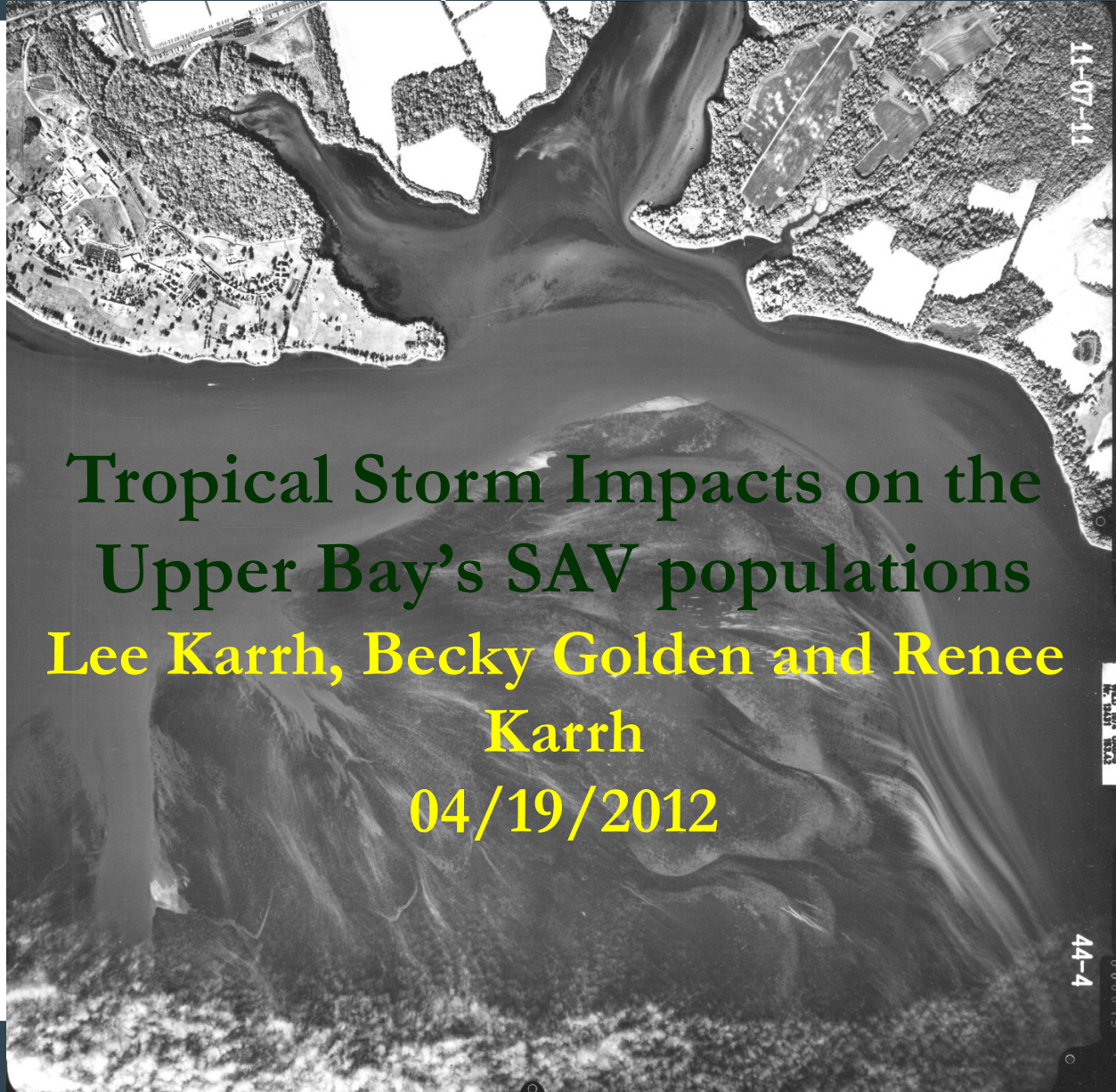


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Tropical Storm Impacts to SAV



Tropical Storm Impacts on the Upper Bay's SAV populations

Lee Karrh, Becky Golden and Renee
Karrh

04/19/2012

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Tropical Storm Impacts to SAV

- In the context of the whole year, 2011 was already a really wet, turbid year in Maryland's Bay before August 29th
- The tropical storms greatly exacerbated already extreme conditions
 - For example
 - Lower Choptank
 - Head of the Bay (CB1)
 - Elk River

Growing Season Habitat Requirement Analysis (Wilcoxon)

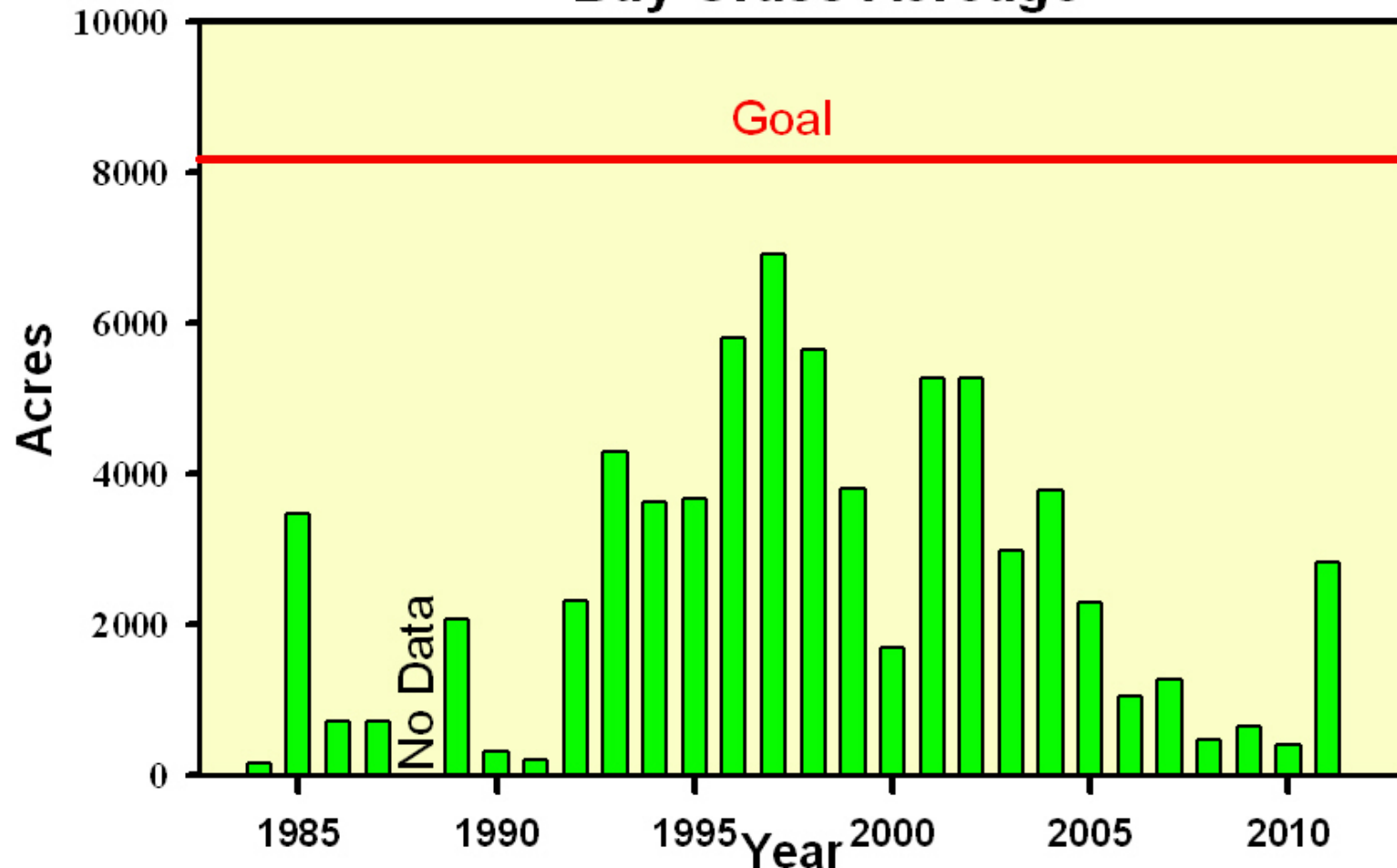
Bold outline indicates change in result from previous year.

