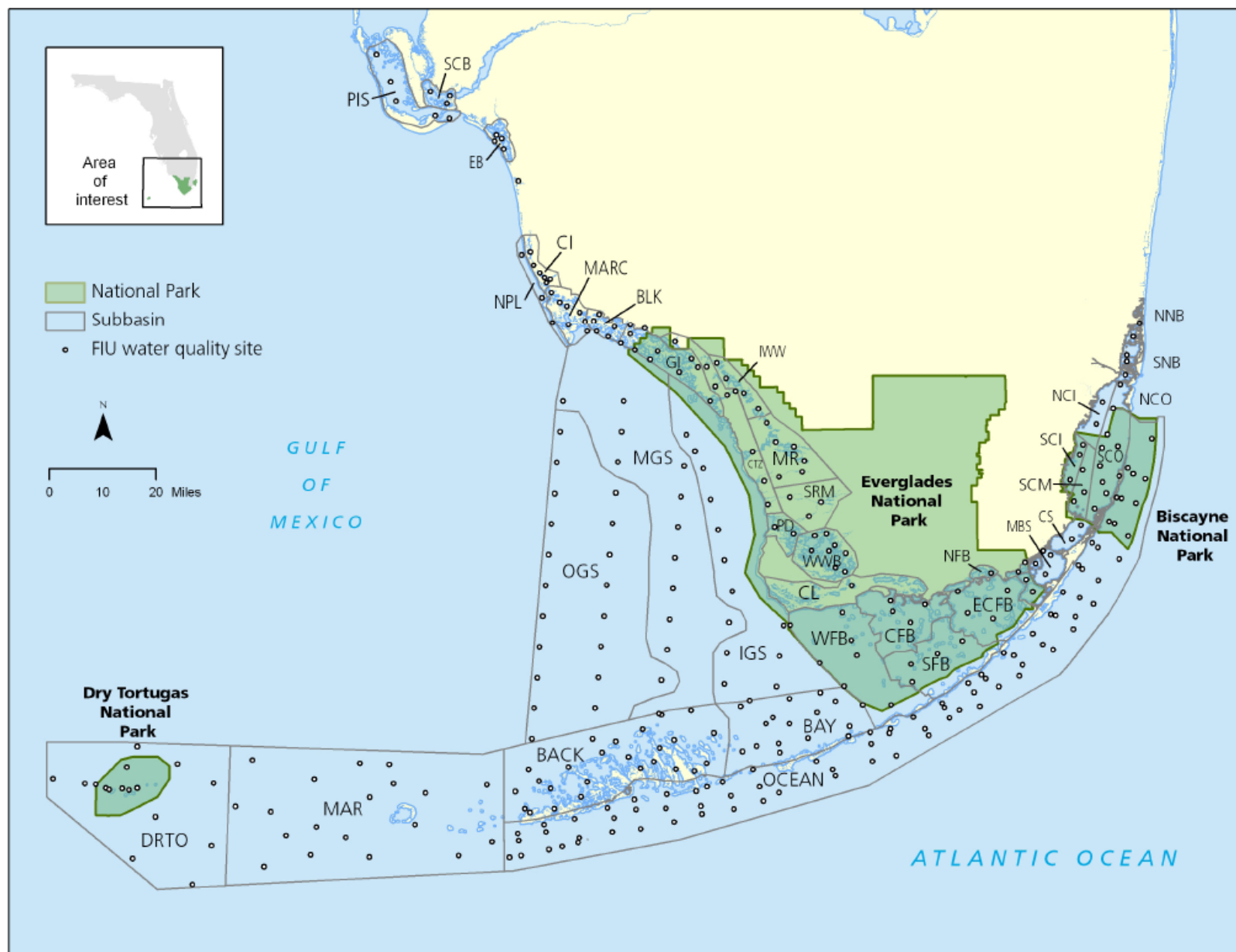


Numeric Nutrient Criteria for South Florida's Estuarine and Coastal Waters

September 2010

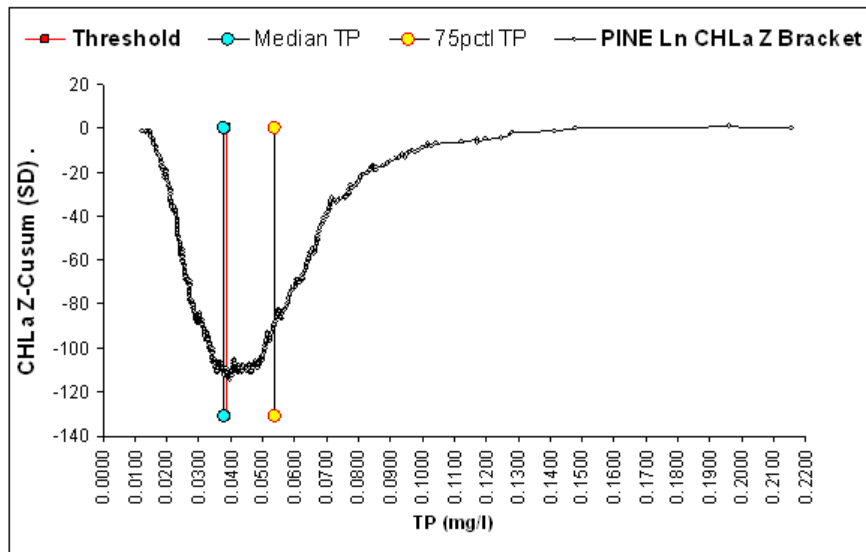


Basin	TN, mg/L			TP, mg/L			CHL-a, µg/L		
	Segment	THLD	Limit	Segment	THLD	Limit	Segment	THLD	Limit
Biscayne Bay	SCO	0.229	0.326	SCM	0.005	0.0083	SCO	0.20	0.30
	NCO	0.224	0.348	CS			SCM	0.25	0.38
	SNB			SCO			SCI	0.29	0.46
	NNB			MBS			CS		
	CS			SCI			NCI	0.35	0.56
	NCI			NCI			MBS		
	SCM			NCO			NCO	0.45	0.71
	SCI			SNB			SNB		
	MBS			NNB			NNB		
Florida Bay	WFB	0.29	0.62	WFB	0.011	0.016	ECFB	0.24	0.35
	ECFB	0.57	0.9	CFB			SFB	0.43	0.66
	NFB			ECFB	0.005	0.008	NFB	0.54	0.77
	SFB			NFB			WFB	0.86	1.32
	CFB			SFB			CFB	1.17	2.48
	CL	0.69	1.10	CL	0.028	0.042	CL	7.19	13.05
		0.91	1.32						
Florida Kets	MAR	0.11	0.16	OCEAN	0.004	0.009	OCEAN	0.2	0.34
	DRTO			DRTO			DRTO	0.26	0.43
	OCEAN			MAR	0.007	0.009	BAY		
	BACK	0.16	0.23	BAY			BACK	0.37	0.65
	BAY			BACK			MAR		
Whitewater Bay - Ten Thousand Is.	BLK	0.38	0.53	SRM	0.014	0.023	SRM	1.8	2.75
	GI			MR			PD	2.04	3.24
	PD	0.44	0.59	WWB			GI	2.98	4.53
	CTZ	0.44	0.60	PD			WWB		
	IWW	0.57	0.78	IWW	0.025	0.033	CTZ		
	MR			CTZ			MR		
	SRM			GI	0.030	0.040	BLK	2.98	5.06
	WWB	0.65	0.88	BLK	0.045	0.056	IWW	4.02	5.92
Pine Is. Sound - Rookery Bay	CI	0.22	0.30	CI	0.029	0.040	CI	2.23	3.89
	MARC	0.23	0.32	MARC	0.035	0.048	SCB	2.76	4.56
	NPL			NPL			PINE		
	PINE			PINE			EB	3.67	6.2
	EB			EB			NPL		
	SCB			SCB			MARC	4.41	7.38
Gulf Shelf	OGS	0.18	0.26	OGS	0.011	0.013	OGS	0.74	1.13
	MGS	0.22	0.32	MGS	0.013	0.016	MGS	1.03	1.54
	IGS	0.24	0.36	IGS	0.013	0.017	IGS	1.04	1.72
	Potentially disturbed segment								

