Central Beaufort Sea Wave and Hydrodynamic Modeling Study

https://aoos.org/foggy/

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BOEM is sponsoring a 5-year effort to understand how construction of an artificial drilling island in Foggy Island Bay may impact area sediment transport.

A number of oceanographic moorings were deployed in summer 2018 to measure velocity, waves, turbulence and suspended sediment.

~250 km of multibeam sonar data was gathered, 64 CTD casts and ~167 km of ADCP transects along with other supporting information.

Photos and NASA’s worldview satellite captured the challenging ice conditions that delayed the start of the field work and prevented most work outside the barrier islands.

The USGS will run a series of nested models to hindcast wave and surge conditions. While downscaled climate model output (see poster by P. Bieniek et al.) will be used by the USGS to model how waves and surge may change under future climate states.

The Alaska Ocean Observing System maintains the project website (https://aoos.org/foggy/).

AOOS and Axiom Data Science are helping to compile a historical database and new observations for validation of wave, storm surge, hydrodynamic and erosion models being run by the USGS (see poster by L. Erikson et al.) and UAA.

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