

# “Monitoring to Establish Reference Conditions for Nutrients and Algal Conditions in Estuarine and Coastal Water Bodies”

Grant MX974332, Recipient: The Mississippi Department of Environmental Quality; 2002 - 2009

The Mississippi Department of Environmental Quality (MDEQ) monitored Mississippi coastal waters at fixed stations, beach monitoring stations, National Coastal Assessment monitoring stations and special projects monitoring stations. These locations were monitored over several annual cycles. The data were compiled, analyzed and used to develop preliminary approaches for development of nutrient criteria for Mississippi Coastal Waters (see Table 1).

**Table 1. Potential target nutrient thresholds for bays and the Mississippi Sound using chlorophyll and Secchi depth as effect-based endpoints.**

Potential Target Nutrient Threshold (mg/L as N or P)	Bays		Sound	
	Chlorophyll (ug/L)	Secchi (m)	Chlorophyll (ug/L)	Secchi (m)
TP	0.090	0.100	0.090	--
TKN	1.021	0.800	0.650	0.729
Nitrite-nitrate	0.080	--	--	0.030
Ammonia	0.012	--	0.046	0.070

This Grant work provided nutrient data needed to develop numeric nutrient criteria for coastal waters in Mississippi. This effort directly supports the EPA National Strategy for the Development of Regional Nutrient Criteria and the results were transferred to the EPA National database (STORET) for use by other states working on nutrient criteria. It also supports the Gulf of Mexico Alliance’s Governors’ Action Plan. The Grant work conducted by the State of Mississippi is vital to resource managers charged with the protection and restoration of these areas; and is invaluable to all Gulf of Mexico States charged with developing nutrient criteria.



Barbara Viskup, MDEQ, deploys the YSI 600 XLM Minisonde, and documents water column profile information for pH, specific conductivity, salinity, water temperature, dissolved oxygen (mg/L) and dissolved oxygen saturation.