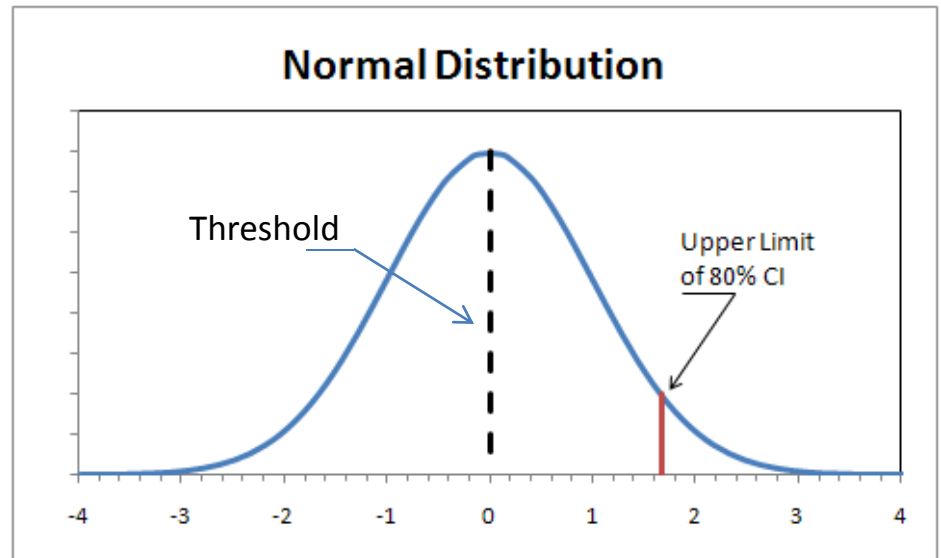
Numeric Nutrient Criteria

COMPONENTS:

- **magnitude:** level of pollutant without adverse effects
- **frequency:** how often the criterion may be exceeded
- **duration:** measure of how long the criterion may be exceeded

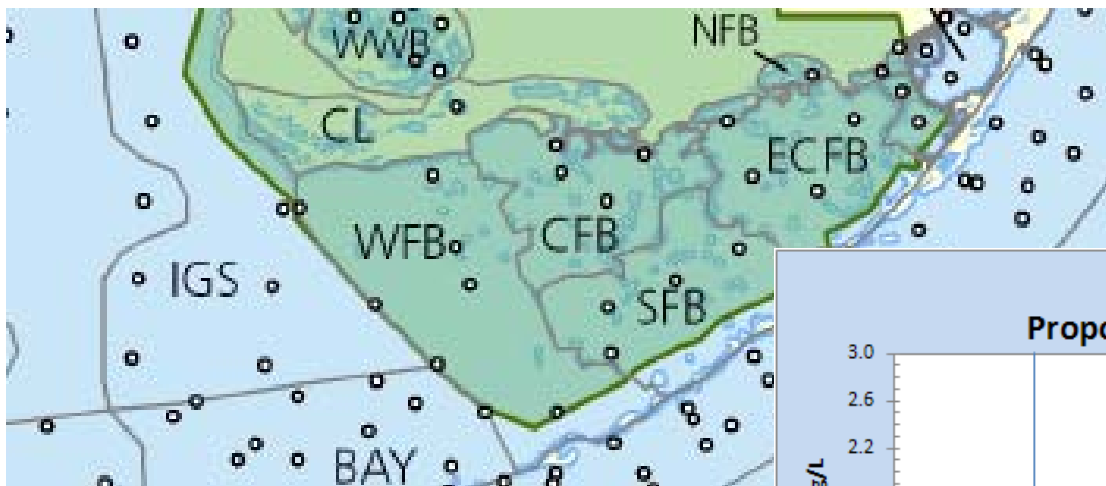


Threshold Value



Upper Limit (UP-L)

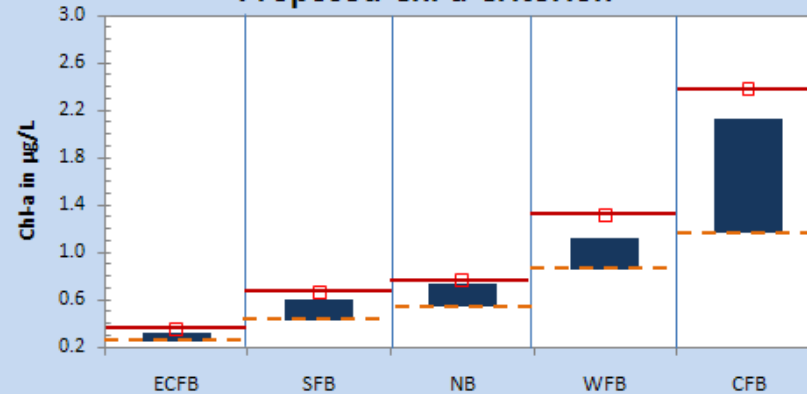
A segment's annual geometric mean must not exceed:
the UP-L more than once in three consecutive years



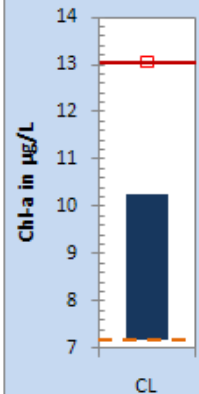
Florida Bay

WFB Western Florida Bay
 ECFB East Central Florida Bay
 NFB Northern Florida Bay
 SFB Southern Florida Bay
 CFB Central Florida Bay
 CL Coastal Lakes

