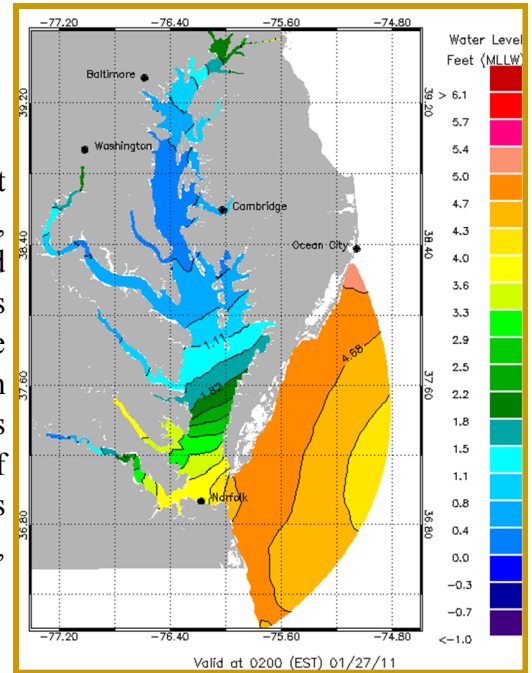


OPERATIONAL FORECAST SYSTEM

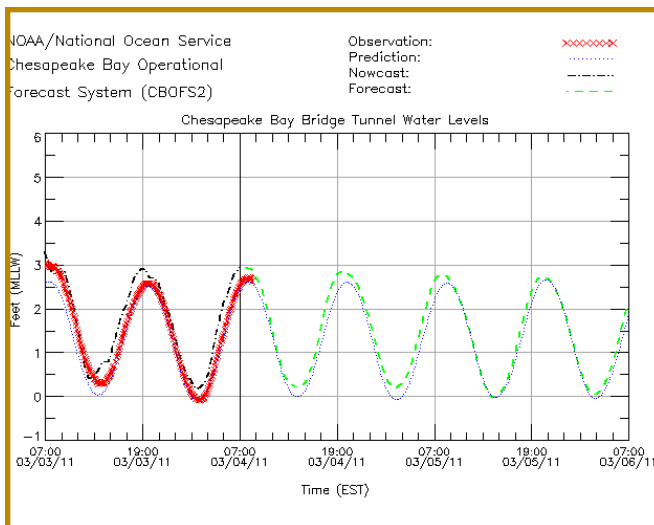
Water Levels and Currents for Chesapeake Bay

The Chesapeake Bay Operational Forecast System (CBOFS) 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 Chesapeake Bay (shown on the right) as well as time series at particular stations or points of interest (shown below) are available for 58 locations for surface winds, water levels, currents, temperature, and salinity.



CHESAPEAKE BAY

<http://tidesandcurrents.noaa.gov/ofs/cbofs/cbofs.html>



CBOFS animation maps and time series graphics are available at <http://tidesandcurrents.noaa.gov/ofs/cbofs/cbofs.html>. The time series plot shown on the left displays observed and predicted water levels as well as the CBOFS water level nowcast and forecast guidance for Chesapeake Bay Bridge Tunnel, Virginia. On calm days these lines will be close together. However, during a storm event, the observed water levels and the CBOFS nowcast and forecast

guidance will be different from the astronomic predictions. During storm events, CBOFS provides valuable information on the changing water levels and currents throughout the Chesapeake Bay.

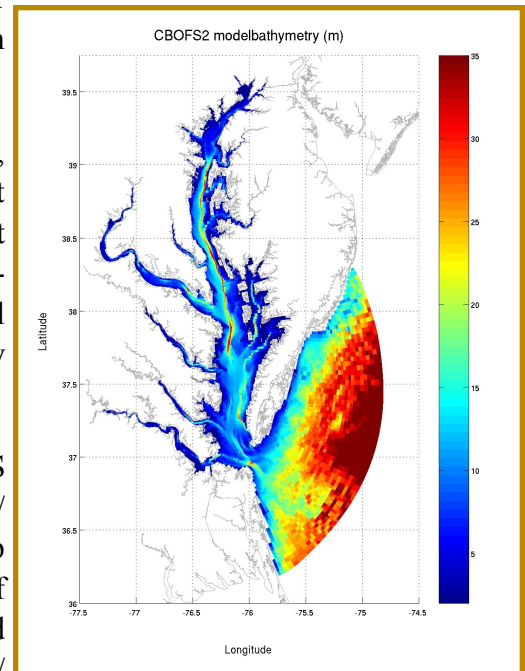


Chesapeake Bay Operational Forecast System (CBOFS)

Output from CBOFS 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 CBOFS.

To generate the wind, water level, current, temperature and salinity nowcast and forecast guidance, CBOFS 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 CBOFS output is available from CO-OPS web services at <http://opendap.co-ops.nos.noaa.gov/thredds/catalog.html>. Additionally, the CBOFS 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/cbofs/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 Chesapeake Bay Operational Forecast System (CBOFS). CBOFS serves the Chesapeake 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 nearby real-time observation data, meteorological forecasts and astronomical predictions.



Access the Chesapeake Bay Operational Forecast System by clicking on the CBOFS icon on the CO-OPS Operational Forecast System web page: <http://tidesandcurrents.noaa.gov/models.html>

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