

Comprehensive Management through an Arctic-based Institution

Nicole L. Kanayurak

North Slope Borough Department of Wildlife Management (NSB DWM)

9-11 January 2018

6th Arctic Council EBM Workshop

Seattle, WA USA

NSB DWM Goals & Objectives

GOAL 1: DOCUMENT THE CONTINUED IMPORTANCE OF SUBSISTENCE BY MAINTAINING ACCURATE, AREA-SPECIFIC HARVEST RECORDS

GOAL 2: DETERMINE THOSE GEOGRAPHIC AREAS IMPORTANT TO SUBSISTENCE-USE ANIMALS

GOAL 3: ENHANCE THE UNDERSTANDING OF THE BIOLOGY OF SUBSISTENCE-USE ANIMALS AND THEIR HABITAT FOR ENHANCED LOCAL PARTICIAPTION IN MANAGEMENT AND SUSTAINABLE SUBSISTENCE HARVEST

GOAL 4: COMMUNICATE, COOPERATE, AND COLLABORATE WITH STATE AND FEDERAL AGENCIES REGARDING STUDIES AND THE EVALUATION OF DATA FOR STRONG LOCAL INPUT INTO MANAGEMENT OF SUBSISTENCE-USE RESOURCES

GOAL 5: WORK CLOSELY WITH THE BOROUGH'S FISH AND GAME MANAGEMENT COMMITTEE IN DEVELOPING AND IMPLEMENTING MANAGEMENT PROGRAMS FOR SUBSISTENCE-USE ANIMALS

GOAL 6: IN CONSULTATION WITH OTHER DEPARTMENTS, THROUGH APPROPRIATE STUDIES, AND THE REVIEW OF EXISTING INFORMATION, IDENTIFY AND ASSESS INDUSTRIAL IMPACTS LIKELY TO ADVERSELY AFFECT PEOPLE, WILDLIFE, OR THE ENVIRONMENT

ALASKA

POPULATED PLACES

- 100,000 – 499,999 • Anchorage
- 25,000 – 99,999 • Fairbanks
- 24,999 and less • King Salmon
- State capital ★ Juneau

TRANSPORTATION

- Principal highway ———
- Railroad ———
- Ferry - - - - -

PHYSICAL FEATURES

- Streams ———
- Lakes ○
- Highest elevation in state (feet) +20,320
- Other elevations (feet) +15,300
- The lowest elevation in Alaska is sea level (Pacific Ocean).