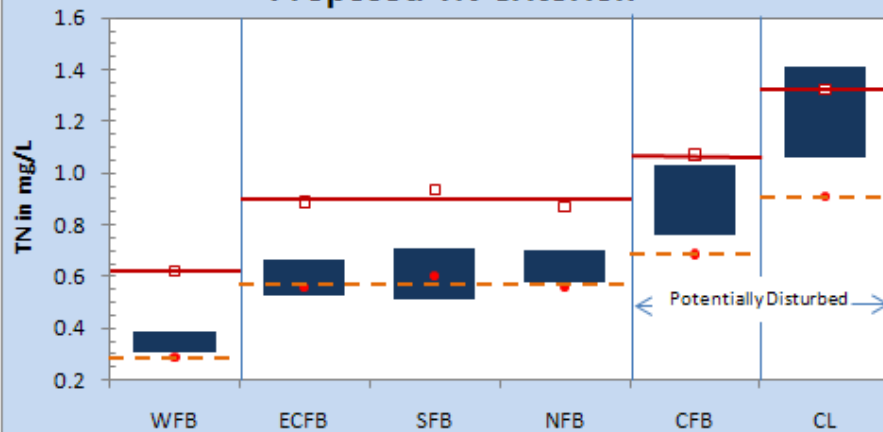
Florida Bay Proposed Chl-a Criterion



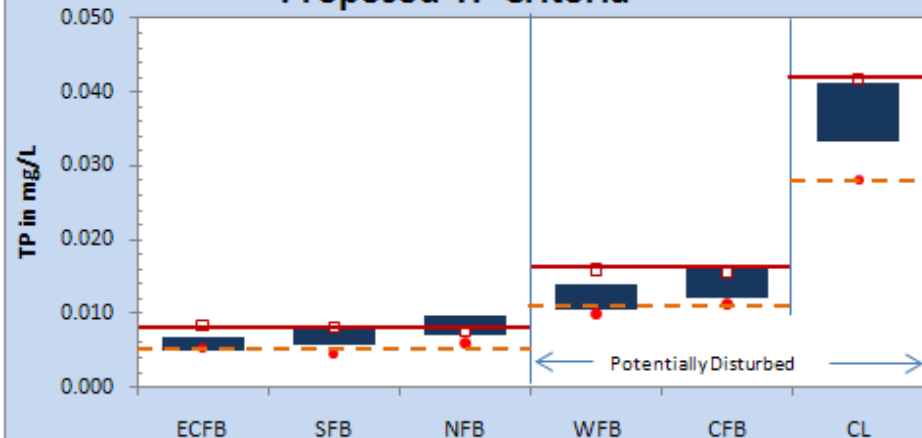
FB Chl-a

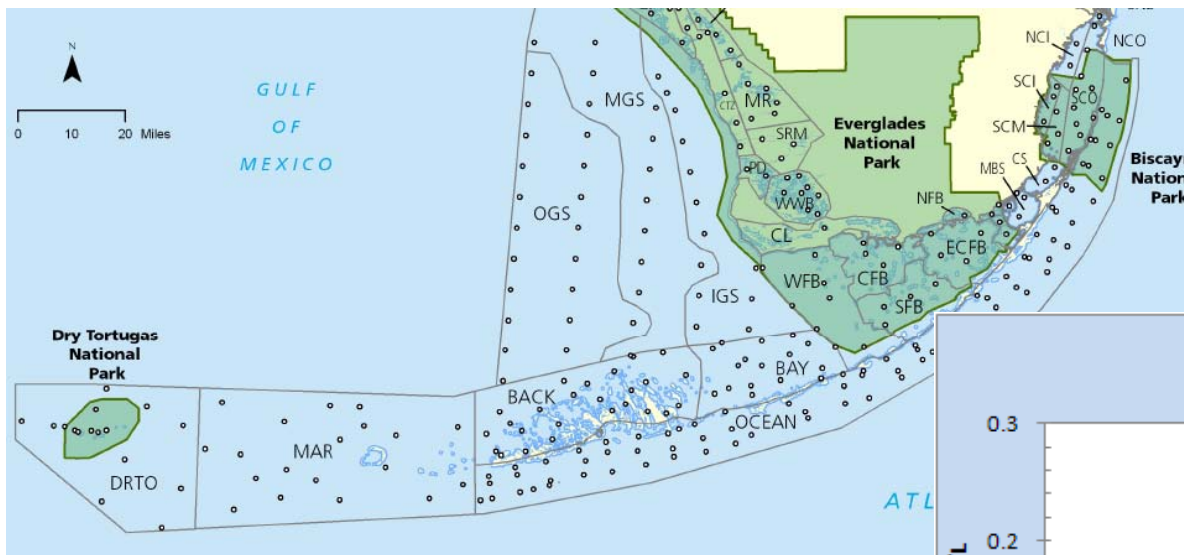


Florida Bay Proposed TN Criterion



Florida Bay Proposed TP Criteria

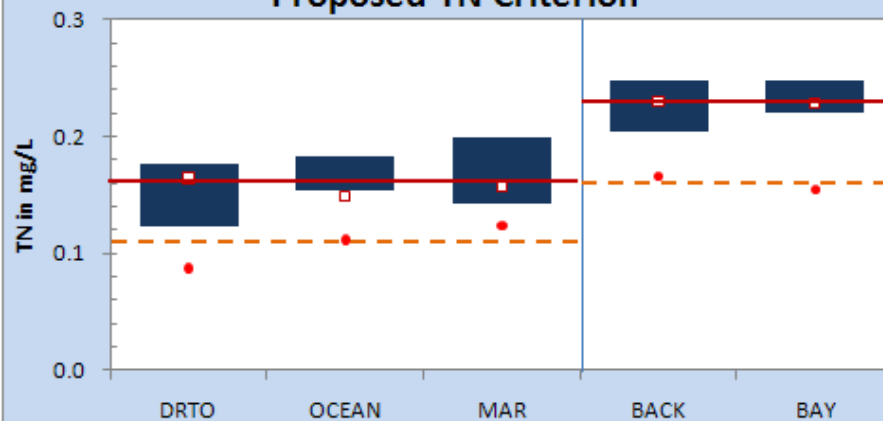




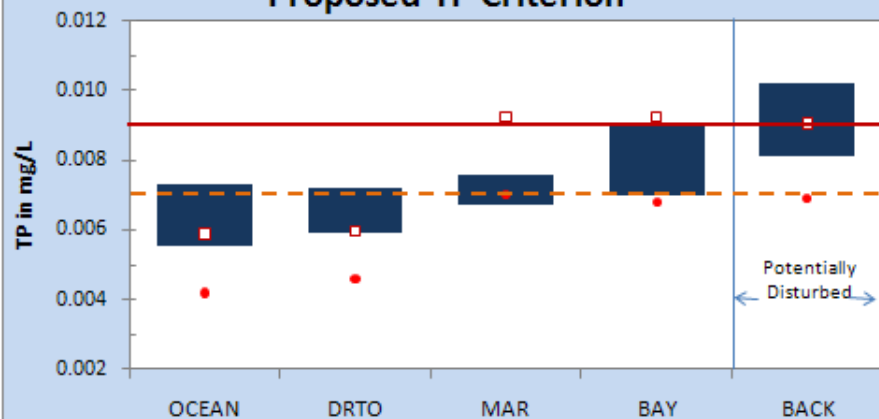
The Florida Keys

DRTO	Dry Tortugas
OCEAN	Oceanside
MAR	Marquesas
BACK	Backcountry
BAY	Bayside

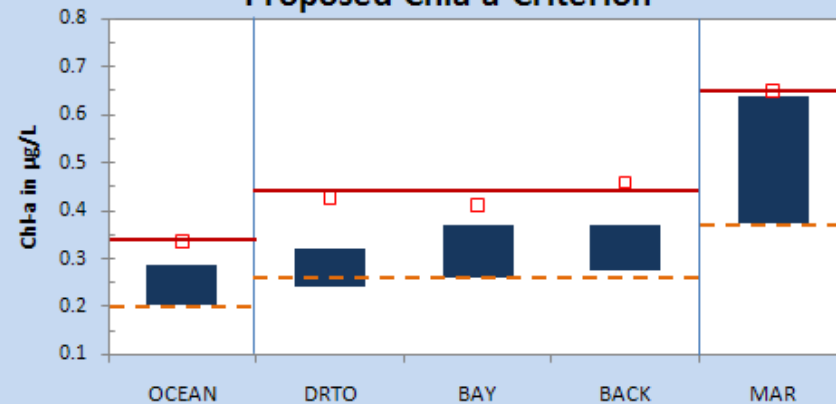
Florida Keys Proposed TN Criterion



Florida Keys Proposed TP Criterion

