

Real-Time Operational Oceanography at the Naval Oceanographic Office

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Abstract-Scientists of the Naval Oceanographic Office (NAVOCEANO) provide specialized operationally-significant products and services for military “warfighters.” These products are also provided for civilian, national and international customers under some circumstances and with some constraints. Our scientists acquire global ocean and littoral data from sources such as: shipboard surveys by NAVOCEANO and others, from routine data collected by both operational Navy and commercial ships, from remotely-sensed data available from a variety of airborne and satellite sensors, and from drifting and fixed-location buoys. The analyses of these data range from the creation of historical climatologies and real-time maps of specific measured parameters to the assimilation of real-time data into ocean prediction systems for temperature, salinity, tides, waves, and currents. NAVOCEANO products are primarily requested from and delivered to the customer through the Warfighting Support Center (WSC).

The WSC provides analyses of the oceanographic environment using multiple data sources. Dynamic and morphologic features of coastal areas are extracted from satellite imagery within the WSC, which then blends bathymetric, hydrologic, climatologic and predictive information from other departments and organizations into operational products tailored to specific mission requirements. These products are frequently geo-spatially enabled for automated information system use and delivered via web technology.