

The Seagrass Integrated Mapping and Monitoring (SIMM) Program of Florida:

Providing information to a broad user community.



Report located at
<http://myfwc.com/research/habitat/seagrasses/projects/active/simm-report-1/>

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Seagrass Integrated Mapping and Monitoring Program
Mapping and Monitoring Report No. 1

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Editors



Florida Fish and Wildlife
Conservation Commission



FWRI Technical Report TR-17

2013

The SIMM program and report includes

- 44 authors/collaborators contributing to:
- 23 chapters covering Florida coastal waters from Perdido Bay to the Northern Indian River Lagoon.
Chapters are served on the Web and can be updated any time new information is available.
- an Executive Summary providing information for seagrass ecosystems throughout Florida waters.

SIMM Program Goals:

- Collate and provide up-to-date seagrass mapping and monitoring information in Florida coastal waters for a variety of stakeholders and uses.
- Identify and fill spatial gaps and data needs
- Leverage scarce funding by collaborating with agencies to acquire and map imagery and to complete monitoring surveys.
- Evaluate new cost-effective data sources and mapping methods.

Each chapter lists contributors and contact information, a general assessment of seagrass status and trends, and

SIMM Program Report No. 1.1 Summary Report for Northern Big Bend

Yarbro & Carlson

Summary Report for the Northern Big Bend Region

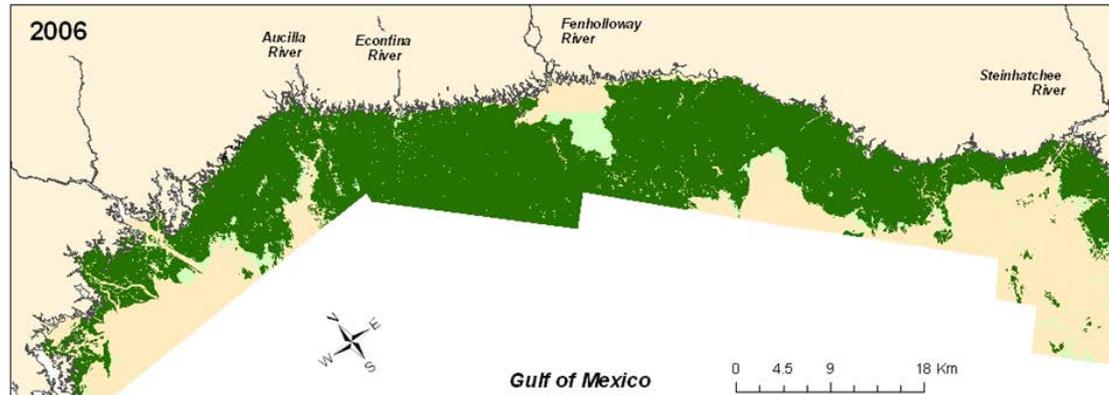
Contacts: Timothy Jones, Jonathan Brucker, and Jamie Letendre (monitoring), Big Bend Seagrasses Aquatic Preserve, Florida Department of Environmental Protection; Laura Yarbro (monitoring) and Paul R. Carlson Jr. (mapping), Fish and Wildlife Research Institute, Florida Fish and Wildlife Conservation Commission; Karen Kebert, Northwest Florida Water Management District (management)



General assessment: The northern Big Bend region contained 149,140 acres of seagrass in 2006. Seagrass density is declining throughout the region, but is most pronounced near the mouths of the Econfinia and Steinhatchee rivers. Seagrass

coastal region during the remainder of the growing season. Turbidity is elevated west of the mouth of the St. Marks River, where discharge from the Apalachicola River affects coastal waters. Heavy propeller scarring is evident around the mouth of the

a map of seagrass cover



a table showing the most recent seagrass acreage

Habitat Type	St Marks West	St Marks East	Aucilla	Econfina	Keaton Beach	Stein* North	All Regions
2001 Habitat Area (acres)							
Patchy Seagrass	230	760	920	140	1,220	1,220	4,490
Continuous Seagrass	15,710	15,610	24,550	28,510	38,080	22,890	145,350
All Seagrass	15,940	16,370	25,470	28,650	39,300	24,110	149,840
2006 Habitat Area (acres)							
Patchy Seagrass	1,180	1,780	1,150	280	1,220	1,600	7,210
Continuous Seagrass	13,920	14,630	24,360	28,390	38,100	22,530	141,930
All Seagrass	15,100	16,410	25,510	28,670	39,320	24,130	149,140
Change 2001-2006							
Patchy Seagrass	950	1,020	230	140	0	380	2,720
Continuous Seagrass	-1,790	-980	-190	-120	20	-360	-3,420
All Seagrass	-840	40	40	20	20	20	-700

and report cards of status, trends, and stressors

Seagrass Status and Potential Stressors in the northern Big Bend region			
Status indicator	Status	Trend	Assessment, causes
Seagrass acreage		Update Needed	Likely declining
Seagrass meadow texture	Red	Thinning	Reduced water clarity
Seagrass species composition	Yellow	Local changes	Reduced water clarity
Overall seagrass trends	Orange	Declining	Reduced water clarity
Seagrass stressor	Intensity	Impact	Explanation
Water clarity	Orange	Reduced	River runoff, phytoplankton blooms
Nutrients	Orange	Likely Increasing	Storm-driven river runoff
Phytoplankton	Orange	Increasing	Storm-driven river runoff
Natural events	Orange	Significant Impacts	Tropical storms in 2012 and 2013
Propeller scarring	Yellow	Localized	St. Marks, Keaton Beach, Steinhatchee

Mapping estimates of seagrass acreage in estuarine
and coastal waters of Florida.

Estuary/Region	Mapping data				
	Previous		Most Recent		Change (%/yr)
	Year	Acres	Year	Acres	
Perdido Bay	2002	115	2009	135	2.5%
Pensacola Bay System	2003	511	2010	1,053	15.2%
Big Lagoon	2003	544	2010	515	-0.8%
Santa Rosa Sound	2003	3,032	2010	2,894	-0.7%
Choctawhatchee Bay	2003	2,623	2007	1,915	-6.7%
St. Andrew Bay	2003	11,233	2010	12,193	1.2%
St. Joseph Bay	2006	6,672	2010	7,166	1.9%
Franklin County	1992	14,452	2010	14,611	0.1%
Northern Big Bend region	2001	149,840	2006	149,140	-0.1%
Southern Big Bend region	2001	59,674	2006	56,146	-1.2%
Suwannee, Cedar Keys, Waccasassa			2001	33,625	n/a
Springs Coast			2007	379,010	n/a

Benefits of the reporting process:

- Common methods, stressors, issues become readily apparent
- Enhanced communication among scientists and managers
- Communication about new methods, technologies, available \$\$
- Ability to quickly respond to RFPs
- Facilitates partnerships in obtaining funding and carrying out monitoring, mapping, development of new technologies.