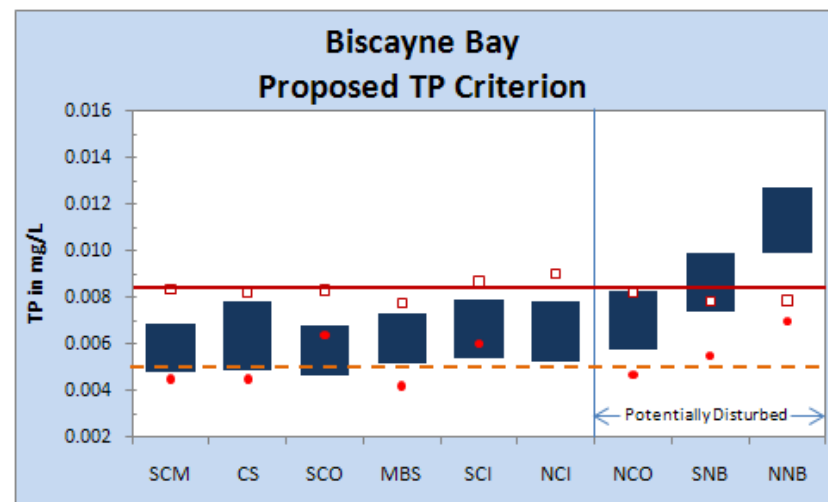
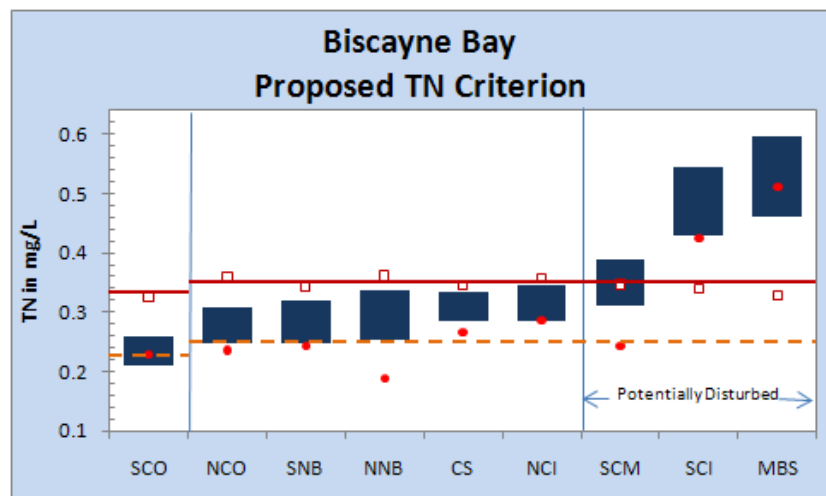
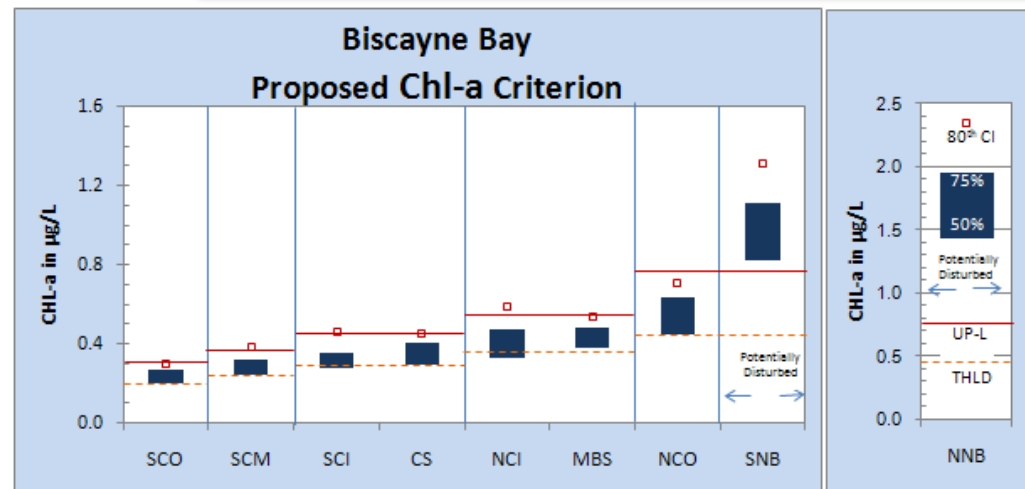


Florida Keys Proposed Chl-a Criterion





Biscayne National Park	
NNB	Northern North Bay
SNB	Southern North Bay
NCO	North Central Outer Bay
NCI	North Central Inshore
SCI	South Central Inshore
SCO	South Central Outer Bay
SCM	South Central Mid Bay
CS	Card Sound
MBS	Manatee Bay and Barnes Sound

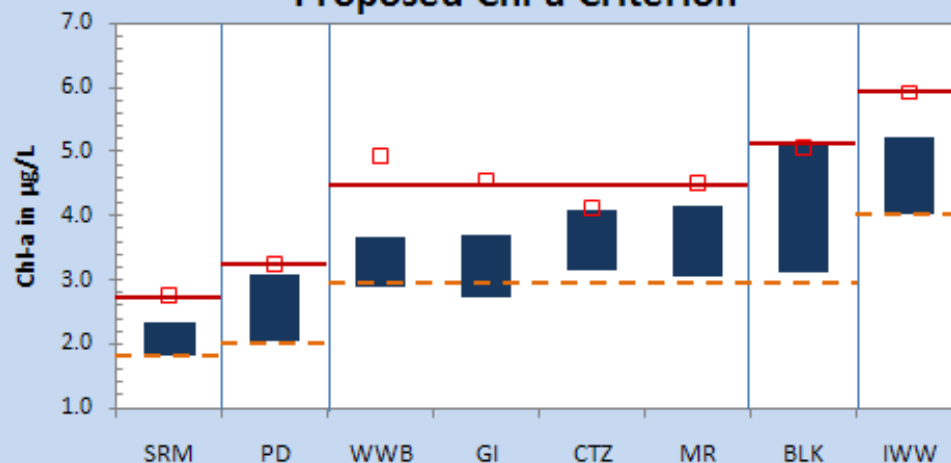




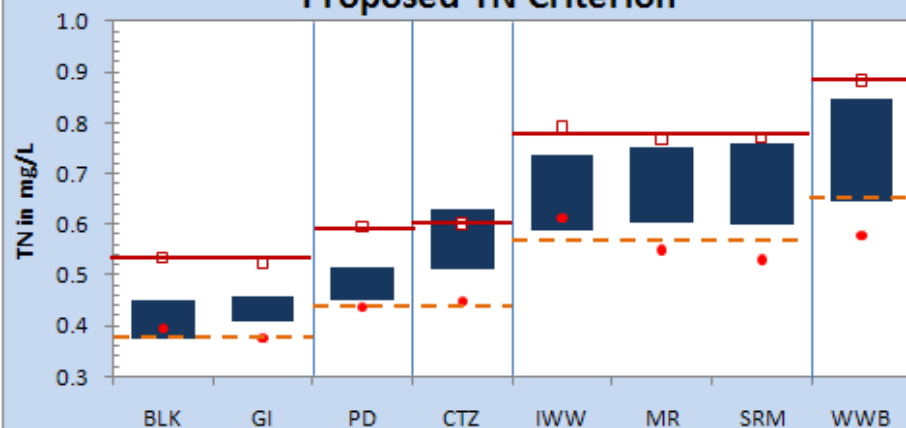
Whitewater Bay – Ten Thousand Is.

