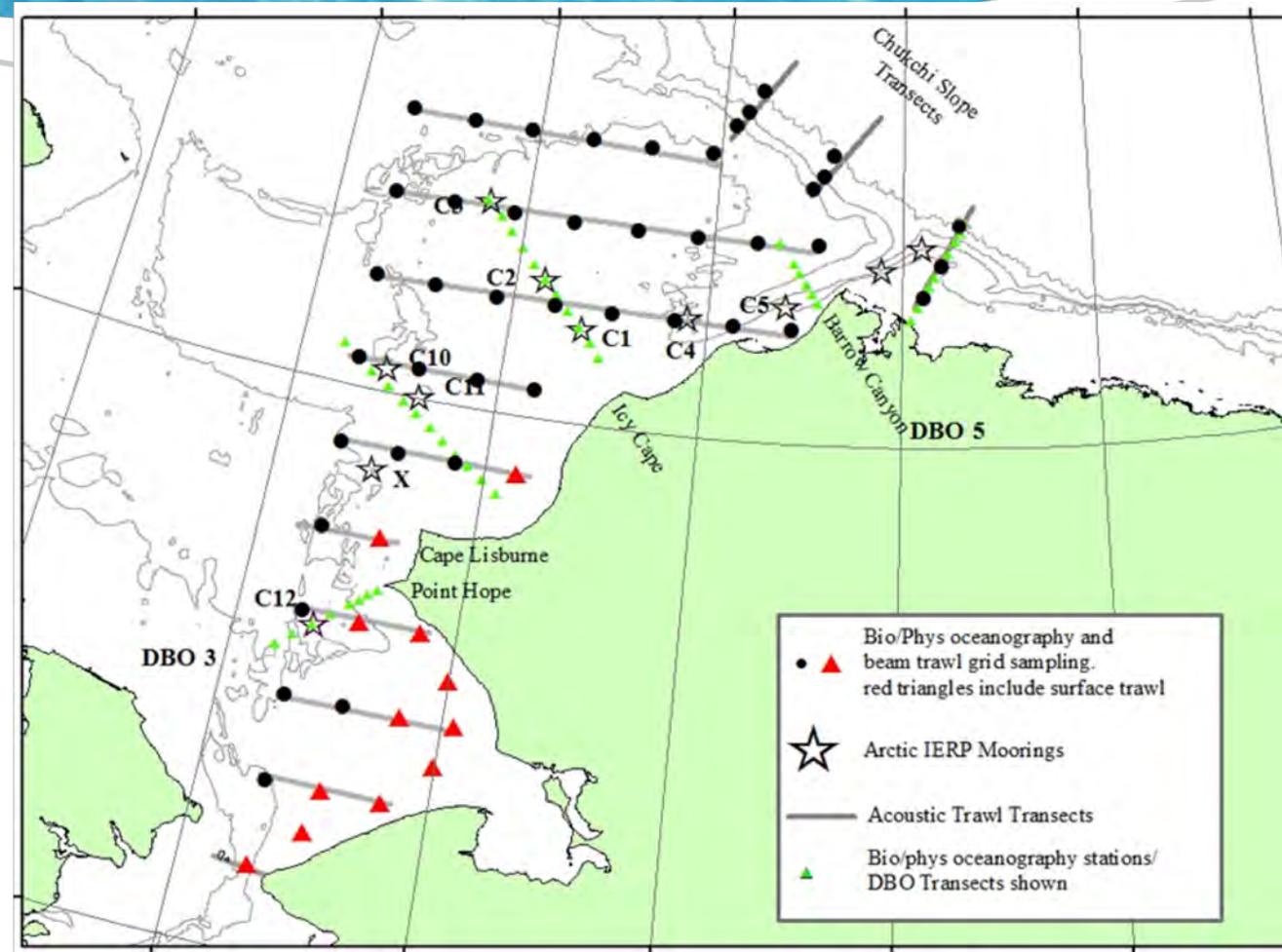
This study provides surveys of the Chukchi Sea with survey transects extending to coastal regions of the Beaufort Sea to support research objectives within the Arctic Integrated Ecosystem Survey, Phase II and those outlined within North Pacific Research Board (NPRB) Arctic IERP (described in NOAA's presentation).

2019 Cruise Schedule

LEG 1: July 31 – August 31

LEG 2: Aug 24 – Sep 13

LEG 3: Sep 14 – Oct 3



Early Notice on Current Permit Applications



TGS-NOPEC Geophysical Company Survey OCS Permit Application 18-02

- Geophysical survey using an ocean bottom node system to collect 3D seismic data in Beaufort Sea Planning Area
- Approximately 905 square miles, of a 3D ocean-bottom node (OBN) seismic survey during 2019 & 2020 open water periods in State and Federal waters in Harrison Bay

