

**Candidate Alternative Methods & Chlorophyll Values to be used to Generate
CHNEP Total Nitrogen and Total Phosphorus Criteria for TAC Consideration – October 13, 2010**

Bay Segment	Seagrass Targets			Reference Period Method (2003-2007)			Optical Model Method ⁴				Empirical Distribution Method ⁵	
	Restore/ Preserve Acres	Water Clarity Trends ²	Seagrass Trends	Target (Mean)	Threshold (Mean + 1 SD) ⁶	Threshold (Mean + 1/2 SD) ⁶	Max	Mean	30 th percentile	70 th percentile	30 th percentile	70 th percentile
Dona and Roberts Bays	Restore	n/a	n/a ¹	4.3	5.4	4.9	n/a	n/a	n/a	n/a	1.7	4.3
Upper Lemon Bay	Preserve	none	improving	6.7	8.9		8.2	-4.9	-0.1	-3.9	2.7	7.2
Lower Lemon Bay	Restore	none	stable	5.1	7.1	6.1	8.2	-1.1	3.5	-1.9	2.7	6
Tidal Myakka	Preserve ¹	none	n/a ¹	8.9	11.7 ³		25.6	-8.5	9	-10.2	4.4	9.6
Tidal Peace	Restore ¹	none	n/a ¹	10.6	14.6 ³	12.6	22.4	-5.6	9.8	-3.5	4.6	10.3
Charlotte Harbor Proper (EW+WW+BK+CH)	Both	none	stable	4.9	7.3	6.1	10.2	-0.8	5.4	-0.3	1.9	5
Matlacha Pass	Restore	slight improving	stable	4	8.1	6.1	8.2	-1.9	2.8	-2.9	1.6	4.5
Pine Island Sound	Preserve	slight improving	improving	5.1	6.5		6.9	-0.7	2.6	-2	2	5.8
Tidal Caloosahatchee	Restore ¹	none	n/a ¹	9	TMDL 6.9	??	17.7	-2.1	8.9	-4.4	2.8	8.2
San Carlos Bay	Preserve	slight improving	improving	2.8	3.5		6.9	1	3.8	-1.2	1.8	3.4
Estero Bay	Restore	slight improving	improving	4.9	6.9	5.9	11.7	1.3	7	0	2.2	5.4

¹ Riverine segments may have underreported seagrass acreages due to difficulty delineating seagrass in highly colored water.

² From "Water Quality Data Analysis and Report for the CHNEP, CHNEP 2007", based on secchi values for period of record through 2005.

³ These Myakka River and Peace River targets and thresholds are based on the mean values for each segment. Previously, the thresholds for these 2 segments were based on the threshold for Charlotte Harbor Proper.

⁴ From "Numeric Water Quality Targets for Lemon Bay, Charlotte Harbor and Estero Bay, FL", CHNEP 2006, based on relationship of total light attenuation to light attenuation from color (CDOM), turbidity and chlorophyll.

⁵ Derived from "Water Quality Target Refinement Interim Report 3: Water Clarity Targets", CHNEP 2010, but is based on Cumulative Distribution Frequencies of chlorophyll a instead of light attenuation (K_d) values.

⁶ For segments with Preservation Targets only, Thresholds = Mean + 1 SD; for segments with Restoration Targets, Thresholds = Mean + ½ SD.