BLK	Blackwater River	SRM	Shark River Mouth
GI	Gulf Islands	PD	Ponce de Leon
CTZ	Coastal Transition Zone	MR	Mangrove River
IWW	Inner Waterway	WWB	Whitewater Bay

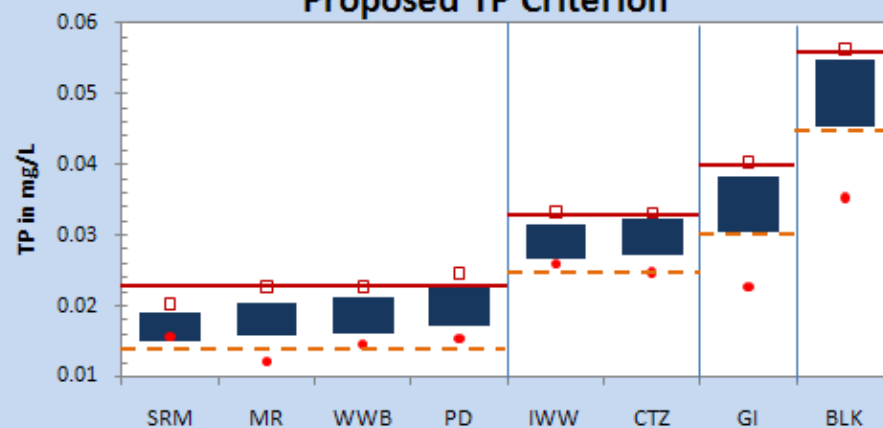
Whitewater Bay - Ten Thousand Is. Proposed Chl-a Criterion

