

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Division of Environmental Assessment and Restoration, Bureau of Watershed Restoration

NORTHWEST DISTRICT • PENSACOLA BAY BASIN

Final TMDL Report

Appendix D:

Pensacola Bay WBIDs

- North Escambia Bay (WBID 548AA)
- Escambia Bay North (Shellfish) (WBID 548AC)
- Escambia Bay South (WBID 548B)
- Blackwater Bay North (WBID 548GA)
- Blackwater Bay South (WBID 548GB)
- East Bay (WBID 548H)
- Pensacola Bay North (WBID 548C)
- Pensacola Bay Middle (WBID 548D)
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- Santa Rosa Sound (WBID 915)

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June 7, 2013

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D.1 Pensacola Bay General Information

Figure D.1.1. Pensacola Bay WBIDs

Note: WBIDs 10E, 24AB, and 30A (shown in red) are the freshwater WBIDs for the mouth of the Escambia, Blackwater, and Yellow Rivers; all other WBIDs are marine in nature.



Figure D.1.2. Pensacola Bay Evaluation Zones and EFDC/WASP Model Grids

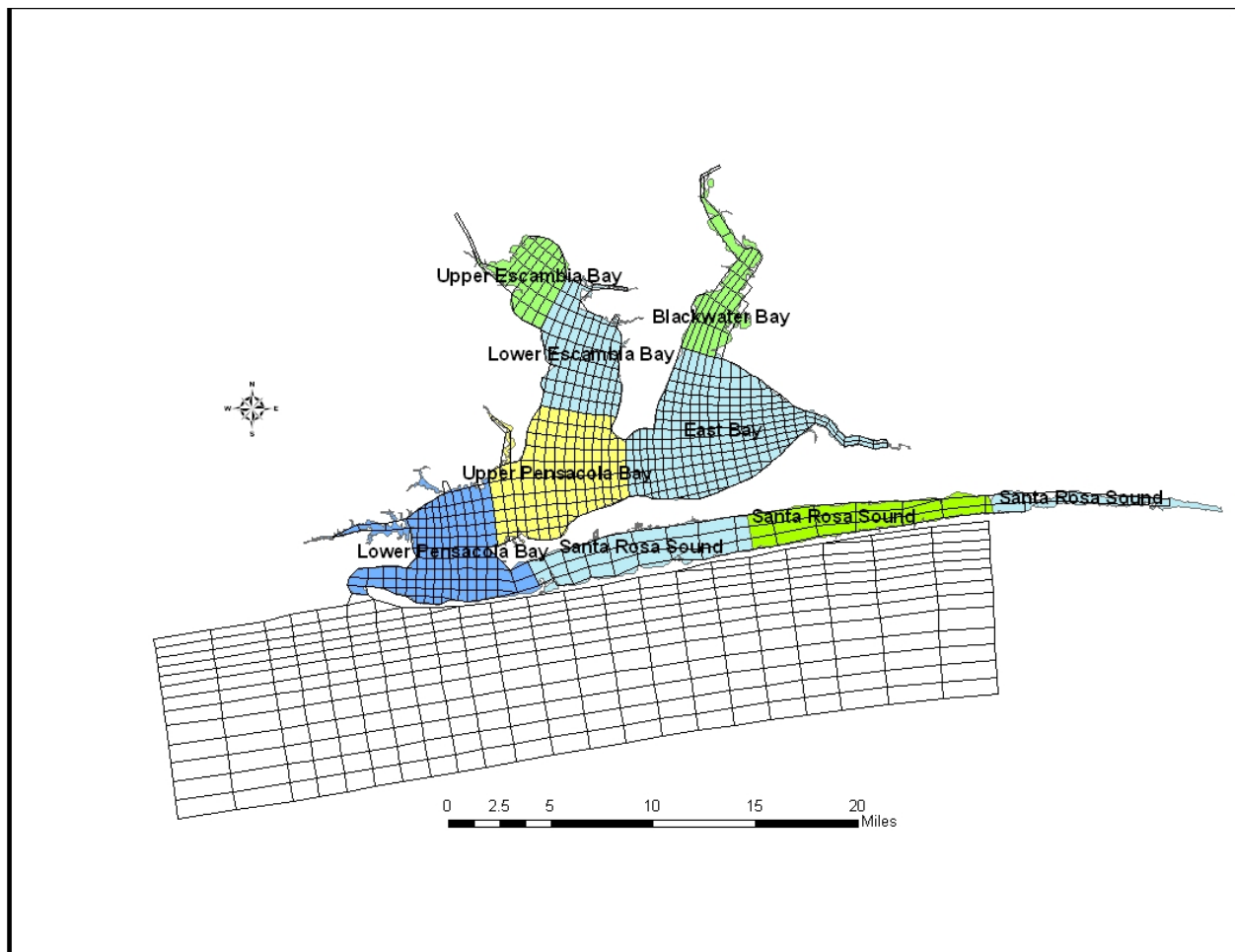


Figure D.1.3. Pensacola Bay EMAP Stations

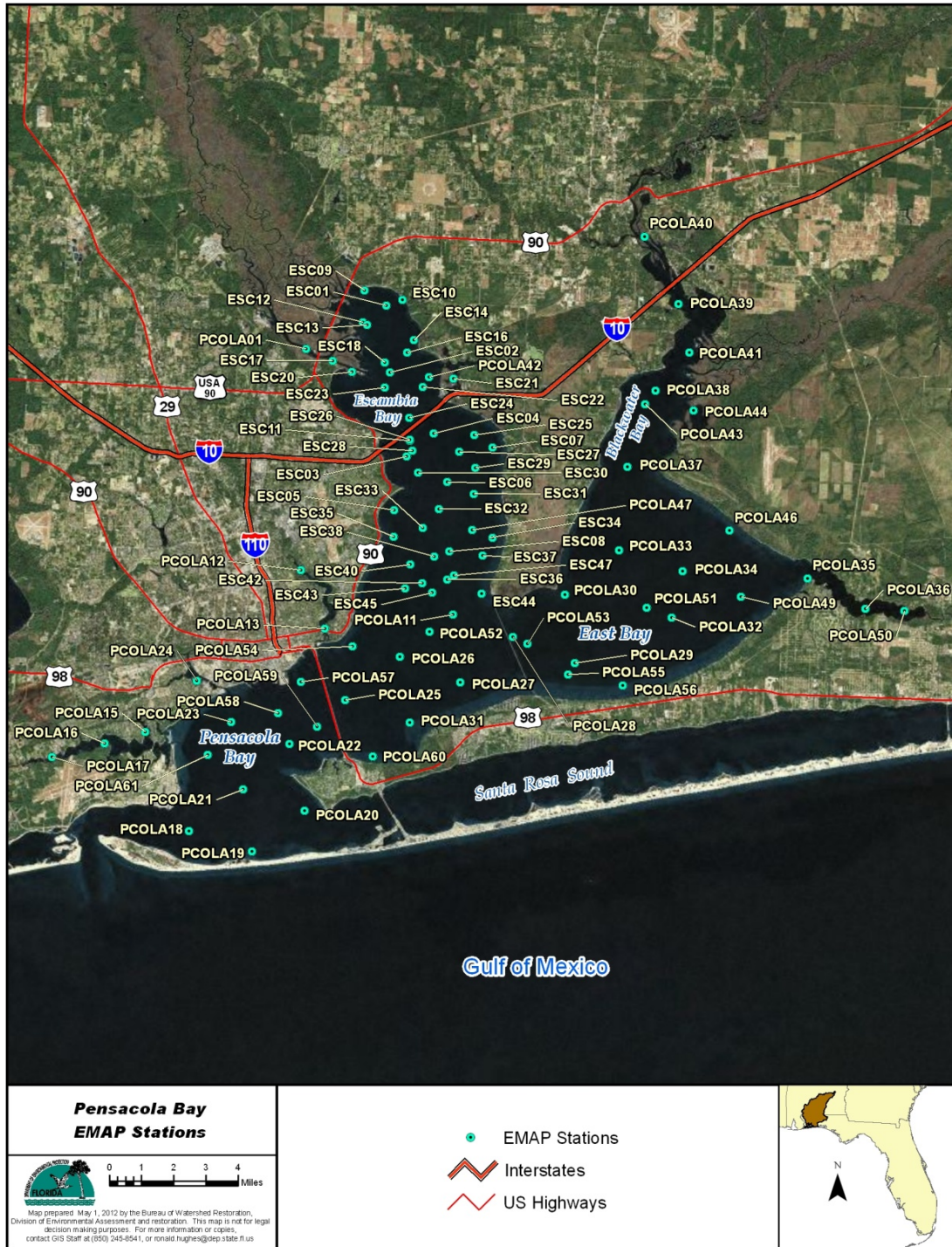
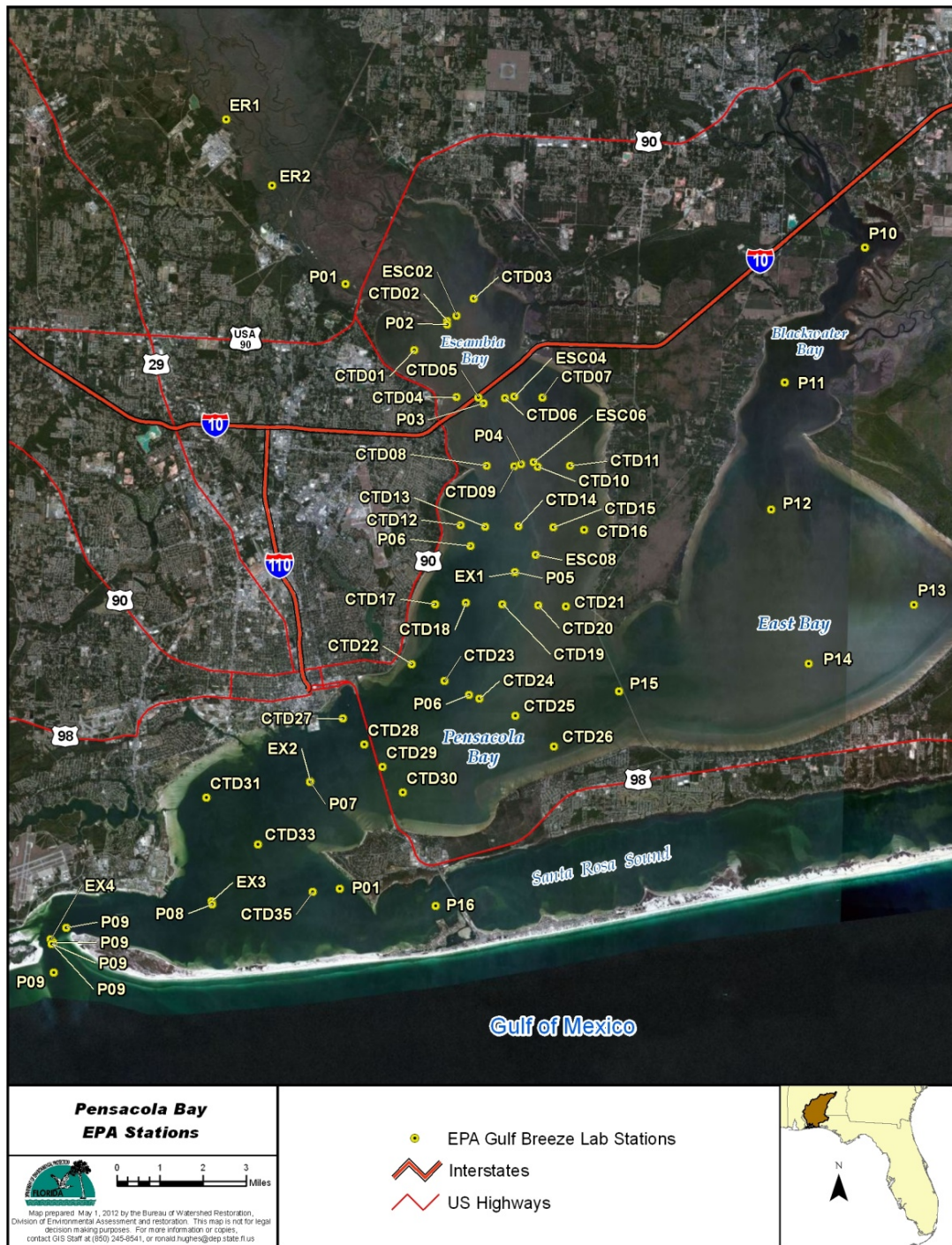


Figure D.1.4. Pensacola Bay Gulf Breeze Stations



D.2 North Escambia Bay (WBID 548AA) Data Presentation

Table D.2.1. North Escambia Bay (WBID 548AA) Stations

Station ID	Station Name	Count	Begin Date	End Date	Alias
21FLPNS 3302C548A2	Escambia Bay sect. C TMDL WBID site 548A-2	185	2004	2009	A-1
21FLGBO1CTD01PB0209	Escambia Bay CTD01PB0209	24	2002	2002	A-3
1113T070120165	0.4M S.W OF FISHERMANS POINT	1288	1973	1974	A-5
21FLPNS 3302A548A1	Escambia Bay sect. A TMDL WBID site 548A-1	193	2004	2009	A-6
21FLA 330200A6	ESCAMBIA BAY MOUTH BENNY BAYOU	40	1971	1972	A-7
1113T070120690	2/3 MI NORTH OF STATION 023	332	1973	1973	A-8
21FLGFWFGFCNW0036	ESCAMBIA RIVER CHANNEL MARKER 18 N. ESCAMBIA BAY	483	1982	1988	A-9
21FLGBO1CTD01PB0307	Escambia Bay CTD01PB0307	40	2003	2003	A-10
21FLA 33020C11	ESCAMBIA BAY SECTION C BACKGROUND STATION	3963	1970	1996	C11
21FLA 33020B11	ESCAMBIA BAY BUOY 14	230	1970	1988	A-11
1113T070120715	RE RAF "18"	432	1973	1973	A-12
1113T070120710	5/8 MI EAST OF STATION 023	332	1973	1973	A-13
1113T070120245	ESC.BAY .5MI SSE OF AM.CYN. BOIL	45	1973	1973	A-16
1113T070120260	ESC.BAY .8MI NW OF AM.CYN. BOIL	32	1973	1973	A-17
21FLBRA 548A-E	548A - Escambia Bay (N) - Beyond mouth of Mulatto Bayou	22	2007	2007	A-18
21FLA 330200C7	ESCAM B MID FISHERMA PO L OAK PO	152	1971	1979	A-19
21FLA 330200B3	ESCAMB BA OFFSH ELLYSO FLD DISCH	187	1970	1972	A-20
1113T070120645	N "14"	432	1973	1973	A-21
1113T070120335	0.3MI FM W SHORE JUST ABV RR BR.	431	1973	1974	A-22
1113T070120255	ESC.BAY .5MI WSW OF AM.CYN BOIL	34	1973	1973	A-23
21FLPNS 3302C548A6	Escambia Bay upper TMDL wbid site 548A-6	11	2004	2004	A-24
1113T070120290	UPPER BAY NEAR FLORIDATOWN	83	1972	1973	A-25
1113T070120130	SIMPSON RIV. BELOW US-90 BRIDGE	40	1973	1973	A-26
21FLPNS 330200C1	ESCAMBIA BAY FISHERMANS POINT	21	2001	2001	A-27
21FLPNS 330200B3	ESCAMB BA OFFSH ELLYSO FLD DISCH	56	2000	2001	A-28
21FLFMRIPEN200301	Pensacola - Escambia Bay	34	2003	2003	A-29

Station ID	Station Name	Count	Begin Date	End Date	Alias
21FLBFA 33020C11	ESCAMBIA BAY SECTION C BACKGROUND	445	1993	1999	C11
21FLA 330200B9	ESCAMBIA BAY SEC B BACKGR STA	336	1970	1988	B9
1113T070120675	1 MI FROM C15&ONLINE MULLATO BYU	345	1973	1973	A-30
21FLFMRISTR200001	StateNonTrend - Escambia Bay	13	2000	2000	STR01
21FLA 33020A13	ESC. BAY BKGD FOR AIR PRODUCTS	192	1981	1996	A13
1113T070120285	UPPER BAY NEAR FLORIDATOWN	83	1972	1973	A-31
1113T070120215	ESC.BAY .2MI FM AIR PROD DSCHG	19	1973	1973	A-32
1113T070120020	ESCAMBIA BAY	947	1973	1974	A-33
21FLPNS 33020C11	ESCAMBIA BAY SECTION C BACKGROUND STATION	48	2000	2001	C11
21FLA 33020C12	ESCAMBIA B E END RR TRESTLE NORT	41	1972	1986	A-34
1113T070120250	ESC.BAY .6MI SW OF AM.CYN. BOIL	32	1973	1973	A-35
1113T070120240	ESC.BAY AT AM.CYN. OUTFALL BOIL	17	1973	1973	A-36
1113T070120030	ESCAMBIA BAY	1000	1973	1974	A-37
21FLPNS 330200A2	ESCAMBIA BAY BASS HOLE COVE	15	2001	2001	A2
21FLA 330200A2	ESCAMBIA BAY BASS HOLE COVE	459	1970	1987	A-38
21FLPNS 33020A21	UP ESCAMBI B AMER CYANAMI OUTFAL	20	2001	2001	A-39
21FLBRA 548A-D	548A - Escambia Bay (N) - Under railway tressel N of I-10	22	2007	2007	A-40
21FLBRA 548A-C	548A - Escambia Bay (N) - At channel marker D18	20	2006	2006	548AC
21FLA 33020A15	ESCAMBIA BAY SEC A BACKGROUN STA	620	1970	1984	A15
21FLA 330200C1	ESCAMBIA BAY FISHERMANS POINT	158	1981	1996	A-41
21FLA 330200B7	ESCAMBIA BAY WEST SIDE	15	1968	1971	A-42
1113T070120670	1/2 MI FROM C15&ONLINE W MULLATO	332	1973	1973	A-43
1113T070120660	1 1/2 MI WNW OF N "14"	344	1973	1973	A-44
1113T070120650	1/2 MI WNW OF N "14"	331	1973	1973	A-45
1113T070120155	FISHERMANS PT. 200 YD OFFSHORE	20	1973	1973	A-46
21FLA 33020A14	ESC. BAY OFF AIR PRODUCTS OUTFAL	126	1981	1996	A14
1113T070120695	2/3 MI NORTH OF STATION 022	331	1973	1973	A-47
1113T070120225	ESC.BAY .6MI NW OF AIR PROD DSCG	31	1973	1973	A-48
1113T070120160	0.8M S. OF FLORIDATOWN	740	1973	1974	A-49
1113T070120120	ESCAMBIA R UPSTM S CNFLU WHITE R	470	1973	1974	A-50

Station ID	Station Name	Count	Begin Date	End Date	Alias
1113S000641088	PENSACOLA, FLA. NORTHEAST STP	22	1972	1972	A-51
21FLPNS 3302B548A3	Escambia Bay sect. B TMDL WBID site 548A-3	58	2004	2004	A-52
21FLFMRISTR200301	StateNonTrend - Escambia Bay	6	2003	2003	A-53
1113T070120680	1 1/2 MI FROM C15&ONLINE MULLATO	332	1973	1973	A-54
1113T070120665	C "15"	432	1973	1973	A-55
1113T070120035	ESCAMBIA BAY	542	1973	1973	A-56
1113T070120280	UPPER BAY NEAR FLORIDATOWN	83	1972	1973	A-57
1113T070120235	ESC.BAY .5MI S. OF AIR PROD DSCG	30	1973	1973	A-58
1113T070120220	ESC.BAY .5MI FM AIR PROD DSCHG	34	1973	1973	A-59
21FLA 330200C9	ESCAMBIA BAY BUOY 16 NEAR MOUTH	187	1970	1972	A-60
1113T070120685	2 1/2 MI N OF SWING BRIDGE	344	1973	1973	A-61
1113T070120655	1 MI WNW OF N "14"	332	1973	1973	A-62
1113T070120015	ESCAMBIA BAY	315	1973	1973	A-63
21FLA 330200A7	ESCAMBIA B 1/2 MI NE MOUTH SAULT	29	1972	1972	A-64
1113T070120230	ESC.BAY .7MI E. OF AIR PROD DSCG	30	1973	1973	A-65

Figure D.2.1. North Escambia Bay (WBID 548AA) Stations

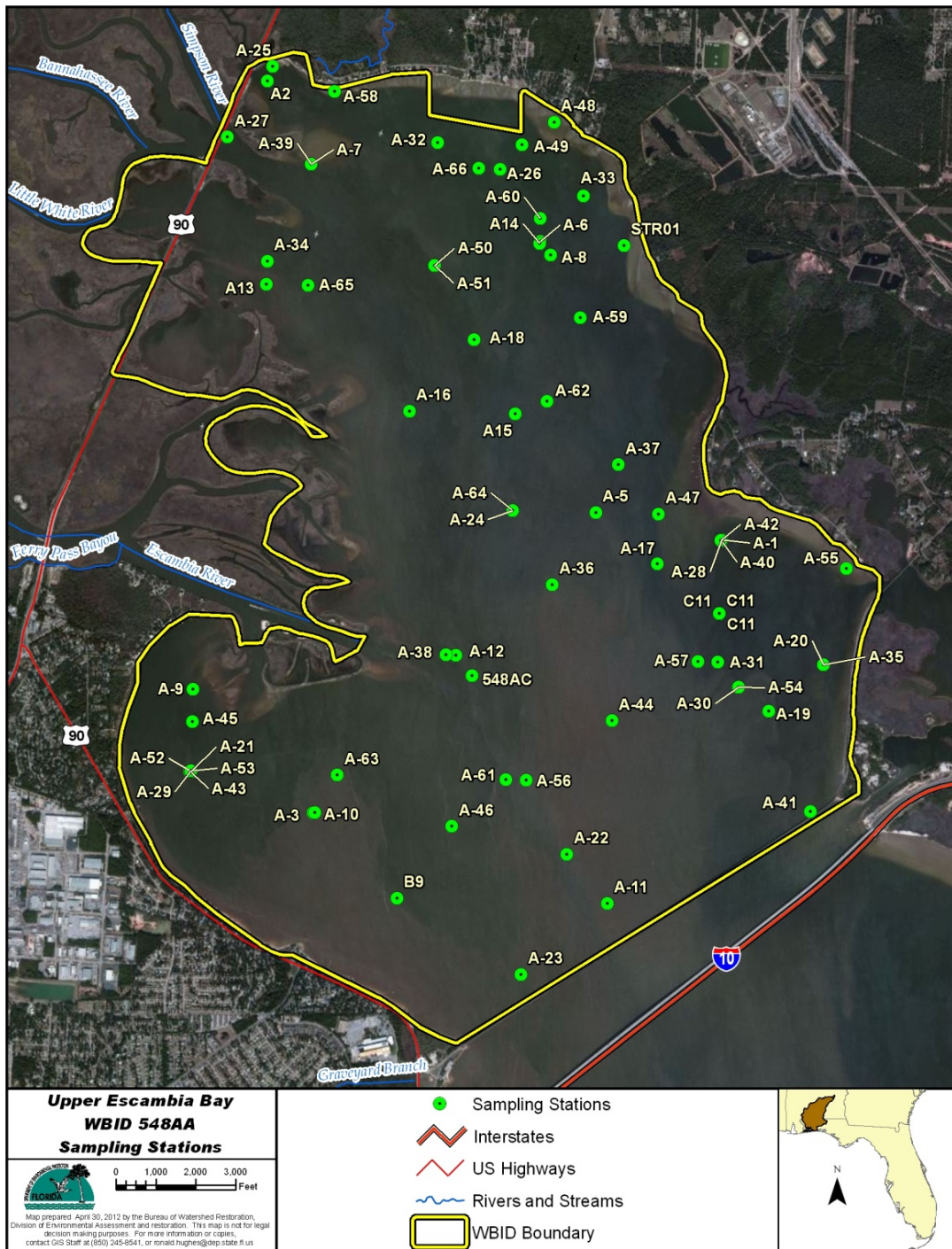


Table D.2.2. North Escambia Bay ((WBID 548AA) Annual Average Results (Selected Constituents)

Note: Annual averages are presented only for years with data in all four calendar quarters.
 - = Empty cell/no data

Year	NO23< (mg/L)	NO23-4 (mg/L)	OrgN< (mg/L)	OrgN4 (mg/L)	NH3< (mg/L)	NH3-4 (mg/L)	TN< (mg/L)	TN4 (mg/L)	PO4< (mg/L)	PO4-4 (mg/L)	TP< (mg/L)	TP4 (mg/L)	CChla< (µg/L)	CChla4 (µg/L)
1968	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1969	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1970	-	-	-	1.14	-	0.458	-	1.73	-	-	-	-	-	-
1971	-	-	-	0.69	-	0.165	-	1.50	0.0033	-	0.017	-	-	-
1972	0.07	-	-	0.56	-	0.120	-	1.01	-	-	-	0.033	-	-
1973	-	0.11	-	0.42	-	0.091	-	0.59	-	0.0054	-	0.033	-	-
1974	0.09	-	-	0.38	-	0.073	-	0.53	0.0101	-	-	0.035	-	-
1975	-	-	-	0.44	-	0.161	-	0.76	-	-	-	0.044	-	-
1976	-	-	-	0.32	-	0.060	-	0.51	0.0150	-	-	0.030	-	-
1977	-	-	-	0.56	-	0.047	-	0.79	-	-	-	0.044	-	-
1978	-	0.08	-	0.47	-	0.080	-	0.65	-	-	-	0.041	-	-
1979	0.09	-	0.48		0.075	-	0.62	-	-	-	0.055	-	-	-
1980	0.04	-	0.49		0.045	-	0.58	-	-	-	0.029	-	5.00	-
1981	-	0.06	-	0.61	-	0.072	-	0.56	-	-	-	0.052	-	7.36
1982	-	0.04	-	0.48	-	0.032	-	0.53	0.0550	-	-	0.047	-	7.22
1983	-	0.09	-	0.38	-	0.056	-	0.46	0.0500	-	-	0.041	6.29	-
1984	0.10	-	-	0.40	-	0.156	-	0.67	-	0.0475	-	0.051	8.82	-
1985	0.06	-	-	0.34	-	0.100	-	0.51	-	0.0350	-	0.057	5.52	-
1986	-	0.06	-	0.49	-	0.095	-	0.54	-	0.0425	-	0.046	-	4.71
1987	-	0.05	-	0.57	-	0.117	-	0.74	0.0633	-	-	0.043	-	8.41

