

# St. Helena Sound

## SUMMARY

St. Helena Sound has not shown any clear trend related to dissolved oxygen or evidence of harmful algal blooms in main sound. The upper portion shows some evidence of increasing nutrient and chlorophyll-a concentrations, especially in tidal creeks. SAV and macro algae are not applicable to the Sound.

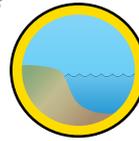
## Influencing Factors

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 substantial.



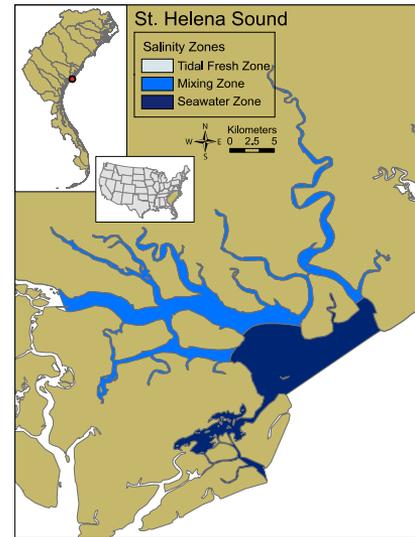
## Future Outlook

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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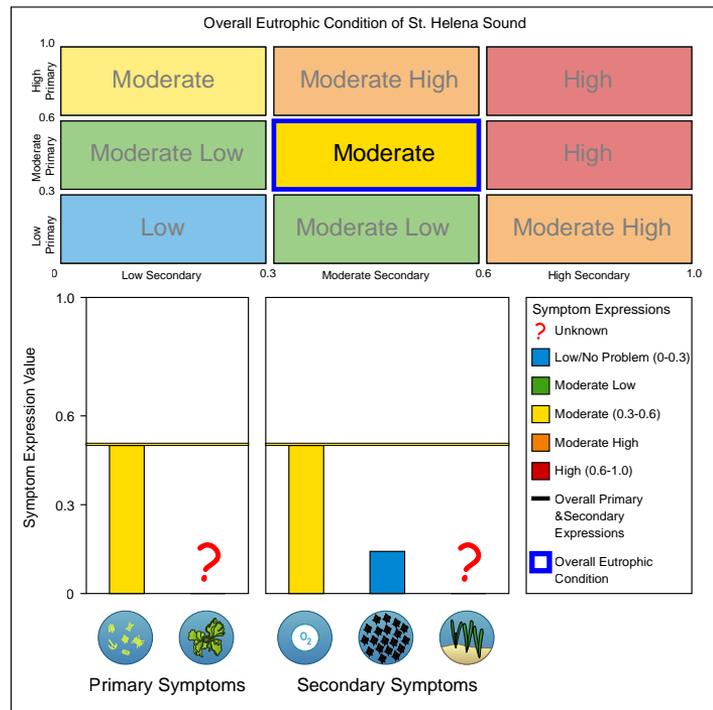
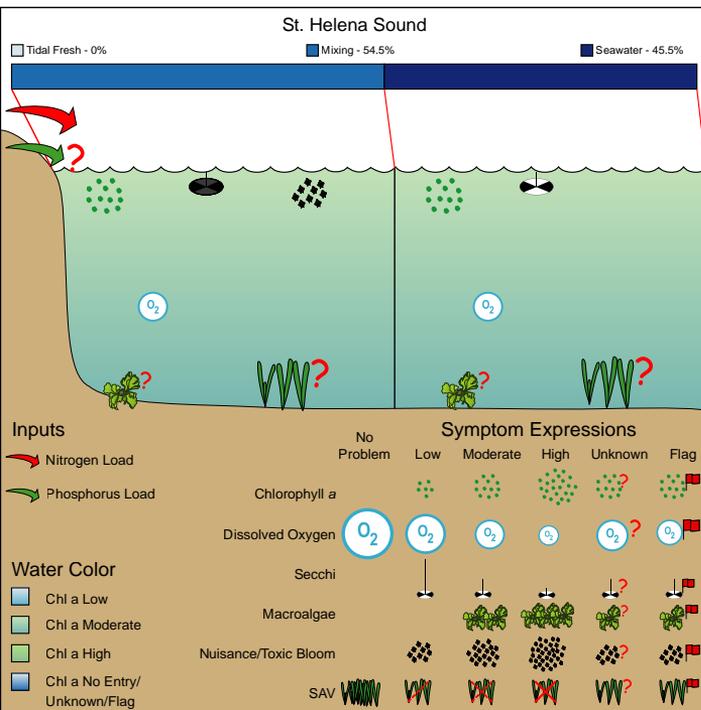
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High

## EUTROPHIC CONDITION



## WATERSHED AND ESTUARY CHARACTERISTICS

Estuary		Landuse / Population		Watershed Details / Input Loads	
Area (km <sup>2</sup> )	203	Urban (km <sup>2</sup> )	282 (2.3%)	Area (km <sup>2</sup> )	12,263
Tidal fresh zone area (km <sup>2</sup> )	0	Agriculture (km <sup>2</sup> )	4,268 (35%)	Mean elevation (m)	57
Mixing zone area (km <sup>2</sup> )	111	Forest (km <sup>2</sup> )	5,053 (41.5%)	Max. elevation (m)	206
Saltwater zone area (km <sup>2</sup> )	92	Wetland (km <sup>2</sup> )	2,569 (21.1%)	Watershed: estuary ratio	60.4
Volume (1,000 x m <sup>3</sup> )	720,650	Range (km <sup>2</sup> )	10 (0.1%)	TSS (tonne y <sup>-1</sup> )	44,100
Depth (m)	3.55	Barren (km <sup>2</sup> )	0 (0%)	TN (kg y <sup>-1</sup> )	4,200,000
Tide Height (m)	1.73	Total (km <sup>2</sup> )	12,183 (0%)	TP (kg y <sup>-1</sup> )	Unknown
Residence Time (d)	2	Population	228,005	TSS/est. area (tonne km <sup>-2</sup> y <sup>-1</sup> )	217
		Popn: est. area ratio	1,123	TN/est. area (kg km <sup>-2</sup> y <sup>-1</sup> )	20,690
				TP/est. area (kg km <sup>-2</sup> y <sup>-1</sup> )	Unknown