Year	SEGMENT	KD	TSS	Chlorophyll a	DIN	DIP
2010	CB1TF	Pass	Pass	Pass	N/A	Pass
2011	CB1TF	Borderline	Pass	Pass	N/A	Pass
2010	ELKOH	Borderline	Borderline	Pass	N/A	Fail
2011	ELKOH	Borderline	Borderline	Pass	N/A	Borderline
2010	CHOMH1	Pass	Pass	Borderline	Pass	Pass
2011	CHOMH1	Pass	Pass	Borderline	Borderline	Pass

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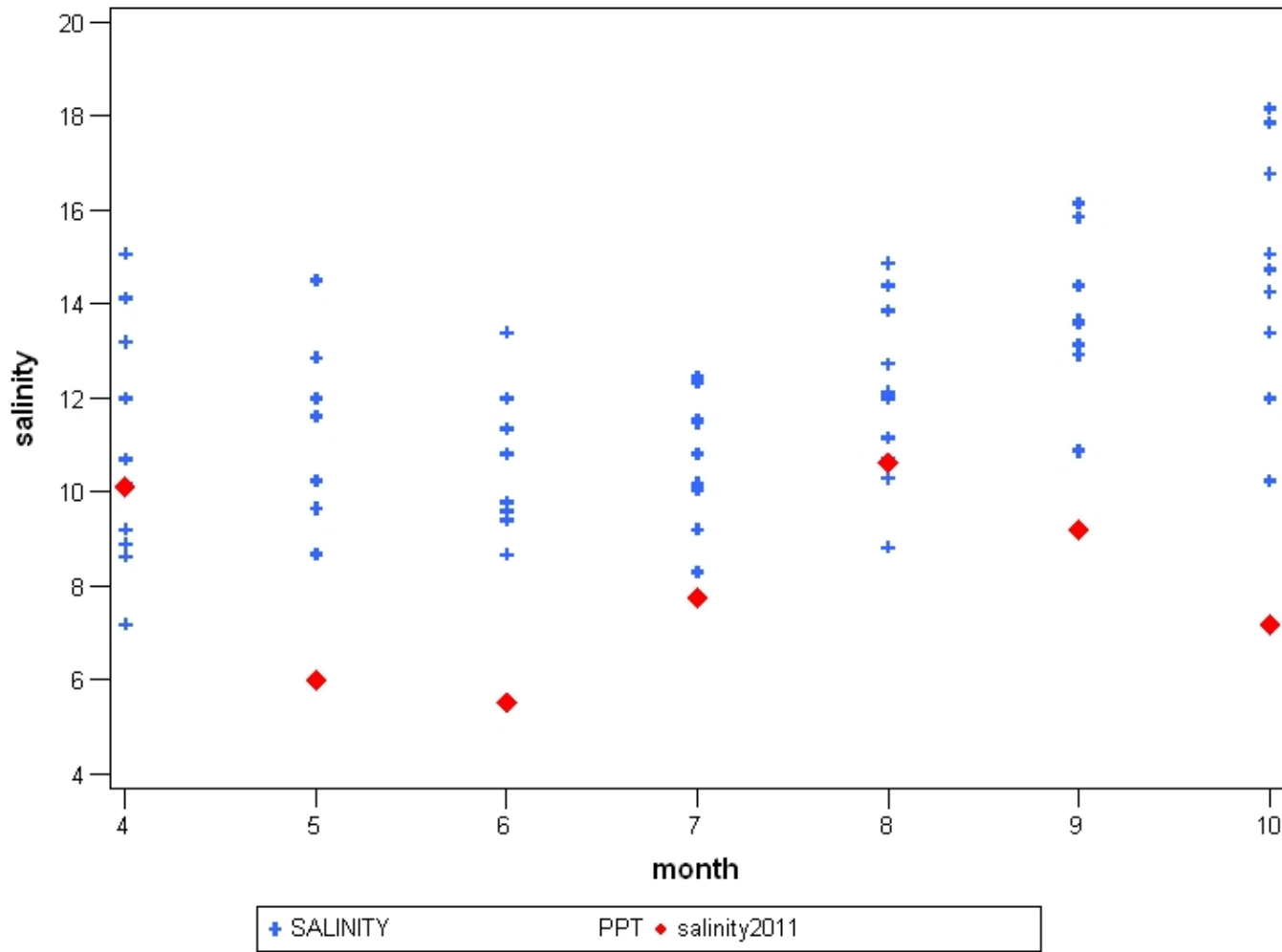
Choptank River Mesohaline 1 (CHOMH1) Bay Grass Acreage



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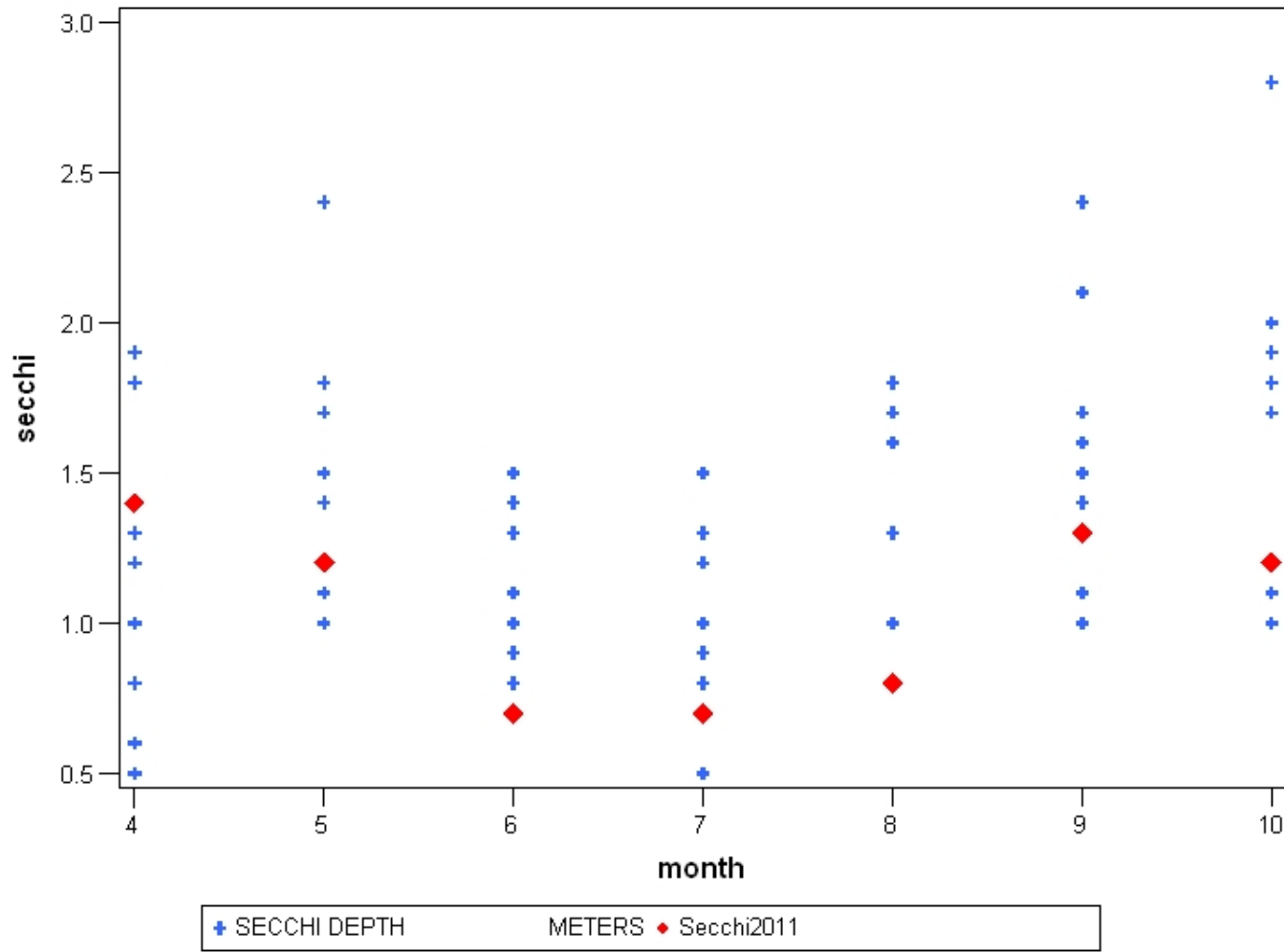
Lower Choptank 2000 to 2011 data