Year	NO23< (mg/L)	NO23-4 (mg/L)	OrgN< (mg/L)	OrgN4 (mg/L)	NH3< (mg/L)	NH3-4 (mg/L)	TN< (mg/L)	TN4 (mg/L)	PO4< (mg/L)	PO4-4 (mg/L)	TP< (mg/L)	TP4 (mg/L)	CChla< (µg/L)	CChla4 (µg/L)
1988	-	0.13	-	0.55	-	0.078	-	0.76	0.0950	-	-	0.040	-	7.46
1989	-	0.08	-	0.72	-	0.070	-	0.87	-	-	-	0.026	-	5.39
1990	-	0.10	-	0.82	-	0.026	--	0.96	-	-	-	0.093	-	18.98
1991	-	0.06	-	0.83	-	0.041	-	0.94	-	-	-	0.044	-	7.63
1992	-	0.04	0.55	-	0.037	-	-	0.59	-	-	-	0.033	-	7.33
1993	-	0.06	-	0.40	-	0.024	-	0.48	-	-	-	0.030	-	13.45
1994	-	0.10	-	0.47	-	0.038	-	0.61	-	-	-	0.030	-	3.63
1995	0.06	-	0.54	-	0.036	-	0.64	-	-	-	0.052	-	-	-
1996	-	0.10	0.40	-	-	0.014	-	0.35	0.0097	--	0.035	-	3.85	-
1997	-	0.08	-	0.75	-	0.069	--	0.77	-	0.0427	-	0.035	-	5.79
1998	-	0.11	-	0.40	-	0.025	-	0.45	-	0.0369	-	0.040	-	6.31
1999	-	0.08	-	0.50	-	0.030	-	0.31	-	0.0299	0.043		-	8.73
2000	-	0.06	-	0.70	-	0.039	-	0.59	-	0.0125	0.101		-	6.82
2001	-	0.07	0.53	-	-	0.029	0.61	-	-	0.0030	0.038		-	8.10
2002	-	0.09	0.95	-	-	0.055	0.59	-	-	0.0042	0.056		-	12.32
2003	-	0.10	-	-	-	0.051	0.42	-	-	0.0090	0.040		-	9.36
2004	-	0.08	-	0.69	-	0.079	-	0.81	0.0070	-	-	0.048	-	8.76
2005	0.07	-	0.58	-	0.014	-	0.66	-	-	-	0.040		-	8.25
2006	0.16	-	-	-	0.480	-	-	-	-	-	0.022		-	10.95
2007	0.02	-	0.64	-	0.020	-	0.68	-	-	-	0.046		-	10.91
2008	0.71	-	0.49	-	0.020	-	1.22	-	-	-	0.041		-	13.23
2009	-	0.12	-	0.68	-	0.027	-	0.83	-	0.0046	-	0.029	--	10.00
2010	-	0.13	-	0.51	-	0.052	-	0.69	-	-	-	0.035	26.07	-

Year	N023< (mg/L)	NO23-4 (mg/L)	OrgN< (mg/L)	OrgN4 (mg/L)	NH3< (mg/L)	NH3-4 (mg/L)	TN< (mg/L)	TN4 (mg/L)	PO4< (mg/L)	PO4-4 (mg/L)	TP< (mg/L)	TP4 (mg/L)	CChla< (µg/L)	CChla4 (µg/L)
2011	0.04	-	0.52	-	0.013	-	0.57	-	0.0088	-	0.038	-	20.08	-
Average (1968-94)	-	0.08	-	0.55	-	0.098	-	0.75	-	0.0326	-	0.042	-	8.32
Average (1995-2011)	-	0.09	-	0.60	-	0.043	-	0.60	-	0.0178	-	0.037	-	9.20

Figure D.2.2. North Escambia Bay Salinity Daily Average over the Period of Record

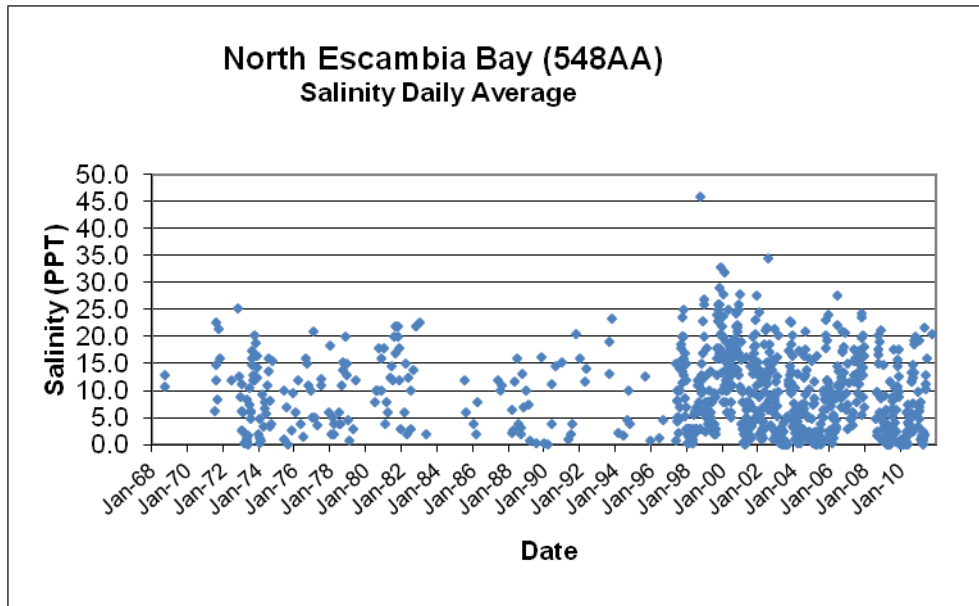


Figure D.2.3. North Escambia Bay Salinity Annual Average over the Period of Record

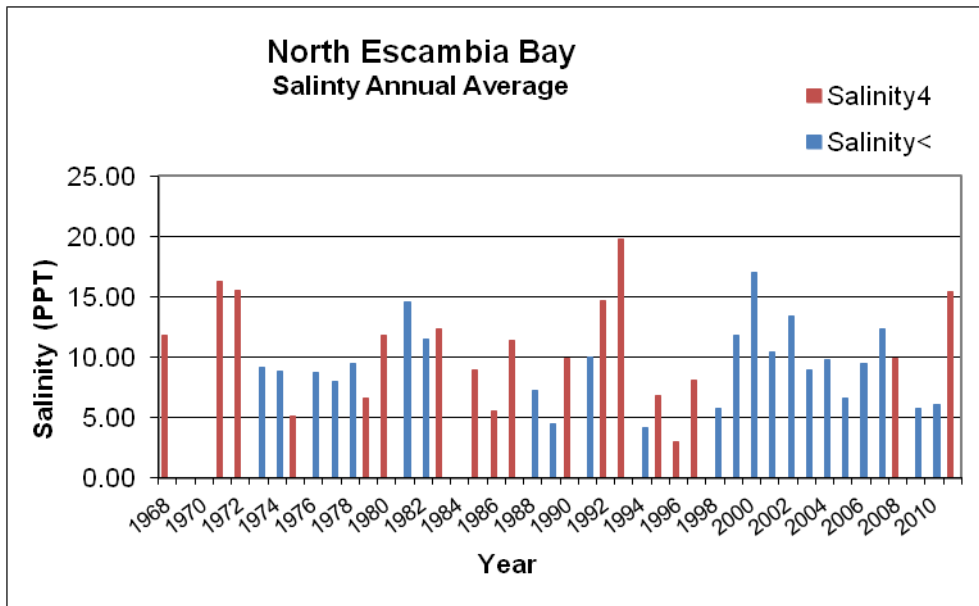


Figure D.2.4. North Escambia Bay Salinity Monthly Average (1998–2011)

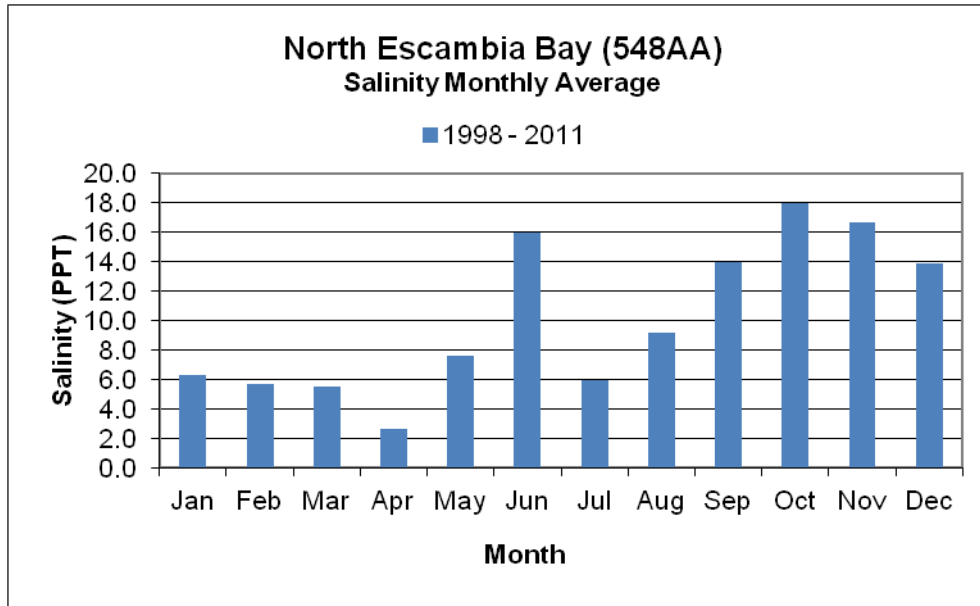


Figure D.2.5. North Escambia Bay Color Daily Average over the Period of Record

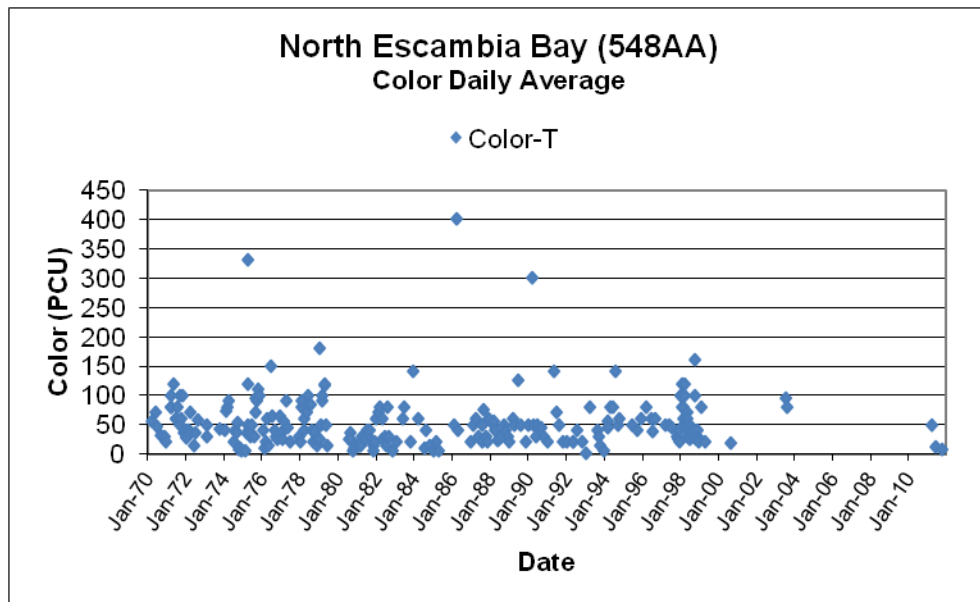


Figure D.2.6. North Escambia Bay Color Annual Average over the Period of Record

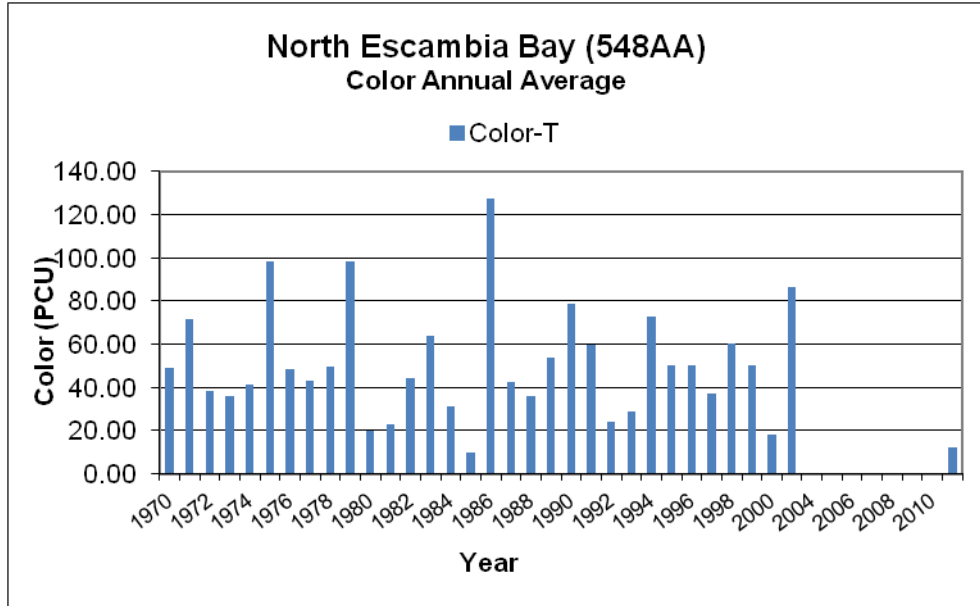


Figure D.2.7. North Escambia Bay Color Monthly Average over the Period of Record

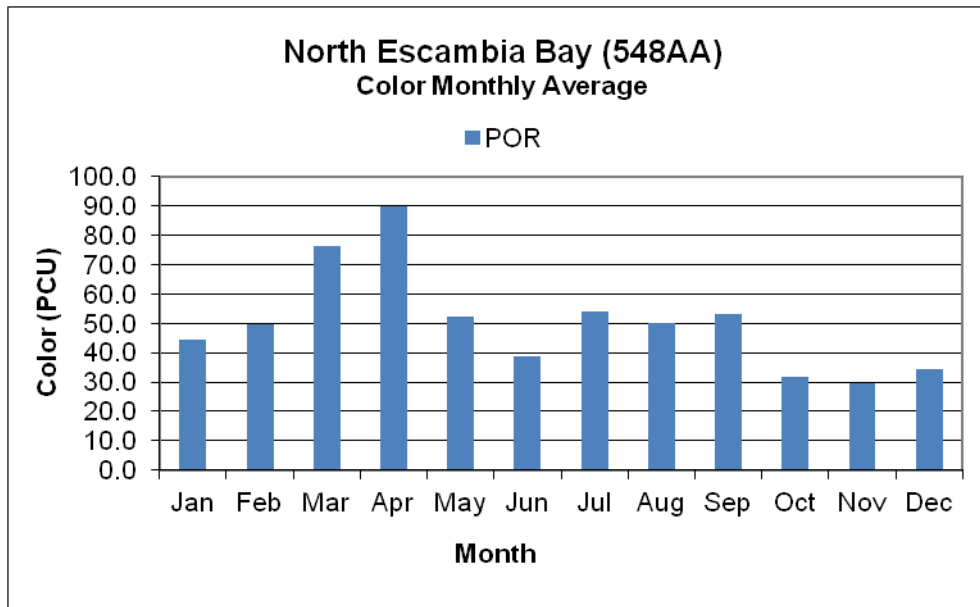


Figure D.2.8. North Escambia Bay Secchi Daily Average over the Period of Record

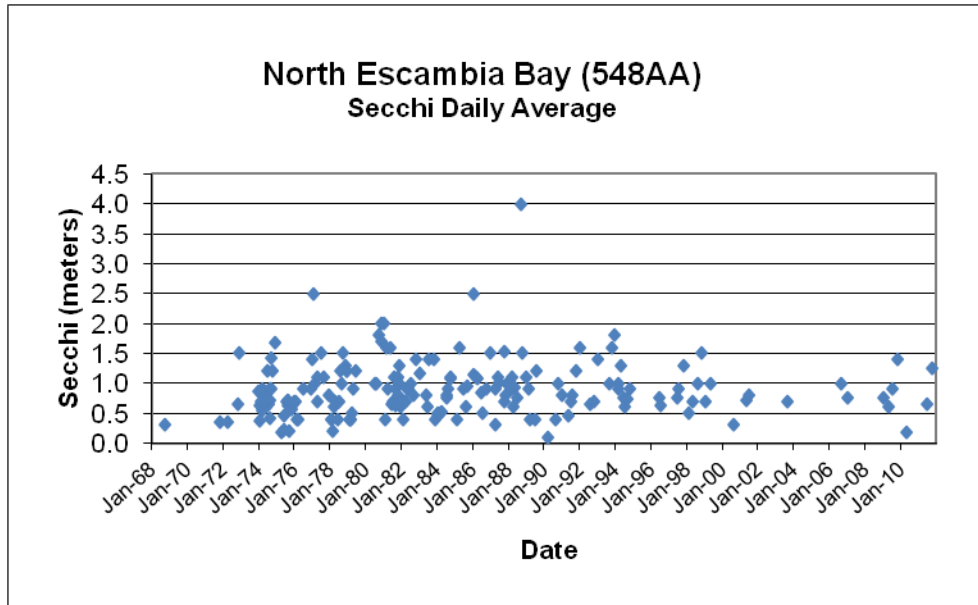


Figure D.2.9. North Escambia Bay Secchi Annual Average over the Period of Record

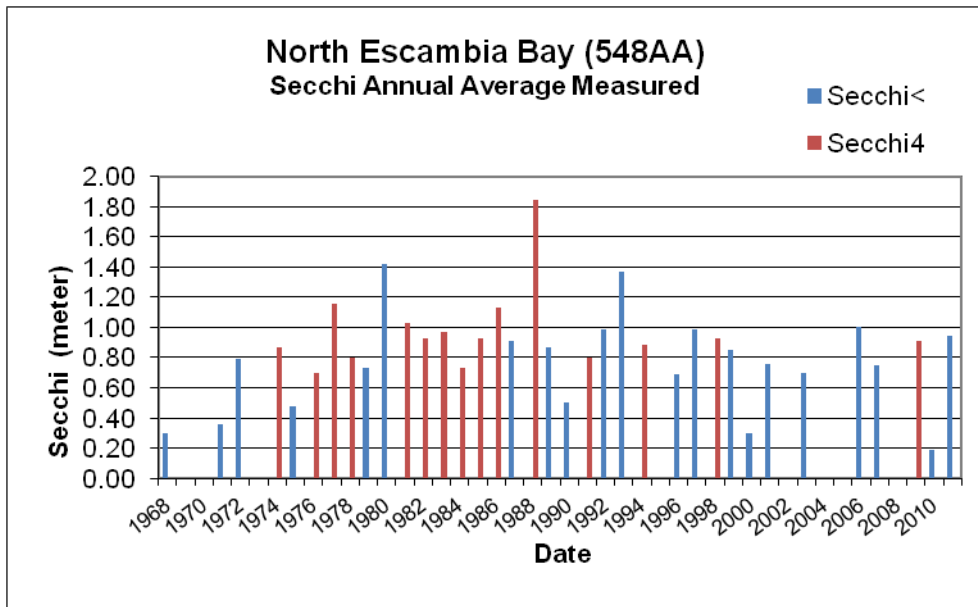


Figure D.2.10. North Escambia Bay Secchi Monthly Average

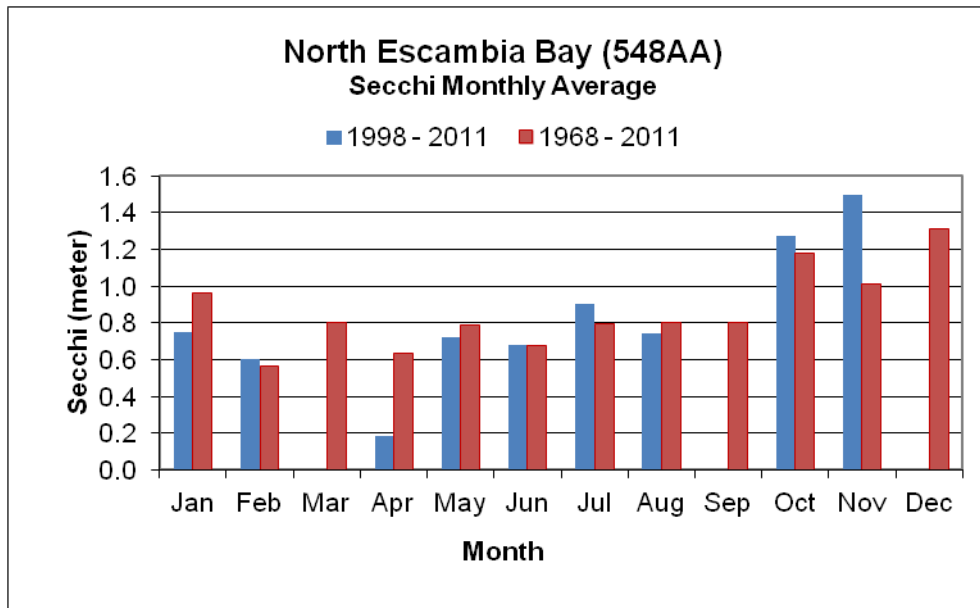


Figure D.2.11. North Escambia Bay NO₃-N Daily Average over the Period of Record

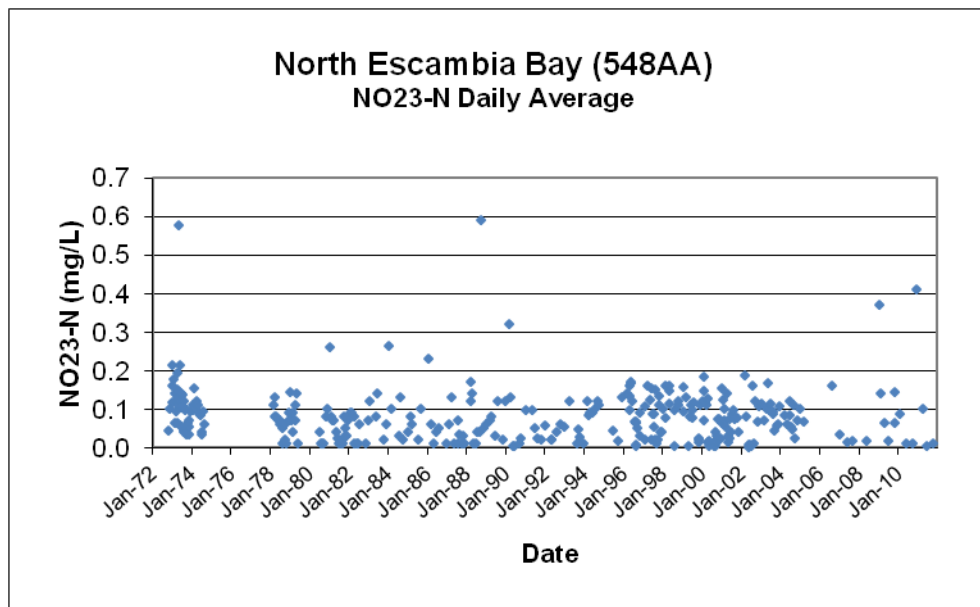


Figure D.2.12. North Escambia Bay NO₃-N Annual Average over the Period of Record

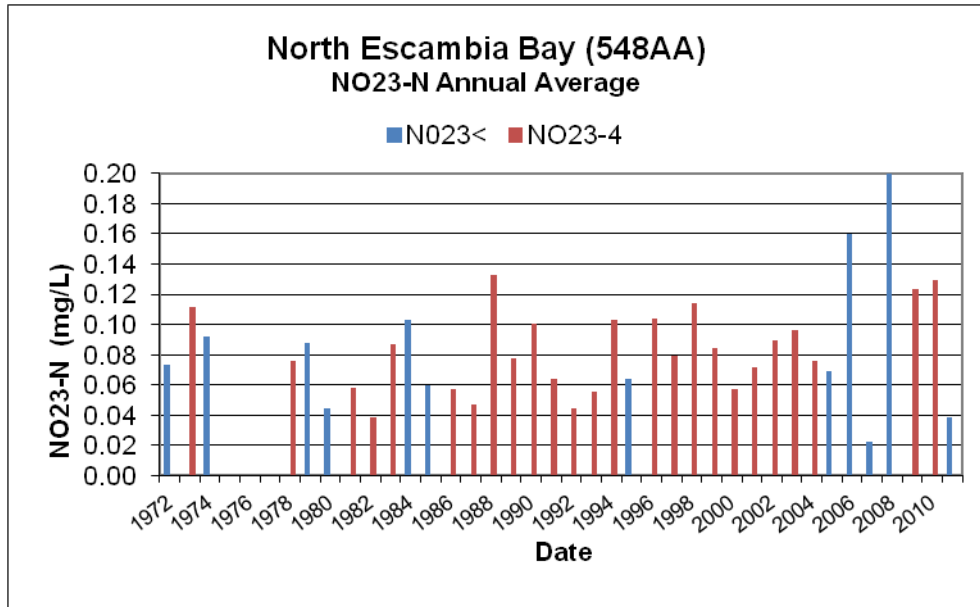


Figure D.2.13. North Escambia Bay NO₃-N Annual Average (1995–2010)

