

# Arctic Oil Spill Modeling

Presented by Dana Brunswick



**Abstract:** During an oil spill, an accurate assessment of the trajectory of oil is important for a quick and effective remediation response. In the remote Arctic, oil fate and transport models are critical; especially during winter months when darkness and ice presence hamper visual detection of oil. A set of equations to describe the transport of oil in ice-covered waters and an environmental database were utilized to create an Arctic Oil Spill Calculator (AOSC). The Calculator

determines the movement and spreading of oil released in Arctic waters, whether it is released near the surface (e.g., due to a ship grounding) or whether it is released under the ice (e.g., due to a well blowout or a pipeline rupture).

**Biography:** Ms. Dana J. Brunswick is a full-time student at the University of Alaska Anchorage (UAA). She received a Bachelor of Science in Engineering from the University of Illinois C-U and has worked as a international field engineer, geomarket service quality manager, and petrophysicist. She is currently completing her graduate thesis “Development of an Arctic Oil Spill Calculator (AOSC) to Characterize the Fate and Transport of Oil” and plans to graduate with her Master of Science in Civil Engineering this summer.

Friday, April 28th, 2017, 11:45am-12:45pm

UAA College of Engineering, EIB 211