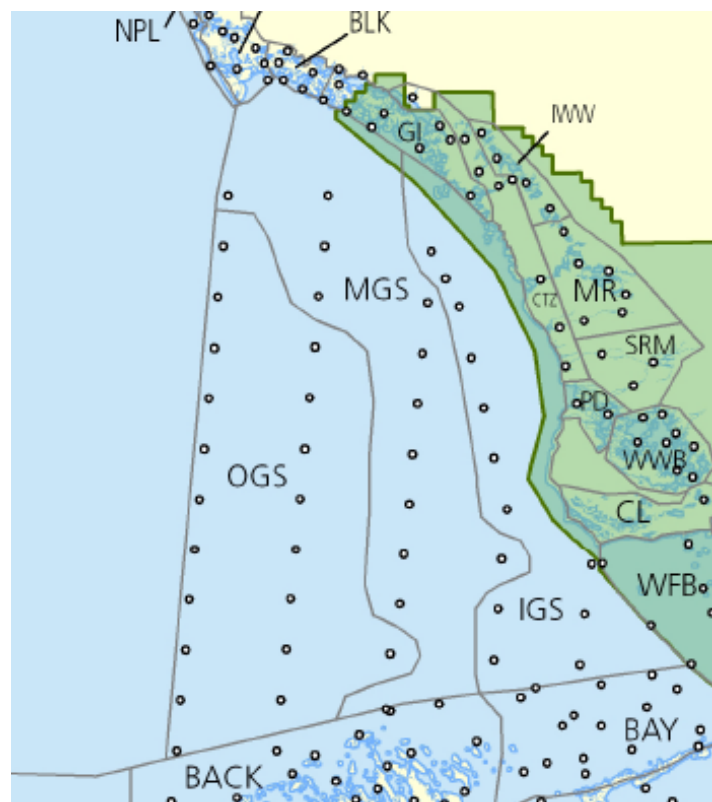


Whitewater Bay - Ten Thousand Is. Proposed TN Criterion



Whitewater Bay - Ten Thousand Is. Proposed TP Criterion

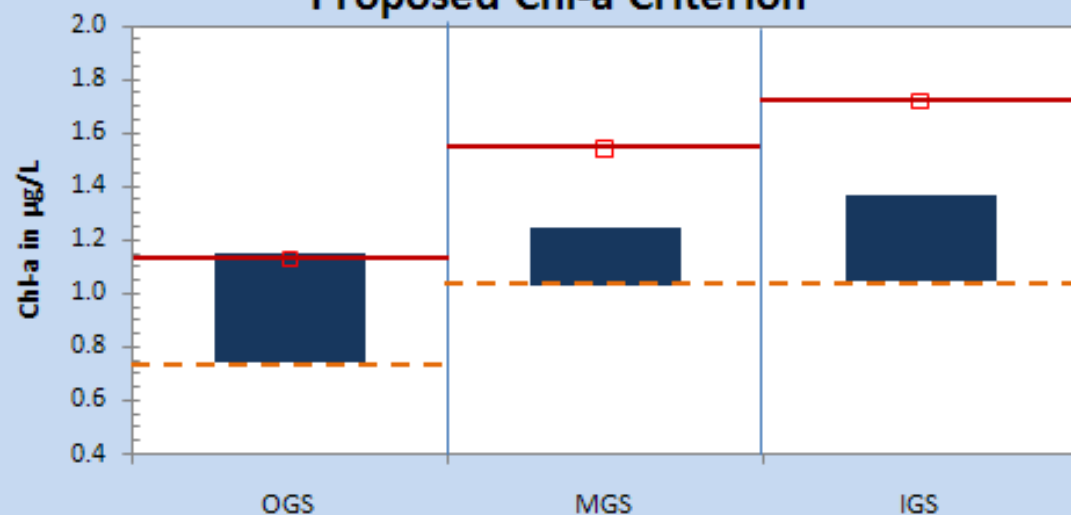




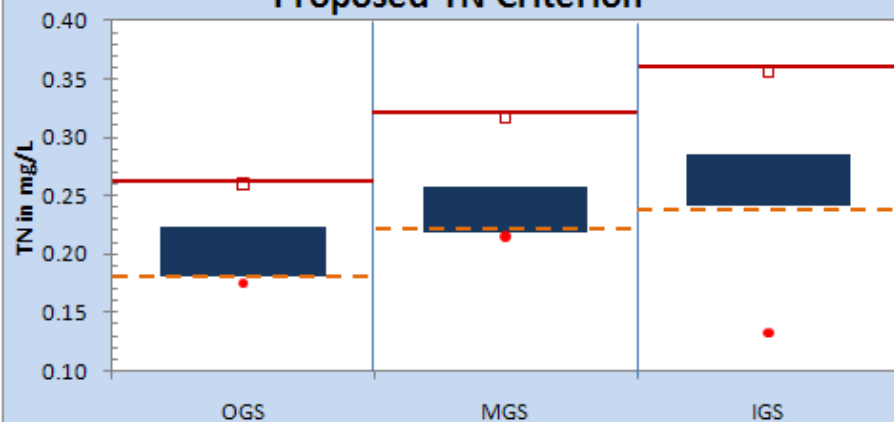
Gulf Shelf

IGS Inner Gulf Shelf
MGS Middle Gulf Shelf
OGS Outer Gulf Shelf

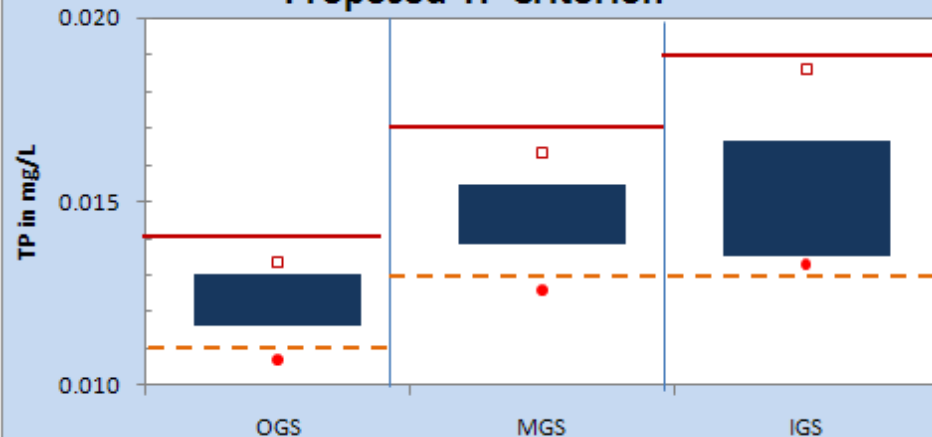
Gulf Shelf Proposed Chl-a Criterion



Gulf Shelf Proposed TN Criterion



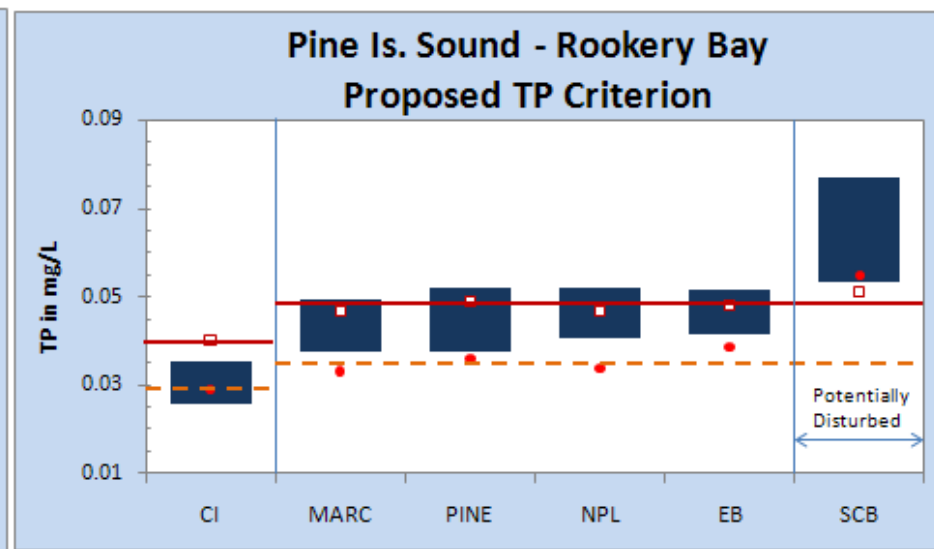
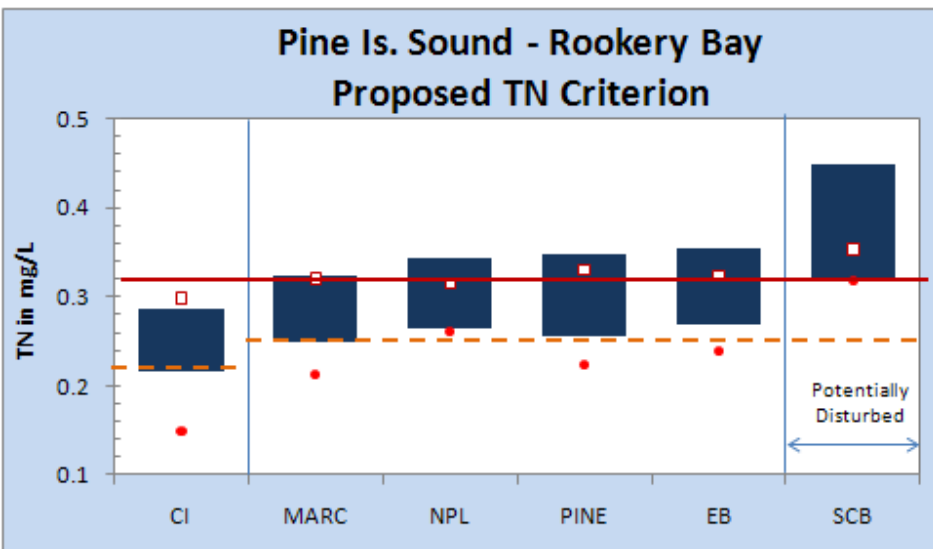
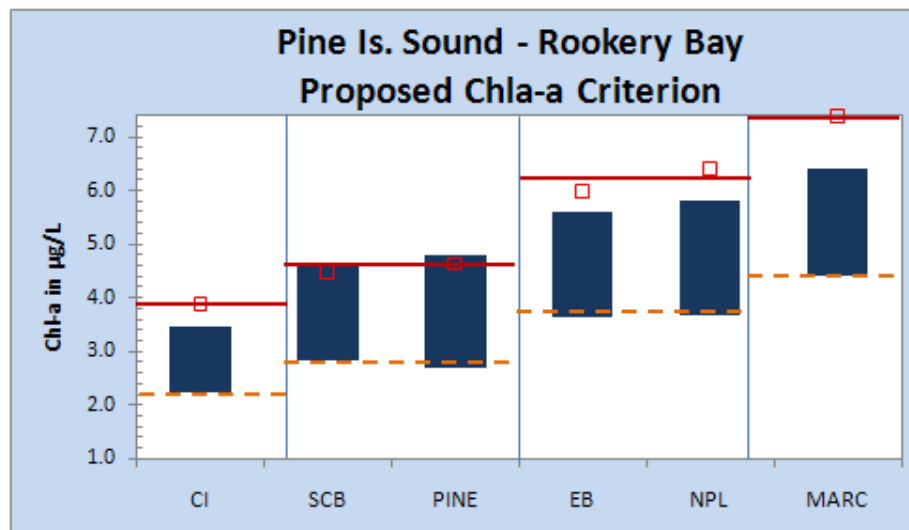
Gulf Shelf Proposed TP Criterion





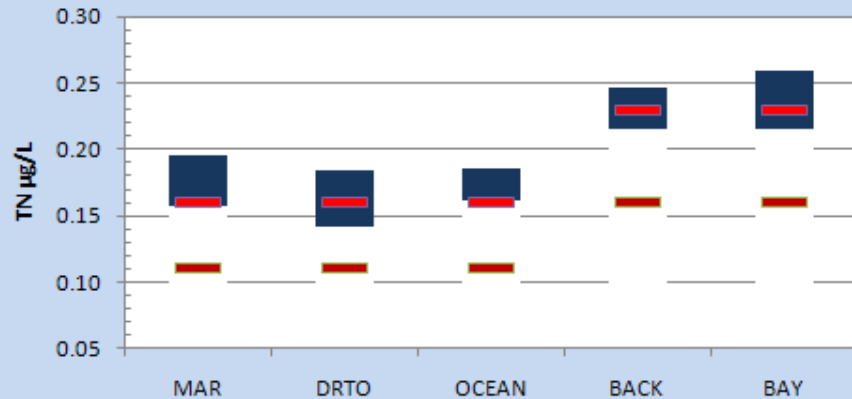
Pine Is. Sound – Rookery Bay

PINE	Pine Island Sound
SCB	San Carlos Bay
EB	Estero Bay
CI	Collier Inshore
NPL	Naples Bay
MARC	Marco Islands