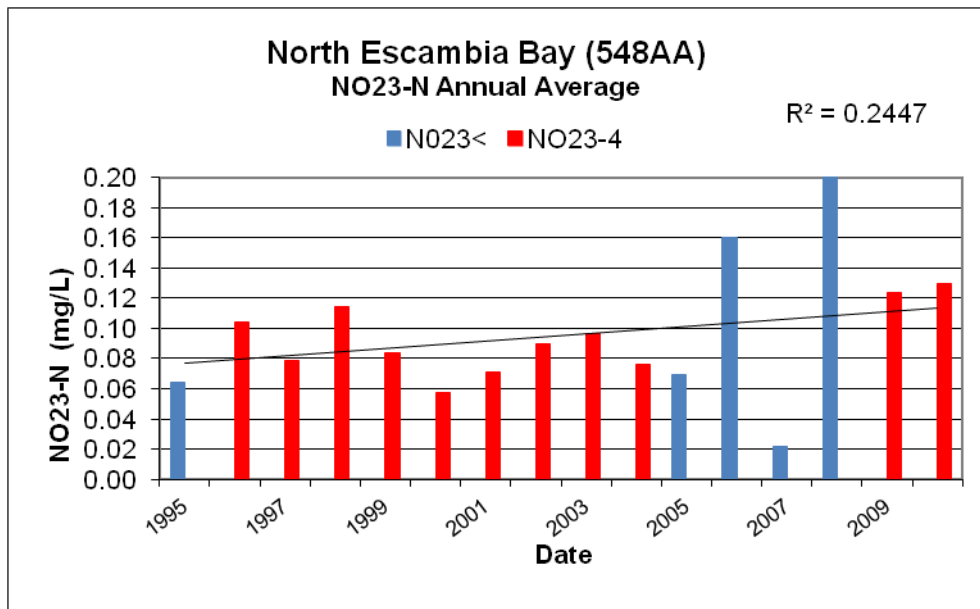


Figure D.2.14. North Escambia Bay NO₃-N Monthly Average

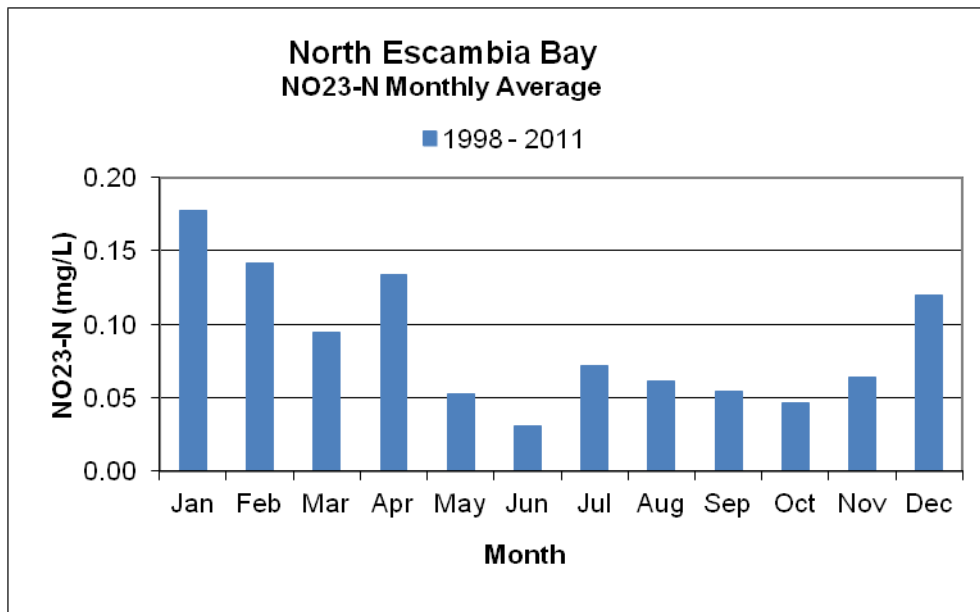


Figure D.2.15. North Escambia Bay NH₄-N Daily Average over the Period of Record

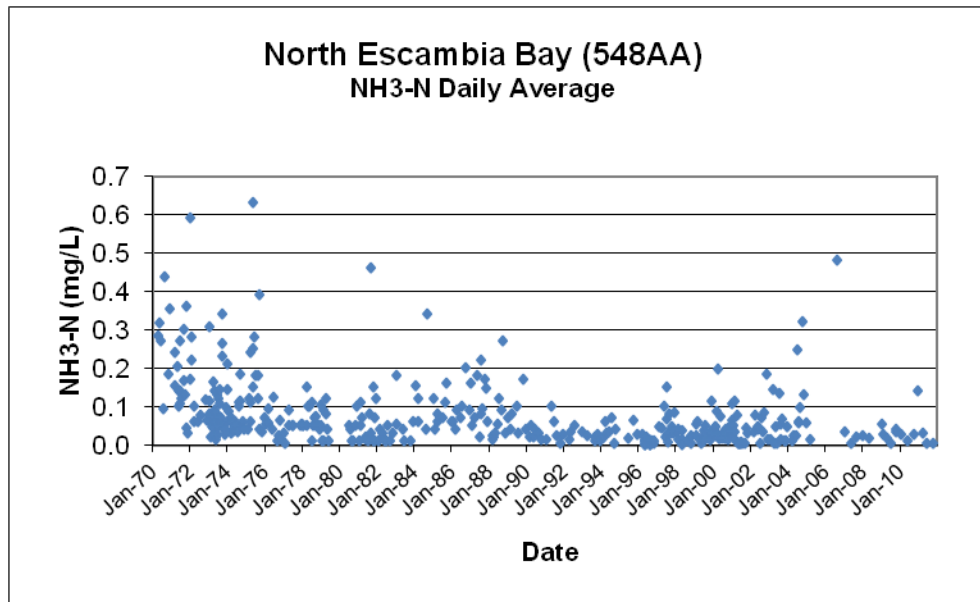


Figure D.2.16. North Escambia Bay NH4-N over the Period of Record

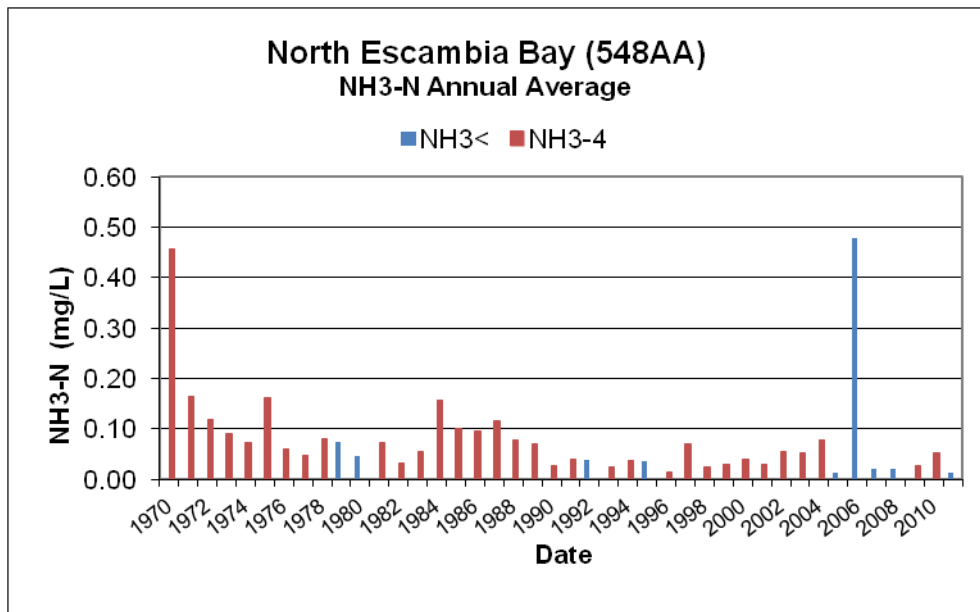


Figure D.2.17. North Escambia Bay NH4-N Annual Average (1995–2011)

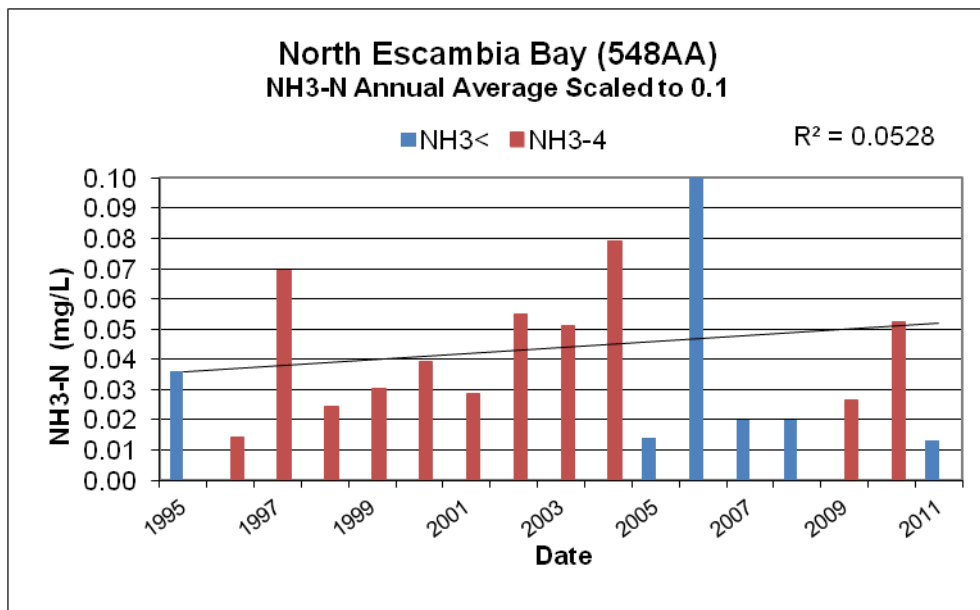


Figure D.2.18. North Escambia Bay NH₄-N (1998–2011)

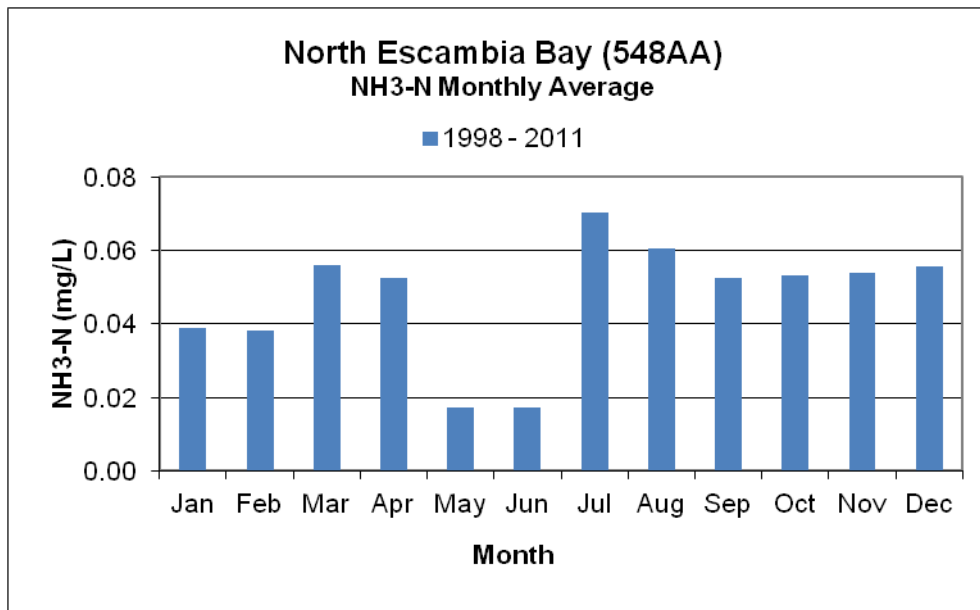


Figure D.2.19. North Escambia Bay Organic-N Daily Average over the Period of Record

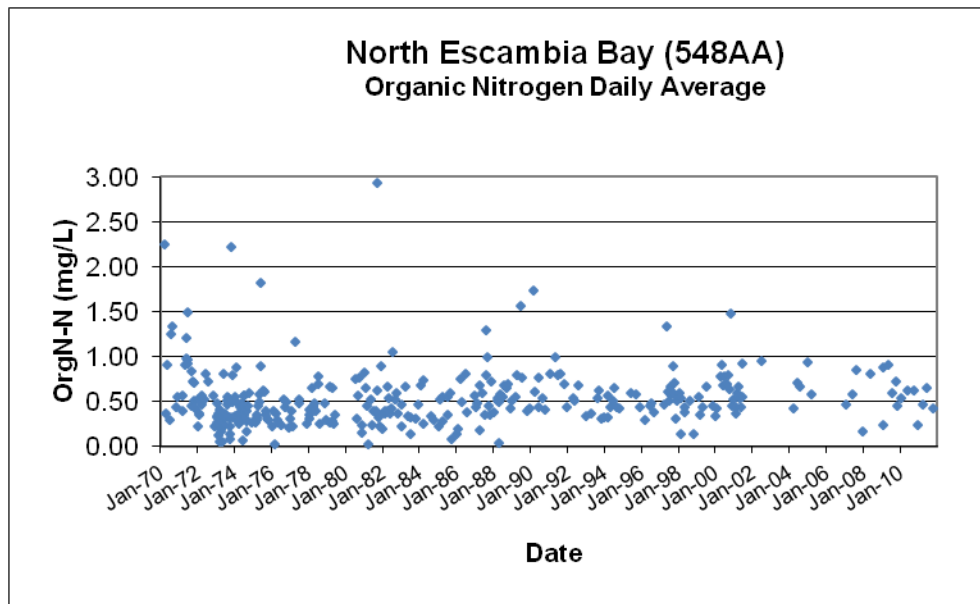


Figure D.2.20. North Escambia Bay Organic-N Annual Average over the Period of Record

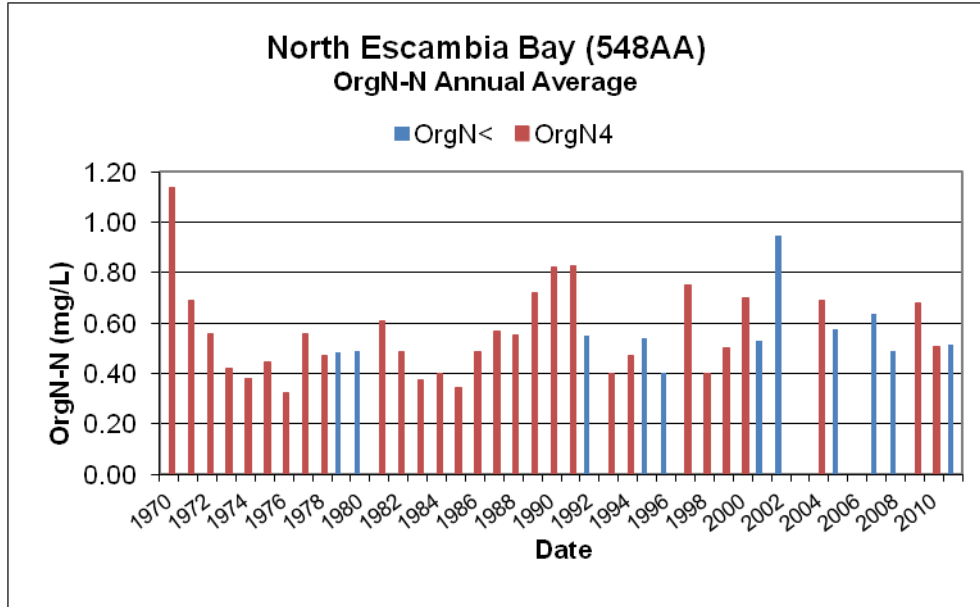


Figure D.2.21. North Escambia Bay Organic-N Monthly Average

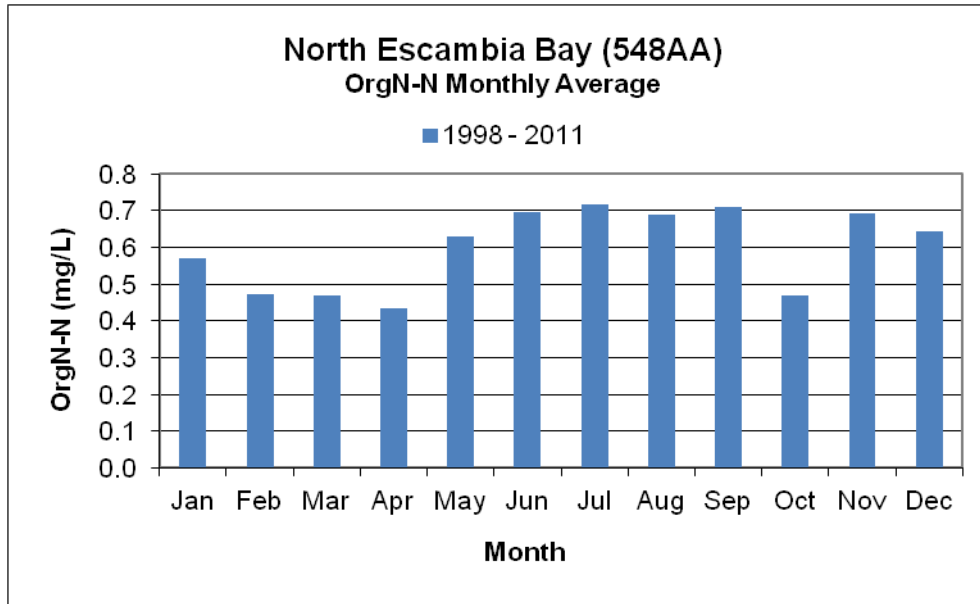


Figure D.2.22. North Escambia Bay TN Daily Average over the Period of Record

Note: Censored at 3.0 mg/L

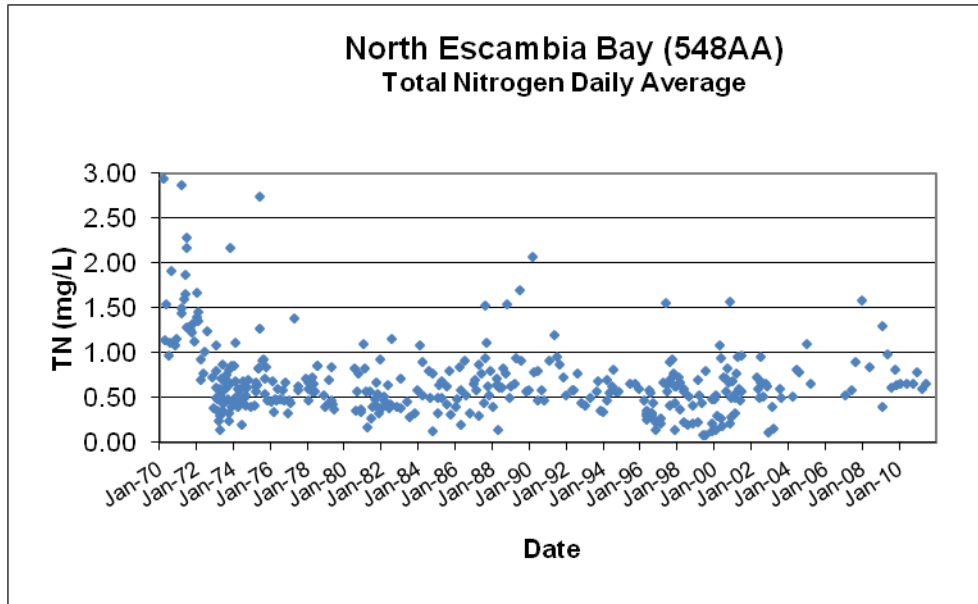


Figure D.2.23. North Escambia Bay TN Annual Average over the Period of Record

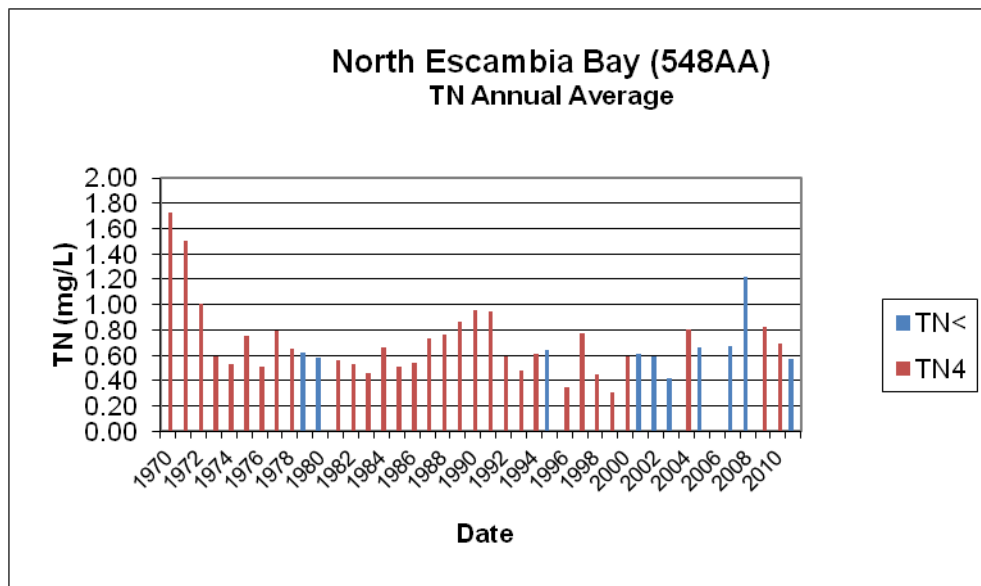


Figure D.2.24. North Escambia Bay TN Annual Average (1995-2011)

