

SETTING SEAGRASS TARGETS FOR THE CHARLOTTE HARBOR NEP



CHARLOTTE HARBOR NEP
POLICY COMMITTEE

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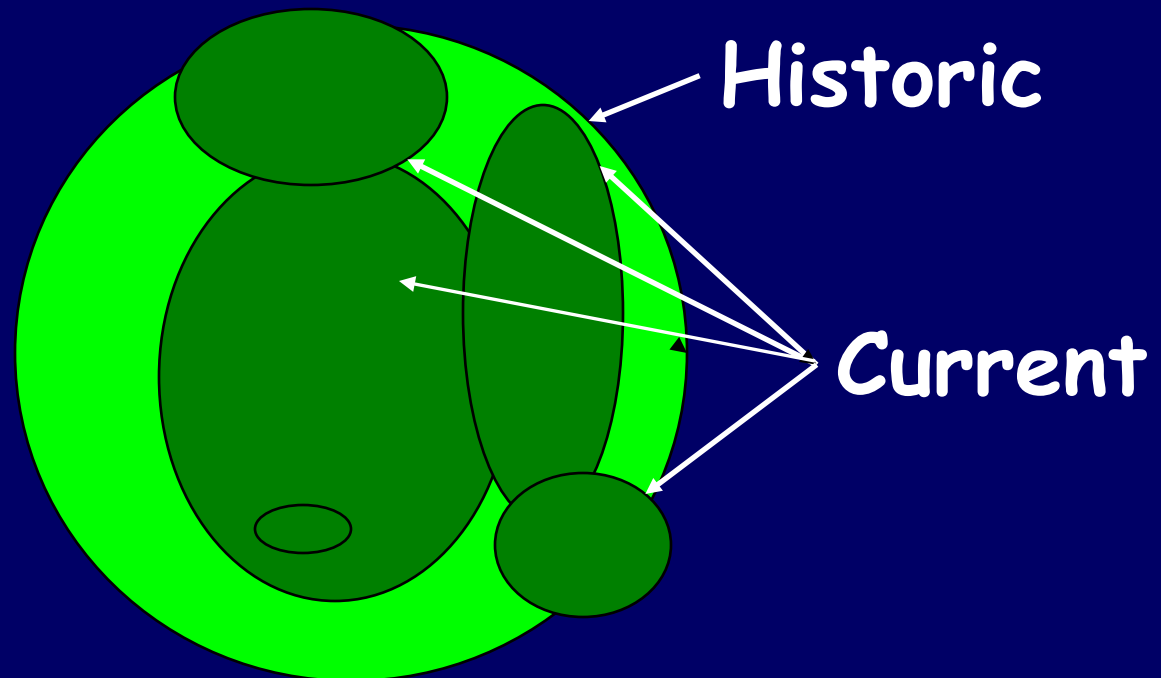
SETTING SEAGRASS TARGETS FOR THE CHARLOTTE HARBOR NEP

- The objective of this project was to provide technically defensible, quantitative, restoration and protection targets for seagrasses in the Charlotte Harbor NEP estuarine waters.



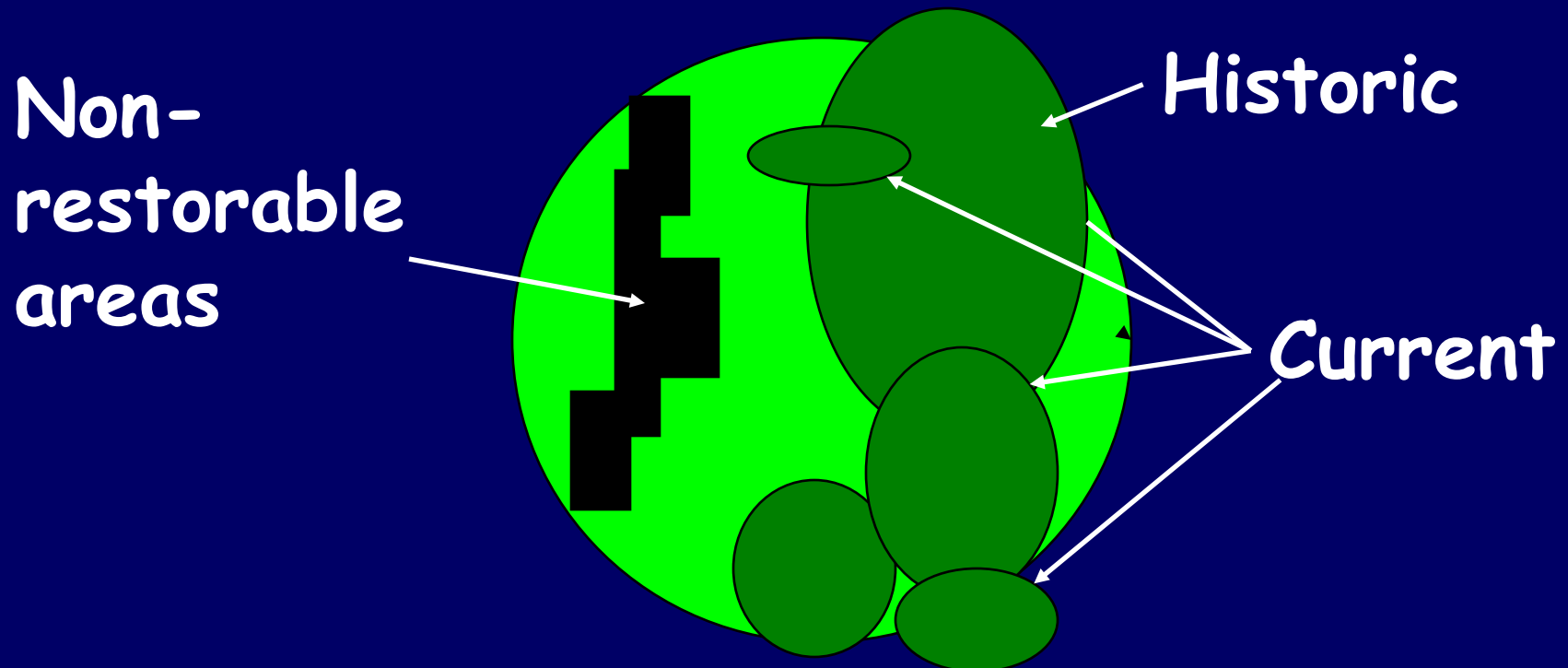
STEP 1. Acquire and overlay all seagrass aerial extent data