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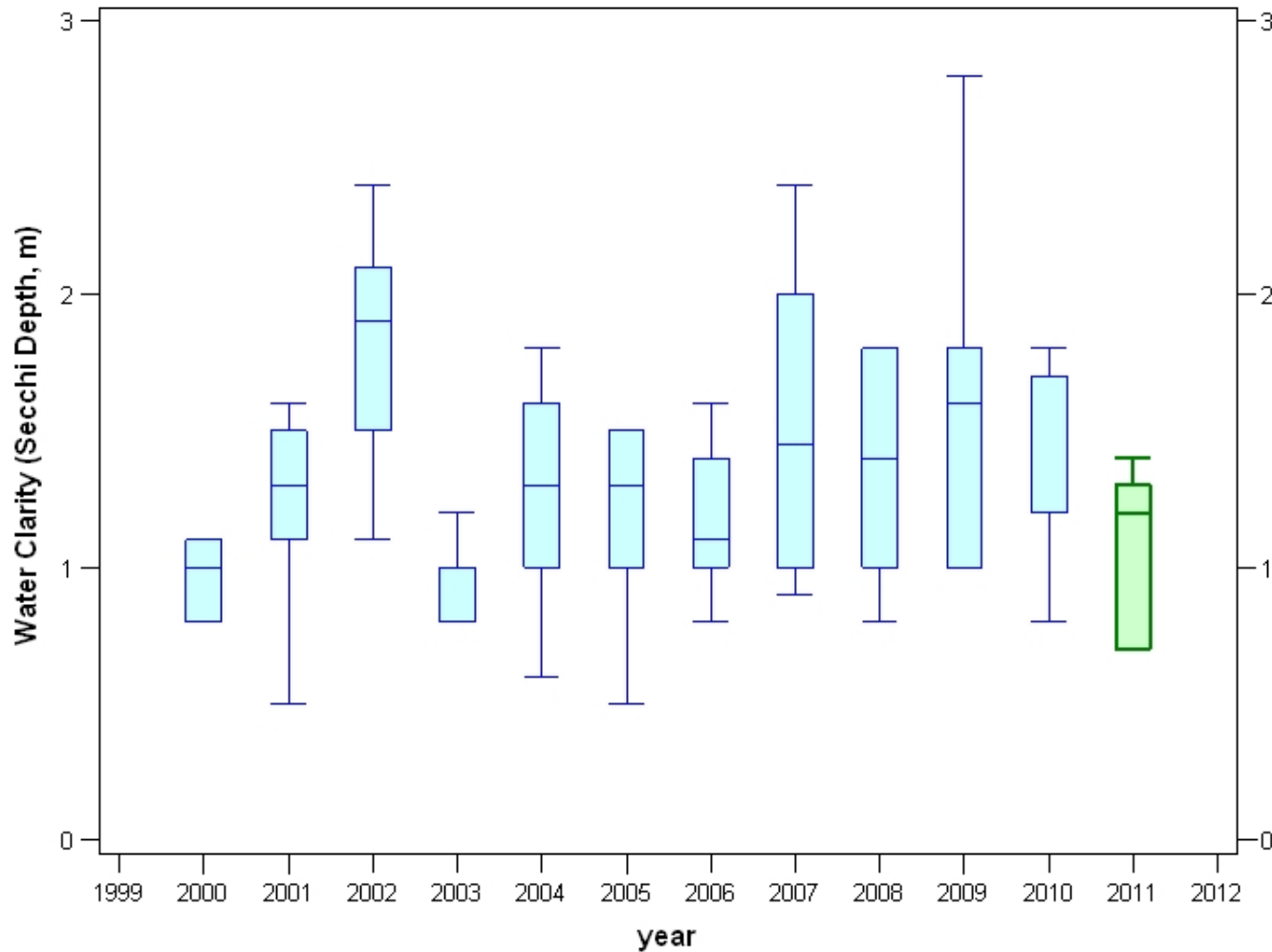
Lower Choptank 2000 to 2011 data



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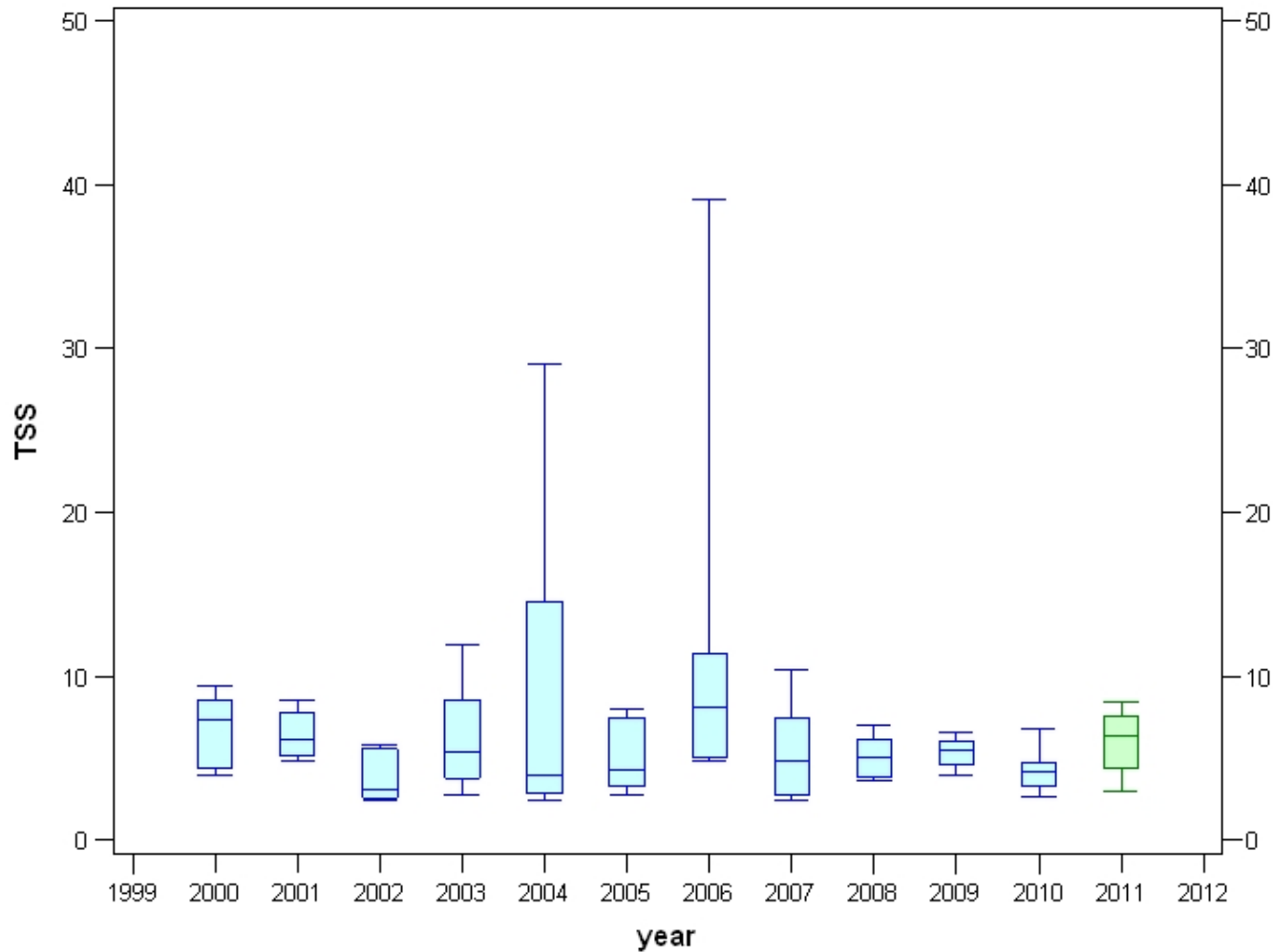
Lower Choptank 2000 to 2011 data



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Tropical Storm Impacts to SAV