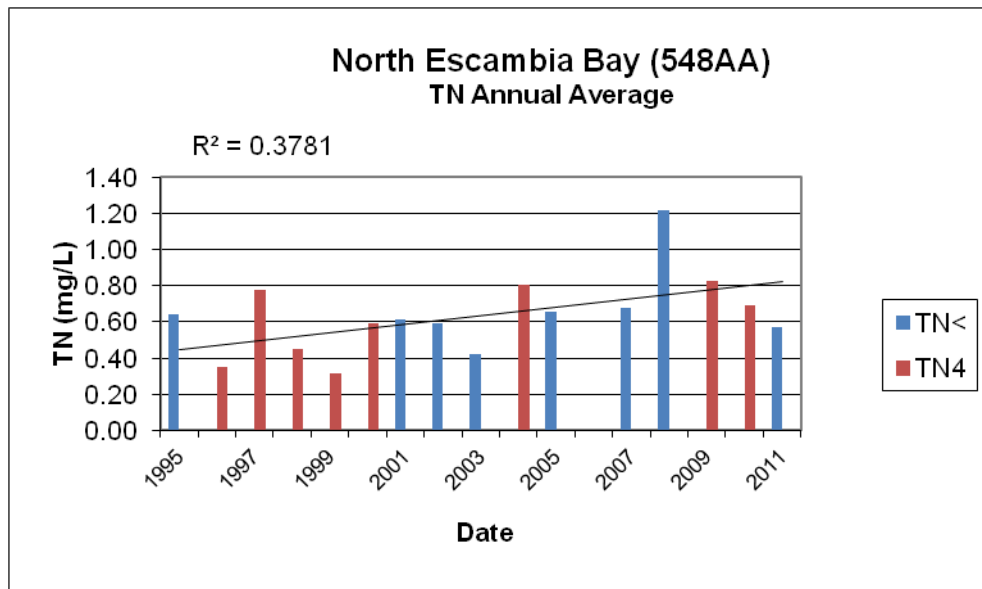


Figure D.2.25. North Escambia Bay TN Monthly Average

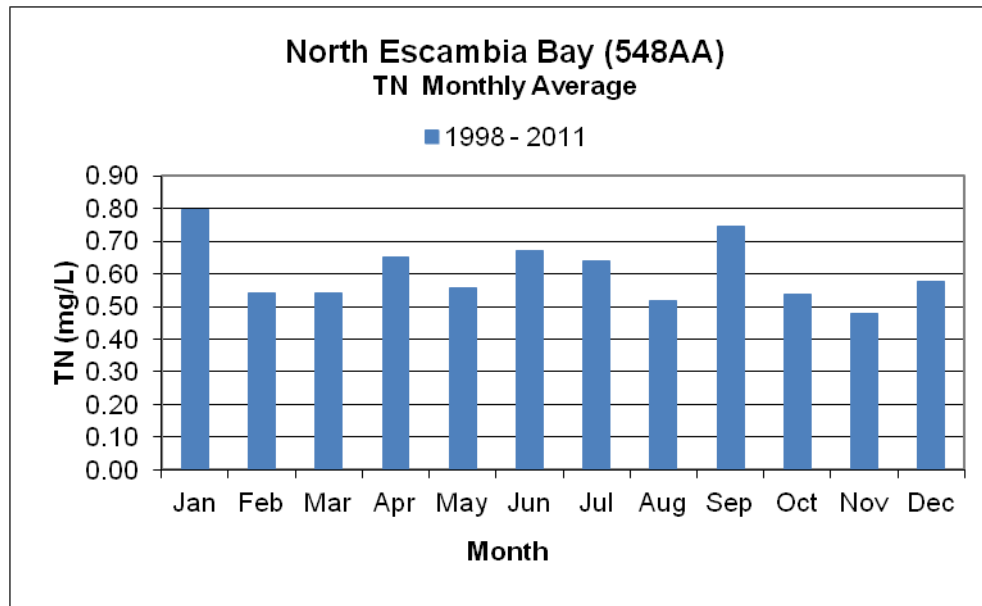


Figure D.2.26. North Escambia Bay PO4-P Daily Average over the Period of Record

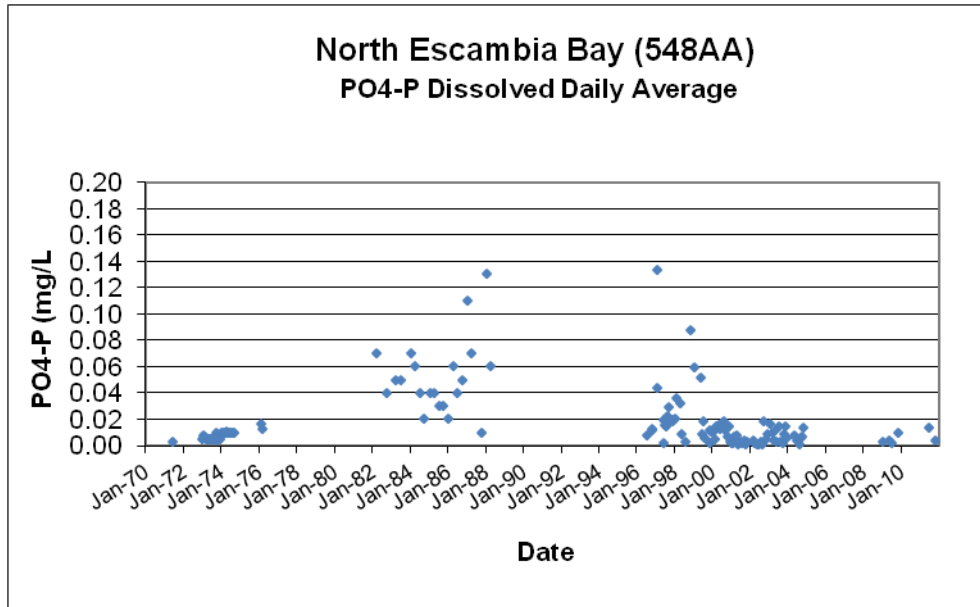


Figure D.2.27. North Escambia Bay PO4-P Annual Average over the Period of Record

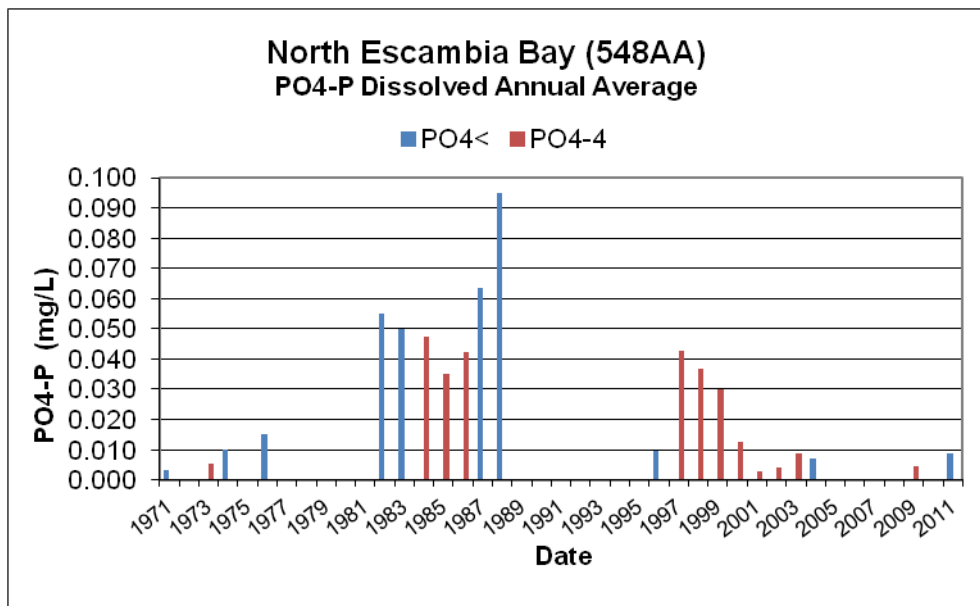


Figure D.2.28. North Escambia Bay PO4-P Monthly Average

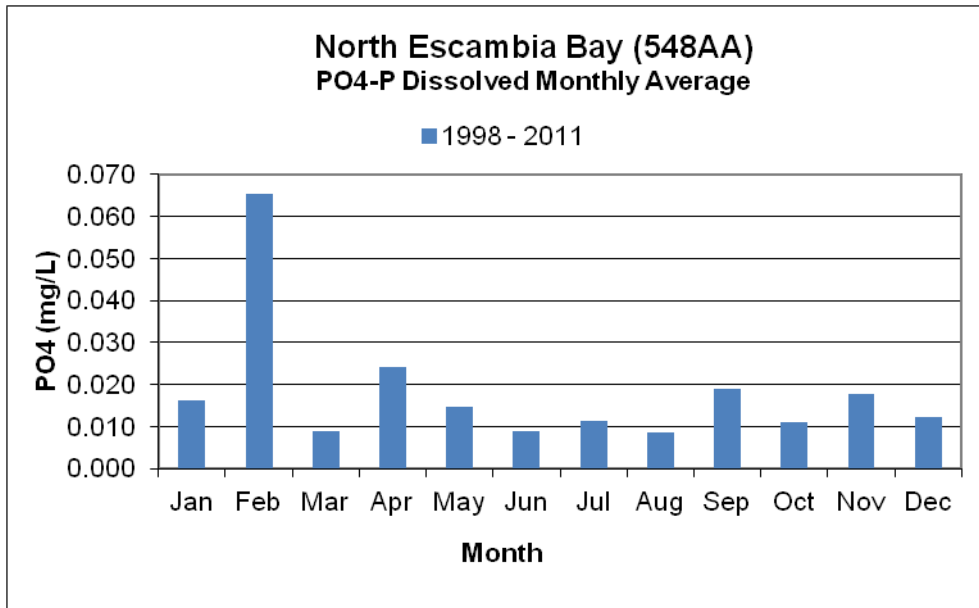


Figure D.2.29. North Escambia Bay TP Daily Average over the Period of Record

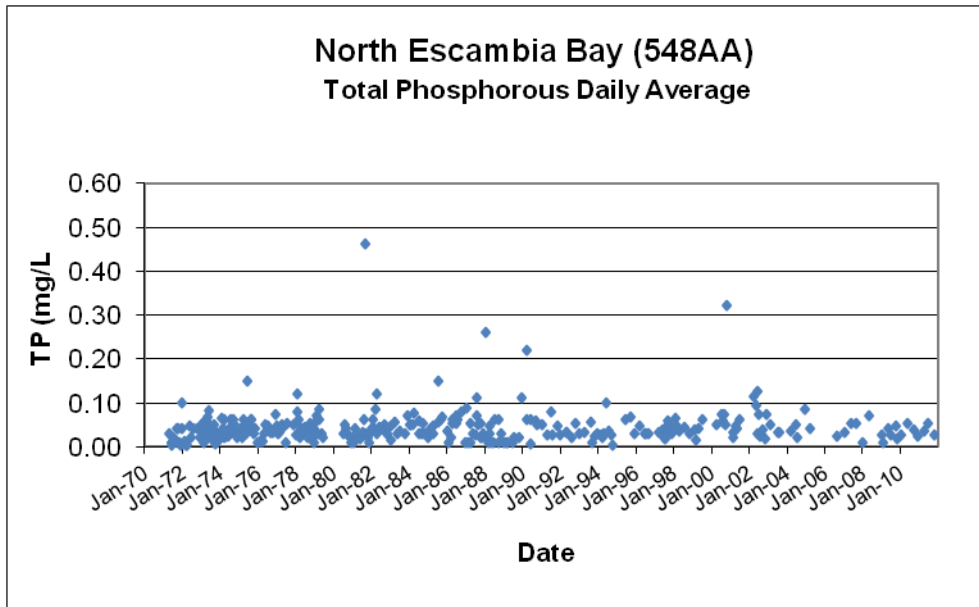


Figure D.2.30. North Escambia Bay TP Daily Average Rescaled over the Period of Record

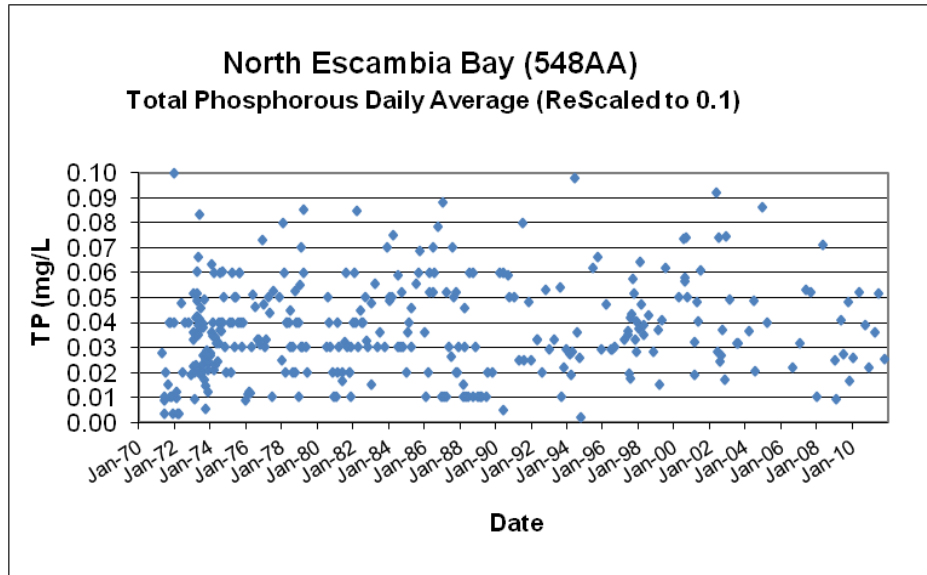


Figure D.2.31. North Escambia Bay TP Annual Average over the Period of Record

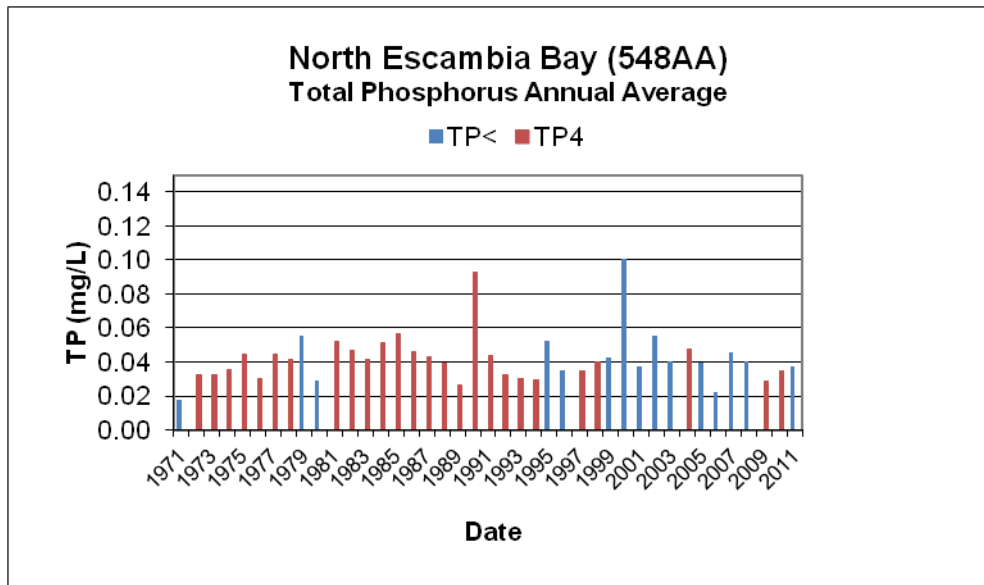


Figure D.2.32. North Escambia Bay TP Annual Average (1995–2011)

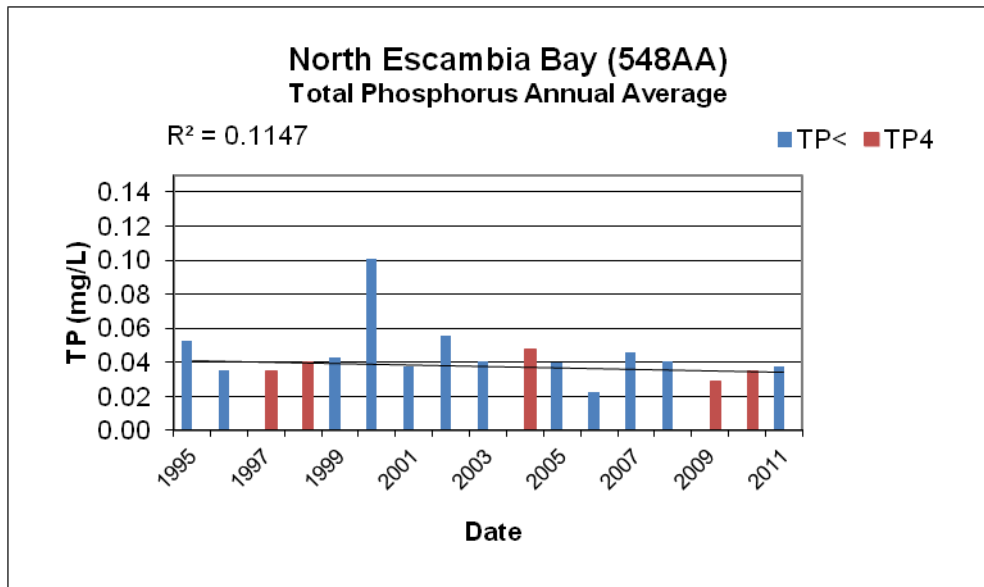


Figure D.2.33. North Escambia Bay TP Monthly Average

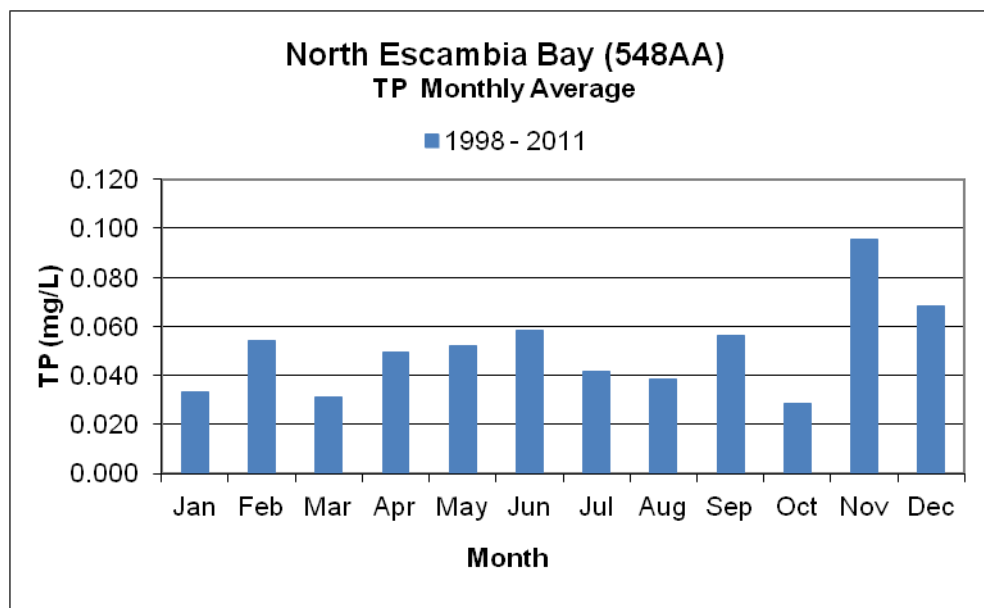


Figure D.2.34. North Escambia Bay CChla Daily Average over the Period of Record

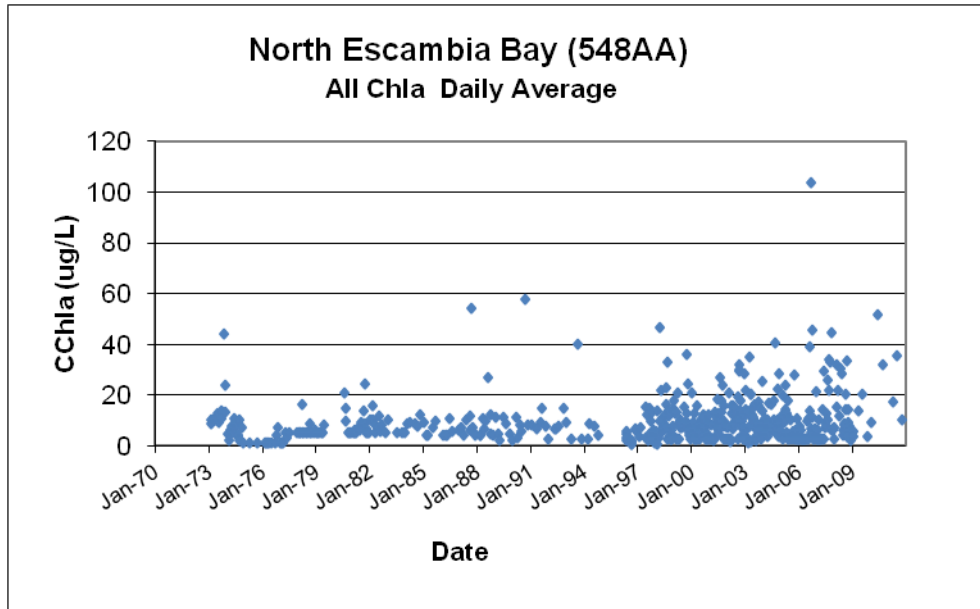


Figure D.2.35. North Escambia Bay CChla Annual Average over the Period of Record

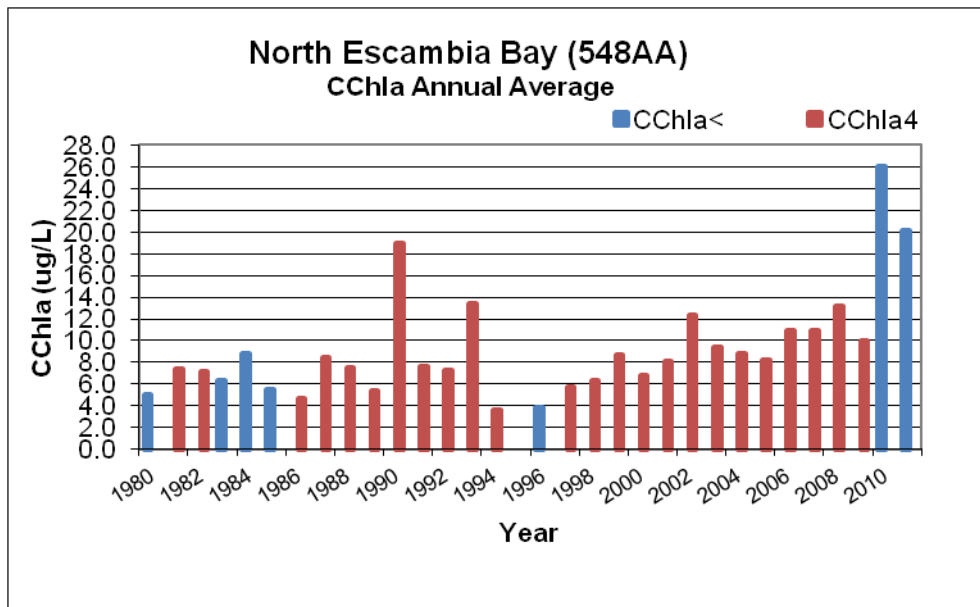


Figure D.2.36. North Escambia Bay CChla Annual Average (1995–2011)

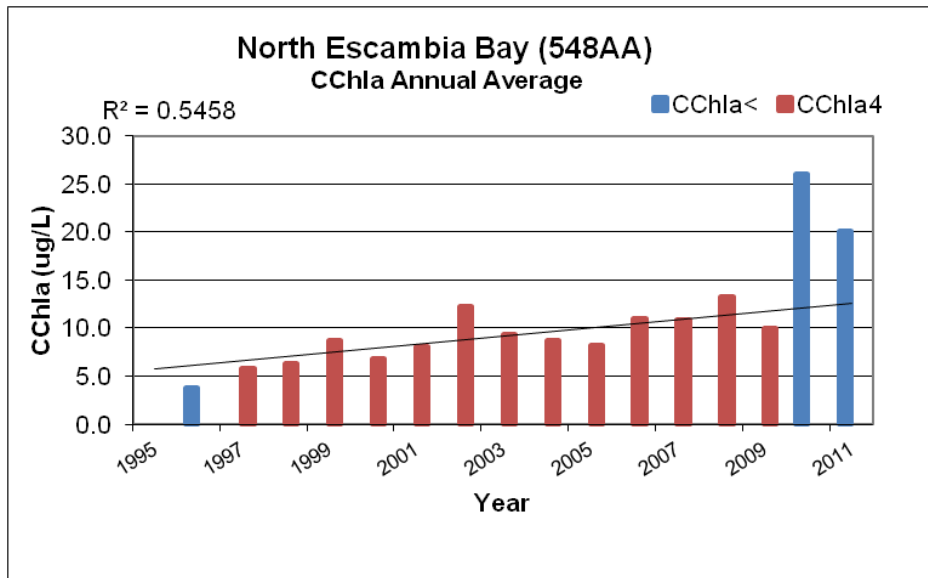


Figure D.2.37. North Escambia Bay CChla Monthly Average

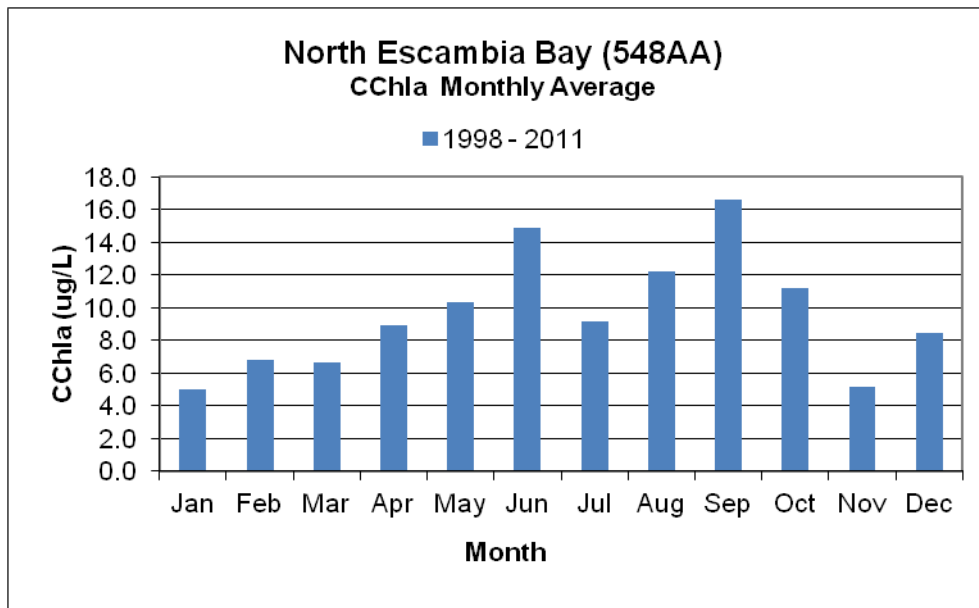


Table D.2.3. North Escambia Bay (WBID 548AA) Water Quality Summary (NO₃-N, NH₄-N, Organic-N, TN, and Salinity)

¹ Values above 3.0 mg/L were censored.
 - = Empty cell/no data

Location	Constituent ¹	Date Range	Count	Min	Max	Median	Avg	Median 1998–2011	Count 1998–2011
Marine	-	-	--	-	-	-	-	-	-
548AA	Nitrate-N (mg/L)	1972–89	786	0.005	0.920	0.090	0.101	0.078	226
-	Nitrate-N (mg/L)	1990–2011	418	0.001	1.400	0.071	0.081	-	-
-	NH ₃ -N (mg/L)	1970–89	937	0.005	1.350	0.053	0.099	0.031	223
-	NH ₃ -N (mg/L)	1990–2011	392	0.0002	0.480	0.034	0.048	-	-
-	Orgn-N (mg/L)	1970–89	899	0.002	2.940	0.380	0.451	0.538	124
-	Orgn-N (mg/L)	1990–2011	251	0.036	1.943	0.556	0.620	-	-
-	TN (mg/L)	1970–89	907	0.02	2.94	0.54	0.65	0.60	170
-	TN (mg/L)	1990–2011	356	0.03	2.34	0.59	0.62	-	-
-	Salinity (ppt)	1970–89	1,195	0.01	28.95	9.10	9.69	16.09	4,907
-	Salinity (ppt)	1990–2011	5,371	0.03	46.00	16.09	14.10	-	-

Table D.2.4. North Escambia Bay (WBID 548AA) Water Quality Summary (PO4-P, TP, CChla, BOD5, and Color)

- = Empty cell/no data

Location/Years	Constituent	Count	Min	Max	Median	Avg	Median 1998–2011	Count 1998–2011
Marine	-	-	-	-	-	-	-	-
548AA 1972–89	PO4-P (dissolved) (mg/L)	501	0.003	0.130	0.005	0.009	0.005	160
548AA 1990–2011	PO4-P (dissolved) (mg/L)	239	0.0005	0.771	0.013	0.021	-	-
548AA 1971–89	TP (mg/L)	908	0.003	0.600	0.030	0.036	0.040	138
548AA 1990–2011	TP (mg/L)	260	0.002	0.320	0.037	0.042	-	-
548AA 1980–89	CChla (µg/L)	86	2.00	42.70	5.00	7.10	6.90	447
548AA 1990–2011	CChla (µg/L)	624	0.09	120.0 0	6.14	8.72	-	-
548AA 1970–89	BOD ₅ (mg/L)	290	0.20	19.00	1.50	2.00	1.30	76
548AA 1990–2011	BOD ₅ (mg/L)	214	0.20	4.40	1.30	1.40	-	-
548AA 1970–89	Color true (PCU)	168	5.0	400.0	40.0	51.1	50.0	38
548AA 1990–2011	Color true (PCU)	374	1.5	400.0	40.0	53.7	-	-

D.3 Escambia Bay North (shellfish) (WBID 548AC) Data Presentation

Figure D.3.1. Escambia Bay North (WBID 548AC) TN Annual Average over the Period of Record

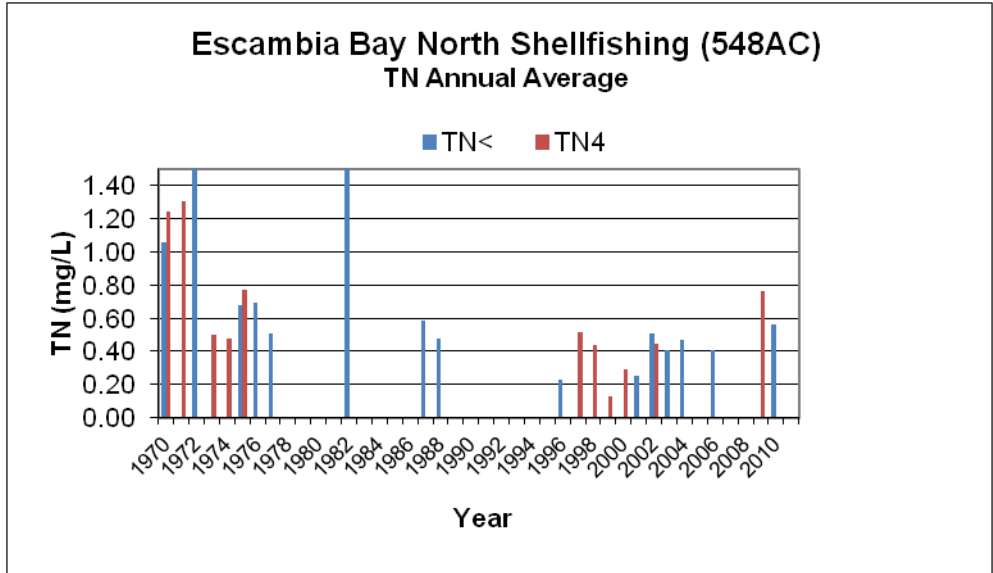


Figure D.3.2. Escambia Bay North (WBID 548AC) TN Annual Average (1995–2011)

