Corsica River
2014 Water Quality Report

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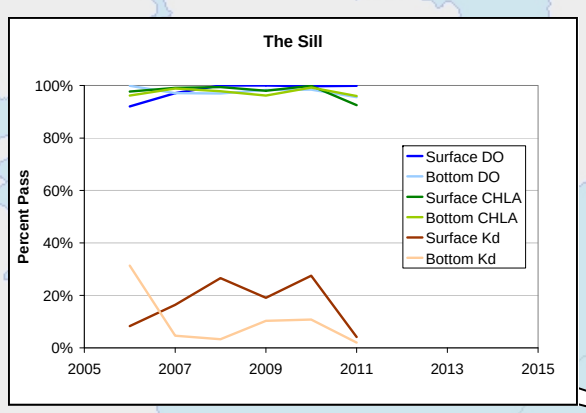
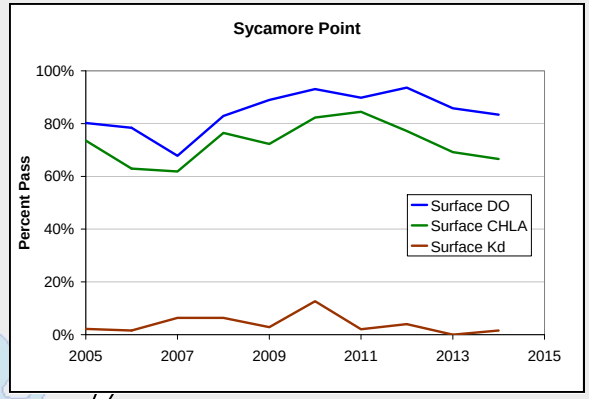
The Corsica River Targeted Watershed Project was implemented in 2005. Maryland DNR's Tidewater Ecosystem Assessment division is responsible for the water quality monitoring and habitat assessments that support the management actions of the project. As part of this effort, five continuous monitors have been maintained at three locations*****, and monthly water quality mapping cruises are performed April - October. The continuous monitors collect data every 15 minutes on dissolved oxygen, chlorophyll, turbidity, water temperature, salinity and pH. These data help to guide future actions within the watershed by providing managers with insight into the effects of current efforts to reduce nutrient and sediment pollution.

These graphs represent percent attainment over time of three key continuous monitoring water quality parameters in the Corsica River: Dissolved Oxygen (DO), Chlorophyll (CHLA), and Water Clarity (Kd). The dissolved oxygen threshold represents levels harmful to aquatic animals and the chlorophyll threshold indicates concentrations which are indicative of significant algal blooms. The water clarity threshold is based upon a calculation of light attenuation, Kd, which utilizes salinity, chlorophyll, and turbidity measurements. The Kd threshold represents conditions that would allow sunlight to reach the bottom in 1 meter of water and thus promote the growth of underwater grasses.

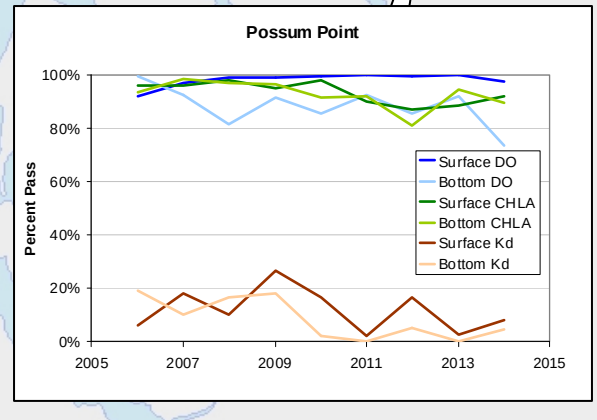


*****The Sill was not deployed after 2011

Parameter	Time Period Examined Each Year	Threshold
DO	June - September	3.2 mg/l
CHLA	April – October (Underwater grass growing season)	50 ug/l
Kd	April – October (Underwater grass growing season)	1.5



The station furthest upstream, Sycamore Point, experienced significant low oxygen conditions in 2007 with less than 70% of the readings meeting the dissolved oxygen threshold. After 2007, the number of dissolved oxygen readings greater than 3.2 mg/l generally increased at Sycamore Point and peaked at 94% in 2012. In 2014, 83% of dissolved oxygen readings at Sycamore Point met the dissolved oxygen threshold. Dissolved oxygen levels at the downstream stations, The Sill and Possum Point, have generally exceeded the dissolved oxygen threshold over 90% of the time during each year since monitoring began in 2006. However, in 2014, just 74% of dissolved oxygen readings in the bottom waters at Possum Point exceeded the threshold.



Of the three stations, Sycamore Point generally experiences the most frequent and intense algal blooms with less than 67% of the readings meeting the chlorophyll threshold in 2014. Similarly, Sycamore Point generally has the worst water clarity conditions (less than 2% of Kd values met the threshold in 2014), although water clarity at all stations can be characterized as poor. This lack of clear waters has prevented the growth of underwater grasses within the Corsica River.

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