

# Charleston Harbor

## SUMMARY

Dissolved oxygen concentrations have increased in Charleston Harbor since the 1999 assessment. Some decreases in water clarity are evident. Chlorophyll-a symptom expression is moderate for both the mixing and seawater zones. There are low-to-no nuisance/toxic bloom problems. Overall eutrophic condition is moderate low.

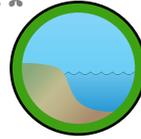
## Influencing Factors

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



## Eutrophic Conditions \*\*

Primary symptoms beginning to indicate possible problems but still very few secondary symptoms expressed.



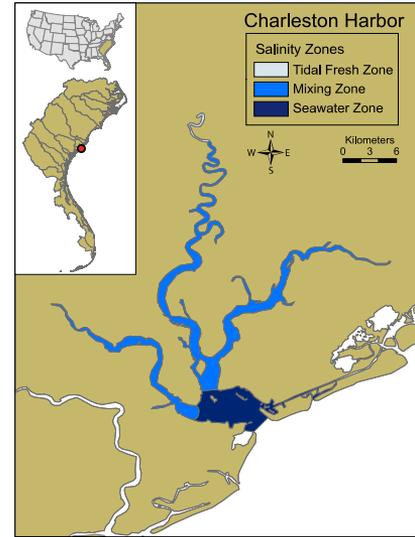
## Future Outlook

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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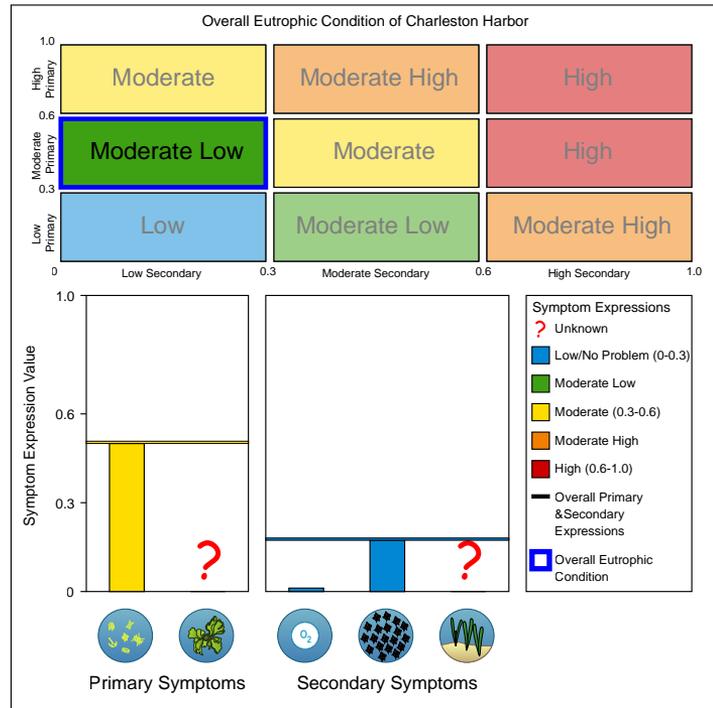
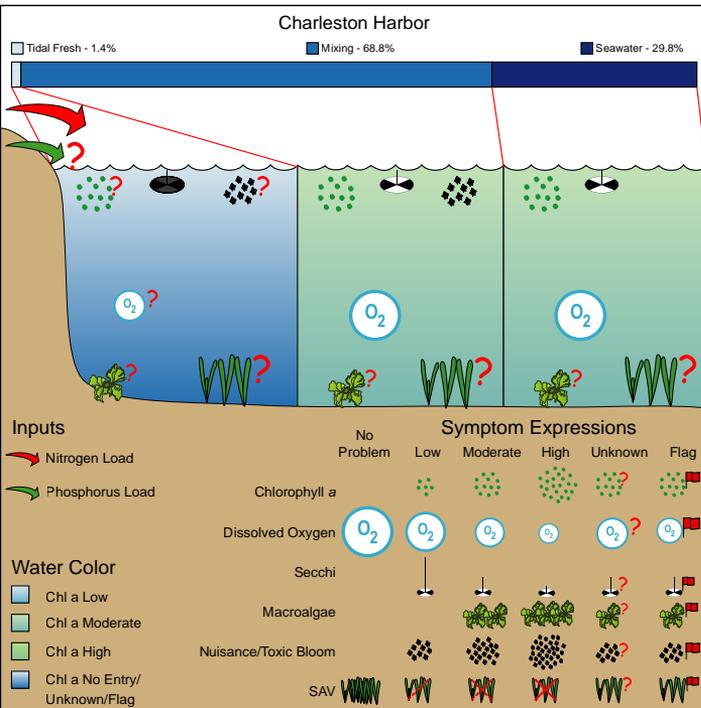
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High

## EUTROPHIC CONDITION



## WATERSHED AND ESTUARY CHARACTERISTICS

Estuary	Landuse / Population		Watershed Details / Input Loads		
Area (km <sup>2</sup> )	85	Urban (km <sup>2</sup> )	4,532 (11.4%)	Area (km <sup>2</sup> )	41,116
Tidal fresh zone area (km <sup>2</sup> )	1	Agriculture (km <sup>2</sup> )	9,938 (24.9%)	Mean elevation (m)	216
Mixing zone area (km <sup>2</sup> )	58	Forest (km <sup>2</sup> )	24,159 (60.6%)	Max. elevation (m)	1,679
Saltwater zone area (km <sup>2</sup> )	25	Wetland (km <sup>2</sup> )	1,217 (3.1%)	Watershed: estuary ratio	483.7
Volume (1,000 x m <sup>3</sup> )	424,150	Range (km <sup>2</sup> )	10 (0%)	TSS (tonne y <sup>-1</sup> )	32,200
Depth (m)	4.99	Barren (km <sup>2</sup> )	0 (0%)	TN (kg y <sup>-1</sup> )	30,470,000
Tide Height (m)	1.45	Total (km <sup>2</sup> )	39,857 (0%)	TP (kg y <sup>-1</sup> )	Unknown
Residence Time (d)	5	Population	3,139,518	TSS/est. area (tonne km <sup>-2</sup> y <sup>-1</sup> )	379
		Popn: est. area ratio	36,936	TN/est. area (kg km <sup>-2</sup> y <sup>-1</sup> )	358,471
				TP/est. area (kg km <sup>-2</sup> y <sup>-1</sup> )	Unknown