- Recent (~1988) and Historic (1950's)



STEP 2. Identify non-restorable areas

- ICW , Fill projects, etc.



STEP 3. Present options to the TAC

Table 5-1. Baseline, non-restorable, and adjusted baseline seagrass extents and potential seagrass targets (acres).

	Coastal Venice	Upper Lemon Bay	Lower Lemon Bay	Tidal Myakka	Tidal Peace	West Wall	East Wall	Cape Haze	Lower Charlotte Harbor	Pine Island Sound	Matlacha Pass	San Carlos Bay	Tidal Caloosa-hatchee	Estero Bay	Total
Baseline	133	1005	3114	350	1039	2117	3986	5798	3058	24113	9577	3243	211	3769	61513
Non-restorable Areas	21	125	232	6	64	11	88	128	94	356	262	125	118	107	1737
Adjusted Baseline	112	880	2882	344	975	2106	3898	5670	2964	23757	9315	3118	93	3662	59776
Maximum Annual Extent	124	1175	2597	539	573	2121	3591	7464	3520	29204	7619	5376	103	3409	67415
Mean Annual Extent: all years	91	1009	2502	456	384	1907	3465	6998	3342	26837	7582	4372	87	3071	62103
Mean Annual Extent: last 3 years	104	1032	2498	411	337	1965	3416	7050	3392	28043	7427	4969	72	3033	63749
Most Recent Annual Extent	124	949	2597	375	341	2121	3382	6911	3520	29204	7619	5376	56	3298	65873

STEP 4. Define restoration and protection targets

- Agreement that the higher of the adjusted baseline or mean of recent areal estimates be used as the target
- If recent extent is larger than adjusted baseline then the target is a "Protection target"
- If adjusted baseline is larger, then the target is "Restoration target"

SEAGRASS TARGETS

Harbor Segment	Baseline, adjusted	Mean Annual Extent all years	Standard Deviation	Protection Target	Restoration Target	Total Target	Target Range
Dona and Roberts** Bay	112	91	20	91	21	112	70-124
Upper Lemon Bay	880	1,009	87	1,009		1,009	949-1,175
Lower Lemon Bay	2,882	2,502	70	2,502	380	2,882	2,396-2,597
Tidal Myakka River**	344	456	87	456		456	331-539
Tidal Peace River**	975	384	103	384	591	975	295-573
West Wall	2,106	1,907	161	1,907	199	2,106	1,676-2,121
East Wall	3,898	3,465	126	3,465	433	3,898	3,275-3,591
Cape Haze	5,670	6,998	271	6,998		6,998	6,709-7,464
Lower Charlotte Harbor	2,964	3,342	148	3,342		3,342	3,101-3,520
Pine Island Sound	23,757	26,837	1,413	26,837		26,837	25,941-29,204
Matlacha Pass	9,315	7,582	710	7,582	1,733	9,315	6,055-7,619
San Carlos Bay	3,118	4,372	775	4,372		4,372	3,709-5,376
Tidal Caloosahatchee**	93	87	41	87	6	93	2-103
Estero Bay	3,662	3,071	530	3,071	591	3,662	2,393-3,409
TOTAL	59,776	62,103	N/A	62,103	3,954	66,057	N/A

OTHER RESULTS

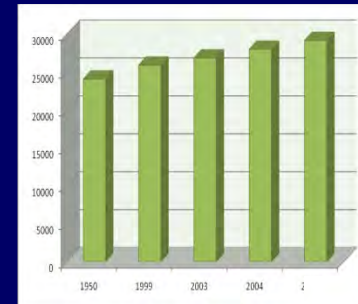
➤ Maps of historic extents by segment



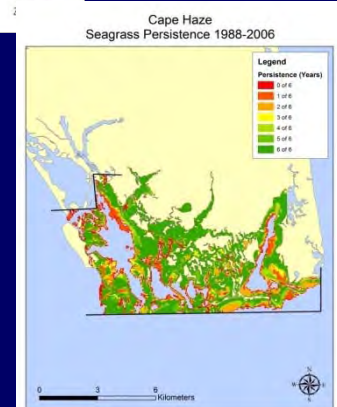
➤ Maps of non restorable areas



➤ Trends in seagrass areal extent



➤ Maps of seagrass "persistence"



CONSIDERATIONS

- The TAC and seagrass report recognizes that this study assesses seagrass condition based on extent only, not speciation, quality or density.
- The TAC and report recognizes that other methods may be more appropriate for assessing seagrass extent in tidal river segments where highly colored waters may influence the ability to interpret aerial photography

NEXT STEPS

- Establish process for reporting
- Link results to water quality targets
- Define appropriate management responses
- Compare changes in areal extent with other data (e.g., seagrass transect monitoring data)