

Plum Island Sound

SUMMARY

Plum Island Sound is characterized by high chlorophyll-a and moderate nuisance/toxic blooms symptom expressions. These symptoms have worsened since 1999. However, dissolved oxygen levels are healthy and have not changed since the 1999 assessment. A future increase in nutrient loads is possible due to a growing population.

Influencing Factors

Any level nitrogen input and low to moderate susceptibility (good ability to dilute and flush nutrients).



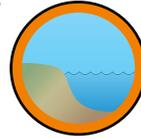
Future Outlook

Nutrient related symptoms observed in the estuary are likely to substantially worsen.



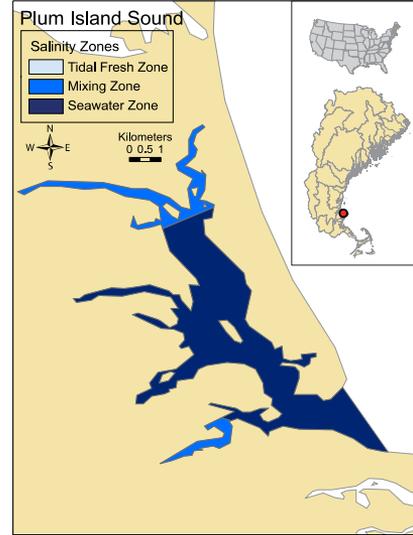
Eutrophic Conditions *

Primary symptoms high and substantial secondary symptoms becoming more expressed, indicating potentially serious problems.

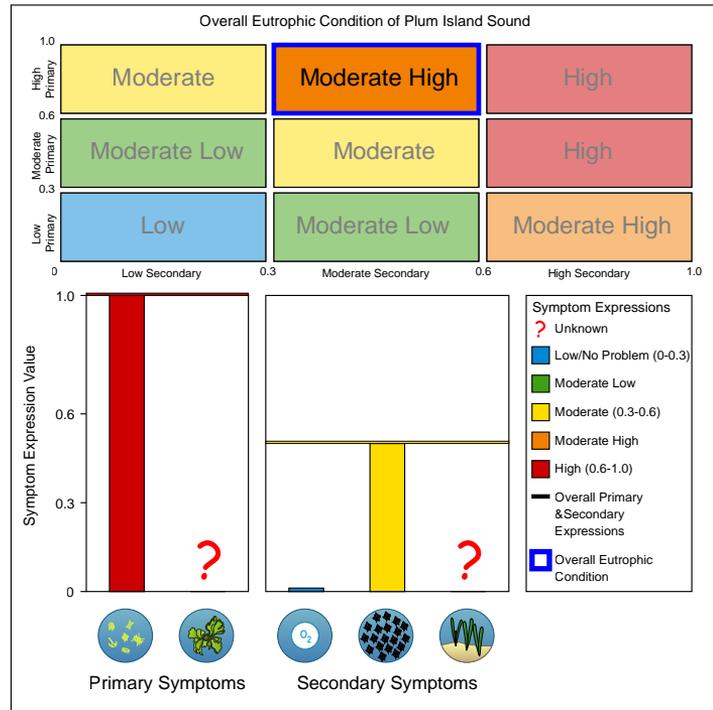
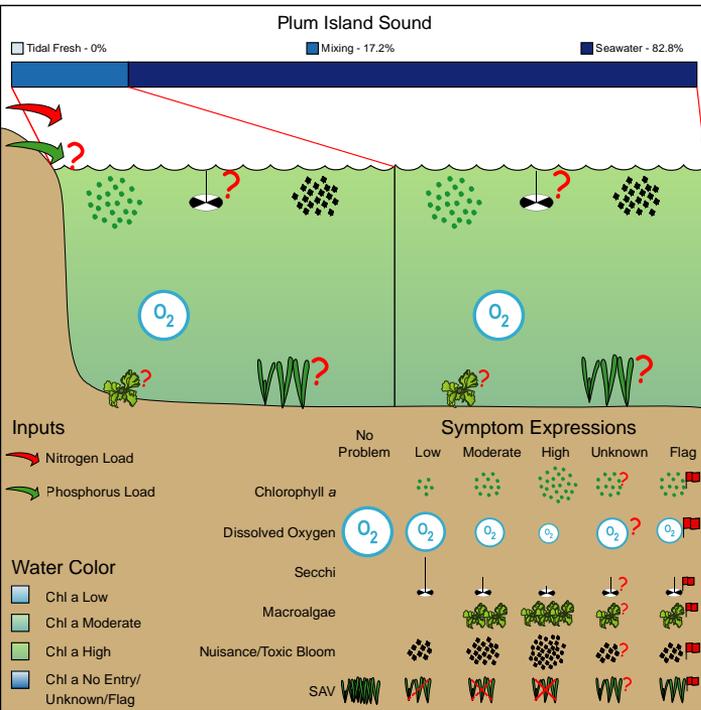


ASSETS Rating

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)	15	Urban (km ²)	197 (33.6%)	Area (km ²)	597	
Tidal fresh zone area (km ²)	0	Agriculture (km ²)	39 (6.6%)	Mean elevation (m)	26	
Mixing zone area (km ²)	3	Forest (km ²)	293 (50%)	Max. elevation (m)	91	
Saltwater zone area (km ²)	12	Wetland (km ²)	57 (9.7%)	Watershed: estuary ratio	39.8	
Volume (1,000 x m ³)	30,750	Range (km ²)	0 (0%)	TSS (tonne y ⁻¹)	28,700	
Depth (m)	2.05	Barren (km ²)	0 (0%)	TN (kg y ⁻¹)	174,000	
Tide Height (m)	2.62	Total (km ²)	585 (0%)	DIP (kg y ⁻¹)	Unknown	
Residence Time (d)	0	Population	180,788	TSS/est. area (tonne km ⁻² y ⁻¹)	1,913	
		Popn: est. area ratio	12,053	TN/est. area (kg km ⁻² y ⁻¹)	11,600	
				DIP/est. area (kg km ⁻² y ⁻¹)	Unknown	