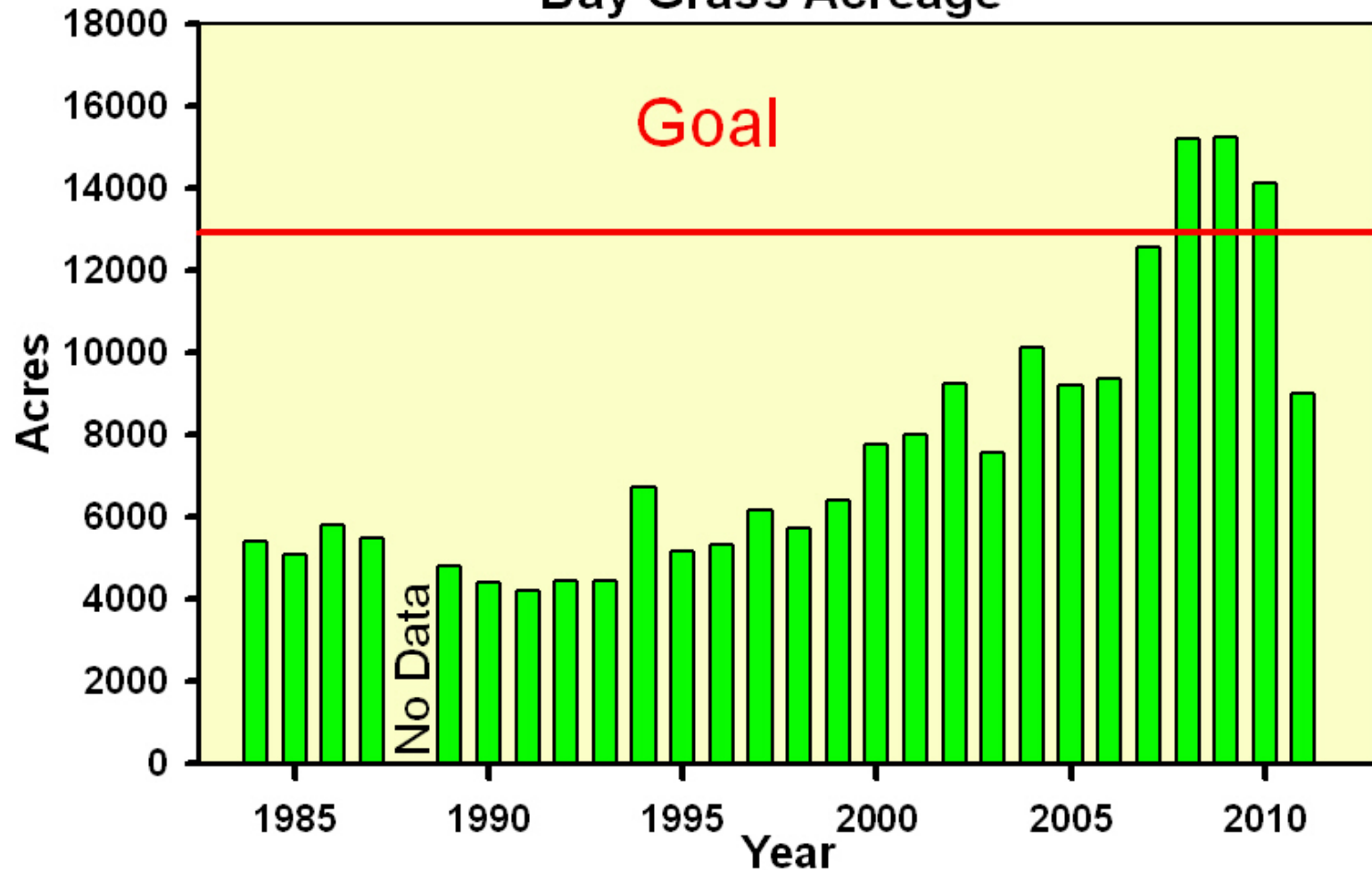
Lower Choptank 2000 to 2011 data



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Tropical Storm Impacts to SAV

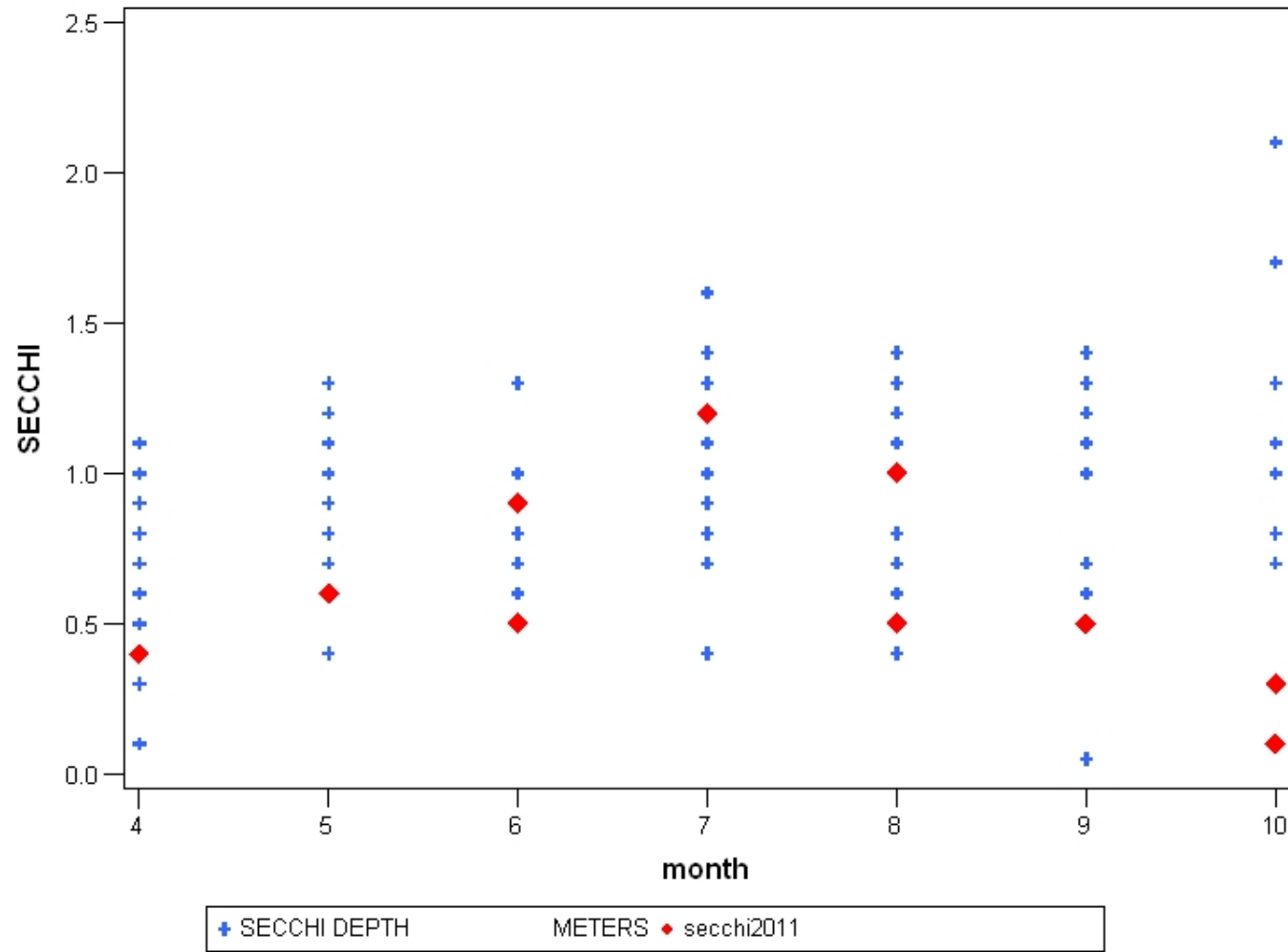
Northern Chesapeake Bay Tidal Fresh (CB1TF) Bay Grass Acreage



