

Barnegat Bay

SUMMARY

Increasing watershed development and associated increases in non-point source nitrogen loads to Barnegat Bay have led to a higher eutrophic condition since 1999. Problem areas include high chlorophyll-a, low dissolved oxygen in some areas, nuisance/toxic algal blooms, epiphytic algal growth, declining seagrass habitat, and highly reduced fisheries.

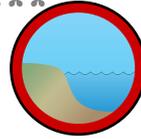
Influencing Factors

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.



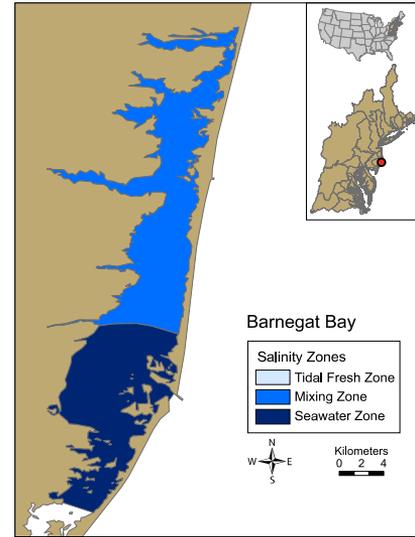
Future Outlook

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

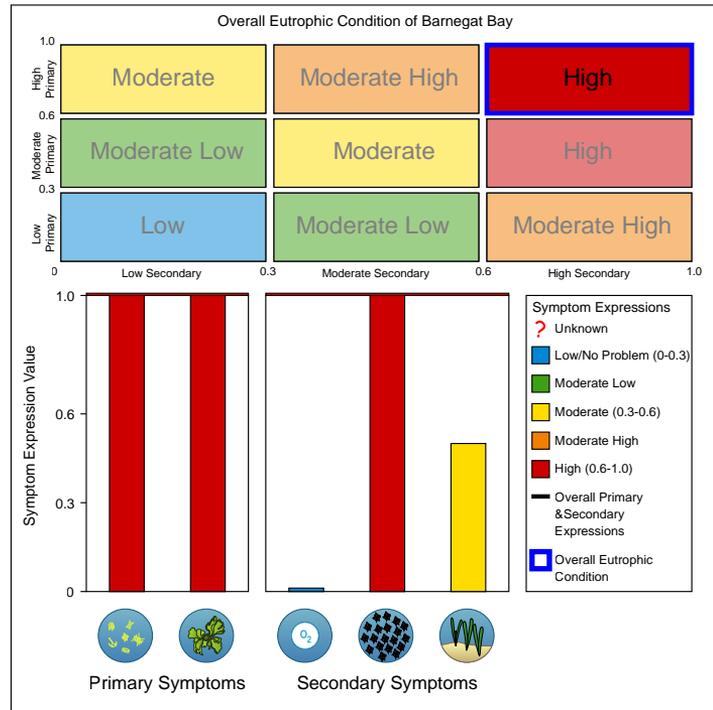
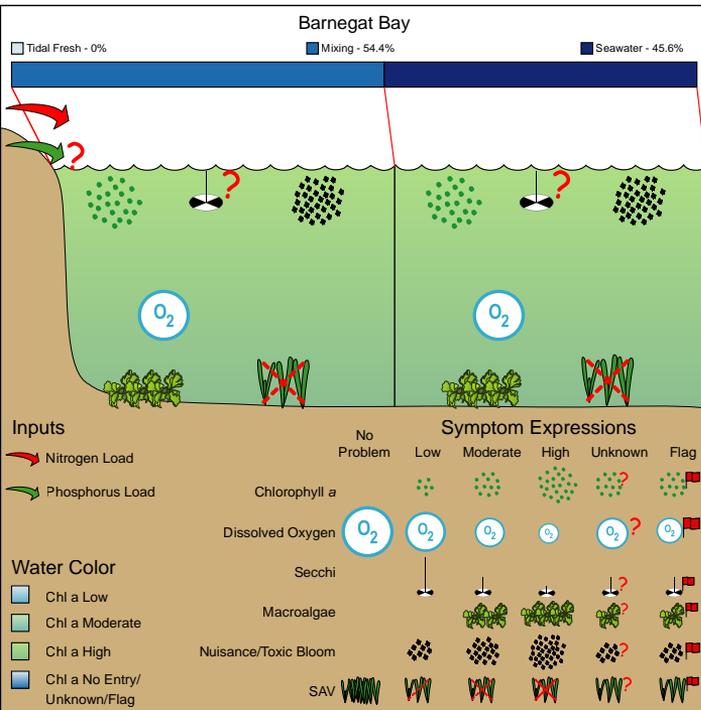


ASSETS Rating

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



EUTROPHIC CONDITION



WATERSHED AND ESTUARY CHARACTERISTICS

Estuary	Landuse / Population			Watershed Details / Input Loads	
Area (km ²)	182	Urban (km ²)	515 (37.6%)	Area (km ²)	1,399
Tidal fresh zone area (km ²)	0	Agriculture (km ²)	73 (5.3%)	Mean elevation (m)	27
Mixing zone area (km ²)	99	Forest (km ²)	609 (44.4%)	Max. elevation (m)	66
Saltwater zone area (km ²)	83	Wetland (km ²)	174 (12.7%)	Watershed: estuary ratio	7.7
Volume (1,000 x m ³)	118,300	Range (km ²)	0 (0%)	TSS (tonne y ⁻¹)	74,000
Depth (m)	0.65	Barren (km ²)	0 (0%)	TN (kg y ⁻¹)	790,000
Tide Height (m)	0.24	Total (km ²)	1,370 (0%)	DIP (kg y ⁻¹)	Unknown
Residence Time (d)	4	Population	402,358	TSS/est. area (tonne km ⁻² y ⁻¹)	407
		Popn: est. area ratio	2,211	TN/est. area (kg km ⁻² y ⁻¹)	4,341
				DIP/est. area (kg km ⁻² y ⁻¹)	Unknown