

Boston Harbor

SUMMARY

Boston Harbor has a low eutrophic expression and has improved considerably since the last survey. Large reductions in wastewater nitrogen and phosphorus loadings have led to decreased nutrient concentrations in the water column, decreased chlorophyll-a concentrations, increased dissolved oxygen and benthic invertebrate diversity.

Influencing Factors

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



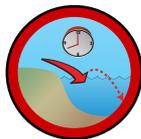
Eutrophic Conditions ***

Level of expression of eutrophic conditions is minimal.



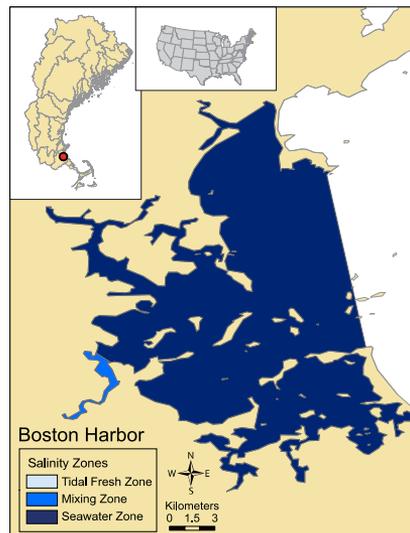
Future Outlook

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



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

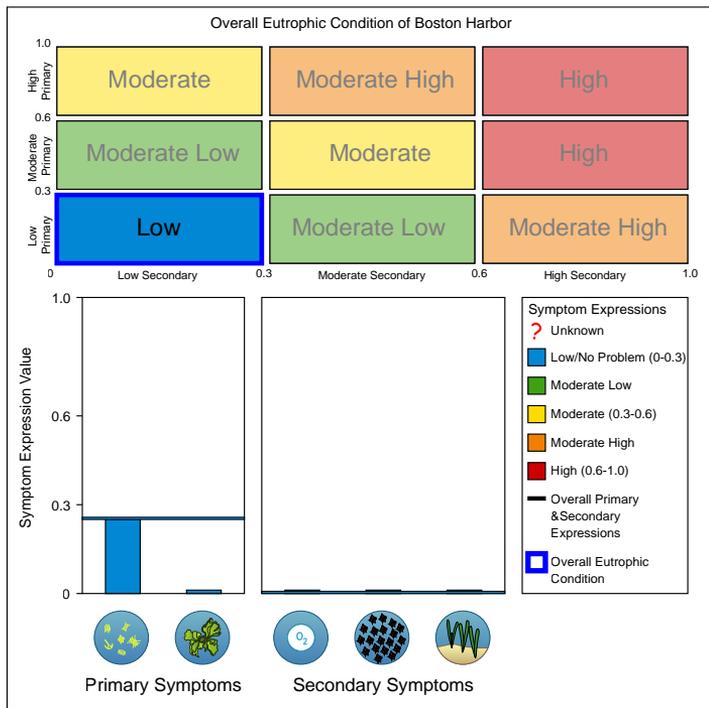
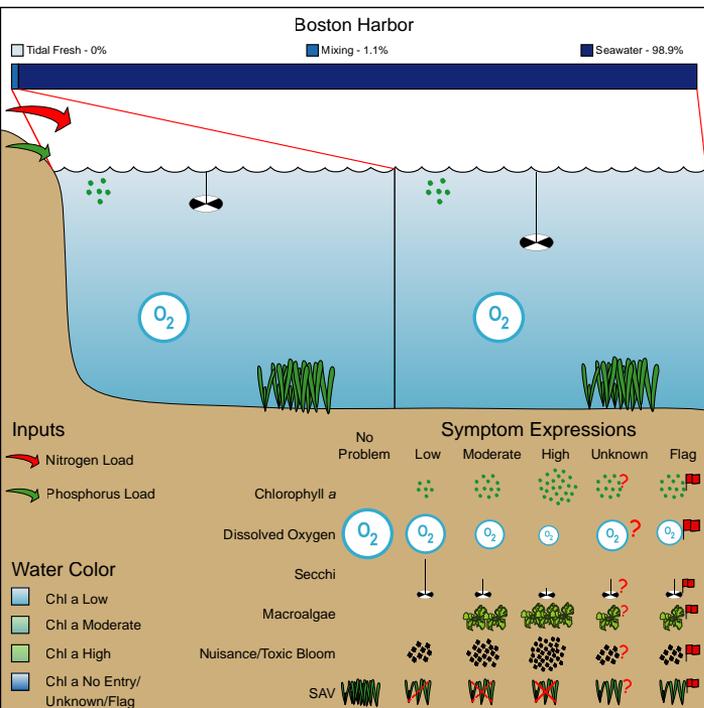
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High

EUTROPHIC CONDITION



WATERSHED AND ESTUARY CHARACTERISTICS

Estuary		Landuse / Population		Watershed Details / Input Loads	
Area (km ²)	186	Urban (km ²)	1,272 (78.9%)	Area (km ²)	1,623
Tidal fresh zone area (km ²)	0	Agriculture (km ²)	23 (1.4%)	Mean elevation (m)	48
Mixing zone area (km ²)	2	Forest (km ²)	316 (19.6%)	Max. elevation (m)	166
Saltwater zone area (km ²)	184	Wetland (km ²)	0 (0%)	Watershed: estuary ratio	8.7
Volume (1,000 x m ³)	1,162,500	Range (km ²)	0 (0%)	TSS (tonne y ⁻¹)	135,000
Depth (m)	6.25	Barren (km ²)	0 (0%)	TN (kg y ⁻¹)	1,200,000
Tide Height (m)	2.87	Total (km ²)	1,611 (0%)	DIP (kg y ⁻¹)	14,000
Residence Time (d)	2	Population	1,933,170	TSS/est. area (tonne km ⁻² y ⁻¹)	726
		Popn: est. area ratio	10,393	TN/est. area (kg km ⁻² y ⁻¹)	6,452
				DIP/est. area (kg km ⁻² y ⁻¹)	75