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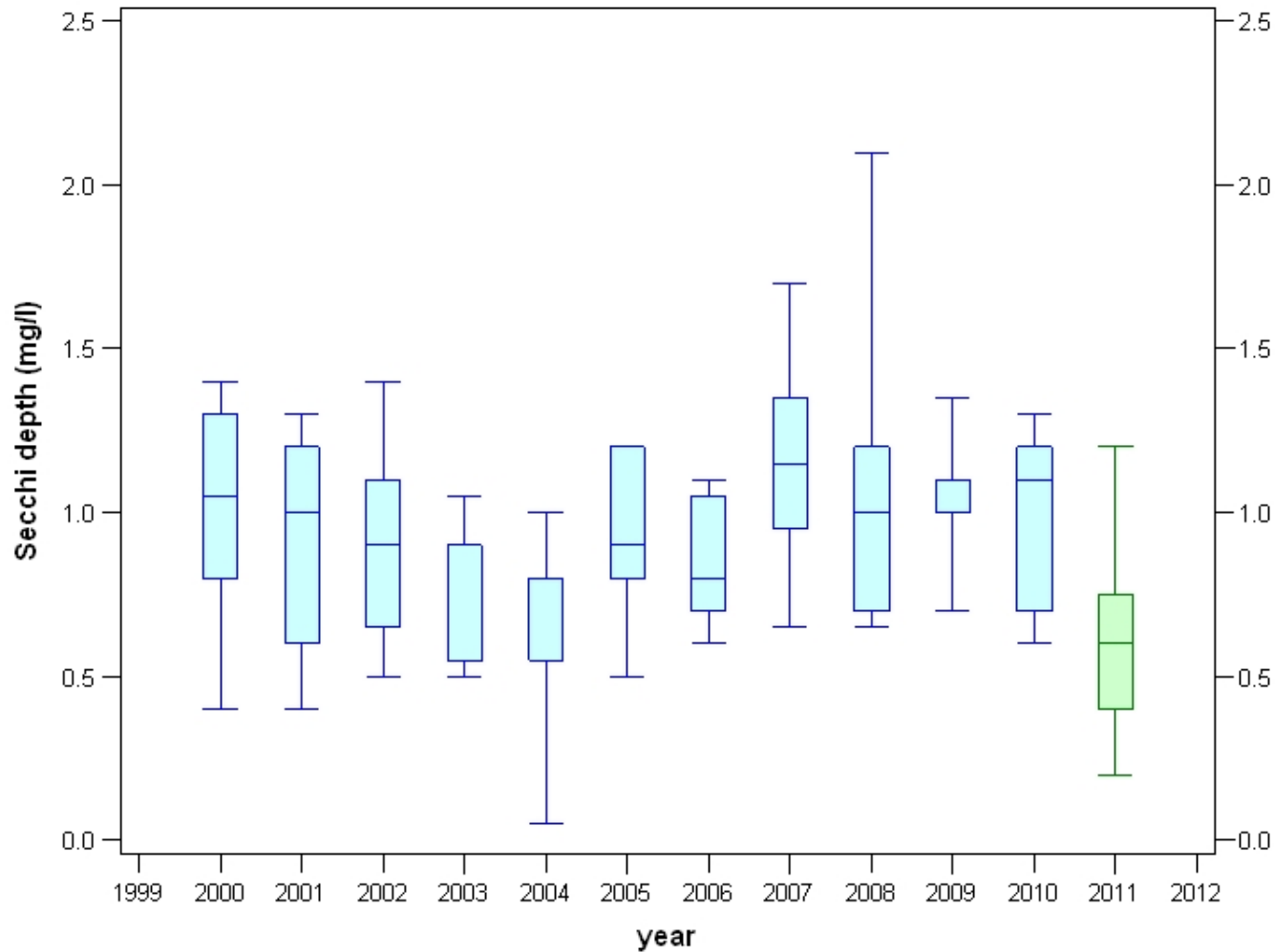
CB1 2000 to 2011 data



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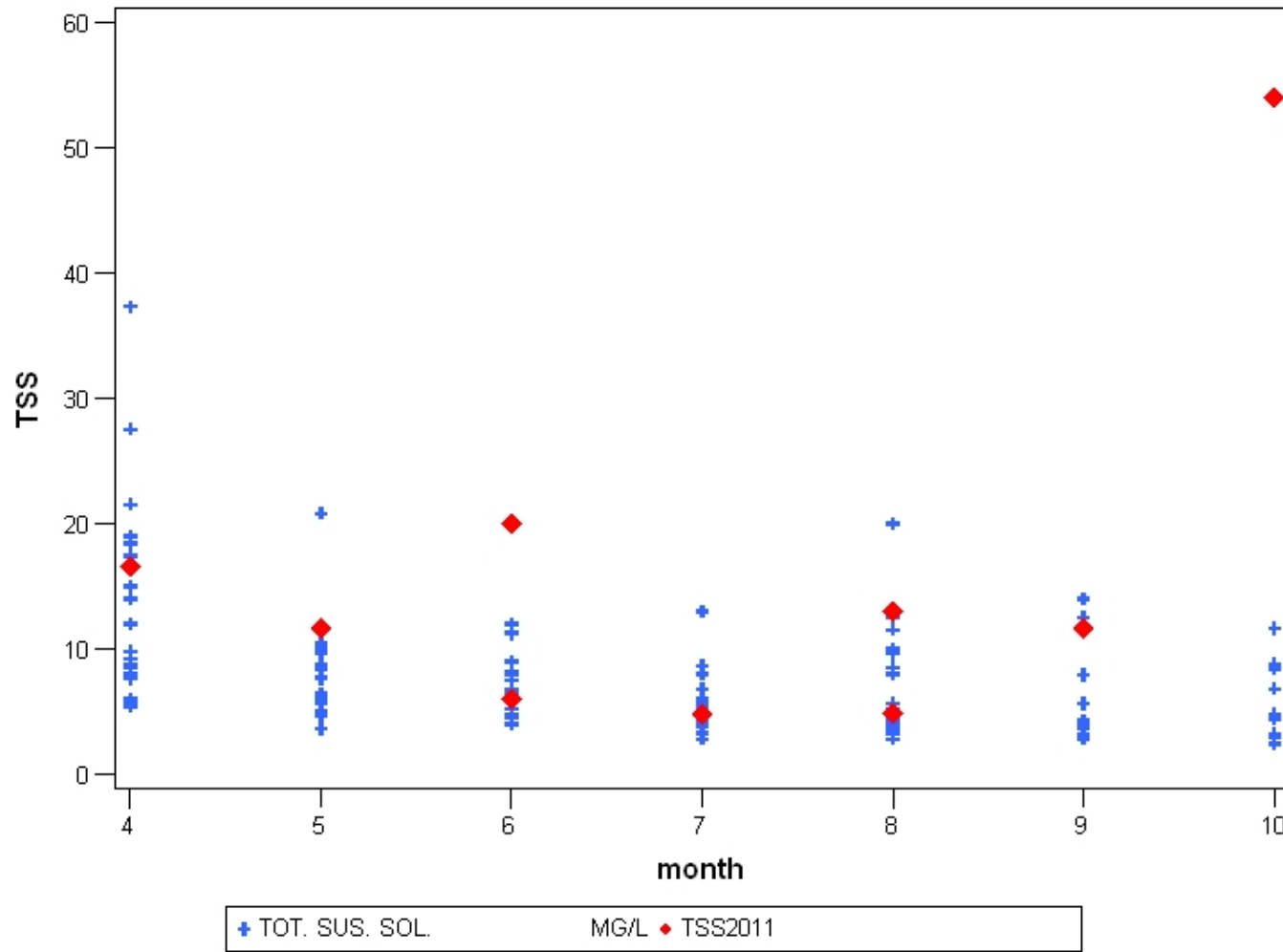
CB1 2000 to 2011 data



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Tropical Storm Impacts to SAV

