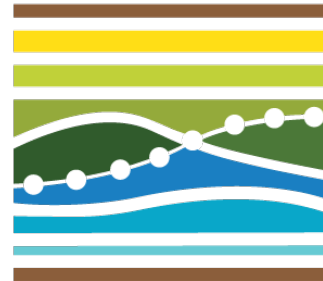


# Beaufort Lagoon Ecosystems



Jim McClelland & Ken Dunton  
LTER SCIENCE COUNCIL MEETING 2018  
MADISON, WI



NATIONAL SCIENCE FOUNDATION  
**LTER** NETWORK  
LONG TERM ECOLOGICAL RESEARCH



# Site News



- Preparations for first BLE-LTER field campaign under way
- Development of Concept of Operations document ( with NSF-RSL, CPS)
- Two Core Program Managers hired (Christian Bonsell and Nathan McTigue)
- Graduate student recruits (Brian Kim, Emily Bristol, Kristina Baker, Sasha Peterson)
- Partnership with NSB Dept. of Wildlife Management – Linking Science and Traditional Knowledge in North Slope Communities (BOEM funding)
- Partnership with Sandia National Laboratories – Coastal erosion modeling
- Partnership with NOAA PMEL to deploy Oculus underwater gliders
- Partnership with Battelle/INSTAAR to develop a Community Vision for Arctic Observing Networks
- Synergy with NASA's Arctic COLORS (COastal Land Ocean inteRactionS in the Arctic)
- Modeling of freshwater inputs from the North Slope to the AK Beaufort Sea

# Organic Matter - Who/How

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*How do variations in terrestrial inputs, local production, and exchange between lagoon and ocean waters interact to control food web structure through effects on carbon and nitrogen cycling, microbial and metazoan community composition, and trophic linkages?*

**What we know:** seasonality is King; rivers deliver a major pulse of relatively labile OM in the spring; *in situ* primary production peaks during / shortly after ice break up; terrestrial OM inputs contribute substantially to secondary production

**What we don't know:** relative OM contributions from river, groundwater, coastal erosion, and ocean sources; effects of freshwater-seawater mixing on OM lability; role of OM decomposition as a source of inorganic nutrients supporting primary production; seasonal variations in use of different OM sources by heterotrophs

# Organic Matter - Results

