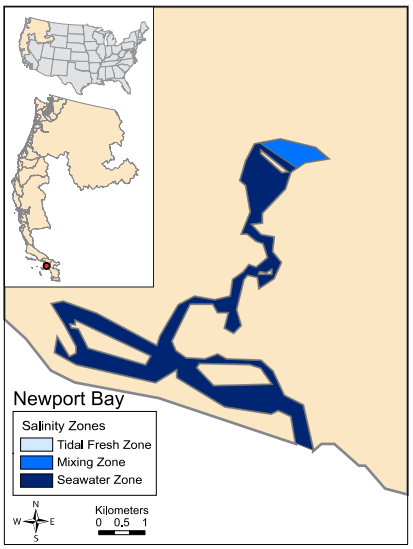
Newport Bay

SUMMARY

In Newport Bay, very large macroalgae biomass has been recorded and is speculated to increase after heavy rainfall. Dissolved oxygen levels suggest some hypoxia, but low confidence in this parameter has led to a symptom expression of low. Nutrient levels are expected to decrease in the future due to diversion and treatment of stormwater.



Influencing Factors

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

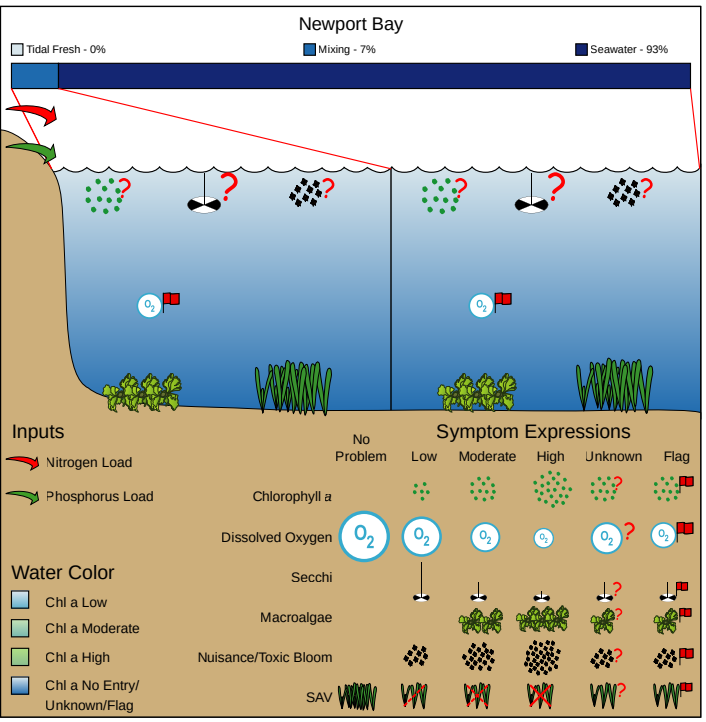
ASSETS Rating

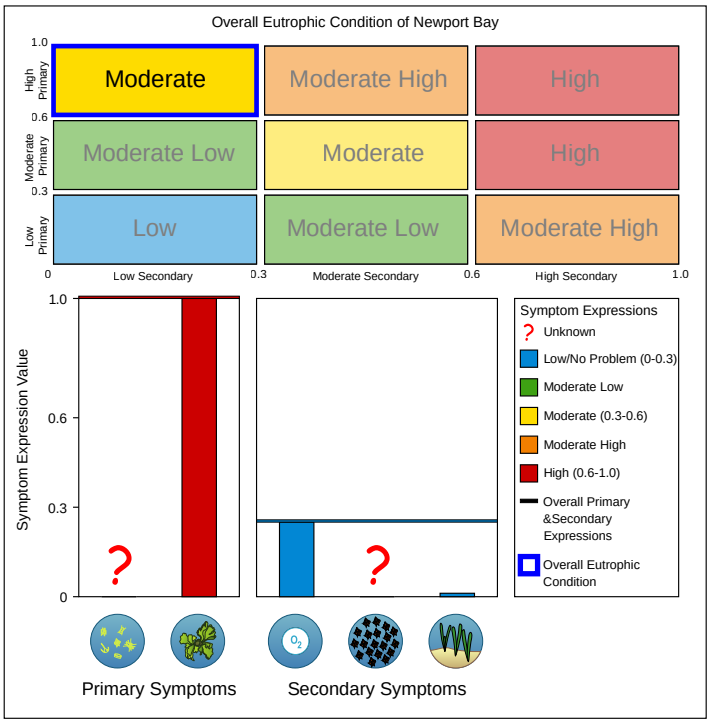
Assessment of Estuarine Trophic Status based on the three factors evaluated in NEEA.

Influence/eutro/future	Unknown	Low	Mod Low	Moderate	Mod High	High
ASSETS	Unknown	High	Good	Moderate	Poor	Bad

Reliability and Confidence: ? Unknown; * Low; ** Moderate; *** High

EUTROPHIC CONDITION





WATERSHED AND ESTUARY CHARACTERISTICS

Estuary		Landuse / Population		Watershed Details / Input Loads	
Area (km^2)	5	Urban (km^2)	303 (78.5%)	Area (km^2)	392
Tidal fresh zone area (km^2)	0	Agriculture (km^2)	28 (7.4%)	Mean elevation (m)	98
Mixing zone area (km^2)	<1	Forest (km^2)	0 (0%)	Max. elevation (m)	484
Saltwater zone area (km^2)	5	Wetland (km^2)	0 (0%)	Watershed: estuary ratio	78.4
Volume (1,000 x m^3)	12,900	Range (km^2)	54 (14.1%)	TSS (tonne y^{-1})	6,920
Depth (m)	2.58	Barren (km^2)	0 (0%)	TN (kg y^{-1})	60,000
Tide Height (m)	1.13	Total (km^2)	386 (0%)	TP (kg y^{-1})	54,000
Residence Time (d)	3	Population	363,901	TSS/est. area (tonne km^{-2} y^{-1})	1,384
		Popn: est. area ratio	72,780	TN/est. area (kg km^{-2} y^{-1})	12,000
				TP/est. area (kg km^{-2} y^{-1})	10,800