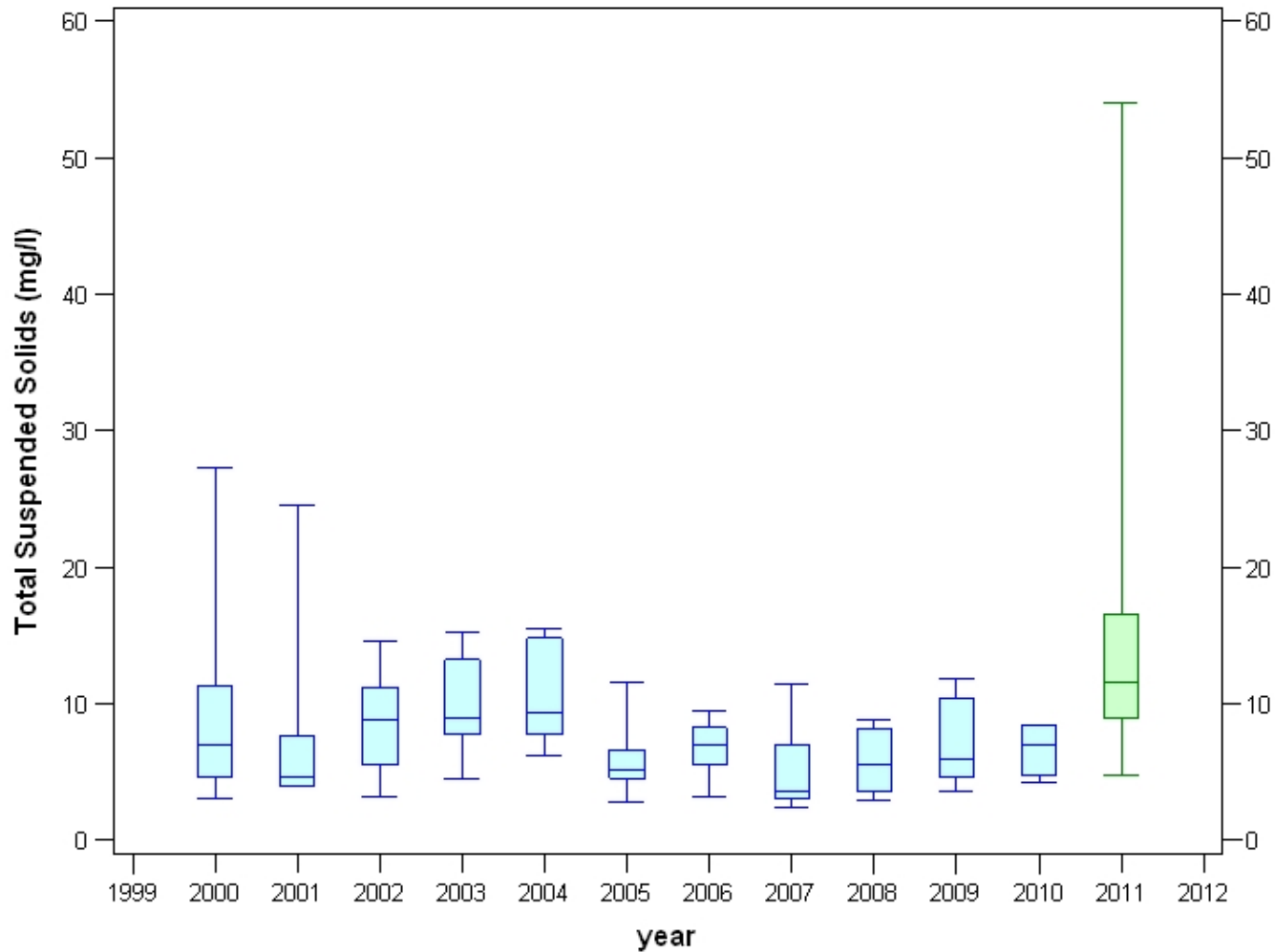
CB1 2000 to 2011 data



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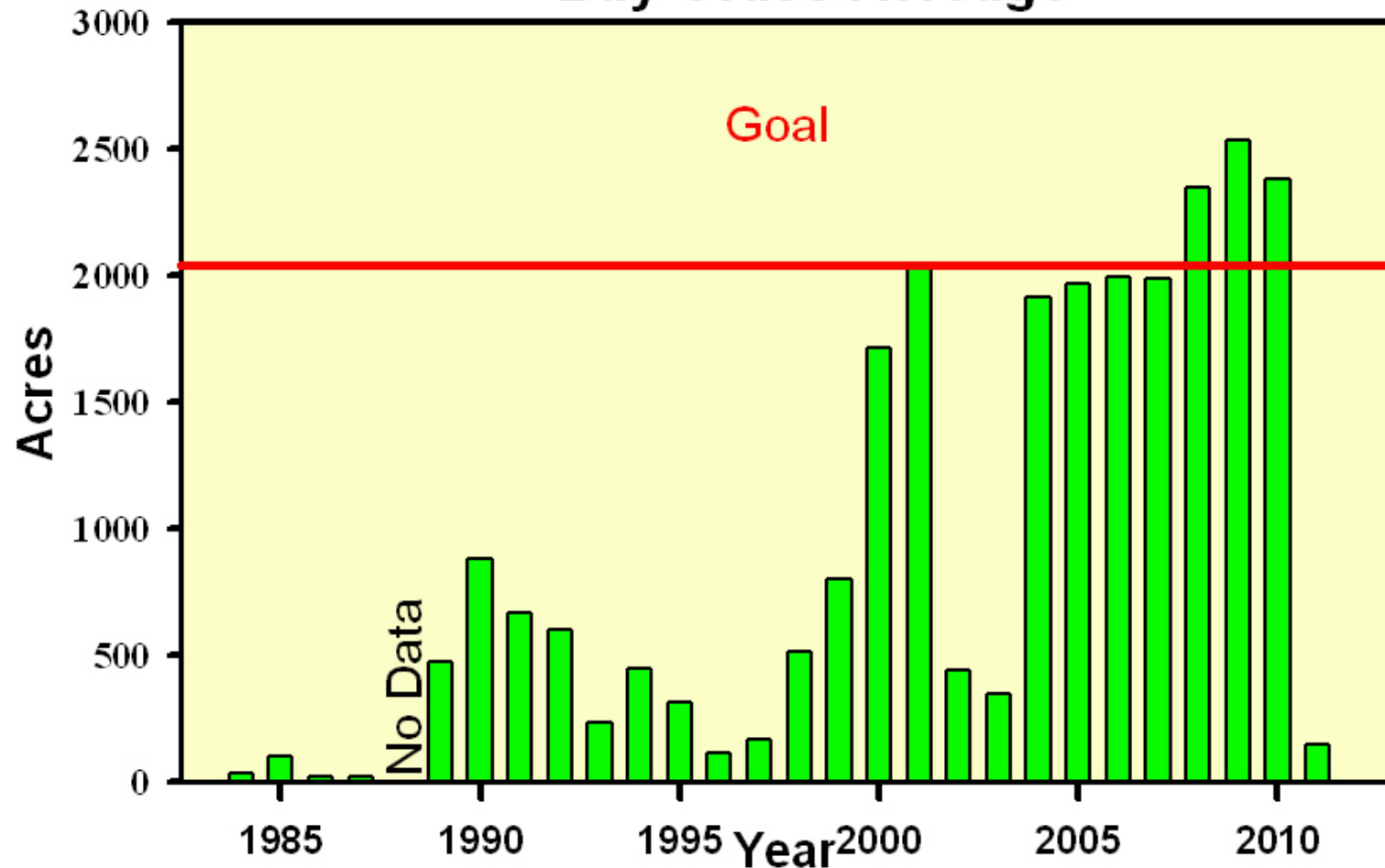
CB1 2000 to 2011 data



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Tropical Storm Impacts to SAV

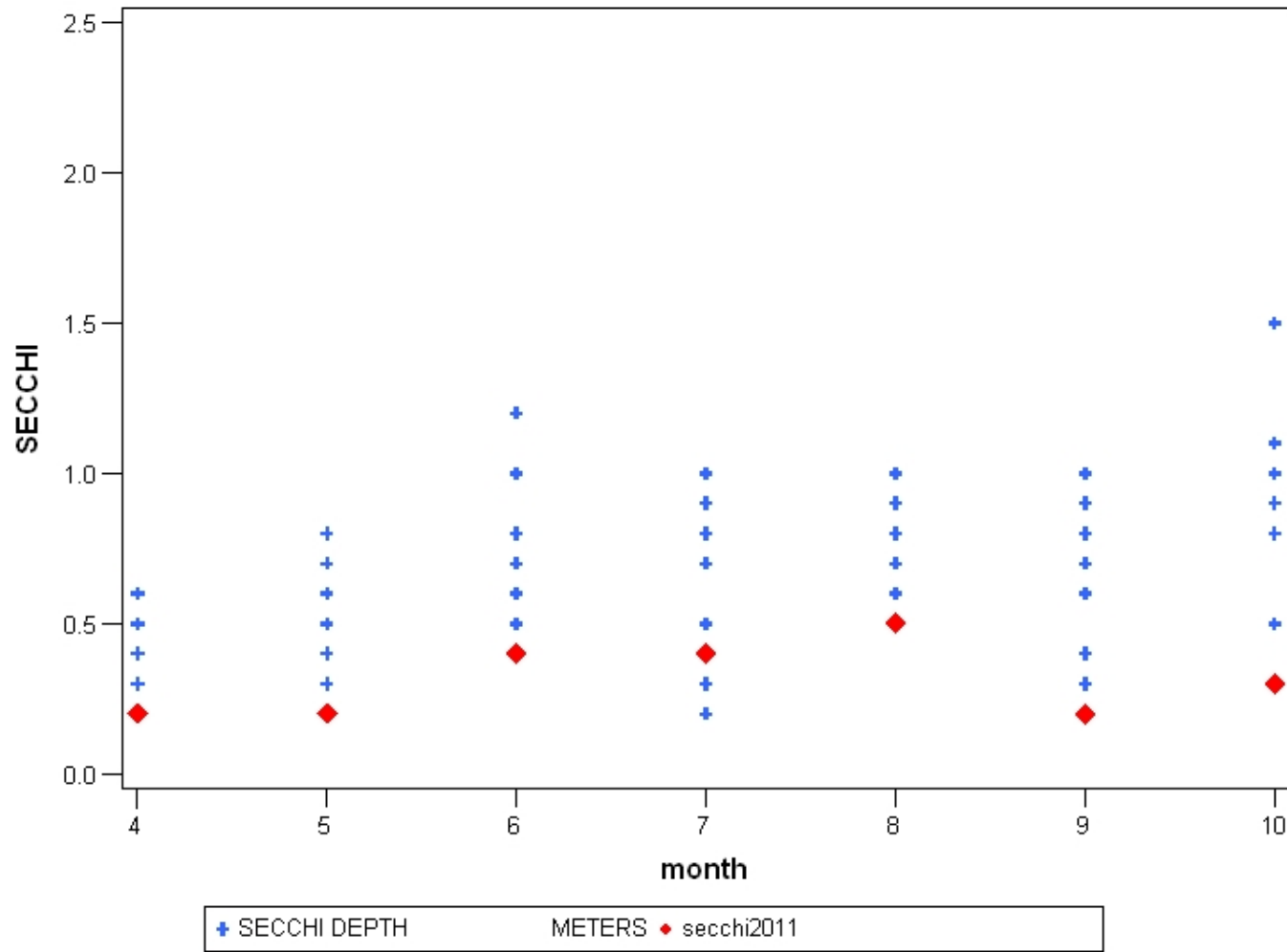
Elk River Oligohaline (ELKOH) Bay Grass Acreage



