

# Waquoit Bay

## SUMMARY

The Waquoit Bay watershed has experienced an increase in urban sprawl during recent decades, resulting in greater nitrogen loads to the bay. These factors have contributed to increases in macroalgae abundance and chlorophyll-a concentrations, and a decline in seagrasses and scallop catch. Nutrient loads are expected to increase.

## Influencing Factors

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



## Eutrophic Conditions \*\*\*

Primary symptoms high but problems with more serious secondary symptoms still not being expressed.



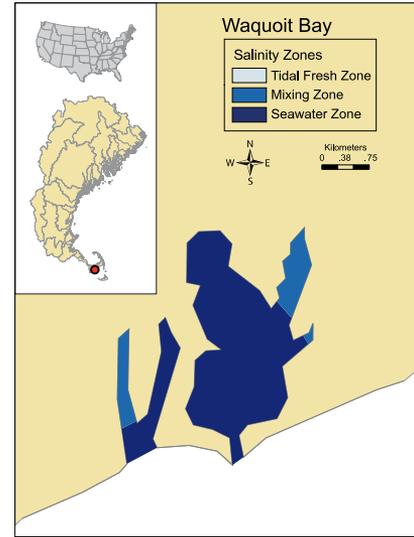
## Future Outlook

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



## 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

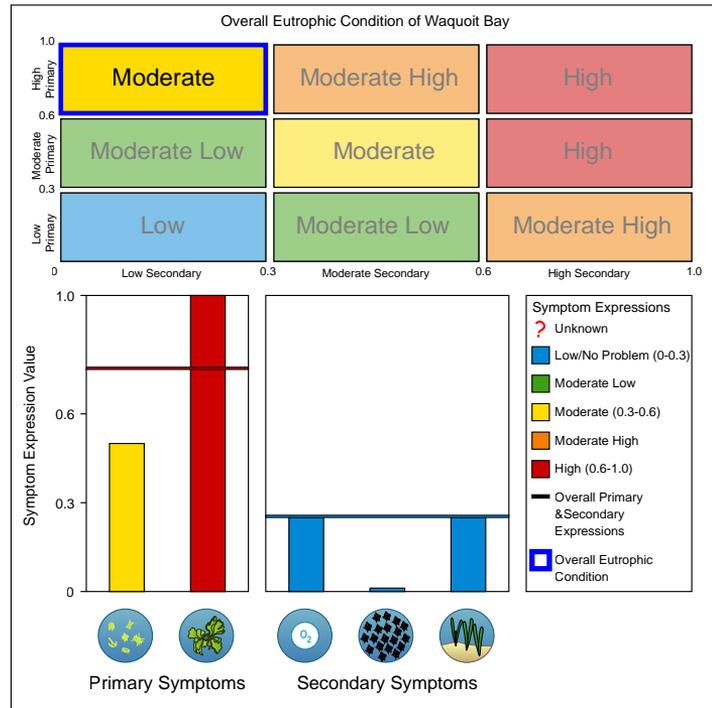
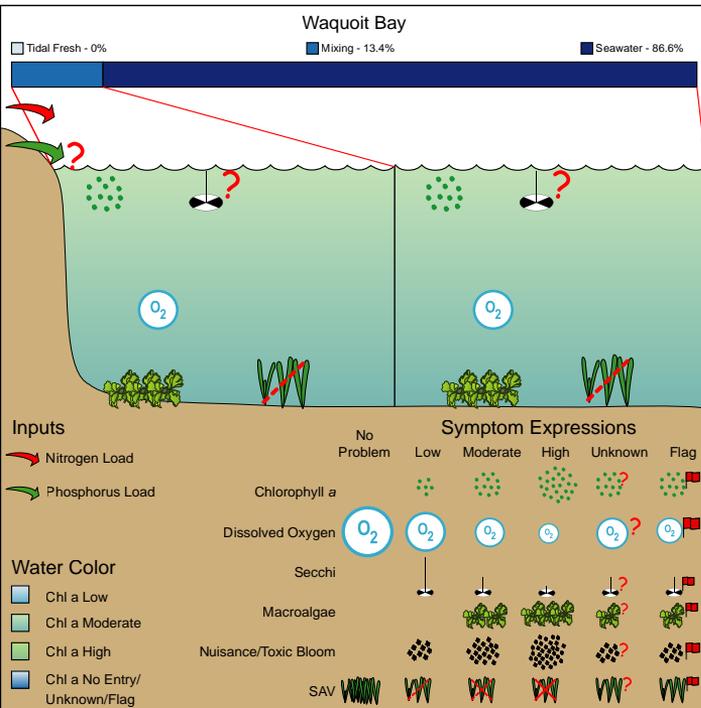
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## EUTROPHIC CONDITION



## WATERSHED AND ESTUARY CHARACTERISTICS

Estuary		Landuse / Population		Watershed Details / Input Loads	
Area (km <sup>2</sup> )	5	Urban (km <sup>2</sup> )	15 (18.3%)	Area (km <sup>2</sup> )	53
Tidal fresh zone area (km <sup>2</sup> )	0	Agriculture (km <sup>2</sup> )	2 (1.9%)	Mean elevation (m)	17
Mixing zone area (km <sup>2</sup> )	<1	Forest (km <sup>2</sup> )	32 (38.4%)	Max. elevation (m)	50
Saltwater zone area (km <sup>2</sup> )	4	Wetland (km <sup>2</sup> )	35 (41.4%)	Watershed: estuary ratio	10.6
Volume (1,000 x m <sup>3</sup> )	4,400	Range (km <sup>2</sup> )	0 (0%)	TSS (tonne y <sup>-1</sup> )	321
Depth (m)	0.88	Barren (km <sup>2</sup> )	0 (0%)	TN (kg y <sup>-1</sup> )	35,343
Tide Height (m)	0.30	Total (km <sup>2</sup> )	84 (0%)	DIP (kg y <sup>-1</sup> )	Unknown
Residence Time (d)	4	Population	4,987	TSS/est. area (tonne km <sup>-2</sup> y <sup>-1</sup> )	64
		Popn: est. area ratio	997	TN/est. area (kg km <sup>-2</sup> y <sup>-1</sup> )	7,069
				DIP/est. area (kg km <sup>-2</sup> y <sup>-1</sup> )	Unknown