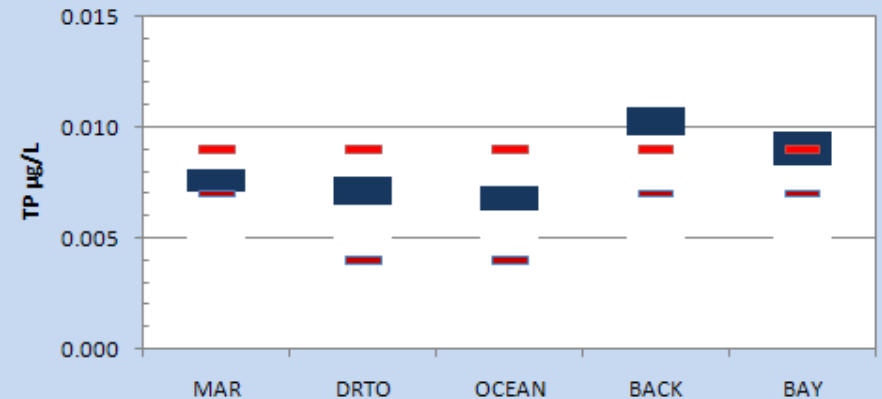


FLORIDA KEYS

Florida Keys Proposed Criteria



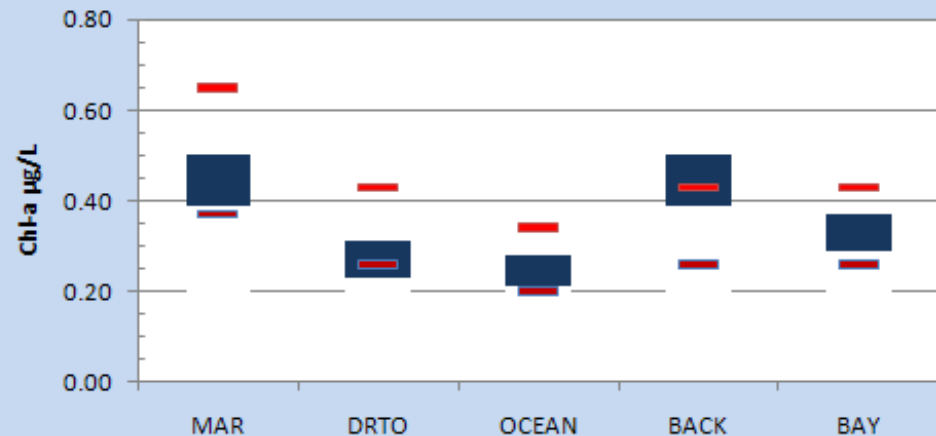
Florida Keys Proposed Criteria



Top of box: FDEP UP-L
Bottom of box: FDEP LT-L

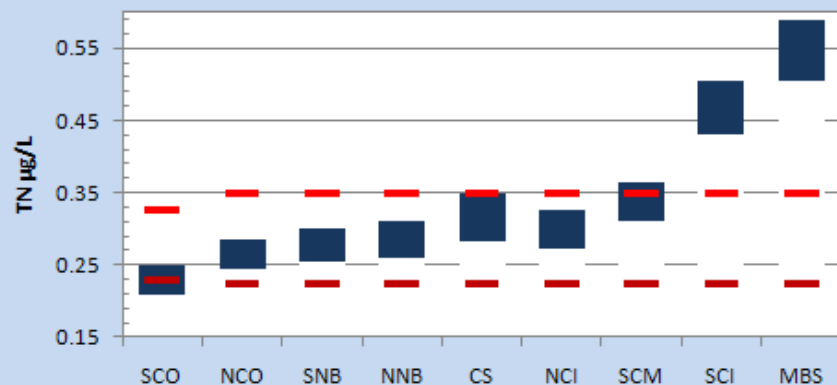
Red marker: proposed limit
Brown marker: threshold

Florida Keys Proposed Criteria

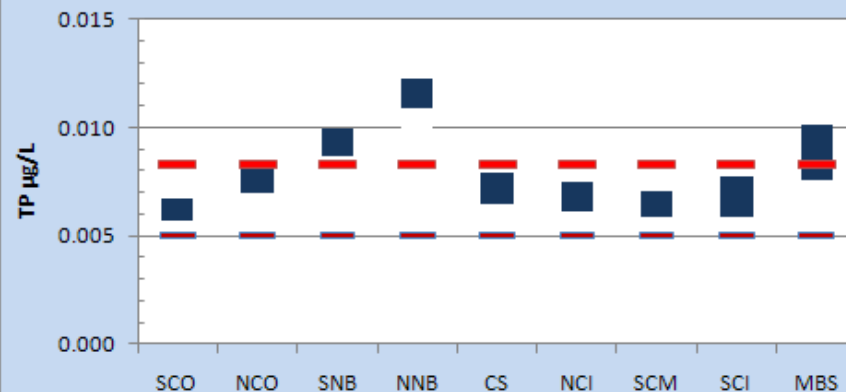


BISCAYNE BAY

Biscayne Bay Proposed Criteria



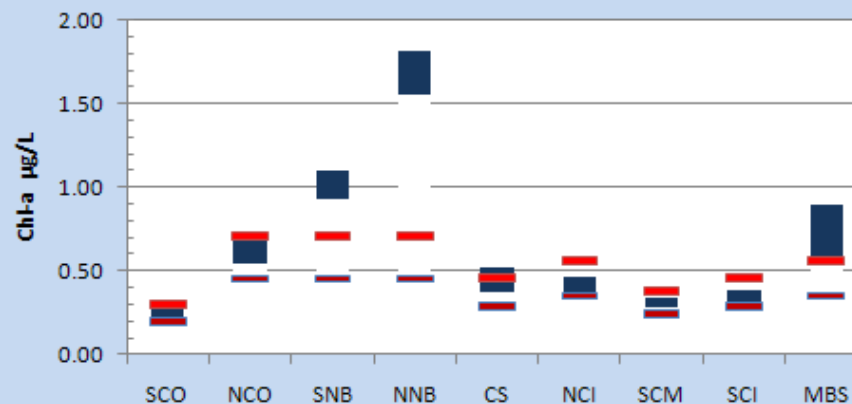
Biscayne Bay Proposed Criteria



Top of box: FDEP UP-L
Bottom of box: FDEP LT-L

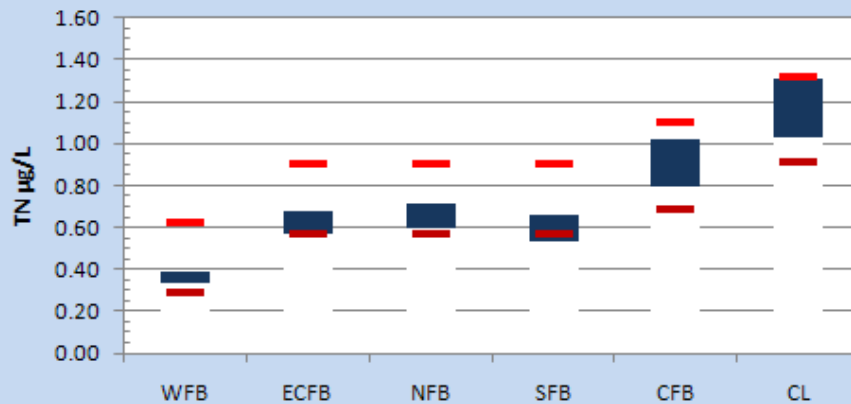
Red marker: proposed limit
Brown marker: threshold

Biscayne Bay Proposed Criteria

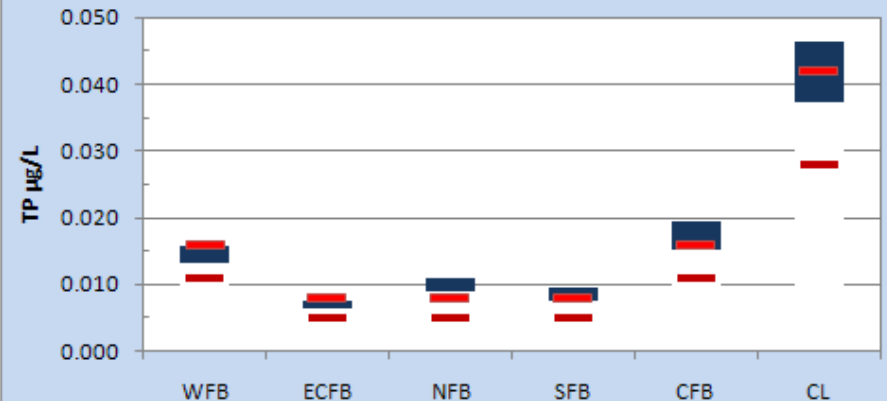


FLORIDA BAY

Florida Bay Proposed Criteria



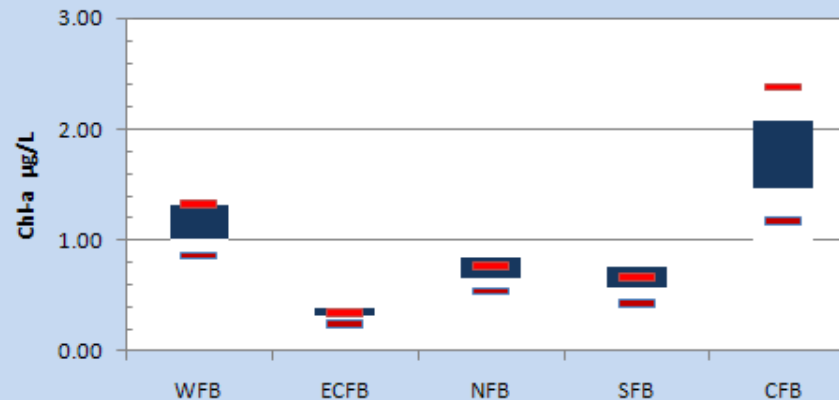
Florida Bay Proposed Criteria



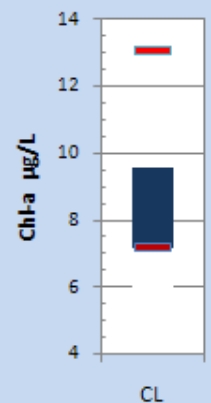
Top of box: FDEP UP-L
Bottom of box: FDEP LT-L