0 100 200 300 400 500
MILES
Albers equal area projection



© Nations Online Project

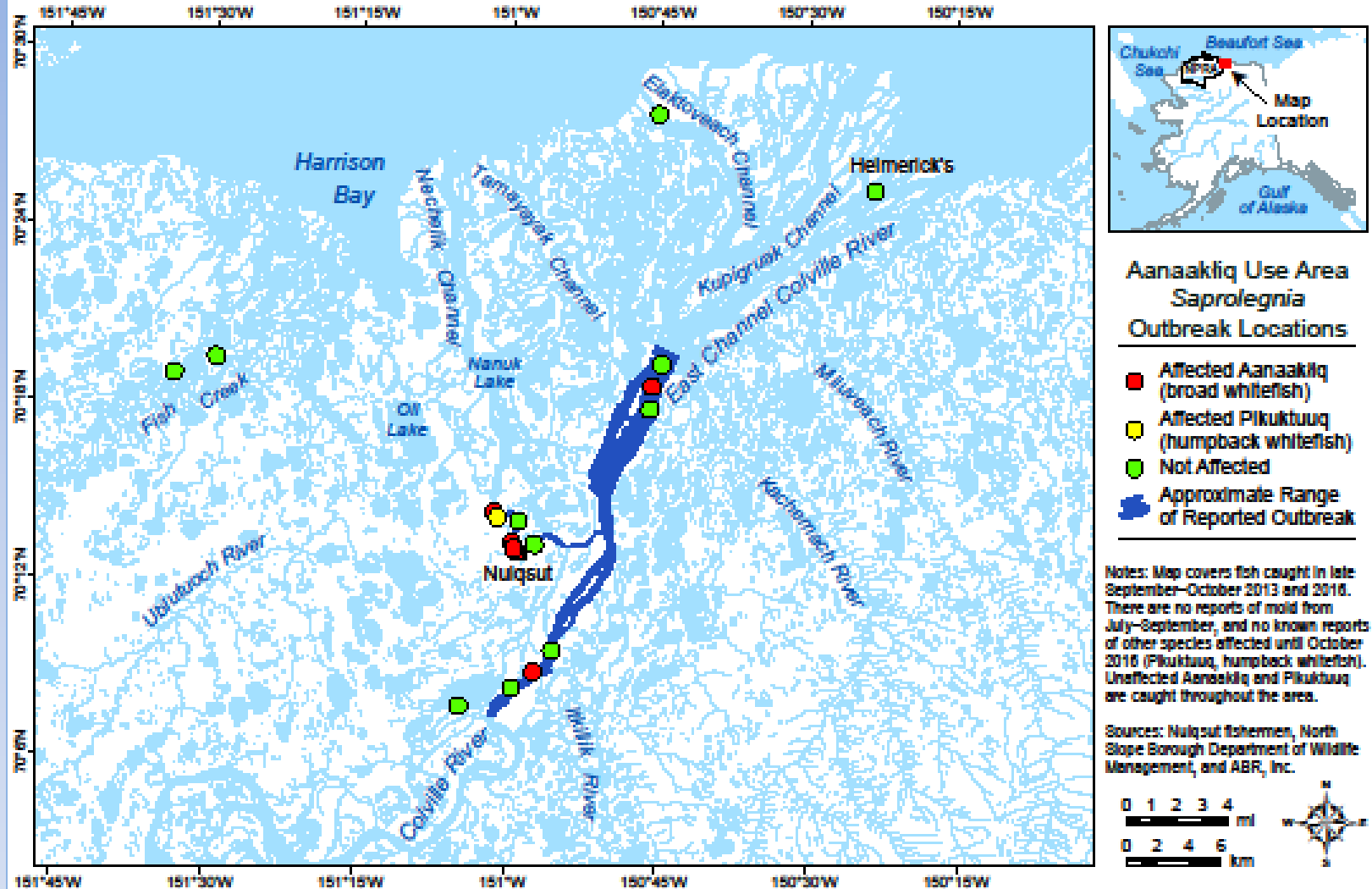


Druckenmiller, M.L., Eicken, H., George, J.C., Brower, L. 2012. Trails to the whale: reflections of change and choice on an Inupiat icescape at Barrow, Alaska. Polar Geography. DOI: 10.1080/1088937X.2012.724459



- Trail Maps
- Trail start and 'failure' times
- record ice types
- Ice thickness





Polar Science, Vol. 14, December 2017. “Observations and first reports of saprolegniosis in Aanaakliq, broad whitefish (*Coregonus nasus*), from the Colville River near Nuiqsut, Alaska,” **Todd L. Sformo**, **Billy Adams**, John C. Seigle, Jayde A. Ferguson, Maureen K. Purcell, **Raphaela Stimmelmayer**, Joseph H. Welch, Leah M. Ellis, Jason C. Leppi, **John C. George**

Local observation
and ground truth
corroborate remotely
sensed data.



"Most of the time when we have large break-off is when there's no wind. Don't have multi-year ice structure we used to have. Ice not as thick as it used to be. Have lots of 2-3 ft. thick. There's an absence of pressure ridges. We're floating out there a lot of the time and it can shear off at any time".

(Eugene Brower, commenting on the apparent increase in break-off danger to spring whaling activities in recent years.)