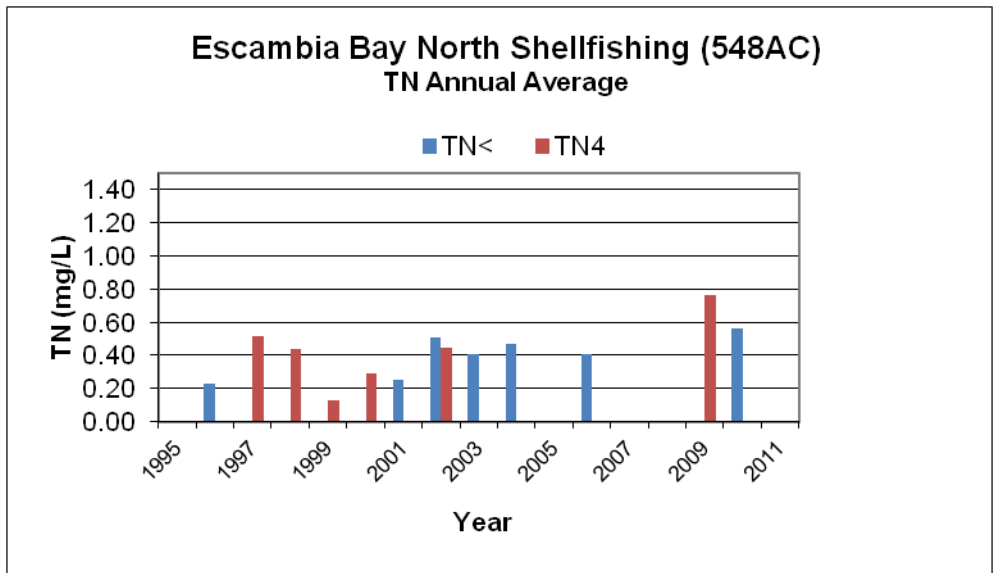


Figure D.3.3. Escambia Bay North (WBID 548AC) TP Annual Average over the Period of Record

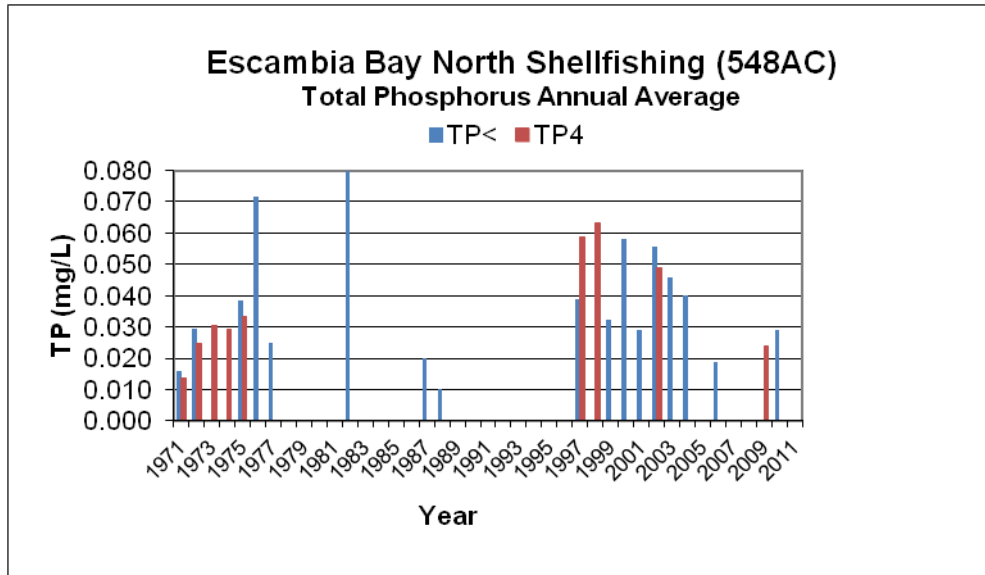


Figure D.3.4. Escambia Bay North (WBID 548AC) CChla over the Period of Record

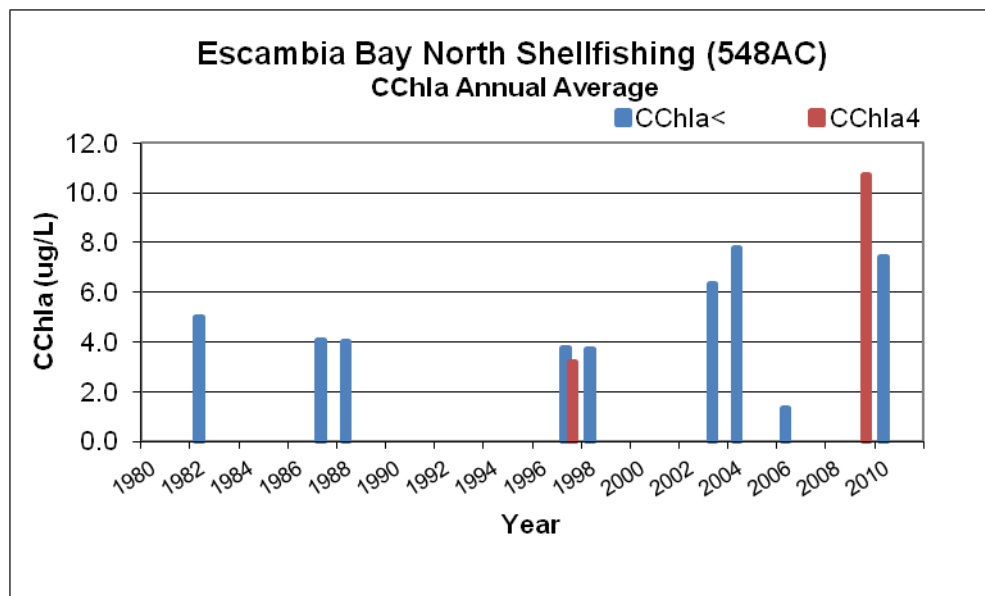


Table D.3.1. Escambia Bay North (WBID 548AC) Water Quality Summary

- = Empty cell/no data

Location	Constituent	Date Range	Count	Min	Max	Median	Avg	Median 1998–2011	Count 1998–2011
Shellfish	-	-	-	-	-	-	-	-	-
WBID 548AC	Salinity (ppt)	1968–2011	6,095	0.01	35.80	13.04	13.25	16.60	2,041
-	DO (mg/L)	1968–2010	4,493	0.06	14.40	7.20	6.94	6.69	1,904
-	CChla (µg/L)	1982–2010	119	0.20	21.00	3.60	4.37	2.70	44
-	TN (mg/L)	1970–2010	872	0.02	7.93	0.44	0.52	0.40	150
-	TP (mg/L)	1970–2010	760	0.003	0.620	0.029	0.038	0.037	94
-	Color true (PCU)	1970–2004	104	0.00	360.00	40.00	50.88	50.00	11

D.4 South Escambia Bay (WBID 548B) Data Presentation

Figure D.4.1. Escambia Bay South TN Annual Average over the Period of Record

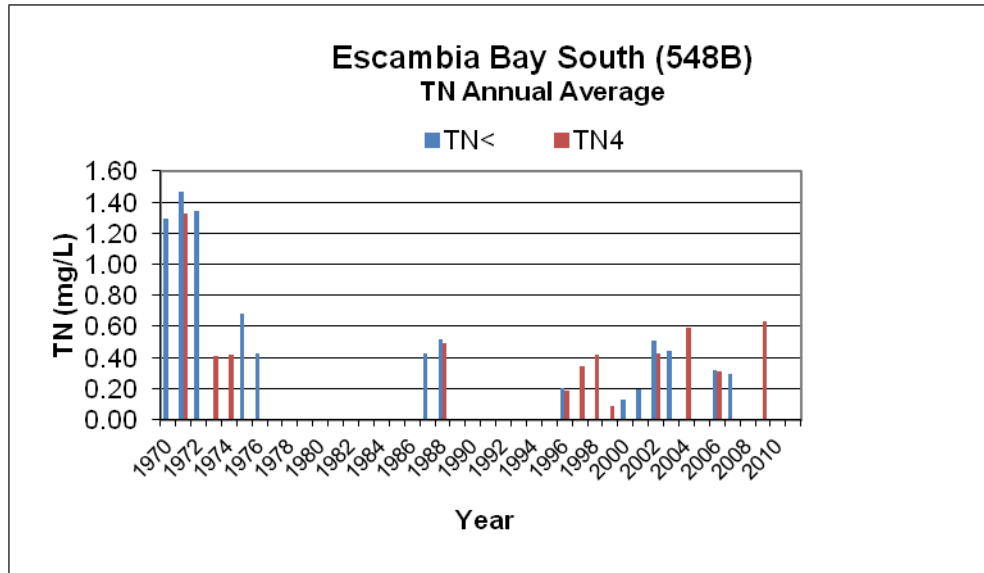


Figure D.4.2. Escambia Bay South TP Annual Average over the Period of Record

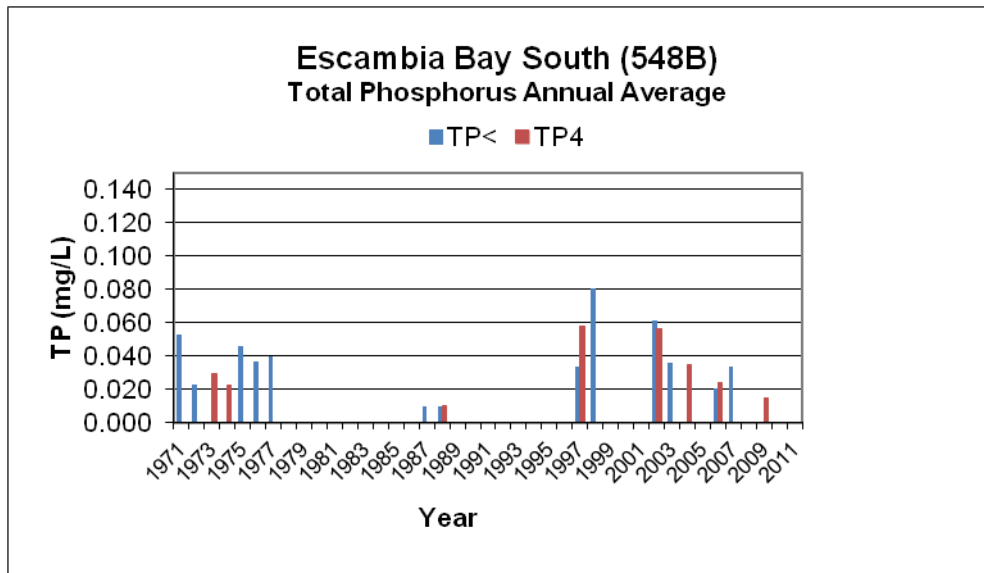


Figure D.4.3. Escambia Bay South CChla Annual Average over the Period of Record

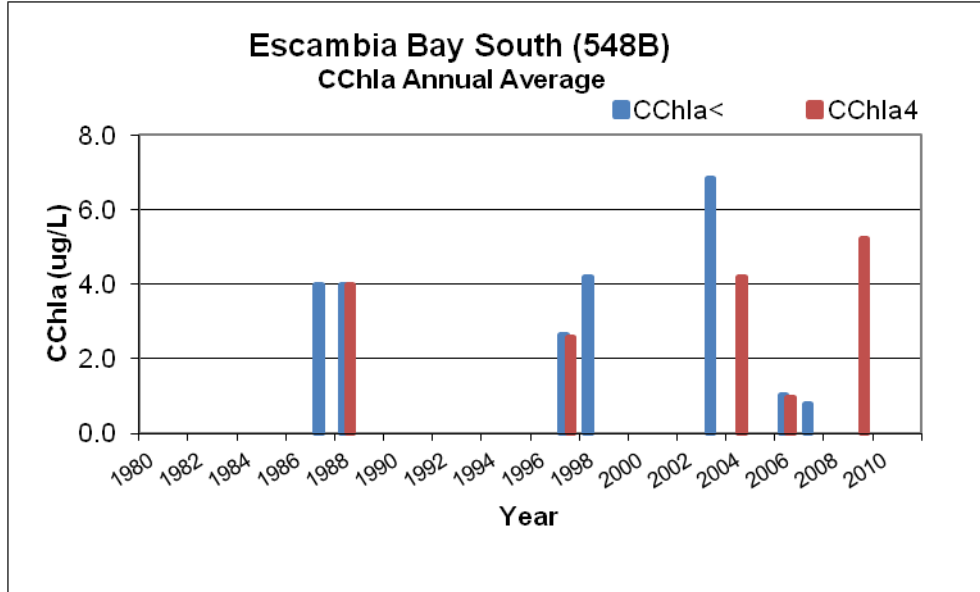


Table D.4.1. Escambia Bay South (WBID 548B) Water Quality Summary

- = Empty cell/no data

Location	Constituent	Date Range	Count	Min	Max	Median	Avg	Median 1998–2011	Count 1998–2011
WBID 548B	Salinity (ppt)	1968–2011	8,732	0.00	38.18	17.00	16.43	19.70	3,755
-	DO (mg/L)	1968–2010	6,216	0.02	14.00	7.30	7.03	6.71	3,403
-	CChla (µg/L)	1987–2009	139	0.30	17.10	2.90	3.59	2.50	71
-	TN (mg/L)	1970–2009	709	0.01	4.95	0.38	0.44	0.49	133
-	TP (mg/L)	1971–2009	601	0.001	1.60	0.023	0.036	0.032	98
-	Color true (PCU)	1970–2003	56	5.00	360.0	30.00	43.43	72.23	4

D.5 East Bay (WBID 548H) Data Presentation

Figure D.5.1. East Bay TN Annual Average over the Period of Record

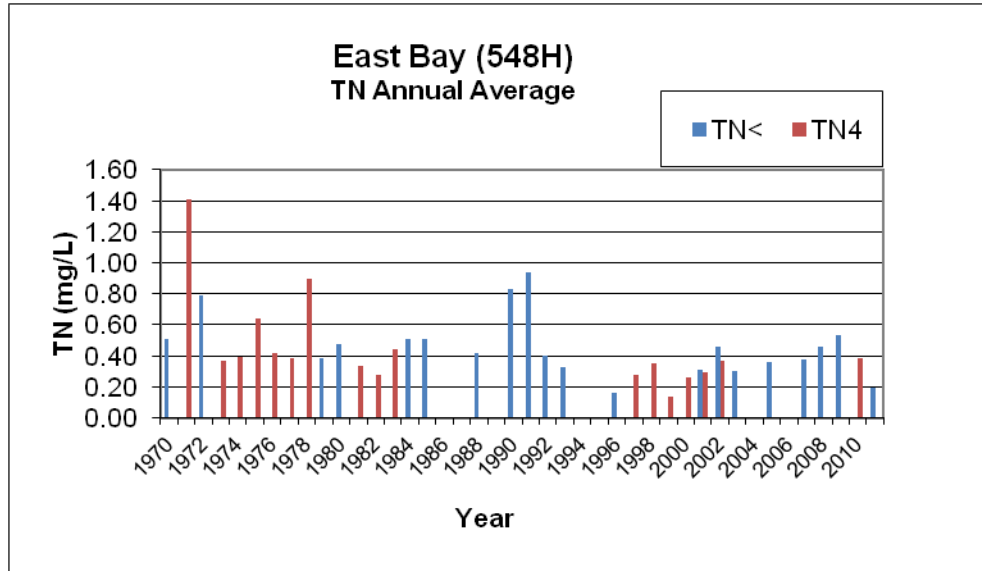


Figure D.5.2. East Bay TN (1995–2011)

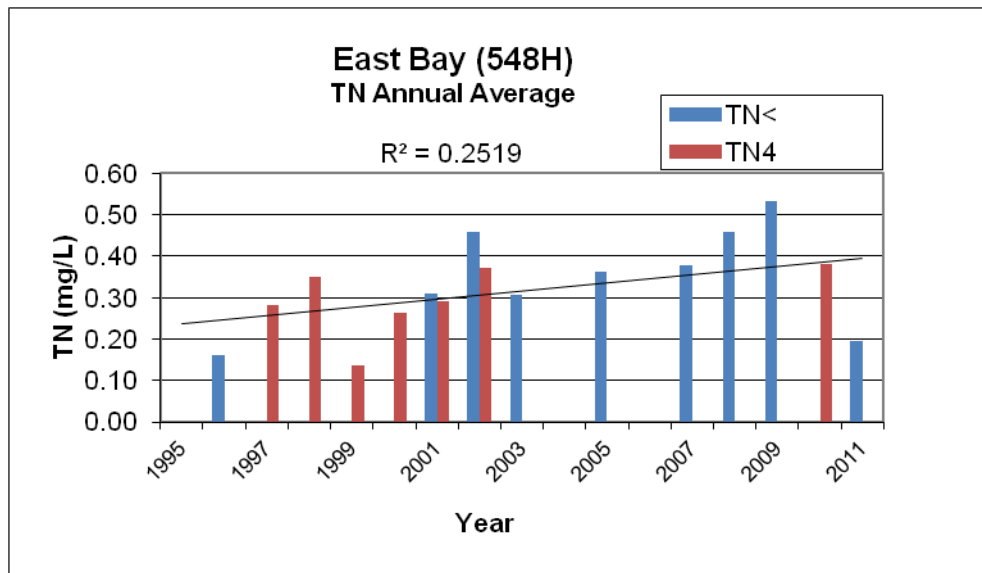


Figure D.5.3. East Bay TP Annual Average over the Period of Record

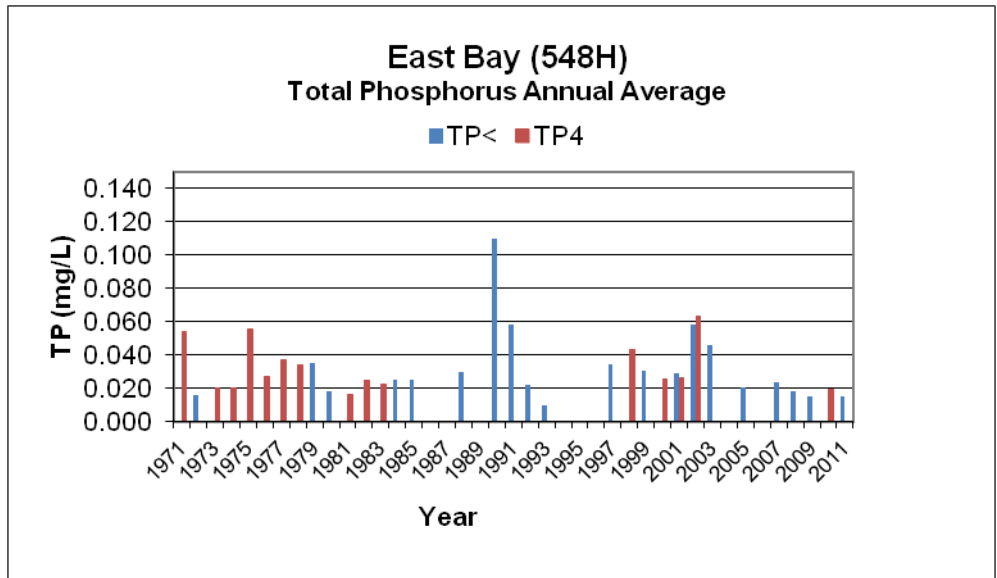


Figure D.5.4. East Bay CChla Annual Average over the Period of Record

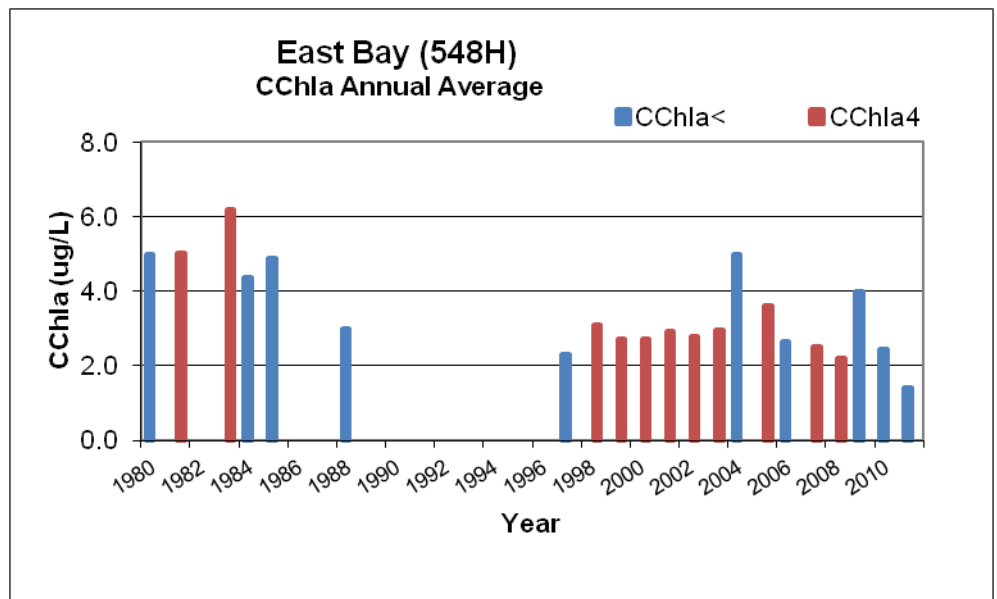


Figure D.5.5. East Bay (548H) CChla Annual Average (1995–2011)

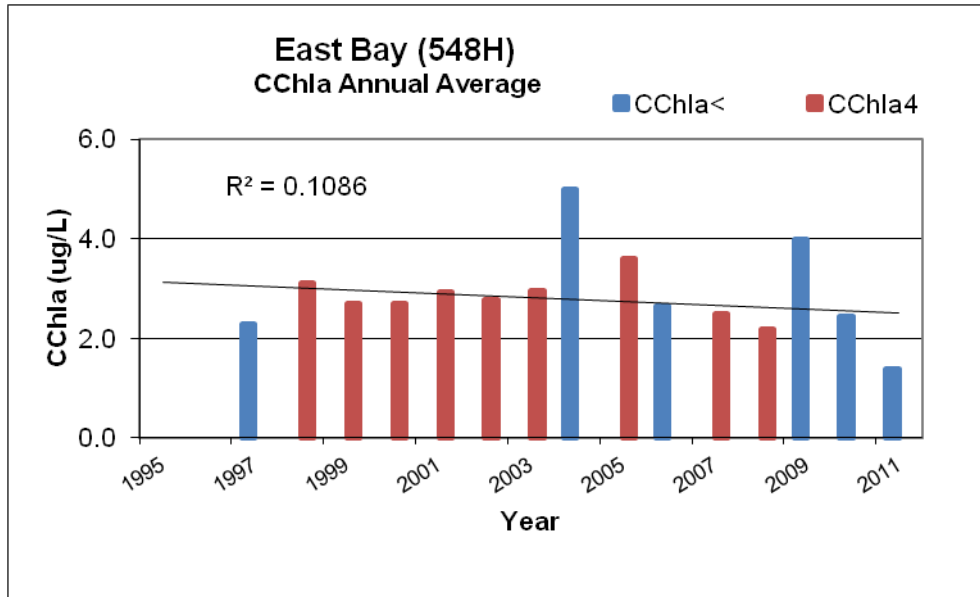


Table D.5.1. East Bay (WBID 548H) Water Quality Summary

Location	Constituent	Date Range	Count	Min	Max	Median	Avg	Median 1998–2011	Count 1998–2011
Class II	-	-	-	-	-	-	-	-	-
WBID 548H	Salinity (ppt)	1968–2011	9,911	0.08	37.25	17.20	16.69	19.60	4,273
-	DO (mg/L)	1968–2011	7,644	0.08	17.40	7.40	7.24	7.00	3,866
-	CChla (µg/L)	1980–2011	349	0.50	13.70	2.50	3.05	2.50	278
-	TN (mg/L)	1970–2011	1,315	0.01	5.34	0.32	0.39	0.32	224
-	TP (mg/L)	1971–2011	1,173	0.0003	0.455	0.015	0.025	0.024	130
-	Color (PCU)	1970–2011	564	5.00	570.90	20.00	30.32	20.00	329

D.6 North Pensacola Bay (WBID 548C) Data Presentation

Figure D.6.1. North Pensacola Bay TN Annual Average over the Period of Record

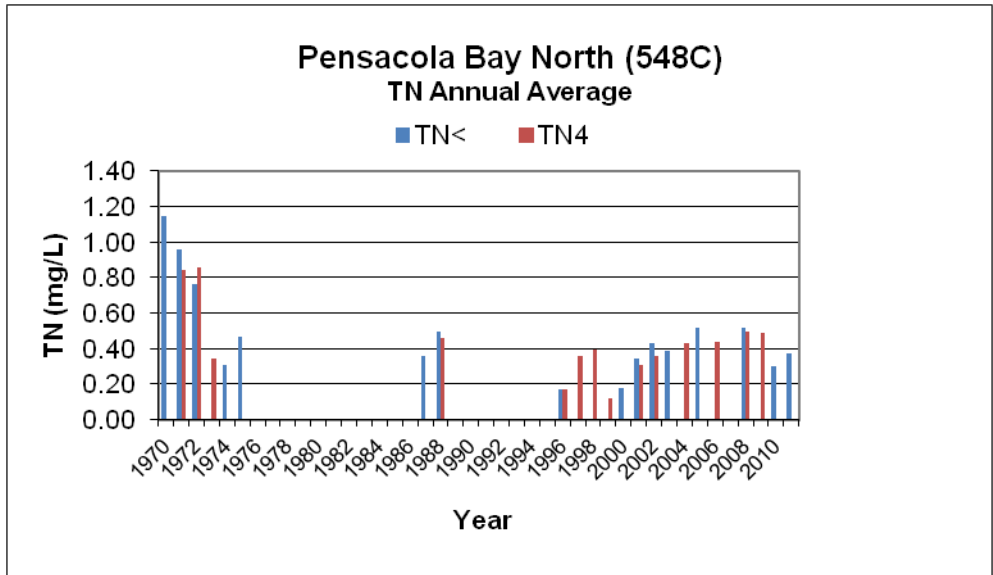


Figure D.6.2. North Pensacola Bay TN Annual Average (1995–2011)

