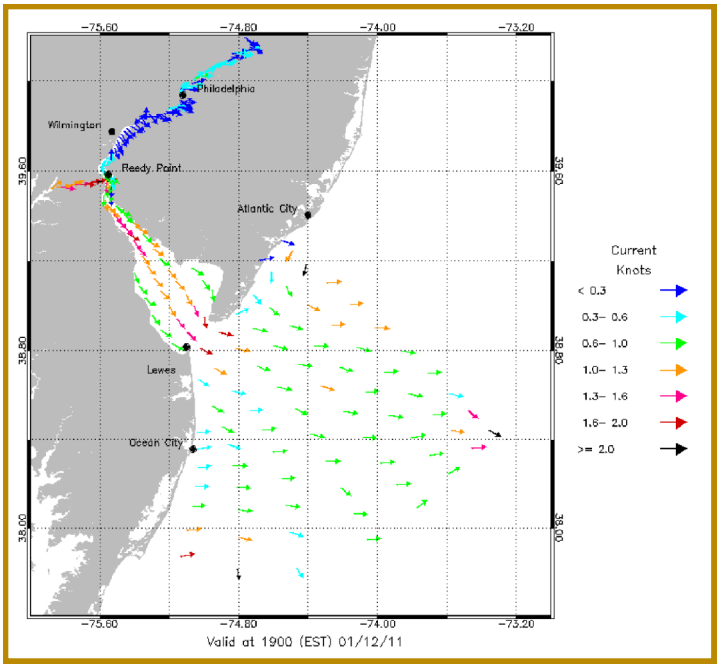
Delaware Bay Operational Forecast System (DBOFS)

OPERATIONAL FORECAST SYSTEM

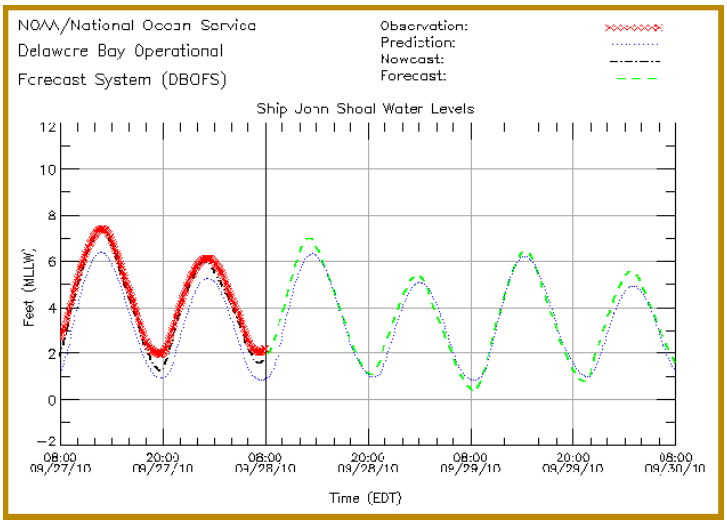
Water Levels and Currents for Delaware Bay

The Delaware Bay Operational Forecast System (DBOFS) updates the surface wind, water level, current, temperature and salinity nowcast and forecast guidance four times per day (every six hours). The forecasts are provided for 48 hours into the future. Animation maps of Delaware Bay (shown on the right) as well as time series at particular stations or points of interest (shown below) are available for 18 locations for water level, currents, temperature, and salinity.



DELAWARE BAY

http://tidesandcurrents.noaa.gov/ofs/dbofs/dbofs.html



DBOFS animation maps and time series graphics are available at http://tidesandcurrents.noaa.gov/ofs/dbofs/dbofs.html. The time series plot shown on the left displays observed and predicted water levels as well as the DBOFS water level nowcast and forecast guidance for Ship John Shoal, Delaware. On calm days these lines will be close together. However, during a storm event, the observed water levels and the DBOFS nowcast and forecast guidance will be different from the astronomic predictions. During storm events, DBOFS provides valuable information on the changing water levels and currents throughout Delaware Bay.

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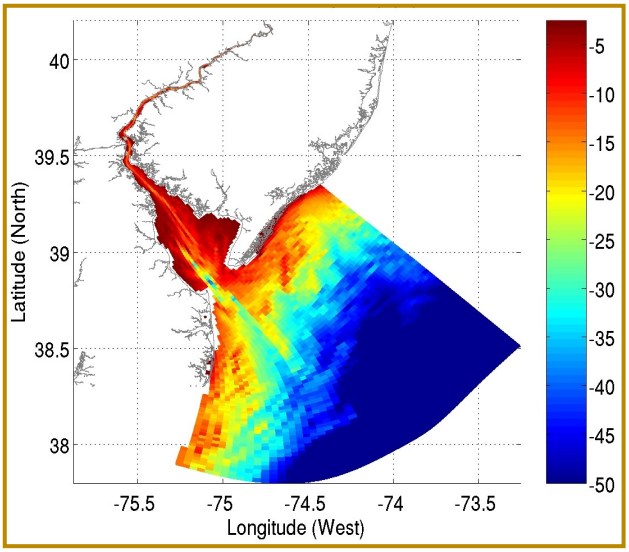
Output from DBOFS can be used for a wide variety of applications such as recreational boating, fishing and sailing, shipment and vessel transect planning, storm effect tracking, hazardous material tracking and search and rescue, to name a few. Any activity where winds, water levels, currents water temperature and or salinity are a factor can benefit from the information provided by DBOFS.

To generate the wind, water level, current, temperature and salinity nowcast and forecast guidance, DBOFS relies on real-time and forecast data from the NOAA National Weather Service, real-time observations from CO-OPS and U.S. Geological Survey gauges and output from the U.S. Navy Coastal Ocean Model.



Historic DBOFS output is available from CO-OPS web services at http://opendap.co-ops.nos.noaa.gov/thredds/catalog.html. Additionally, the DBOFS map animations and time series graphics archive of surface wind, water level, current, temperature and salinity is located at ftp://tidepool.nos.noaa.gov/pub/outgoing/ofs/dbofs/graphics/

For decades, mariners in the United States have depended on NOAA's Tide Tables for the best estimate of expected water levels and tidal currents. These tables provide accurate predictions of the astronomical tide and tidal currents (i.e., the change in water level and current due to the gravitational effects of the moon and sun and the rotation of the Earth); however, they cannot predict water level changes and variations in currents due to wind, atmospheric pressure, and river flow, which are often significant. As a result, NOAA's Center for Operational Oceanographic Products and Services (CO-OPS), Office of Coast Survey, and National Centers for Environmental Prediction (NCEP) have developed a Delaware Bay Operational Forecast System (DBOFS). DBOFS serves the Delaware Bay community, including U.S. port authorities and mariners, by providing water level, current, temperature and salinity nowcasts (predictions for locations where there are no observations) and forecast guidance based on real-time observation data, meteorological forecasts and astronomical predictions.

Access the Delaware Bay Operational Forecast System by clicking on the DBOFS icon on the CO-OPS Operational Forecast System web page: http://www.tidesandcurrents.noaa.gov/models.html

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