Red marker: proposed limit
Brown marker: threshold

Florida Bay Proposed Criteria

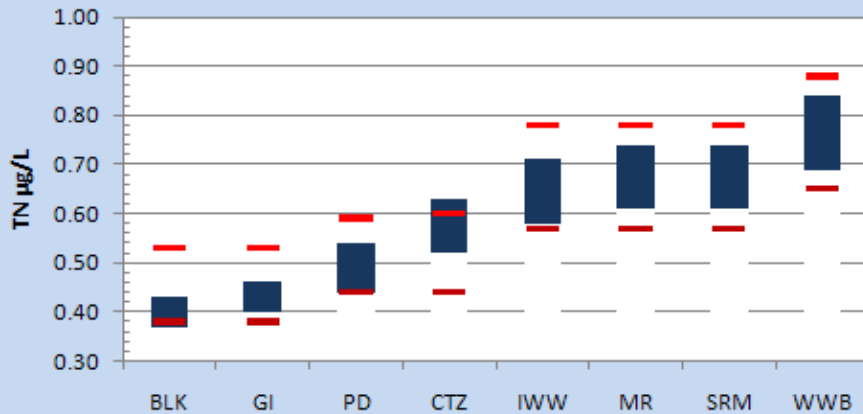


FB-NNC

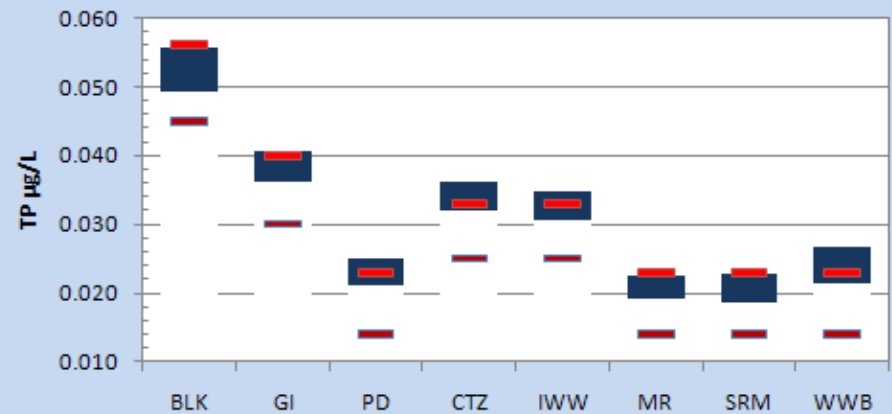


WHITEWATER BAY – TEN THOUSAND Is.

Whitewater Bay - Ten Thousand Is.
Proposed Criteria



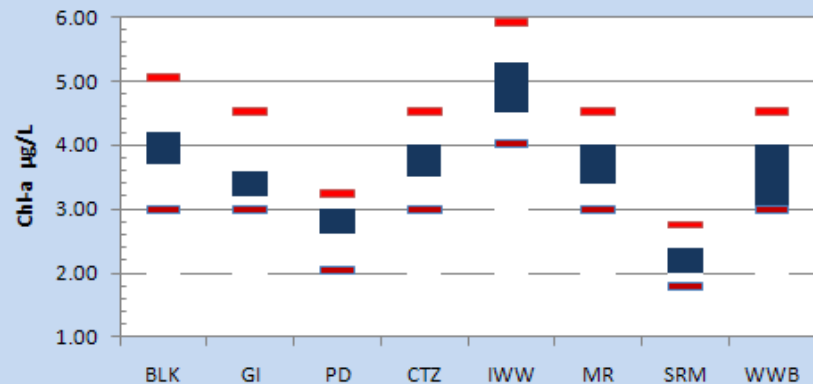
Whitewater Bay - Ten Thousand Is.
Proposed Criteria



Top of box: FDEP UP-L
Bottom of box: FDEP LT-L

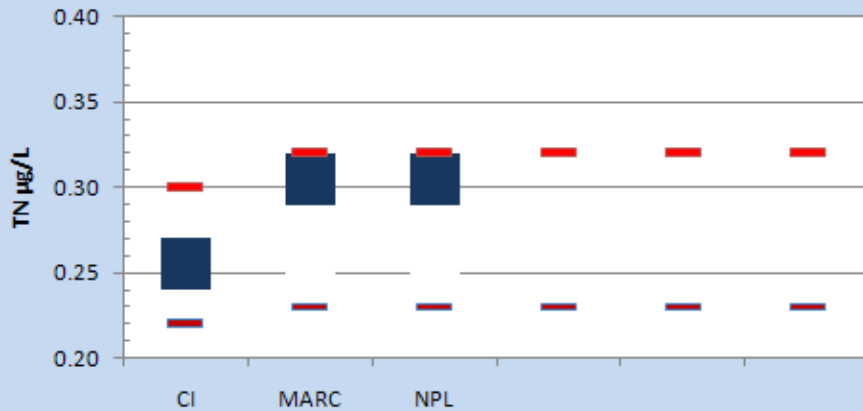
Red marker: proposed limit
Brown marker: threshold

Whitewater Bay - Ten Thousand Is.
Proposed Criteria

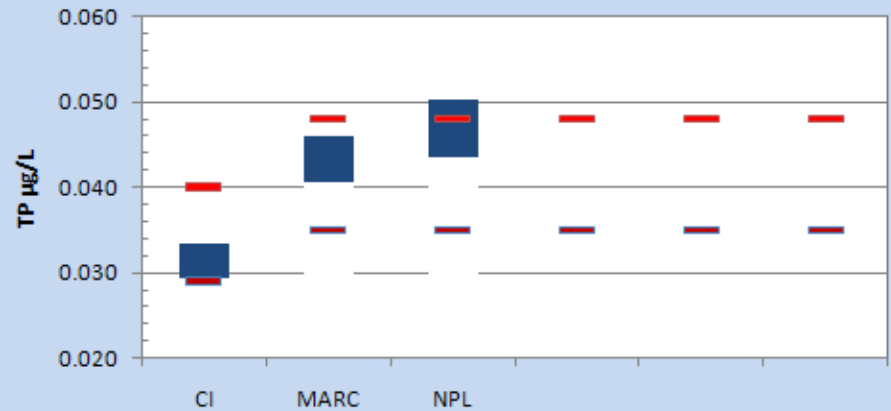


PINE Is. SOUND – ROOKERY BAY

Pine Is. Sound- Rookery Bay
Proposed Criteria



Pine Is. Sound- Rookery Bay
Proposed Criteria



Top of box: FDEP UP-L
Bottom of box: FDEP LT-L

Red marker: proposed limit
Brown marker: threshold

Pine Is. Sound- Rookery Bay
Proposed Criteria