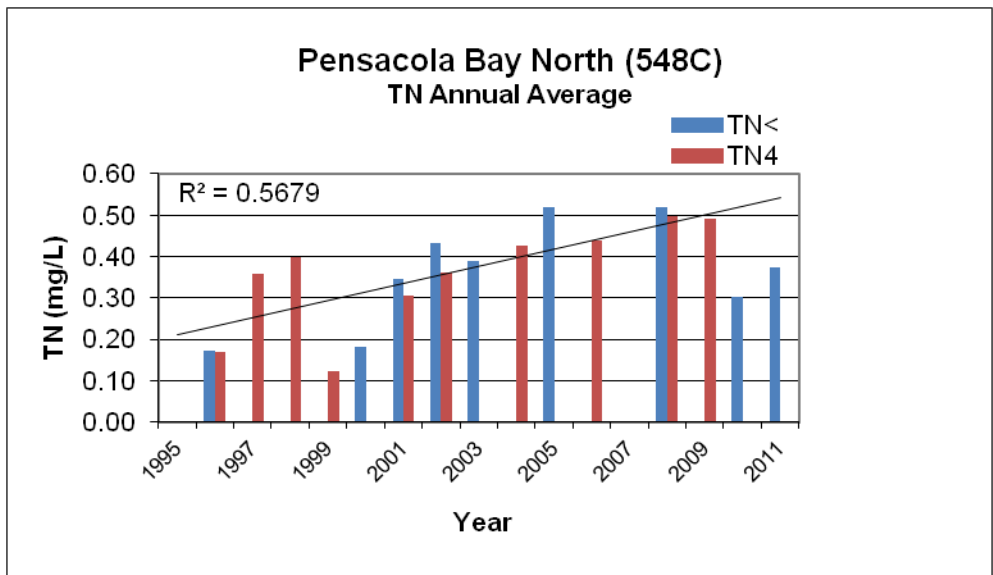


Figure D.6.3. North Pensacola Bay TP Annual Average over the Period of Record

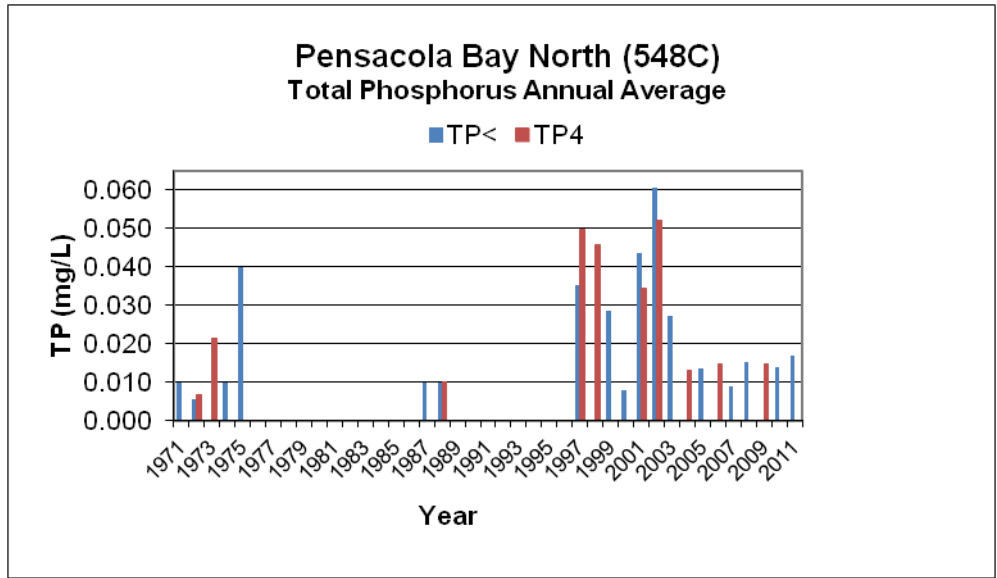


Figure D.6.4. North Pensacola Bay CChla Annual Average over the Period of Record

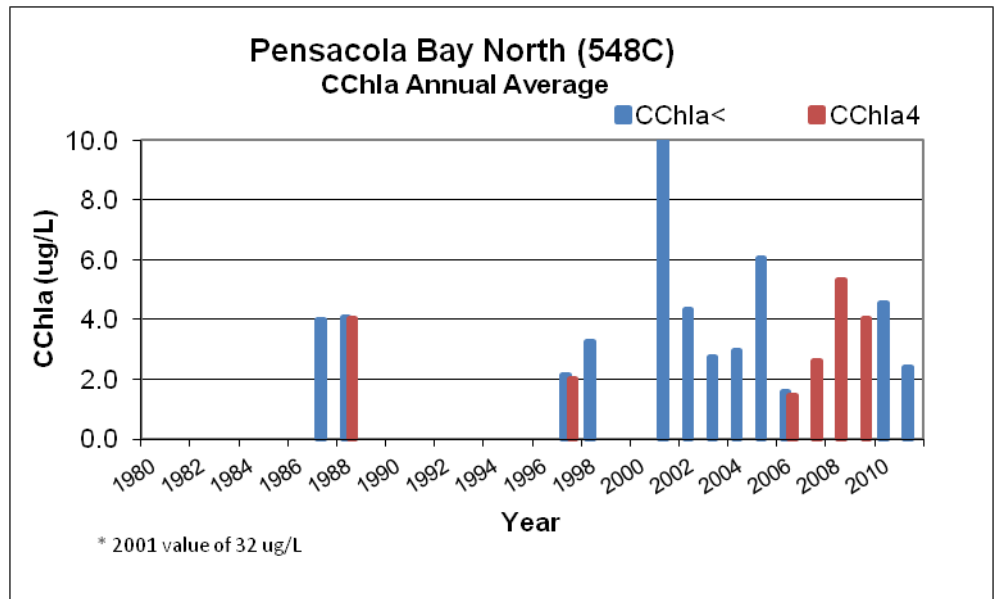


Table D.6.1. North Pensacola Bay (WBID 548C) Water Quality Summary

- = Empty cell/no data

Location	Constituent	Date Range	Count	Min	Max	Median	Avg	Median 1998–2011	Count 1998–2011
WBID 548C	Salinity (ppt)	1972–2011	6,719	0.00	38.40	19.70	19.17	22.20	3,602
-	DO (mg/L)	1970–2011	5,148	0.19	14.90	7.10	6.78	6.60	3,366
-	CChla (µg/L)	1987–2011	175	0.20	32.54	2.50	3.01	2.50	82
-	TN (mg/L)	1970–2011	535	0.02	1.69	0.36	0.40	0.37	209
-	TP (mg/L)	1971–2011	405	0.001	0.575	0.022	0.036	0.027	144
-	Color true PCU)	1970–2011	70	1.00	162.10	20.00	23.64	25.00	24

D.7 Middle Pensacola Bay (WBID 548D) Data Presentation

Figure D.7.1. Middle Pensacola Bay TN over the Period of Record

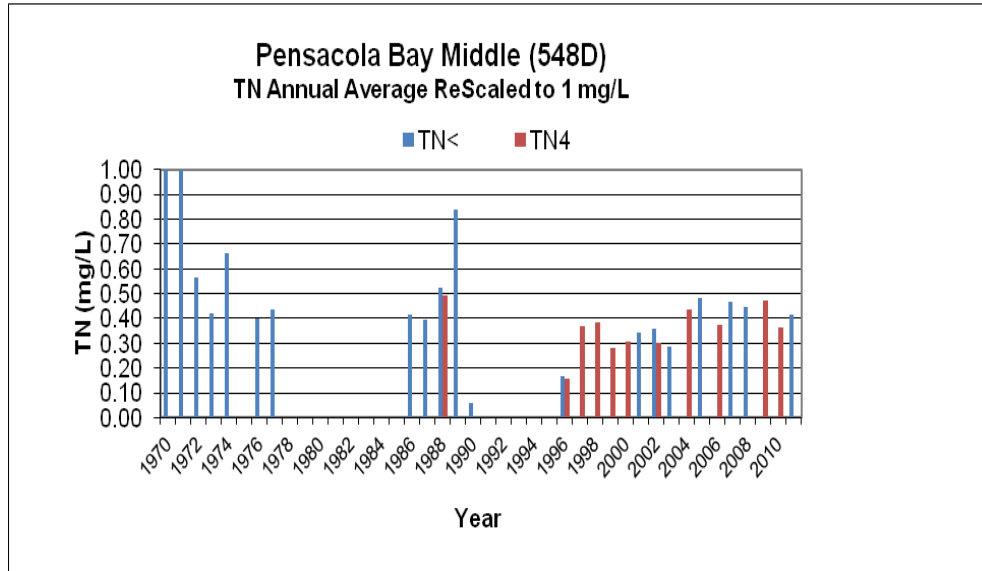


Figure D.7.2. Middle Pensacola Bay TN Rescaled (1995–2011)

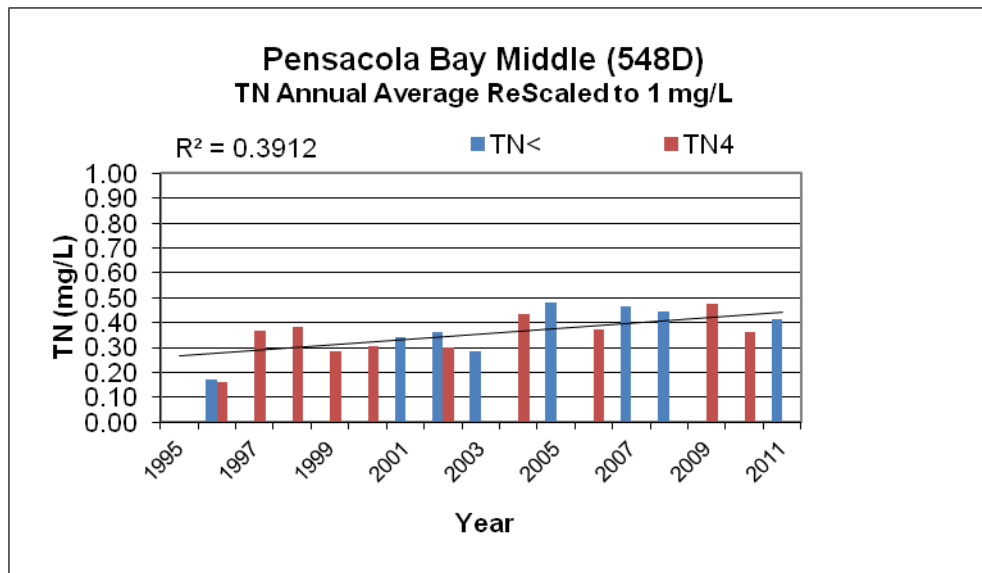


Figure D.7.3. Middle Pensacola Bay TP Annual Average over the Period of Record

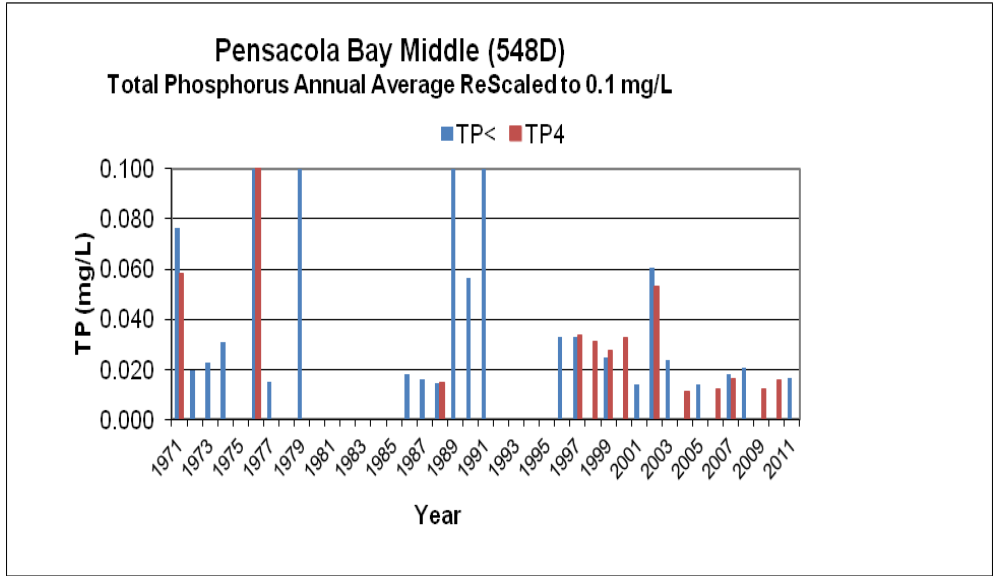


Figure D.7.4. Middle Pensacola Bay CChla over the Period of Record

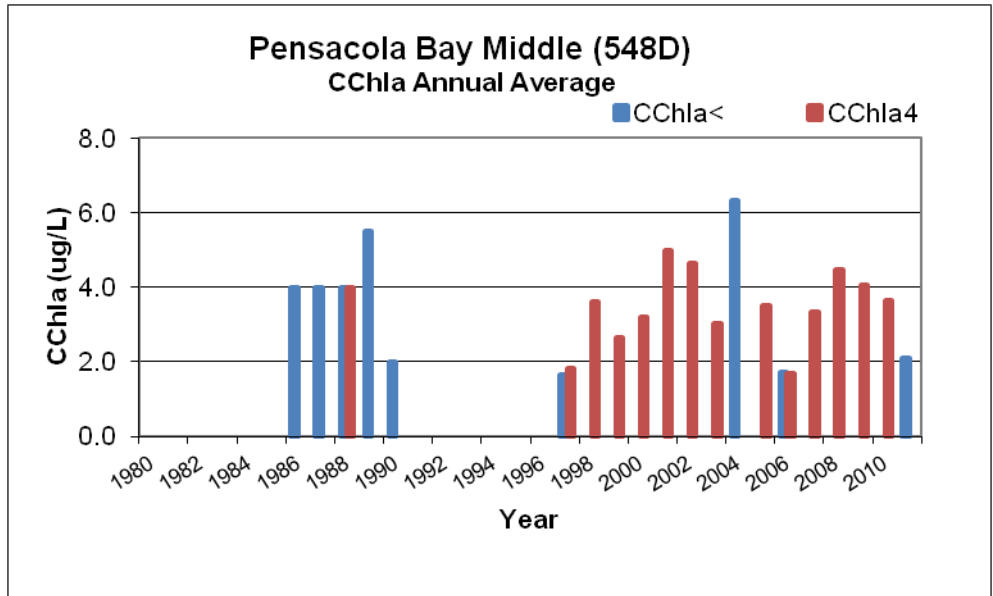


Figure D.7.5. Middle Pensacola Bay CChla (1995–2011)

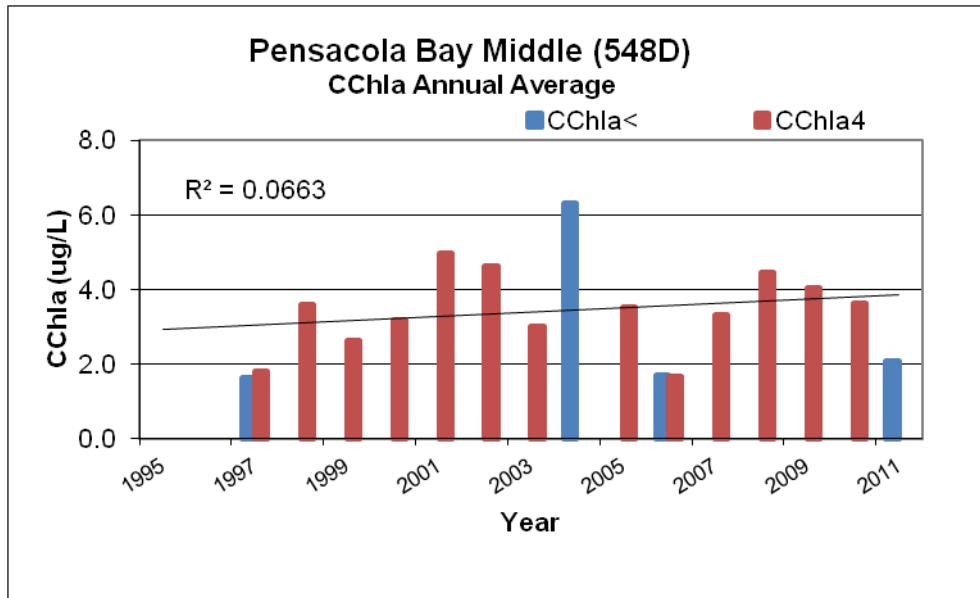


Table D.7.1. Middle Pensacola Bay (WBID 548D) Water Quality Summary

- = Empty cell/no data

Location	Constituent	Date Range	Count	Min	Max	Median	Avg	Median 1998–2011	Count 1998–2011
WBID 548D	Salinity (ppt)	1970–2011	2,857	0.19	36.20	24.52	23.00	25.20	2,356
-	DO (mg/L)	1970–2001	2,978	0.30	14.19	6.91	6.95	6.81	2,381
-	CChla (µg/L)	1986–2011	588	0.30	25.60	2.50	3.46	2.50	520
-	TN (mg/L)	1970–2011	583	0.02	2.51	0.42	0.45	0.41	381
-	TP (mg/L)	1970–2011	548	0.001	1.200	0.014	0.028	0.013	366
-	Color true (PCU)	1970–2011	338	5.00	120.00	15.00	20.33	15.00	311

D.8 Mouth Pensacola Bay (WBID 548E) Data Presentation

Figure D.8.1. Mouth Pensacola Bay TN Annual Average over the Period of Record

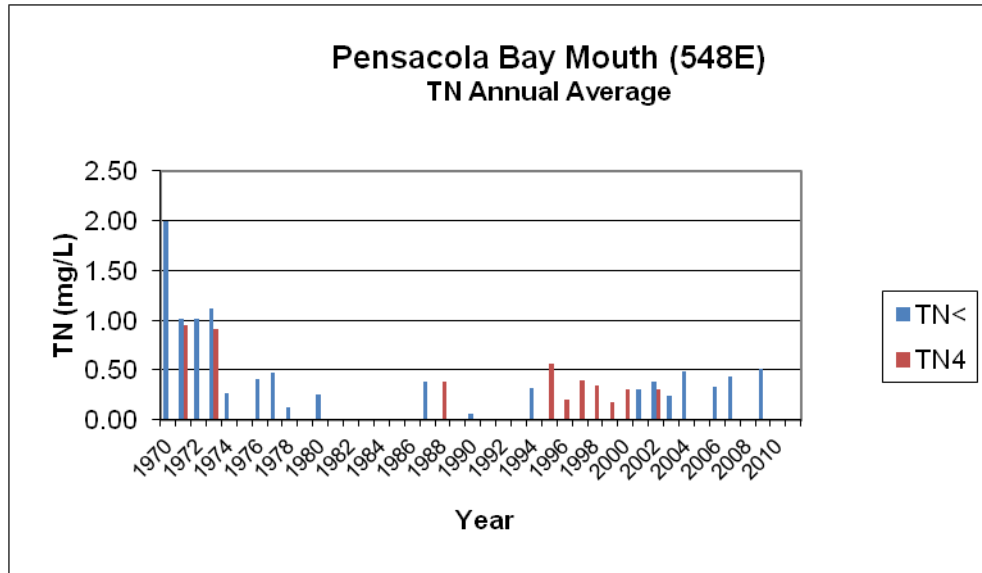


Figure D.8.2. Mouth Pensacola Bay TN Annual Average (1995–2011)

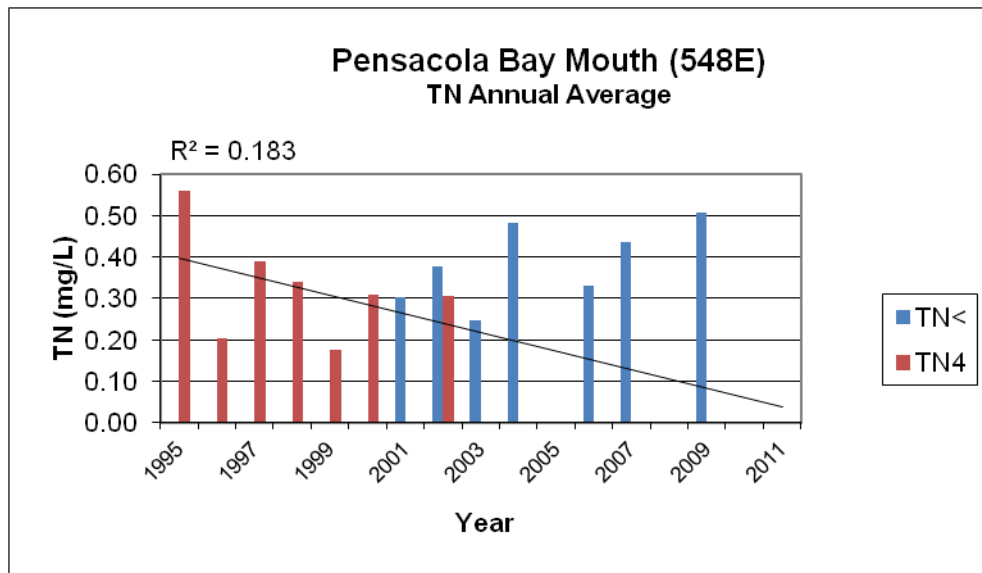


Figure D.8.3. Mouth Pensacola Bay TP Annual Average over the Period of Record

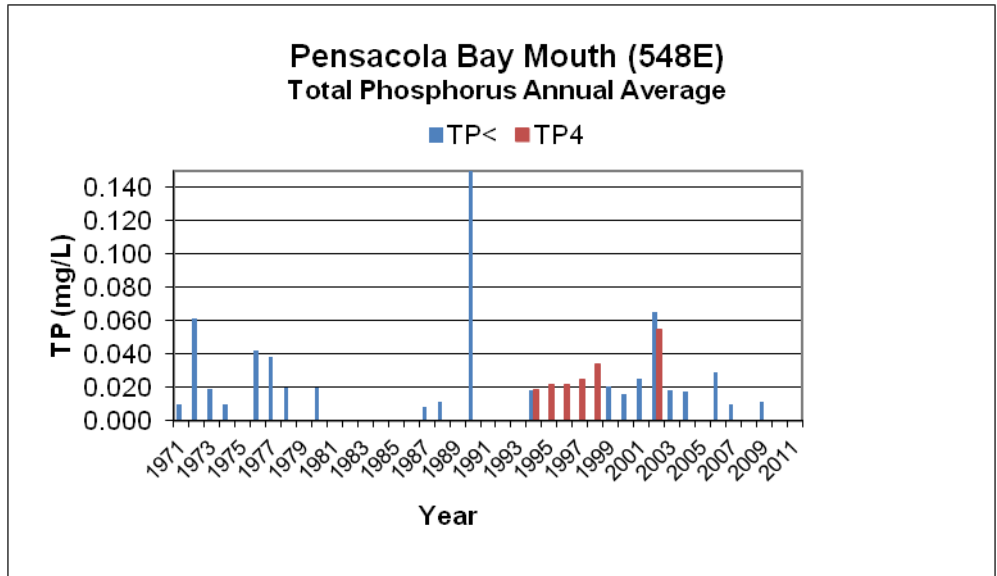


Figure D.8.4. Mouth Pensacola Bay TP Annual Average (1995–2011)

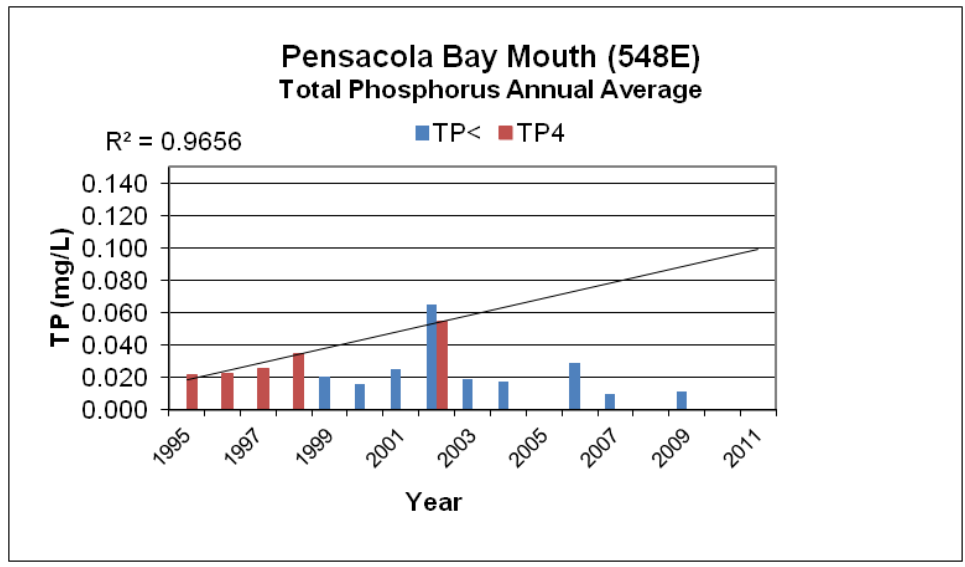


Figure D.8.5. Mouth Pensacola Bay CChla Annual Average over the Period of Record

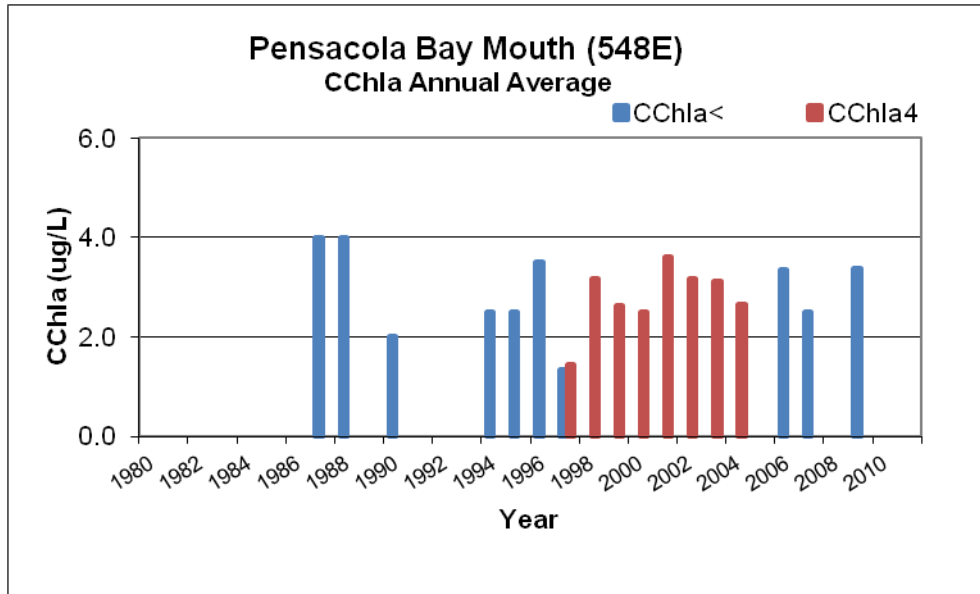


Figure D.8.6. Mouth Pensacola Bay CChla Annual Average (1995–2011)