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Tropical Storm Impacts to SAV

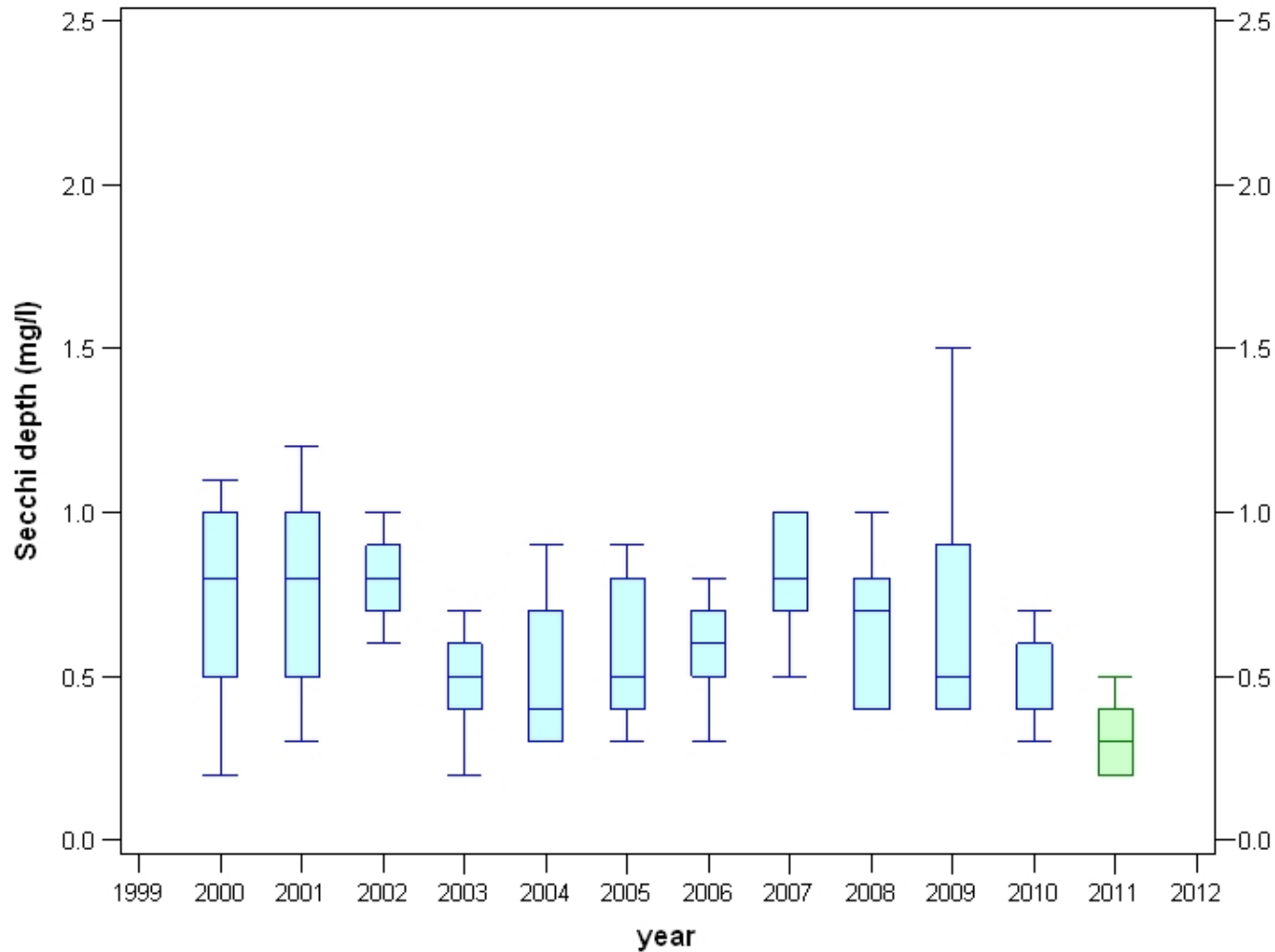
Elk 2000 to 2011 data



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Tropical Storm Impacts to SAV

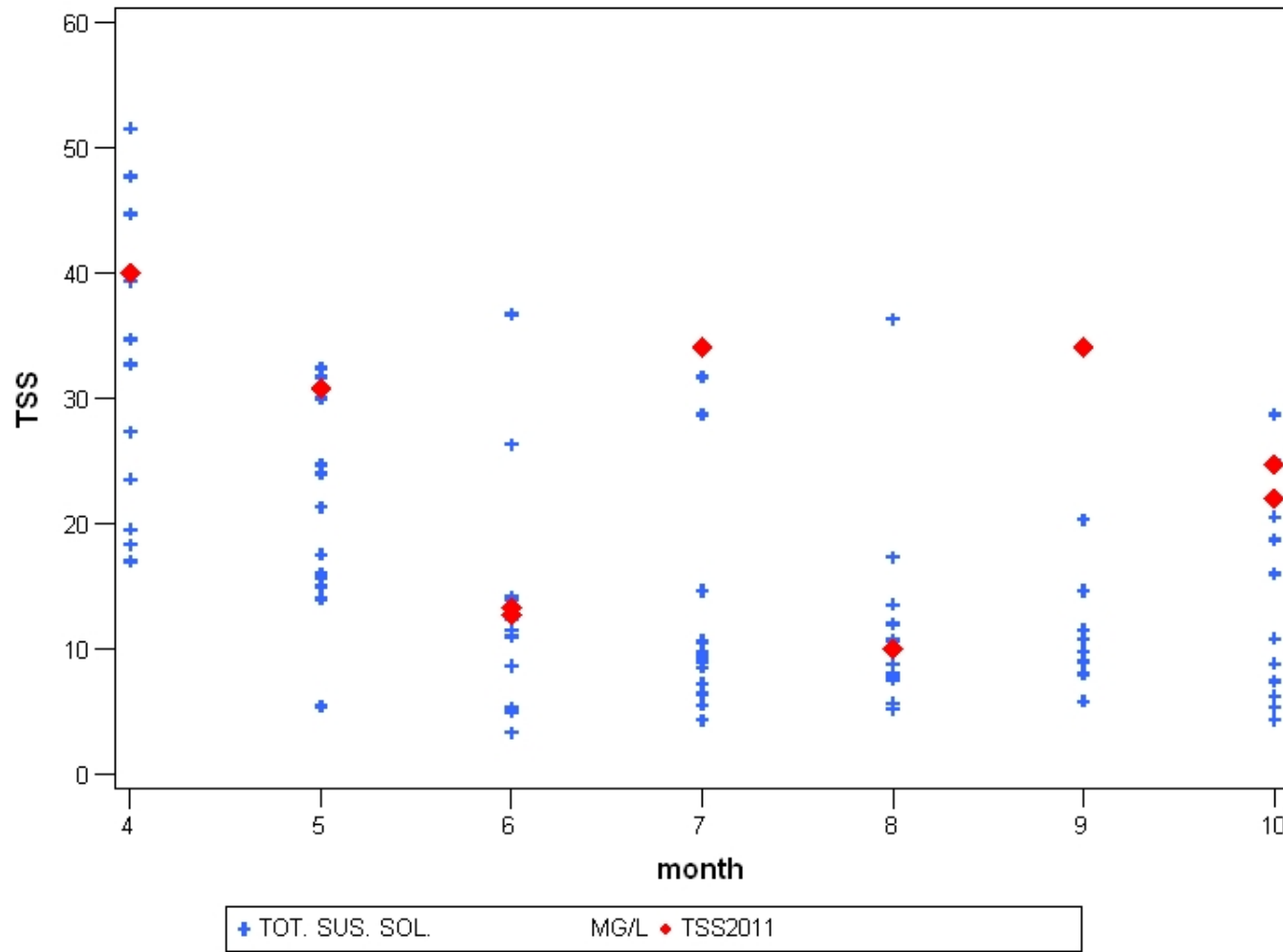
Elk 2000 to 2011 data



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Tropical Storm Impacts to SAV

