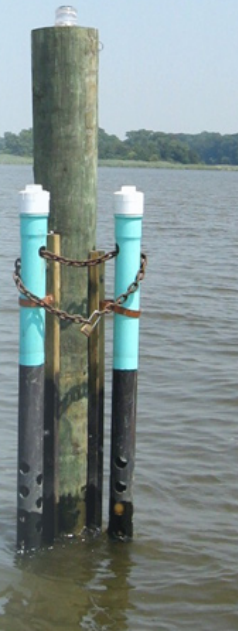


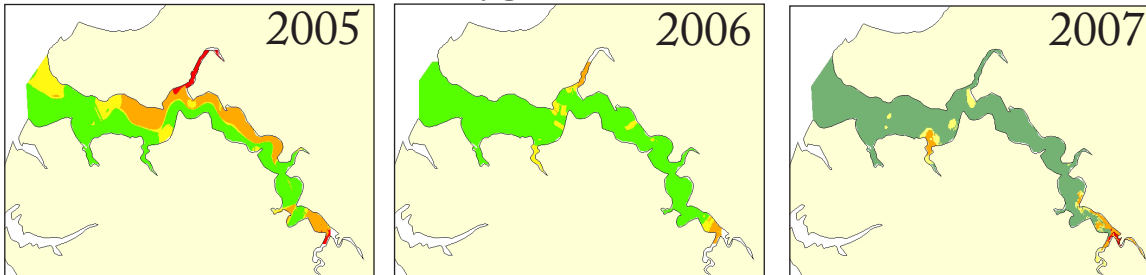
2007 Corsica River Water Quality Criteria Attainment



The Corsica River Targeted Watershed Project was implemented in 2005. Maryland DNR's Tidewater Ecosystem Assessment division is responsible for the ambient water quality monitoring and assessment that supports the management actions of the project. As part of this effort, five continuous monitors are maintained at three locations, and monthly water quality mapping cruises are performed April - October.

Water Quality Mapping data for dissolved oxygen, chlorophyll and water clarity for 2005 - 2007

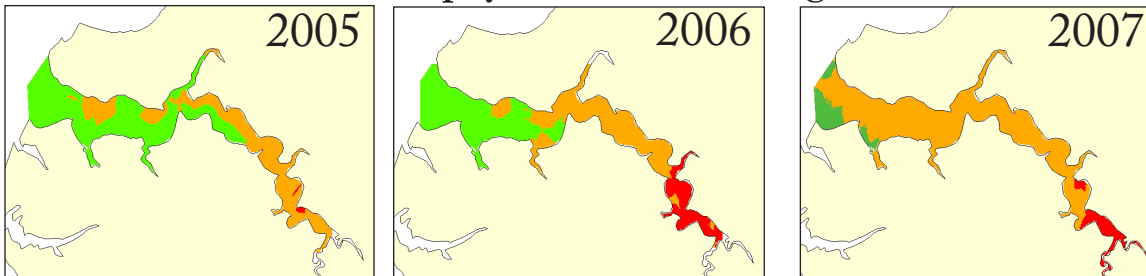
Dissolved Oxygen - Annual Minimum



	Dissolved Oxygen (mg/l)			
	%Area <3.2	%Area 3.2 - 5.0	%Area 5.0 - 5.5	%Area >5.5
2005	2.6	27.3	43.5	26.6
2006	0	2.5	7.7	89.8
2007	0.4	4.2	5.2	90.2

Oxygen levels improved over much of the river in 2007, but some low levels remain.

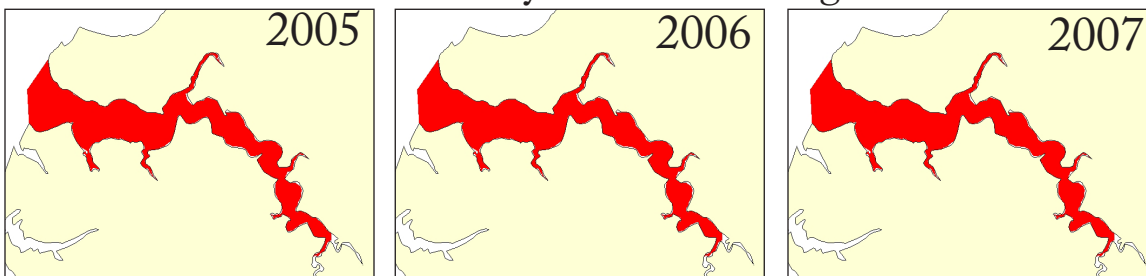
Chlorophyll - Annual Average



	Chlorophyll (ug/l)		
	%Area >50	%Area 15 - 50	%Area <15
2005	0.6	42.3	57.1
2006	12.8	54.1	33.1
2007	7.4	83.2	9.4

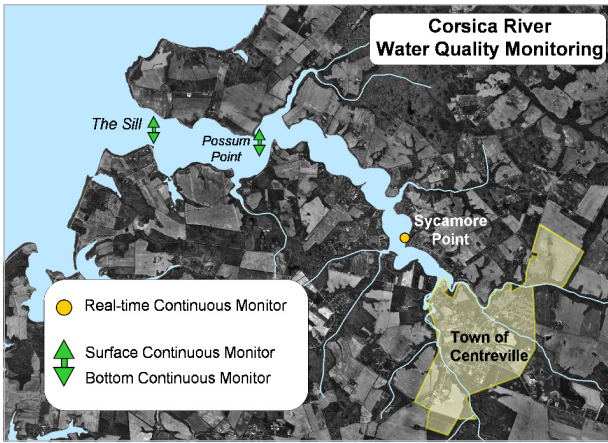
In 2007, less than 10% of the river had average chlorophyll in the good (<15 ug/l) range.

Water Clarity - Annual Average



	Turbidity (NTU)	
	%Area >7	%Area <7
2005	100	0
2006	100	0
2007	100	0

Water clarity, reported as turbidity, remains poor along the entire length of the river.



Continuous Monitoring Data

The graphs to the right represent percent attainment over time of three key continuous monitoring water quality parameters in the Corsica River: dissolved oxygen, chlorophyll, and water clarity. Continuous monitoring data are collected every 15-minutes, 24-hours/day.

Dissolved oxygen was examined June 1 through September 30 at the instantaneous criteria of 3.2 mg/l. Downstream sites met the criteria over 90% of the time for 2006 and 2007. Sycamore Point, however, is showing a decreasing trend, and only met the criteria about 68% of the time in 2007.

Chlorophyll and water clarity data were examined during the SAV growing season, April 1 through October 31st. In 2006, instrumentation was not installed at Possum Point or the Sill until June 22. The narrative chlorophyll criteria is 50 ug/l, which generally represents bloom conditions. The water clarity criteria uses a calculation of light attenuation, Kd, which takes into account salinity, chlorophyll and turbidity. The criteria is 1.5, which represents conditions that would allow sunlight to reach the bottom in 1 meter of water. Water clarity was poor overall, especially at the Sycamore Point station. Analysis of Water Quality Mapping data indicates that the poorest water clarity is usually found in the upper third of the river.



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Monitoring Parameters

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 measures several thousand surface water quality measurements. During bi-weekly continuous monitor exchange and monthly water quality mapping cruises, in situ calibration samples are taken for light attenuation, nutrients, chlorophyll and total suspended sediment. These calibration data, in combination with the spatially and temporally intensive automated data, provide managers with insight into the effects of current management efforts to reduce nutrient and sediment pollution and can guide future actions.