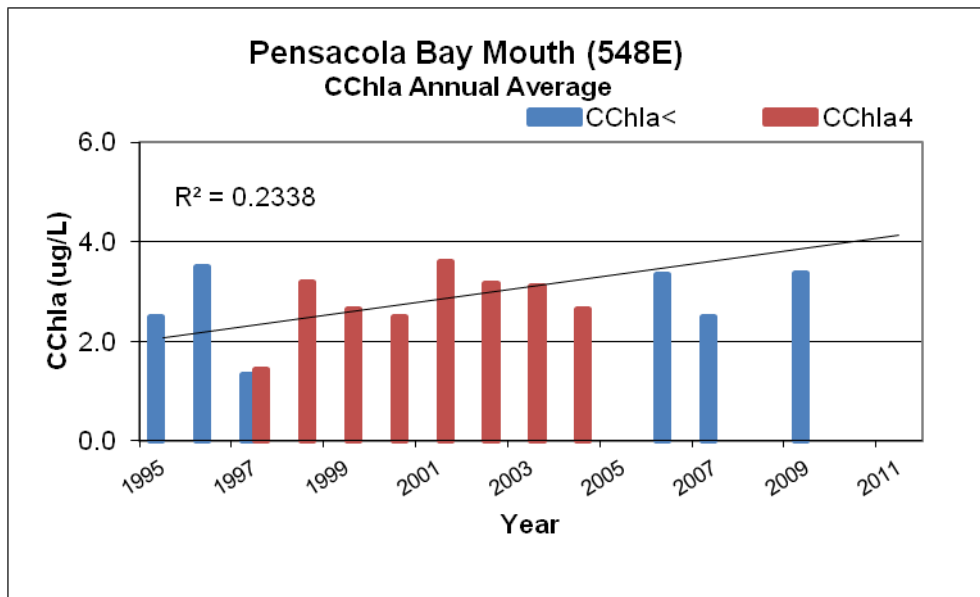


Table D.8.1. Mouth Pensacola Bay (WBID 548E) Water Quality Summary

- = Empty cell/no data

Location	Constituent	Date Range	Count	Min	Max	Median	Avg	Median 1998–2011	Count 1998–2011
WBID 548E	Salinity (ppt)	1971–2009	3,334	0.70	48.30	30.92	28.38	31.24	2,938
-	DO (mg/L)	1968–2009	3,322	2.90	13.18	6.51	6.74	6.42	2,943
-	CChla (µg/L)	1987–2009	293	0.30	37.00	2.50	2.77	2.50	235
-	TN (mg/L)	1970–2009	357	0.03	4.30	0.37	0.43	0.35	190
-	TP (mg/L)	1971–2009	255	0.0009	0.277	0.020	0.033	0.020	135
-	Color True (PCU)	1970–2003	46	5.00	41.67	10.00	13.88	10.00	7

D.9 Santa Rosa Sound (WBID 915) Data Presentation

Figure D.9.1. Santa Rosa Sound TN Annual Average over the Period of Record

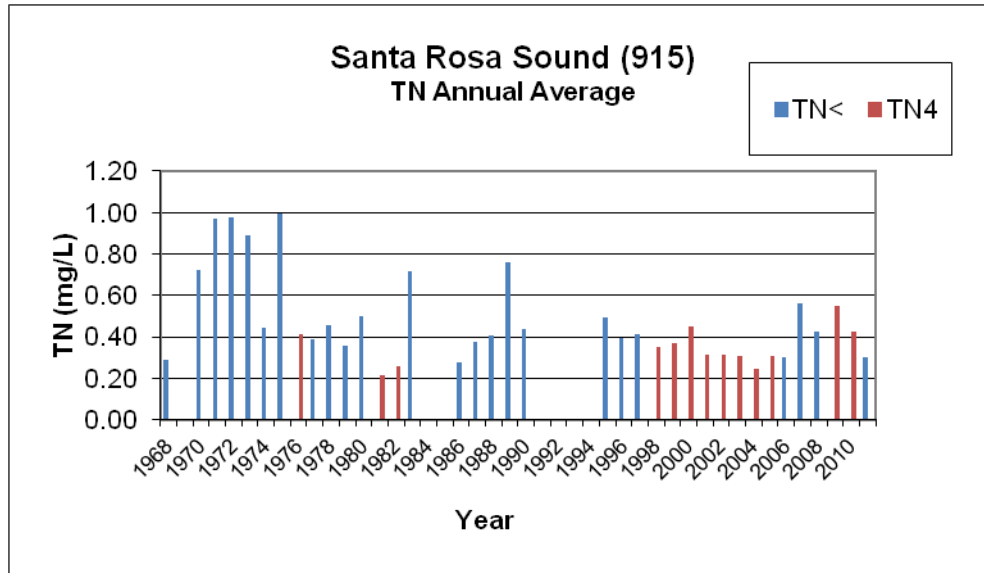


Figure D.9.2. Santa Rosa Sound TN Annual Average (1995–2011)

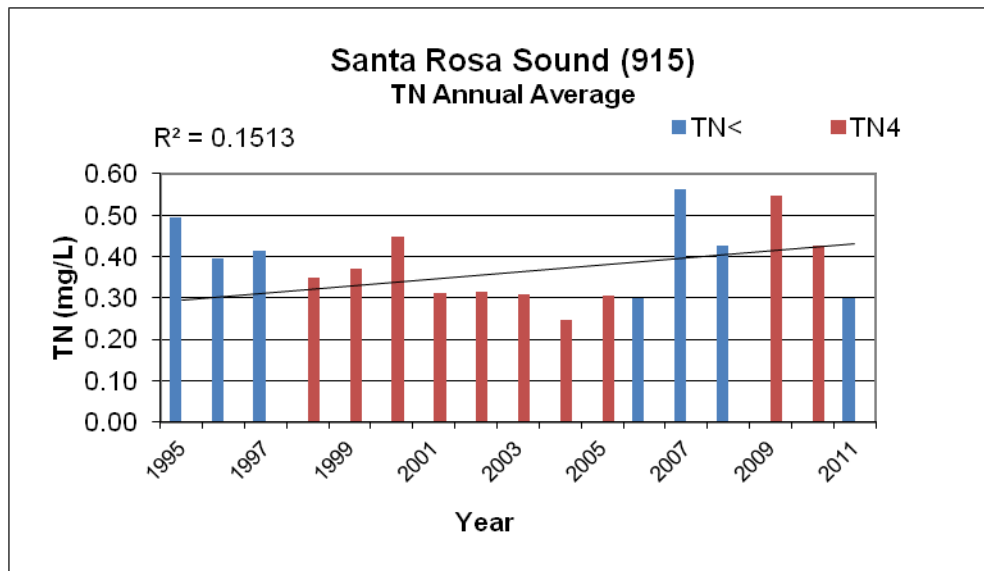


Figure D.9.3. Santa Rosa Sound TP Annual Average over the Period of Record

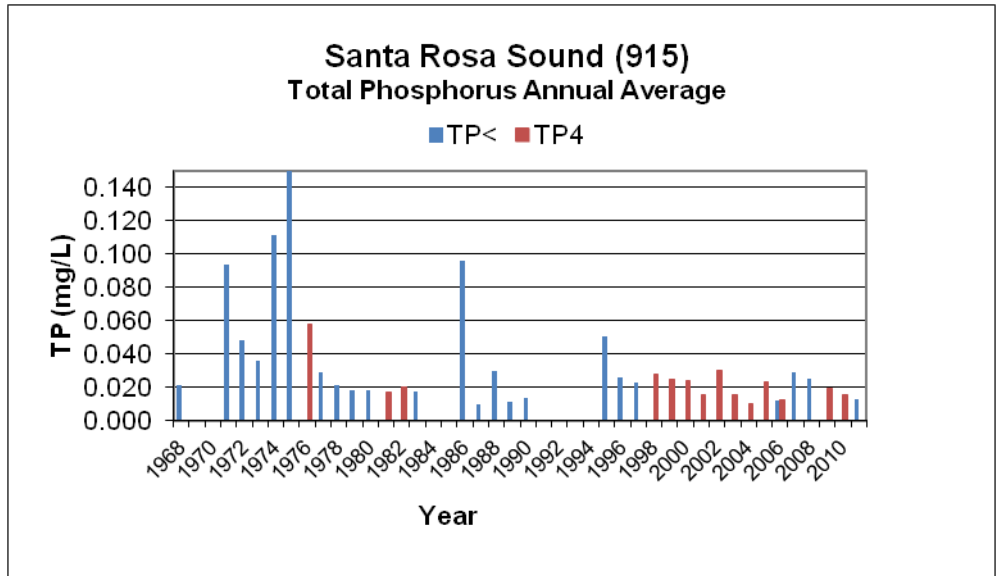


Figure D.9.4. Santa Rosa Sound TP Annual Average (1995–2011)

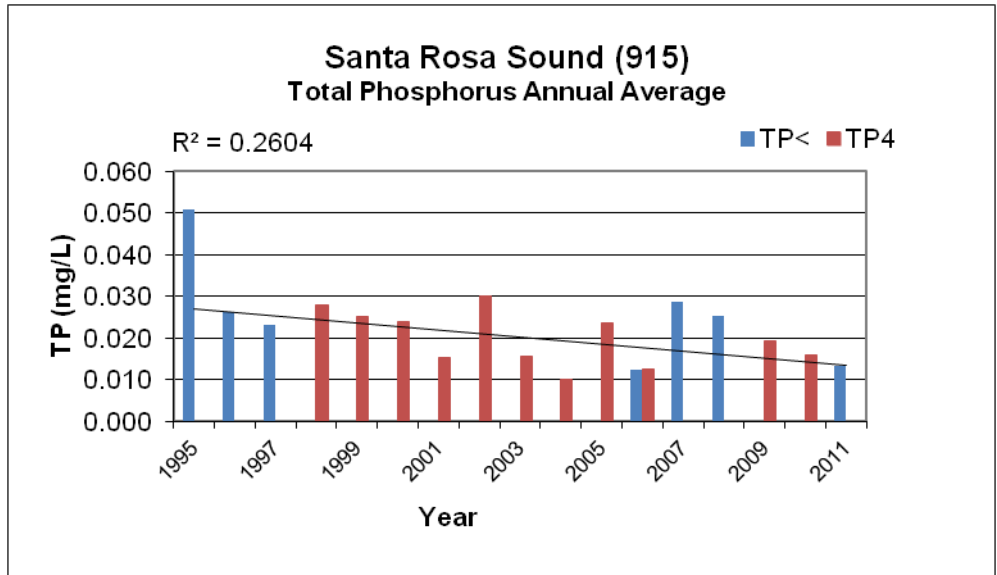


Figure D.9.5. Santa Rosa Sound CChla Annual Average over the Period of Record

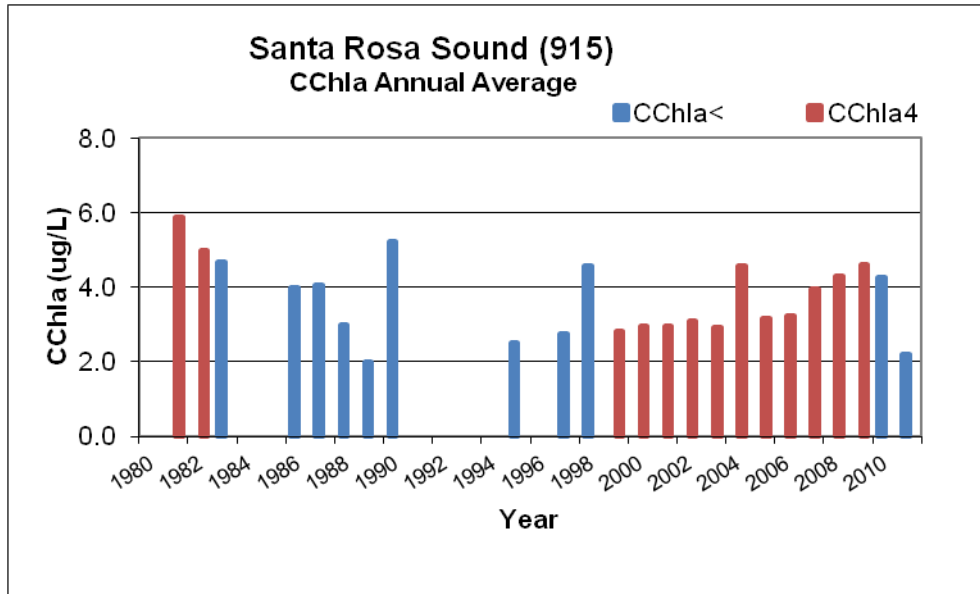


Figure D.9.6. Santa Rosa Sound CChla Annual Average (1995–2011)

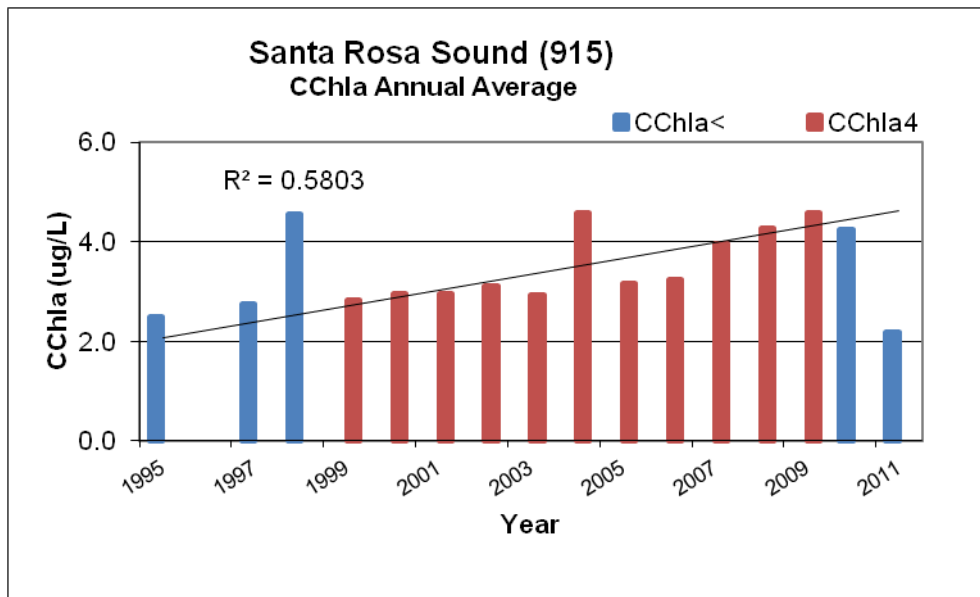


Table D.9.1. Santa Rosa Sound (WBID 915) Water Quality Summary

- = Empty cell/no data

Location	Constituent	Date Range	Count	Min	Max	Median	Avg	Median 1998–2011	Count 1998–2011
WBID 915	Salinity (ppt)	1971–2011	3,138	0.80	37.06	23.60	22.66	24.11	2,769
-	DO (mg/L)	1968–2011	3,374	0.10	16.36	7.40	7.39	7.31	2,810
-	CChla (µg/L)	1981–2011	1,036	1.00	19.20	2.50	3.45	2.50	963
-	TN (mg/L)	1968–2011	755	0.03	2.43	0.38	0.47	0.33	471
-	TP (mg/L)	1968–2011	775	0.0009	0.860	0.018	0.029	0.016	504
	Color true (PCU)	1970–2001	304	0.0	100.0	15.0	16.8	15.0	169

D.10 North Blackwater Bay (WBID 548GA) Data Presentation

Figure D.10.1. North Blackwater Bay TN Annual Average over the Period of Record

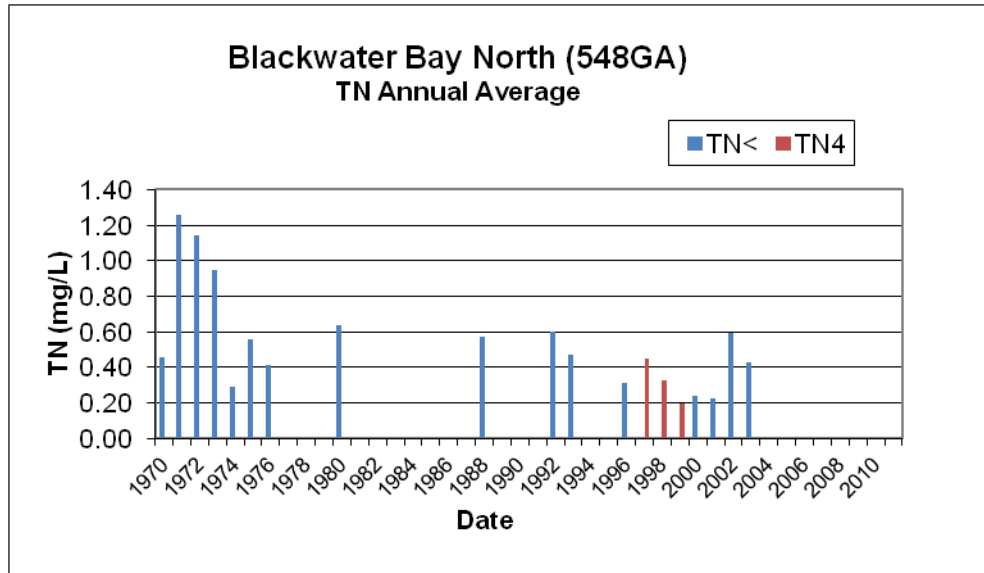


Figure D.10.2. North Blackwater Bay TN Annual Average (1995–2011)

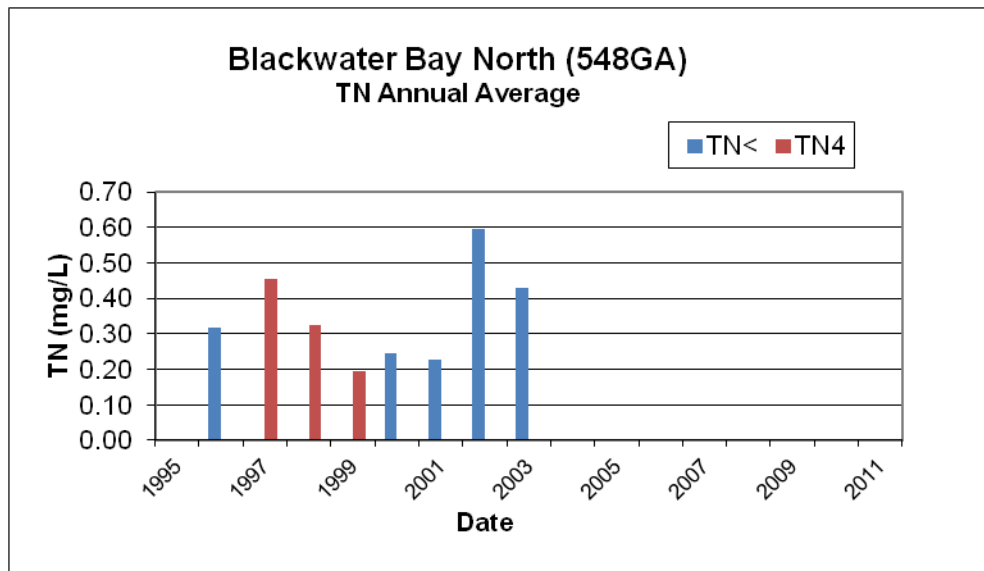


Figure D.10.3. North Blackwater Bay TP Annual Average over the Period of Record

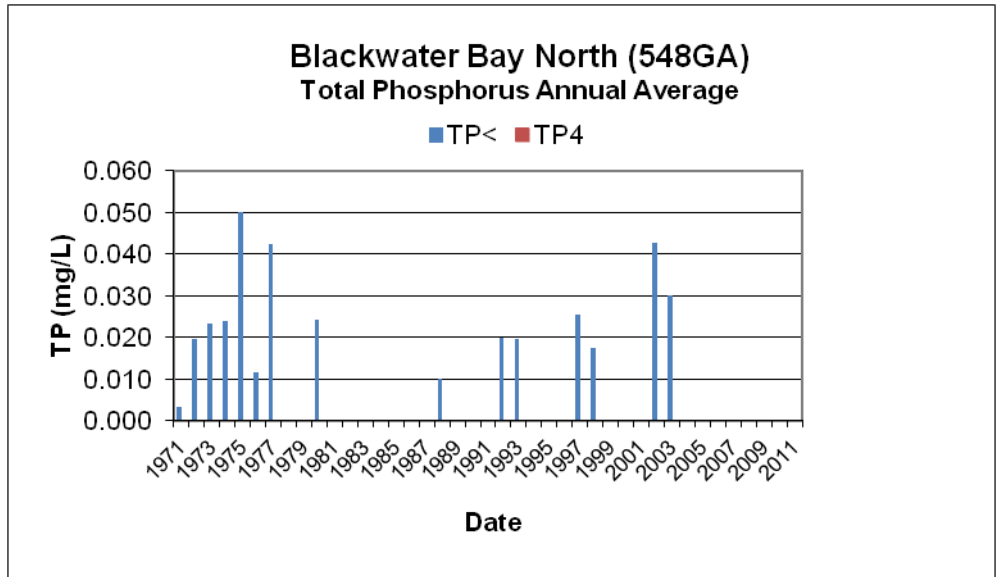


Figure D.10.4. North Blackwater Bay CChla Annual Average over the Period of Record

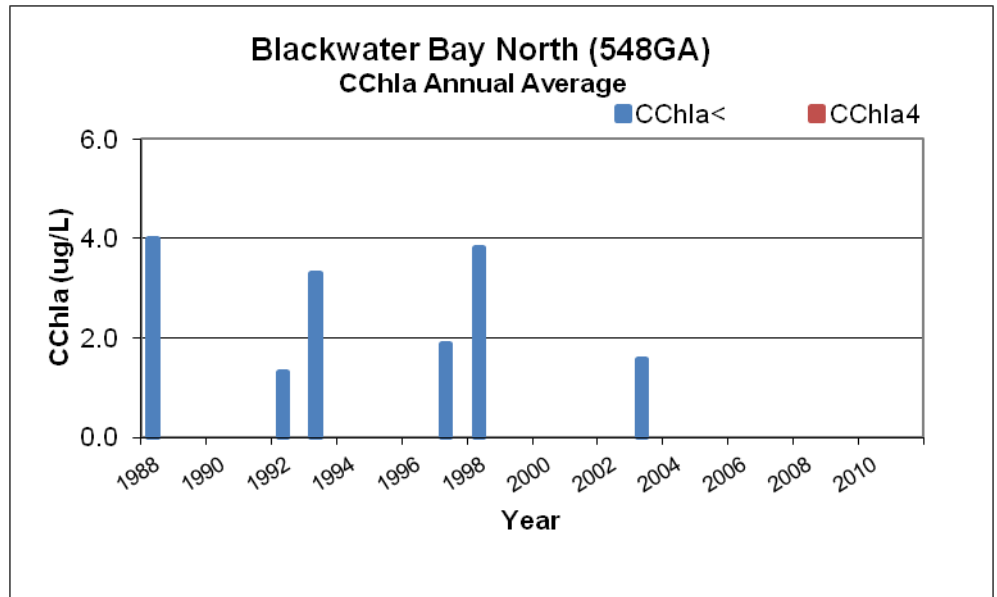


Table D.10.1. North Blackwater Bay (WBID 548GA) Water Quality Summary

- = Empty cell/no data

Location	Constituent	Date Range	Count	Min (mg/L)	Max (mg/L)	Median (mg/L)	Avg	Median 1998–2011	Count 1998–2011
WBID 548GA	Salinity (ppt)	1972–2004	423	0.03	24.5	7.7	9.5	8.9	306
-	DO (mg/L)	1970–2004	423	0.39	13.19	6.34	6.29	6.45	299
-	CChla (µg/L)	1988–2003	23	0.30	12.00	1.57	2.37	0.80	7
-	TN (mg/L)	1970–2003	128	0.07	2.04	0.47	0.53	0.49	38
-	TP (mg/L)	1971–2003	102	0.001	0.164	0.022	0.028	0.023	26
-	Color (PCU)	1972–2003	42	10.0	127.4	30.0	38.0	127.4	1

D.11 South Blackwater Bay (WBID 548GB) Data Presentation

Figure D.11.1. South Blackwater Bay TN Annual Average over the Period of Record

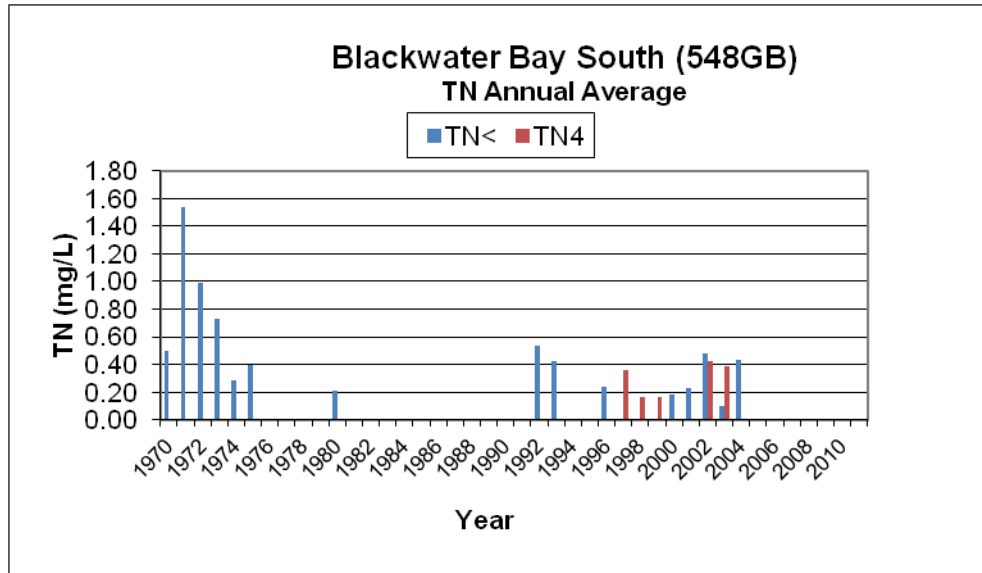


Figure D.11.2. South Blackwater Bay TP Annual Average over the Period of Record

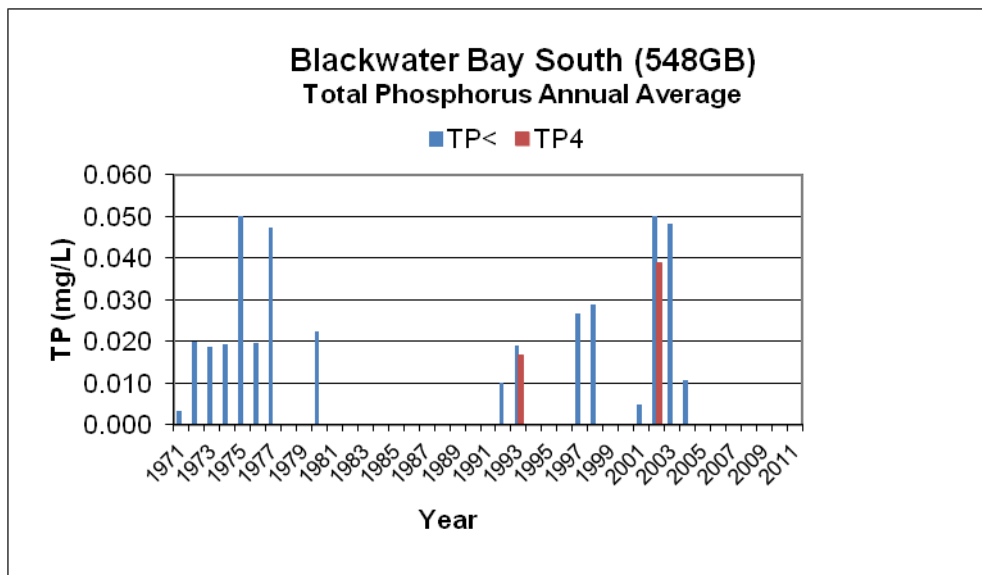


Figure D.11.3. South Blackwater Bay CChla Annual Average over the Period of Record