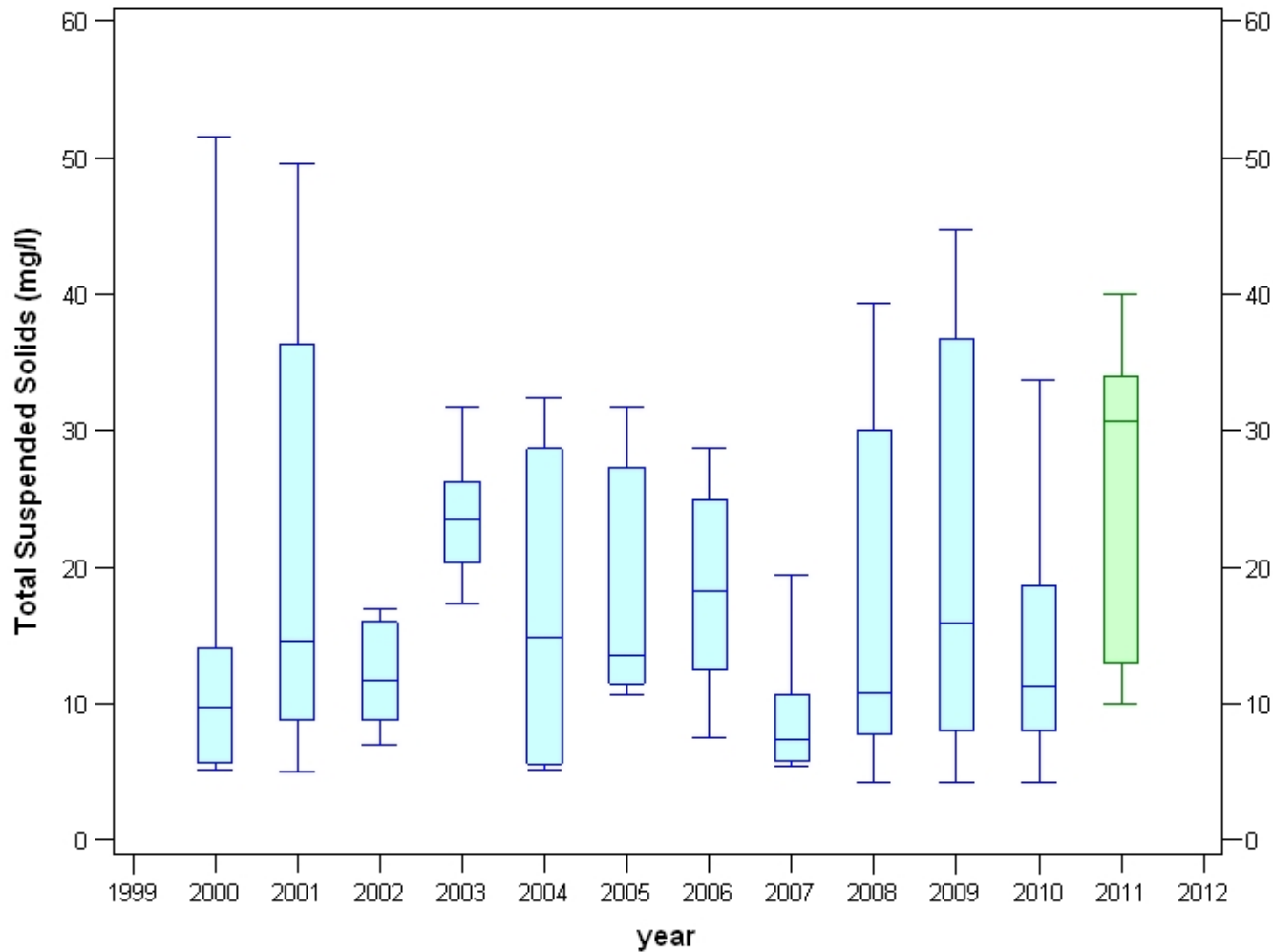
Elk 2000 to 2011 data



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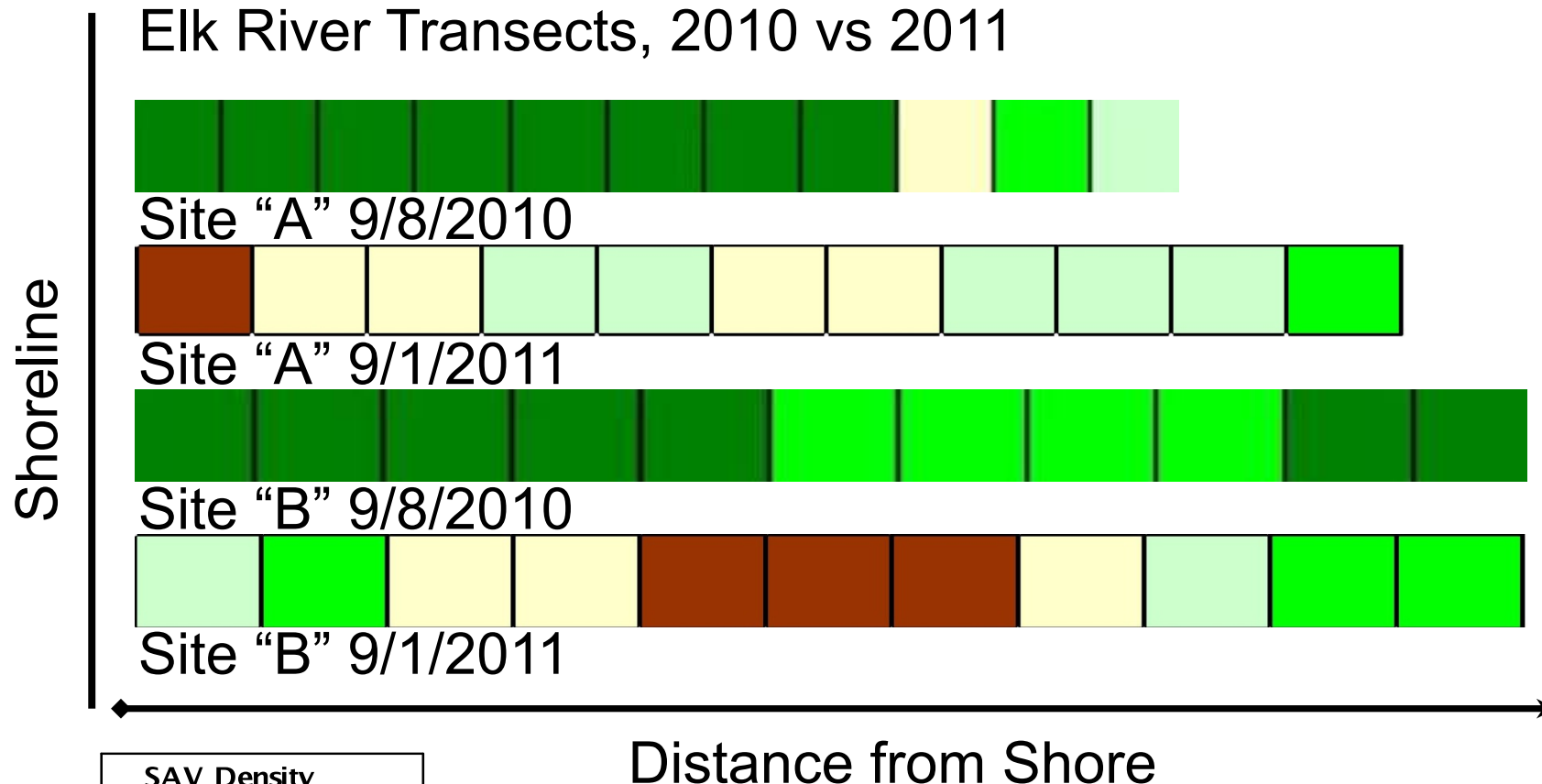
Elk 2000 to 2011 data



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Tropical Storm Impacts to SAV

Elk River Transects, 2010 vs 2011



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Tropical Storm Impacts to SAV

- For Virginia
 - Most of the SAV declines in the region were due to eelgrass loss due to heat stress in summer 2010
 - Aerials taken before the storms
 - No big turbidity plumes OR salinity spikes
 - Impacts of storms are not anticipated to be appreciable

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Tropical Storm Impacts to SAV

- Looking ahead;
 - The Upper Bay had a tremendous biomass of SAV
 - DNR crews saw huge amounts of seed being produced in the Upper Bay in October 2011
 - Plenty of capacity for resurgence
 - Milfoil already present on the Flats, water stargrass is starting to kick off
 - The mesohaline areas of the Bay?
 - Big increases in widgeon grass, will these larger beds persist?
- The whole story of 2011 won't be told until we get the aerials/transect data in 2012



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Tropical Storm Impacts to SAV

2010 vs 2011 on Susquehanna Flats