

Corsica River 2013 Water Quality Report



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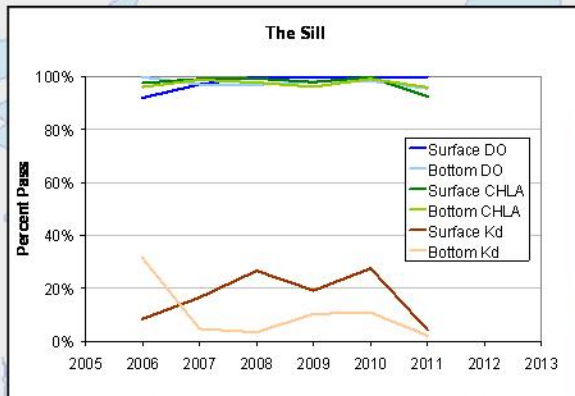


The Corsica River Targeted Watershed Project was implemented in 2005. Maryland DNR's Tidewater Ecosystem Assessment division is responsible for the water quality monitoring and habitat assessments that support the management actions of the project. As part of this effort, five continuous monitors have been maintained at three locations*, and monthly water quality mapping cruises are performed April - October. The continuous monitoring and water quality mapping programs both collect data on dissolved oxygen, chlorophyll, turbidity, water temperature, salinity and pH. Continuous monitors measure data every 15-minutes, while each monthly water quality mapping cruise records several thousand surface water quality measurements. 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.

Corsica River Continuous Monitoring

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 criterion represents levels harmful to aquatic animals and the chlorophyll criterion indicates concentrations which are indicative of significant algal blooms. The water clarity criterion is based upon a calculation of light attenuation, Kd, which utilizes salinity, chlorophyll, and turbidity measurements. The Kd criterion represents conditions that would allow sunlight to reach the bottom in 1 meter of water.

Parameter	Time Period Examined	Criterion
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 Sill was not deployed in 2012 & 2013

Monitoring Results

The station furthest upstream, Sycamore Point, experienced significant low oxygen conditions in 2007 with less than 70% of the readings meeting the dissolved oxygen criterion. Since 2009, however, nearly 90% of dissolved oxygen readings have met the criterion each year. Dissolved oxygen levels in the downstream stations, The Sill & Possum Point, have generally exceeded the dissolved oxygen criterion over 90% of the time during each year since monitoring began in 2006. Sycamore Point, generally experiences the most frequent and intense algal blooms with less than 70% of the readings meeting the chlorophyll criterion thus far in 2013. Water clarity has been poor overall at all three stations and less than 1% of all measurements in the river have met the Kd criterion thus far in 2013. This lack of clear waters has prevented the growth of underwater grasses within the Corsica River.

