

Maryland DNR monitoring review – 9/16/2011

The following is a brief review of MD DNR monitoring efforts that have occurred in the week after the massive Susquehanna discharge to the Bay from Tropical Storm Lee. [Eyes on the Bay](#) telemetered real-time sites are mainly in upper reaches of Bay tributaries and have not observed the brunt of the Susquehanna discharge. Other near-time sites in Chesapeake Bay Segment 3 (immediately above the Bay Bridge), the Susquehanna Flats, Havre de Grace and Patapsco are current through late August and early September, and storm event data sets will be available as early as next week once sondes are retrieved and data goes through a quality assurance review.

Below (Figure 1), a salinity drop was observed in the West River with a corresponding rise in turbidity. The Sassafras has shown a small but steady rise in turbidity. The Patapsco shows salinities upriver at Masonville at around 4ppt while at the mouth, NOAA's buoy is recording closer to 1ppt or less. Over the last day, dissolved oxygen levels have dropped significantly at Masonville. The Big Annemessex station has been experiencing sporadic drops in cellular telemetry coverage due to its remote location. Late breaking data just posted from Havre de Grace and Susquehanna Flats continuous monitors show turbidity spikes of 800NTU and 600NTU, respectively, and very high turbidities persisting for the better part of a week. Those data can be seen by visiting the Eyes on the Bay home page and clicking the station of your choice.

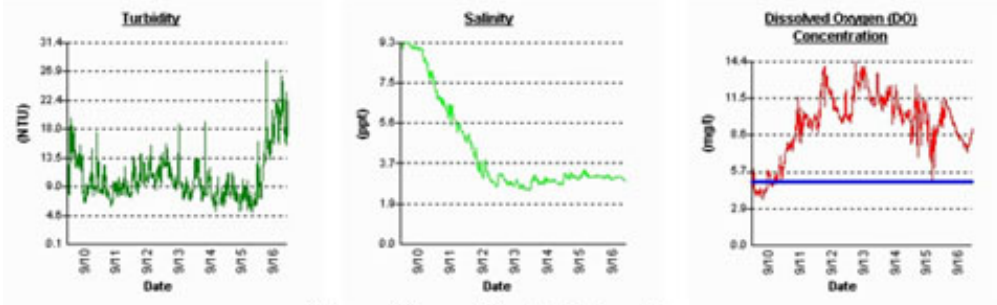
Water quality mapping was conducted this week in the Patapsco, Chesapeake Bay Segment 3 and Corsica River. The [Patapsco map](#) shows an encroachment of the turbid Susquehanna water into the lower third of the river. Surface turbidity in Chesapeake Bay segment 3 (Figure 2) has a maximum of 300NTU with the main plume traveling toward the eastern side of the Bay. [View map with all parameters for Chesapeake Bay Segment 3](#). Profile data from the cruise show no hypoxic or anoxic conditions in the water column. Finally, the [Corsica River mapping](#) did not show any turbidity impacts, but high chlorophyll numbers were observed and September has historically been known as a high bloom/fish kill time in this area.

[New current conditions data](#) is available for September in the middle Potomac and Patuxent Rivers. Hypoxic conditions exist in the middle/lower Patuxent bottom waters and very low clarity (secchi of 0.1 to 0.4m) in the upper Patuxent and upper Potomac.

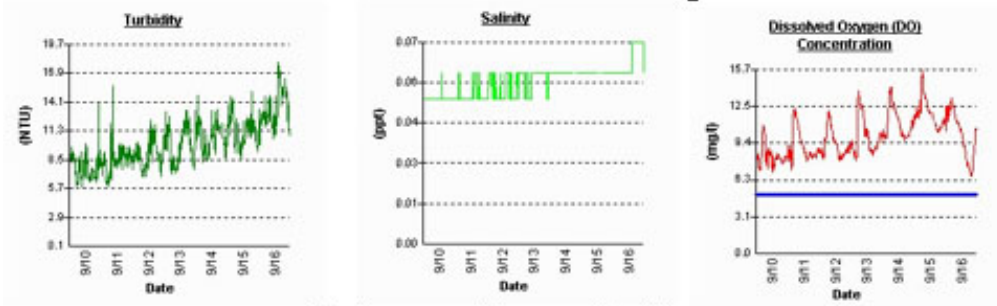
Maryland DNR will begin its mainstem monitoring cruises on Monday September 19th with data and more monitoring reviews to follow.

Figure 1.

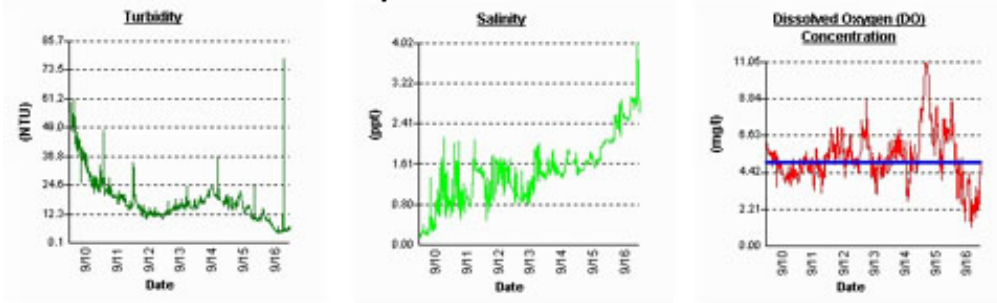
Continuous Monitoring Data 9/10 - 9/16 West River



Sassafras -Budd's Landing



Patapsco - Masonville Cove



Big Annesmessex

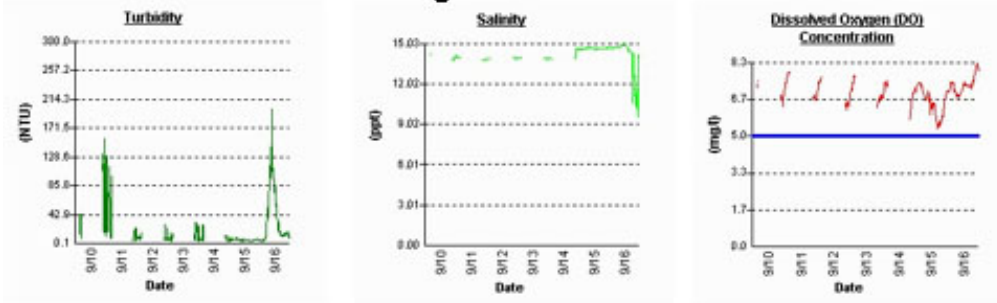


Figure 2.

