

# How Did Your Tributary Measure Up in 2009?

## A Quick Look at Maryland DNR's Continuous Monitoring Data

### Continuous Monitoring Network

A statewide network of automated sondes that monitor water quality parameters every 15-minutes, 24-hours/day.

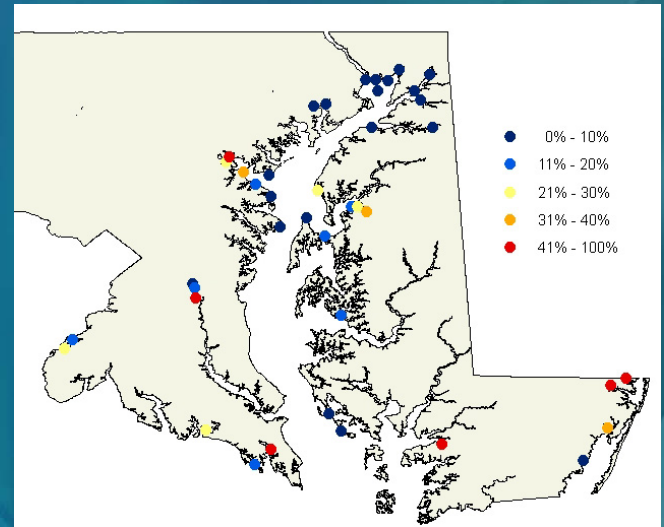


- 45 Data Sondes Throughout Maryland's Chesapeake and Coastal Bays in 2009 (YSI 6600 EDS Data Sondes):
  - Data Telemetry Systems (up to 11)
  - Most Sites Deployed April-October
- Measures:
  - Chlorophyll (Algal Concentration), Dissolved Oxygen, Salinity, Turbidity (Water Clarity), Water Temperature, Depth and pH
- Measurements Collected Every 15 Minutes
- Sondes Set at 1-meter Below the Surface or 0.3-meters from Bottom
- Continuous Data Collection Captures the Dramatic Daily Fluctuations in Water and Habitat Quality Measures, Such As Dissolved Oxygen
- Provides Agencies With Near-Time Data to Assess Fish Kills, Harmful Algal Blooms, Effects of Storms and Other Short-Term Events



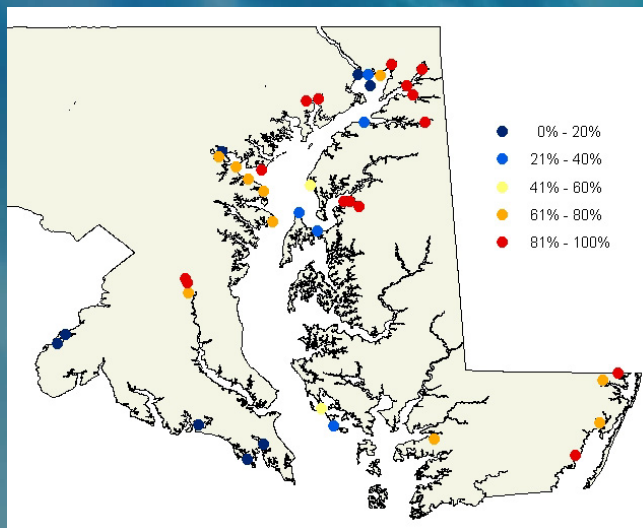
### Percentage of 2009 Dissolved Oxygen Readings <5 mg/l (June-September)

Levels <5mg/l are considered stressful or detrimental to most species



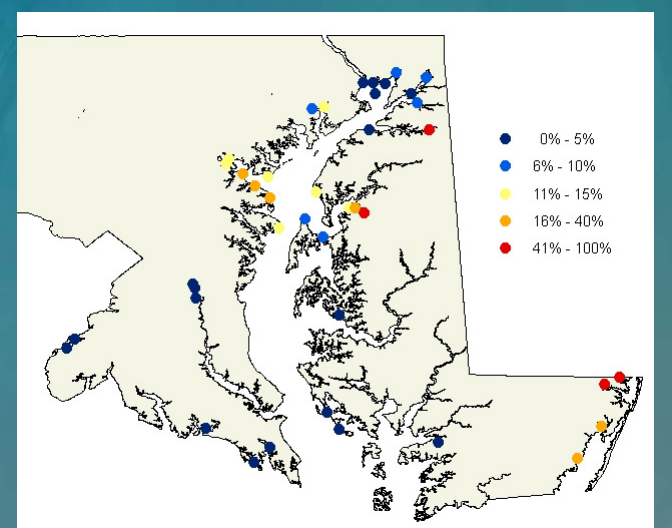
### Percentage of 2009 Turbidity Readings >7 NTU (April - September)

Turbidity >7 NTU is roughly a level that can inhibit growth of underwater grasses but is dependent upon duration and timing



### Percentage of 2009 Chlorophyll Readings >30 ug/l (April - September)

Chlorophyll >30 ug/l is indicative of systems with excessive nutrient concentrations and unhealthy assemblages of algal species



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#### Shallow Water Monitoring Partners:

State of Maryland  
State of Virginia  
EPA Chesapeake Bay Program  
NOAA Chesapeake Bay Program Office  
DNR Tidewater Ecosystem Assessment  
DNR MANTA Field Office  
UMCES Chesapeake Biological Laboratory  
DHMH Analytical Laboratory  
St. Mary's College of Maryland  
NOAA National Estuarine Reserve System  
Cooperative Institute for Coastal And Estuarine Environmental Technology  
United States Geological Survey  
DC Metropolitan Council of Governments