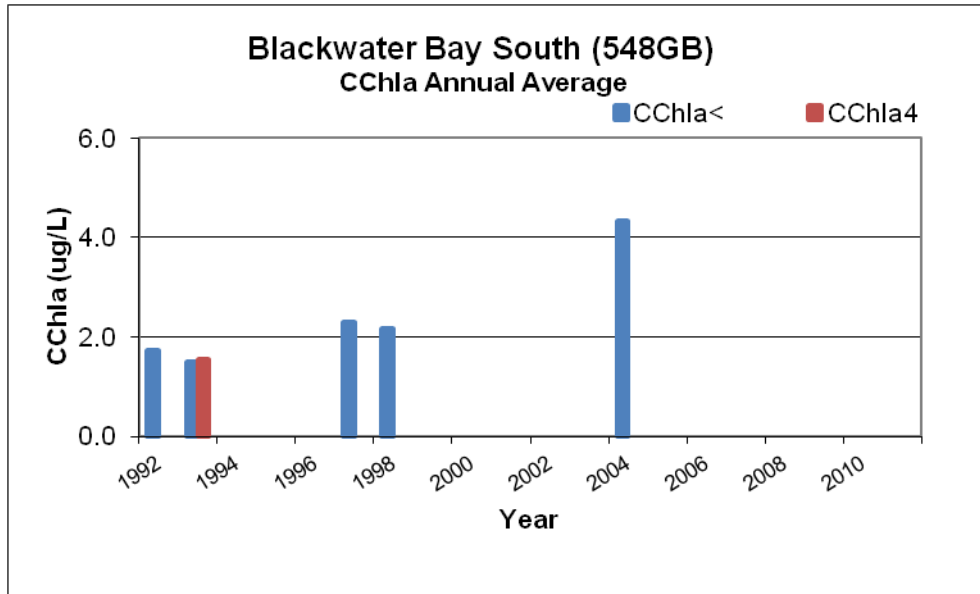


Table D.11.1. South Blackwater Bay (WBID 548GB) Water Quality Summary

- = Empty cell/no data

Location	Constituent	Date Range	Count	Min	Max	Median	Avg	Median 1998–2011	Count 1998–2011
WBID 548GB	Salinity (ppt)	1971–2011	1,096	0.04	30.70	13.26	13.02	13.90	504
-	DO (mg/L)	1970–2010	829	1.03	13.00	7.00	7.03	6.80	458
-	CChla (µg/L)	1992–2004	43	0.40	5.20	2.40	2.32	2.85	12
-	TN (mg/L)	1970–2004	181	0.03	2.04	0.31	0.40	0.28	57
-	TP (mg/L)	1971–2004	131	0.002	0.227	0.020	0.028	0.022	31
-	Color (PCU)	1970–2004	33	5.0	90.0	30.0	39.0	56.9	2

D.12 Pensacola Bay Summary TN, TP, and CChla by WBID

Figure D.12.1. Pensacola Bay TN WBID Medians/Count (1998–2011)

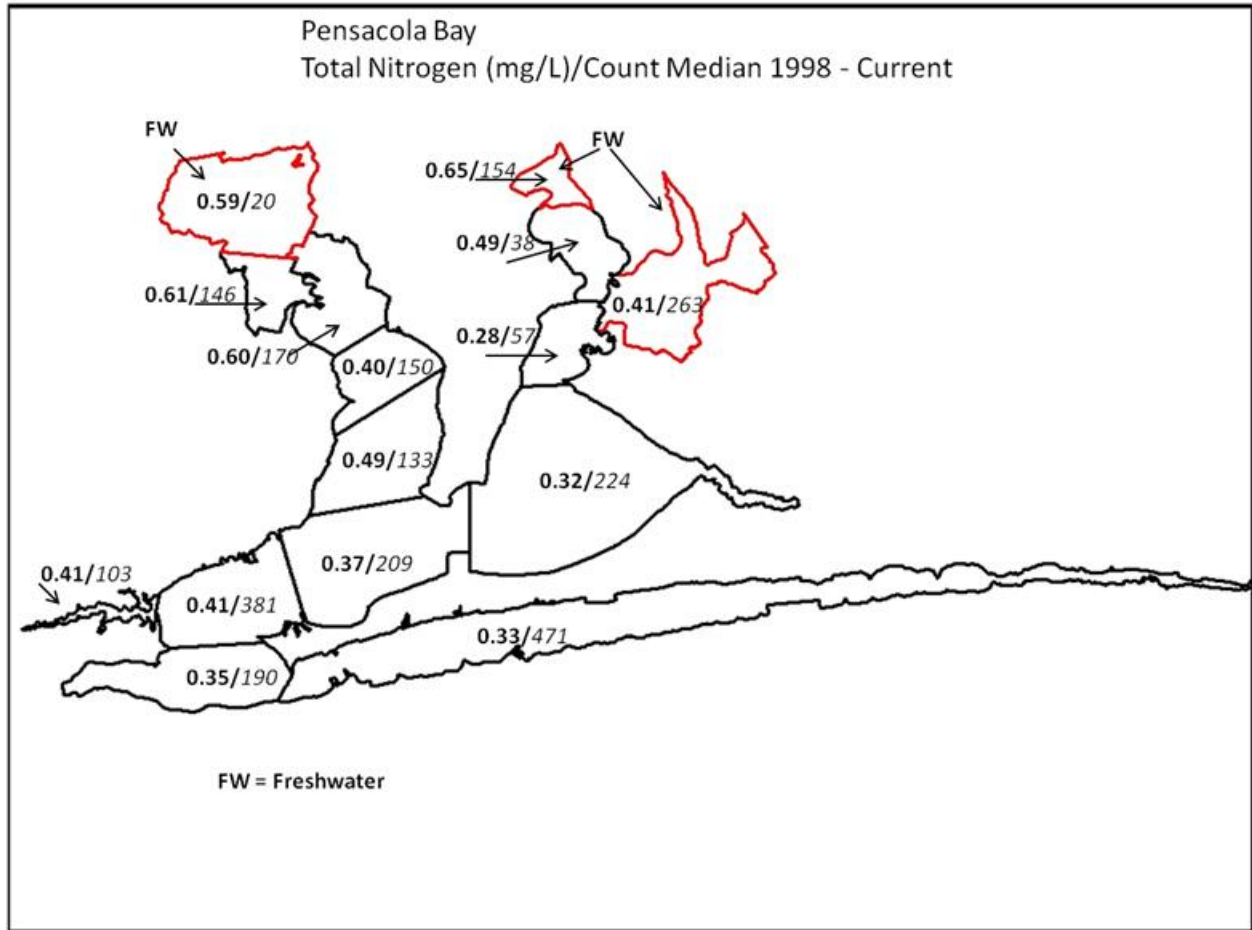


Figure D.12.2. Pensacola Bay TP WBID Medians/Count (1998–2011)

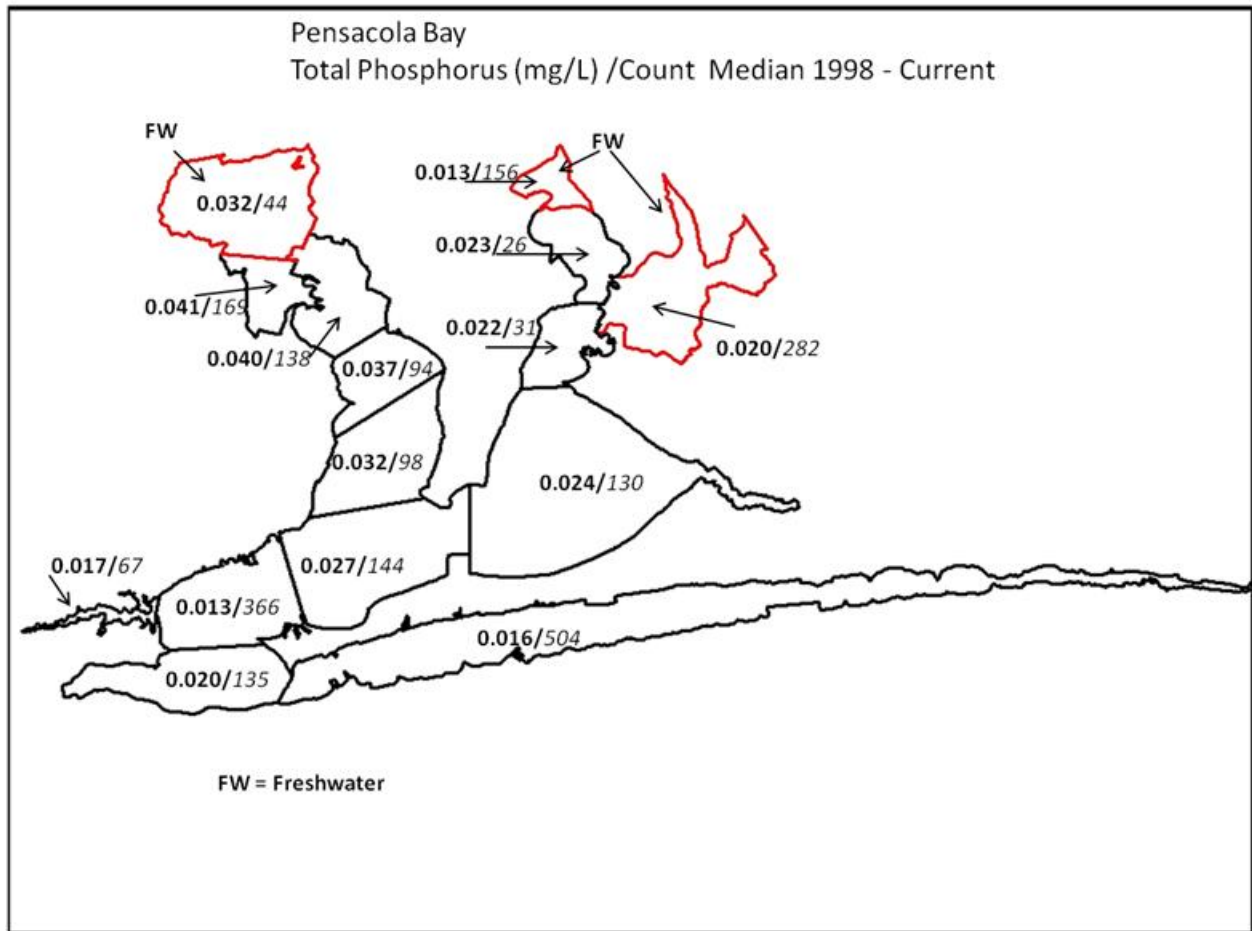
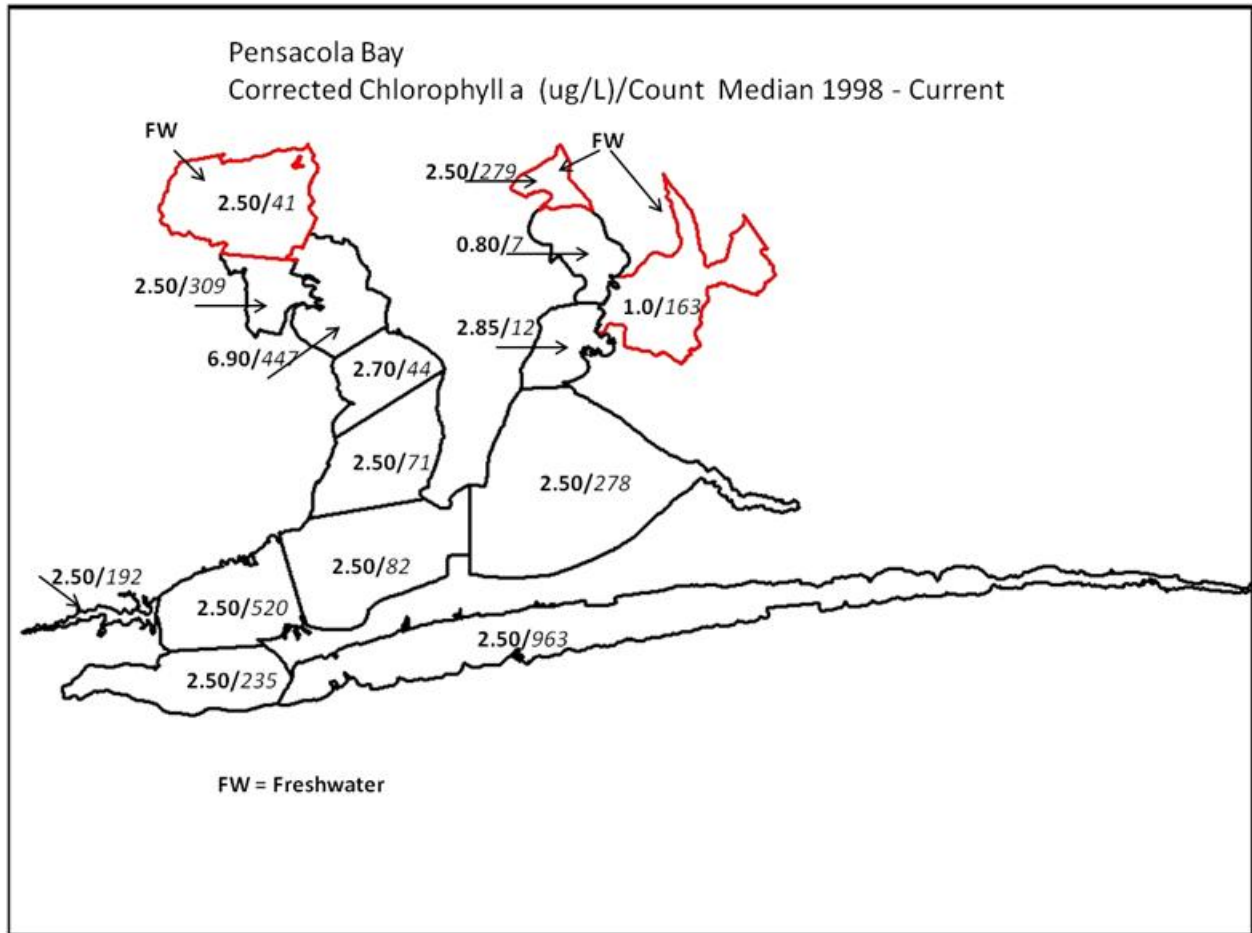


Figure D.12.3. Pensacola Bay CChla WBID Medians/Count (1998–2011)



D.13 North Escambia Bay Surveys, June and October 2011

Figure D.13.1. North Escambia Bay: June/October 2010 Survey Stations

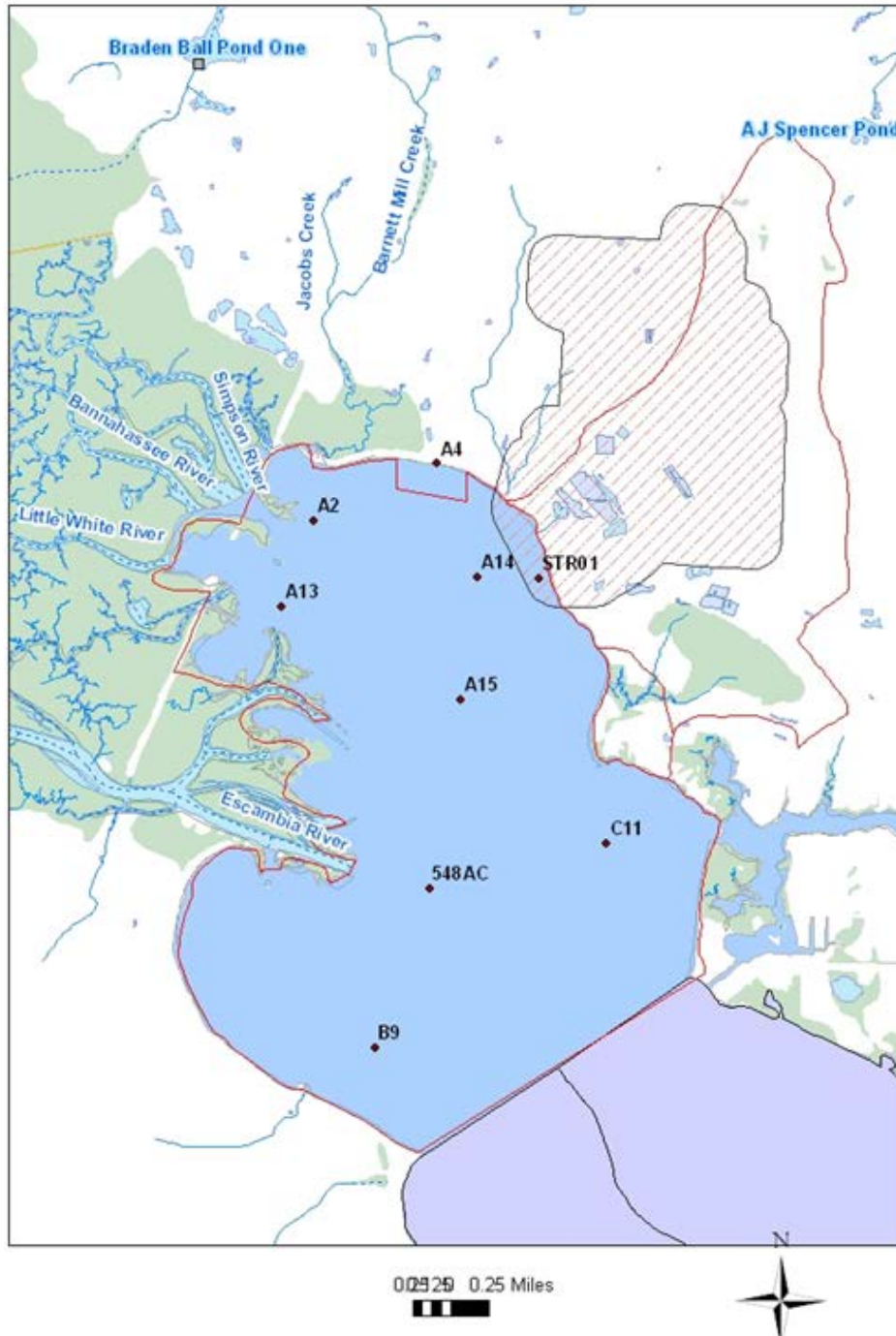


Figure D.13.2. North Escambia Bay: NH4-N June/October 2011 Survey

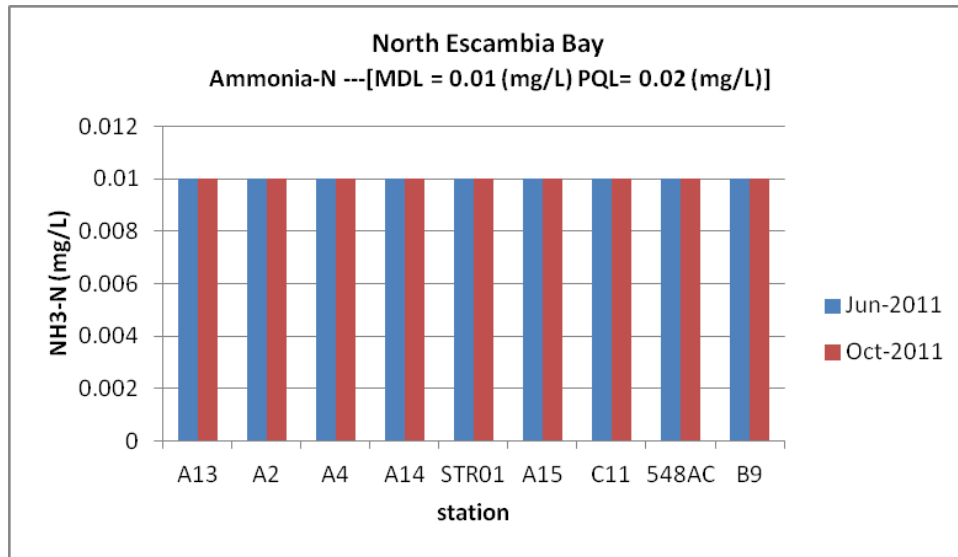


Figure D.13.3. North Escambia Bay: NO3-N June/October 2011 Survey

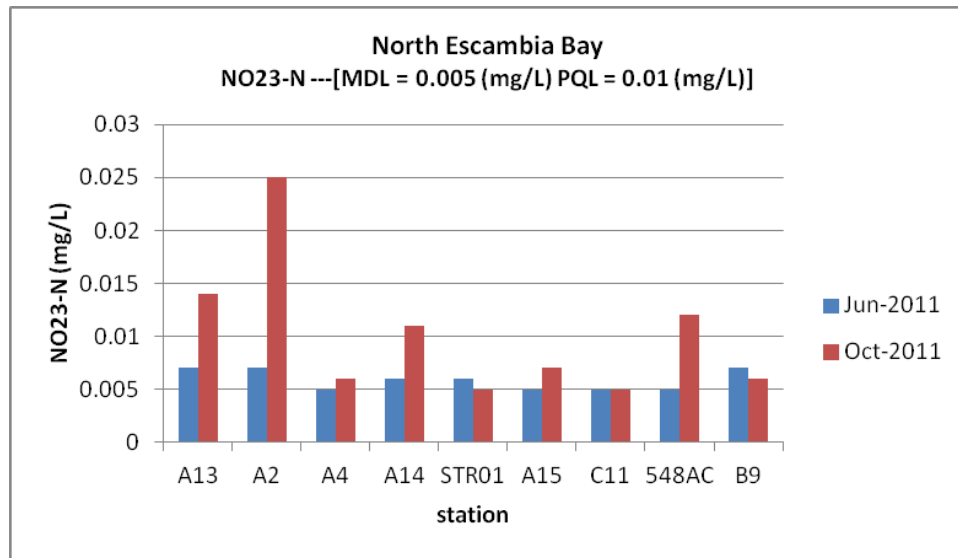


Figure D.13.4. North Escambia Bay: PO4-P June/October 2011 Survey

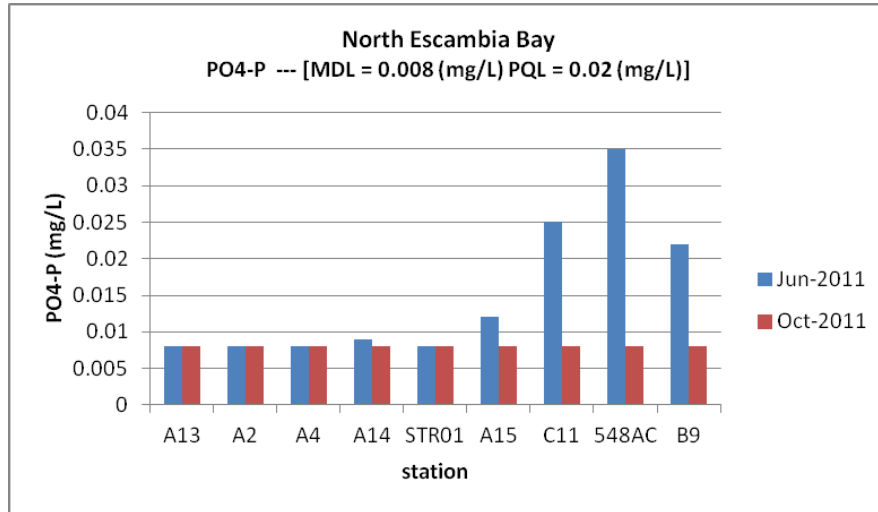
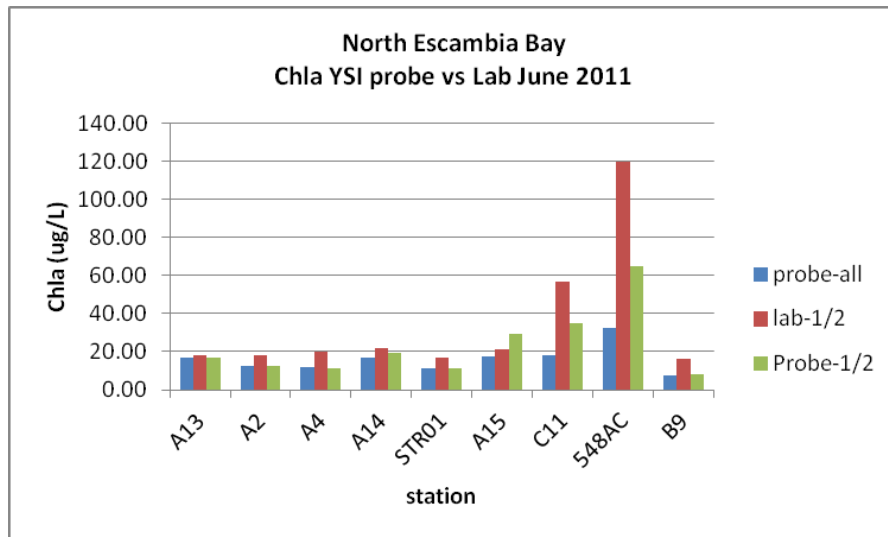


Figure D.13.5. North Escambia Bay: CChla June 2011 Survey





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