Subsistence camp on the landfast ice

TEK and High-tech come together



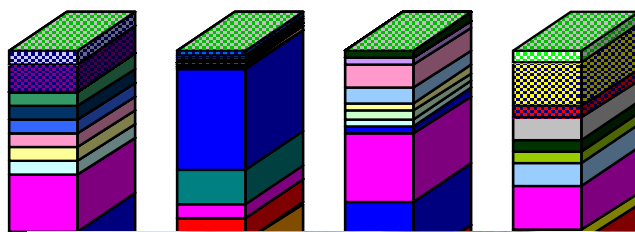
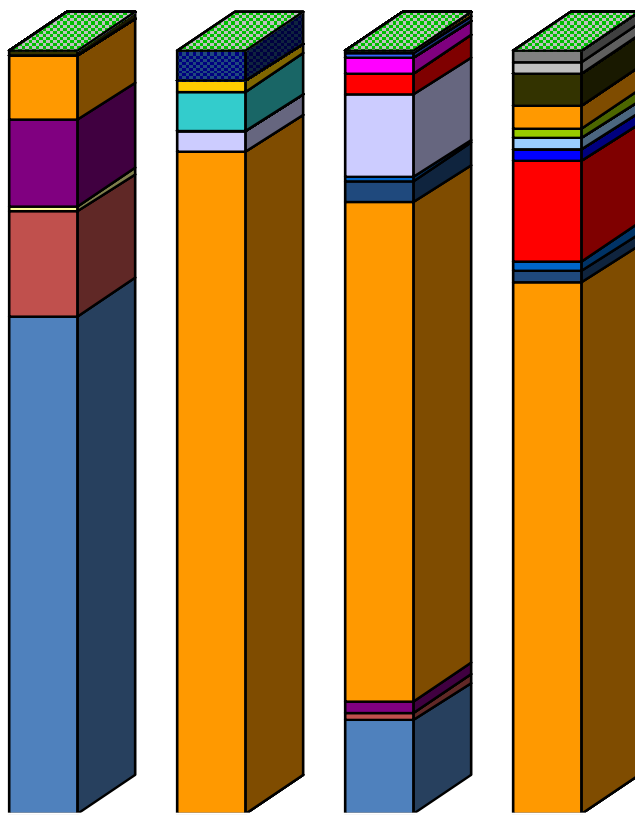
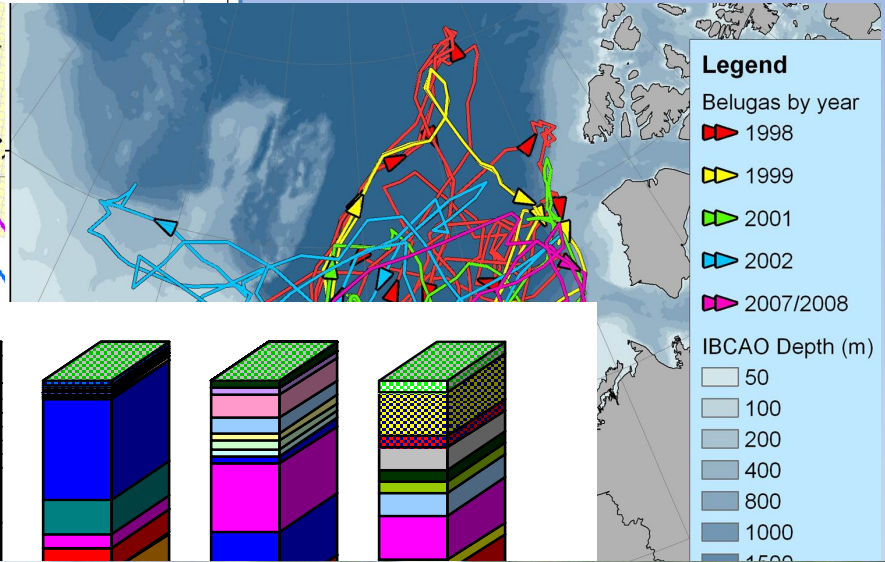
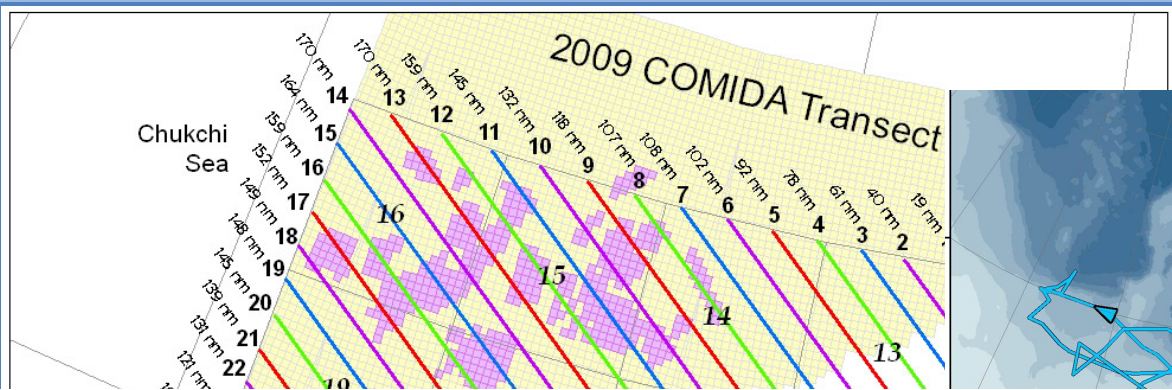
Photo by Allison Graves

"From the Point on down to the Nunavak. It opened up all the way to the beach in December. Stuff drifted in afterwards. Pretty heavy in the area near Pt Barrow. Pretty stable ice all the way to the Point."

Kenneth Toovak, Inupiaq elder speaks about sea ice using a satellite image for reference.

BOWHEAD SHIP STRIKE/LINE ENTANGLEMENT ANALYSIS





OUTCOMES

- ❖ Student understanding of belugas increased
- ❖ Student interest in college and science increased
- ❖ More students working and in training programs
- ❖ Possible college credit as summer intern with Mystic Aquarium
- ❖ Possible college intern with NSB DWM



What studies are needed?

- Communities must help drive science and define priorities
- Examples of needed research
 - Social science
 - Ecosystem science
 - Understanding impacts
 - Mitigating impacts
 - Baseline and long-term monitoring



Quyanaq



13/04/2017 09:05

Photo Credit: Billy Adams