

Chesapeake Bay Mainstem

SUMMARY

The Chesapeake Bay Mainstem shows annually variable regional impacts and recovery. Anoxia/hypoxia plague deep waters and nearshore zones, limiting habitat and promoting fish kills. Mid-Bay chlorophyll-a remains relatively high. Some SAV recovery was observed in the northern part of the bay. Nuisance/toxic blooms remain annual events.

Influencing Factors

Moderate to high nitrogen input and moderate to high susceptibility (low ability for dilution and flushing of nutrients).



Eutrophic Conditions ***

High primary and secondary symptom levels indicate serious eutrophication problems.



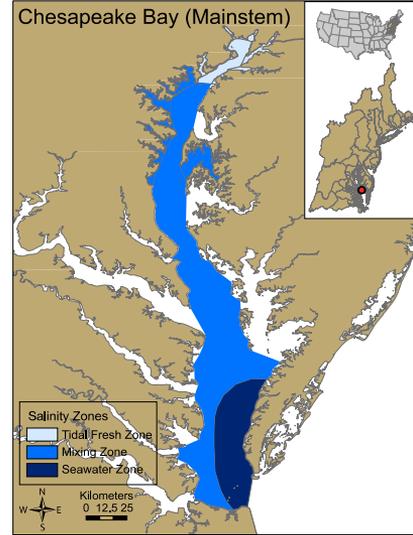
Future Outlook

Nutrient related symptoms observed in the estuary are likely to improve somewhat.



ASSETS Rating

Assessment of Estuarine Trophic Status based on the three factors evaluated in NEEA.



Influence/eutro/future

Unknown

Low

Mod Low

Moderate

Mod High

High

Reliability and Confidence

ASSETS

Unknown

High

Good

Moderate

Poor

Bad

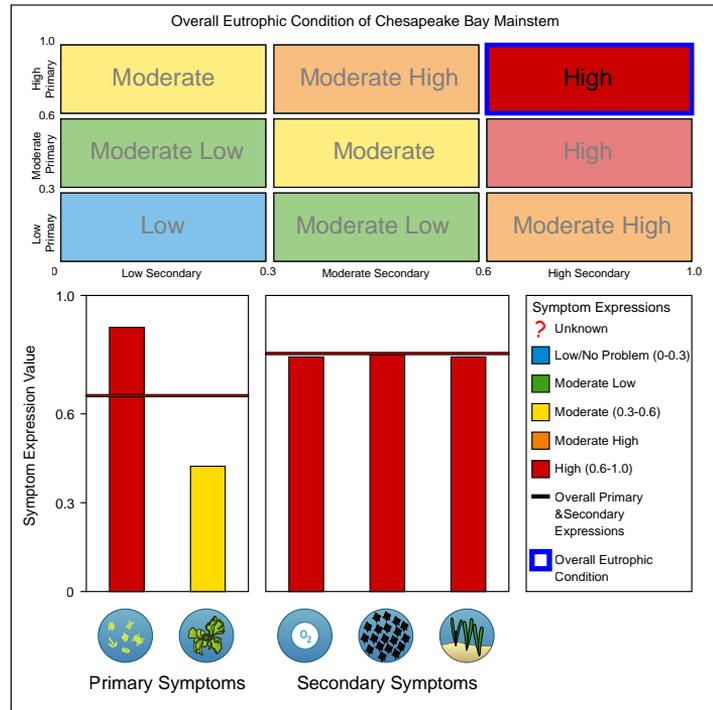
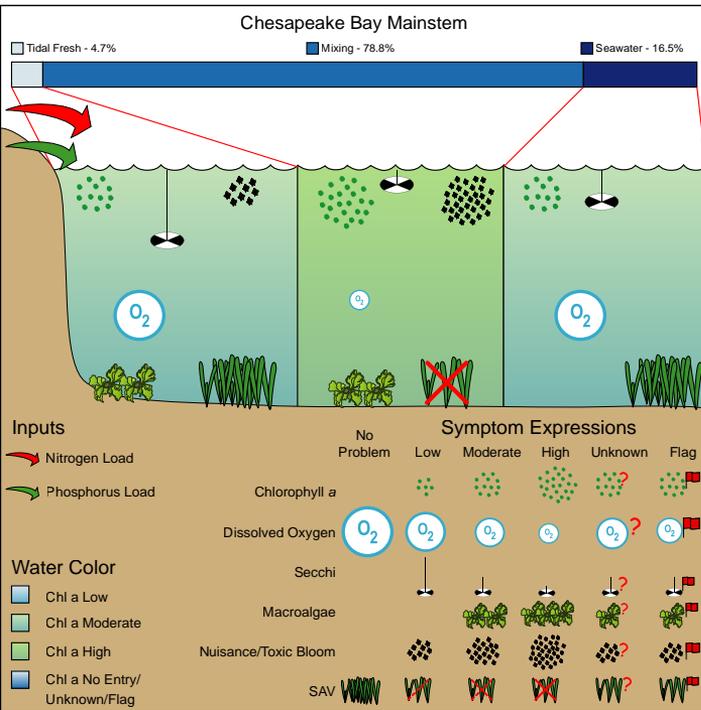
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High

EUTROPHIC CONDITION



WATERSHED AND ESTUARY CHARACTERISTICS

Estuary	Landuse / Population		Watershed Details / Input Loads		
Area (km ²)	6,974	Urban (km ²)	15,201 (9.2%)	Area (km ²)	79,584
Tidal fresh zone area (km ²)	328	Agriculture (km ²)	54,825 (33.2%)	Mean elevation (m)	361
Mixing zone area (km ²)	5,496	Forest (km ²)	92,869 (56.3%)	Max. elevation (m)	935
Saltwater zone area (km ²)	1,151	Wetland (km ²)	1,891 (1.1%)	Watershed: estuary ratio	11.4
Volume (1,000 x m ³)	51,119,420	Range (km ²)	251 (0.2%)	TSS (tonne y ⁻¹)	1,480,000
Depth (m)	7.33	Barren (km ²)	0 (0%)	TN (kg y ⁻¹)	98,101,856
Tide Height (m)	0.45	Total (km ²)	165,037 (0%)	TP (kg y ⁻¹)	4,396,457
Residence Time (d)	105	Population	6,408,536	TSS/est. area (tonne km ⁻² y ⁻¹)	212
		Popn: est. area ratio	919	TN/est. area (kg km ⁻² y ⁻¹)	14,067
				TP/est. area (kg km ⁻² y ⁻¹)	630