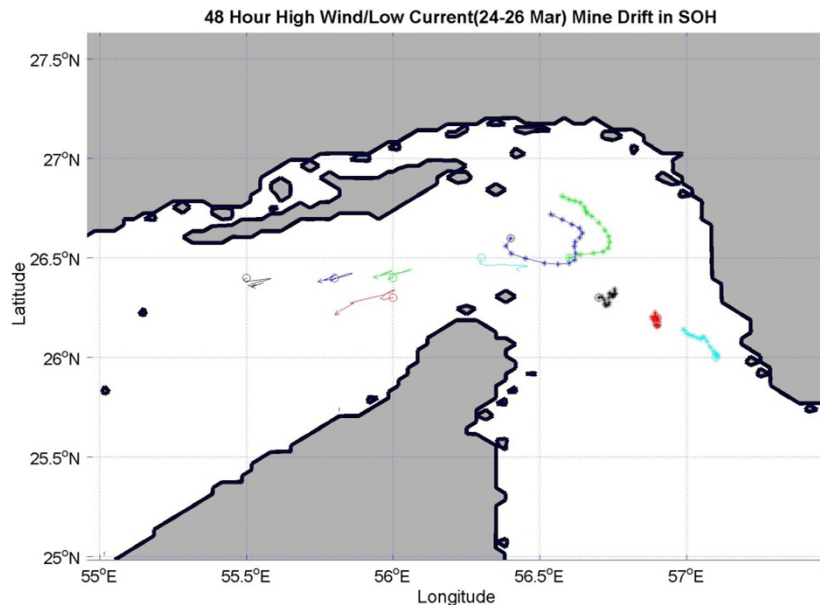


# Littoral Oceanography for Mine Warfare

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## Brief Description

The long-term goals are to enhance the U.S. Navy's MIW capabilities through (1) improvement of coastal ocean modeling and data assimilation for surface and near-surface mine drifting, (2) determination of periodicity for MIW route surveys including influences by natural forcing functions (storms, clima, etc.), human activity (i.e., clutter increased by shipping activity, etc.), (3) development of analogous areas development of analogous CONUS areas that are environmentally "analogous" to a potential operational area of interest).

## Recent NPS Theses

- (1) Williams, C., "[Environmental Impact on the Northern Persian Gulf Chemical Spill and Mine Drift Centered on Iraq's Oil Terminals using Navy's Ocean-Atmospheric Physical and Chemical Models](#)," MS in METOC, March 2007
- (2) Clem, T., "[Oceanographic Effects on Maritime Threats: Mines and Oil Spills in the Strait of Hormuz](#)," MS in METOC, March 2007
- (3) Hudson, D., "Similarity Analysis of Littoral Environments between Korean and U.S. Coasts for Mine Warfare,," (Secret) MS in PO, September 2008
- (4) Coke, H., "Route Survey Periodicity for Mine Warfare," (Secret) MS in METOC, September 2009
- (5) Wheatley, N., "[Determining Route Survey Periodicity for Mine Warfare: Investigation of Bedforms, Waves, Tides, and Currents](#)," MS in PO, September 2009.
- (6) Garstka, J., "Optimizing U.S. Navy Mine Warfare and Department of Homeland Security Maritime Security Requirements: A Quantitative Analysis of Bottom Sediments to Determine Analogous Areas in the Strait of Hormuz and Continental United States." (Secret) MS in PO, September 2009.
- (7) Poteete, S., "[Navy's N-Layer Magnetic Model with Application to Naval Magnetic Demining](#)", MS in Meteorology and Oceanography, September 2010
- (8) Beuligman, C., "Expert System for Mine Burial Prediction," MS in PO, September 2011

***More than 50 refereed journal papers have Been published (see Publication List)***