

Apalachicola Bay Aquatic Preserve

SEACAR Discrete Water Quality Analysis

Last compiled on 26 June, 2024

Contents

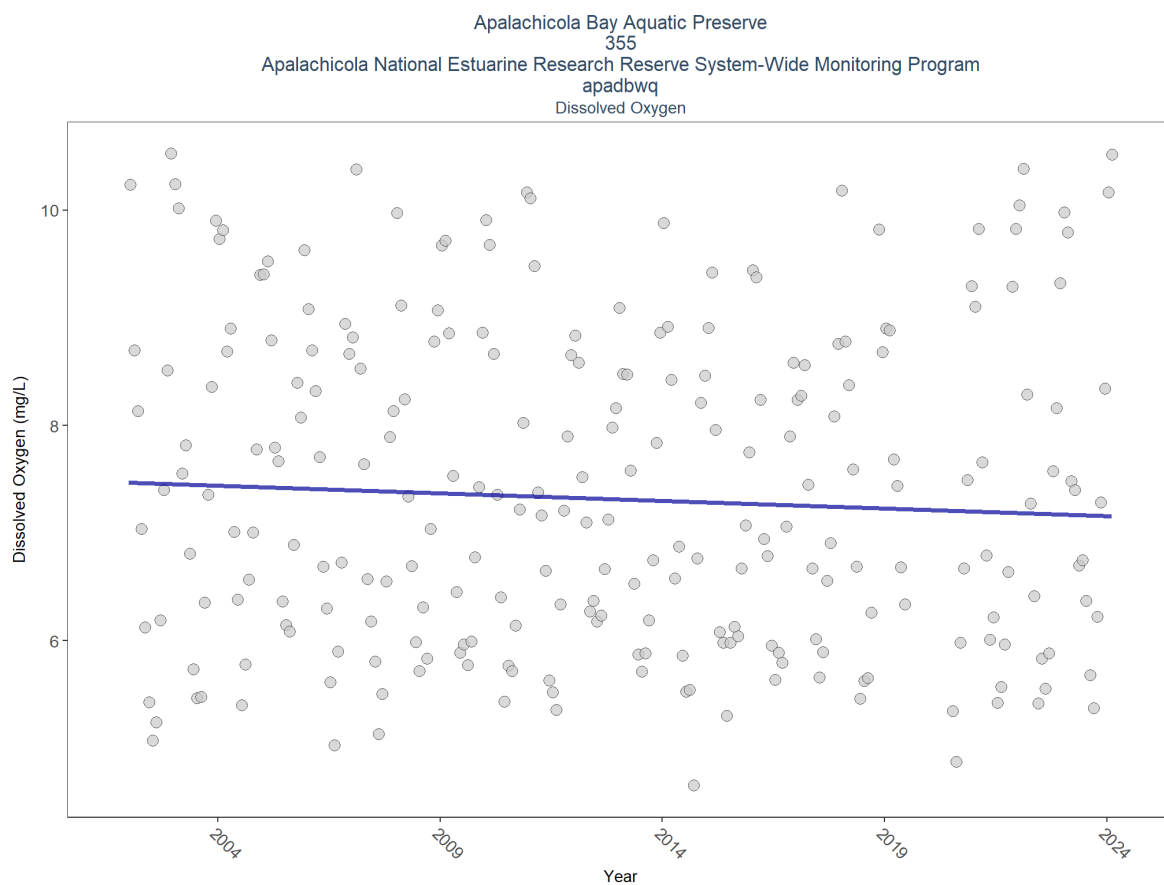
Parameters	3
Dissolved Oxygen	4
apadbwq	4
apapcwq	5
apaebwq	6
apaeswq	7
apalmwq	8
All Stations Combined	9
Dissolved Oxygen Saturation	10
apapcwq	10
apaeswq	11
apalmwq	12
apadbwq	13
apaebwq	14
All Stations Combined	15
pH	16
apaeswq	16
apapcwq	17
apaebwq	18
apalmwq	19
apadbwq	20
All Stations Combined	21
Salinity	22
apaeswq	22
apapcwq	23
apadbwq	24
apaebwq	25
apalmwq	26
All Stations Combined	27
Turbidity	28
apaebwq	28
apadbwq	29
apaeswq	30

apapcwq	31
apalmwq	32
All Stations Combined	33
Water Temperature	34
apaeswq	34
apapcwq	35
apalmwq	36
apadbwq	37
apaebwq	38
All Stations Combined	39

Parameters

Dissolved Oxygen

apadbwq

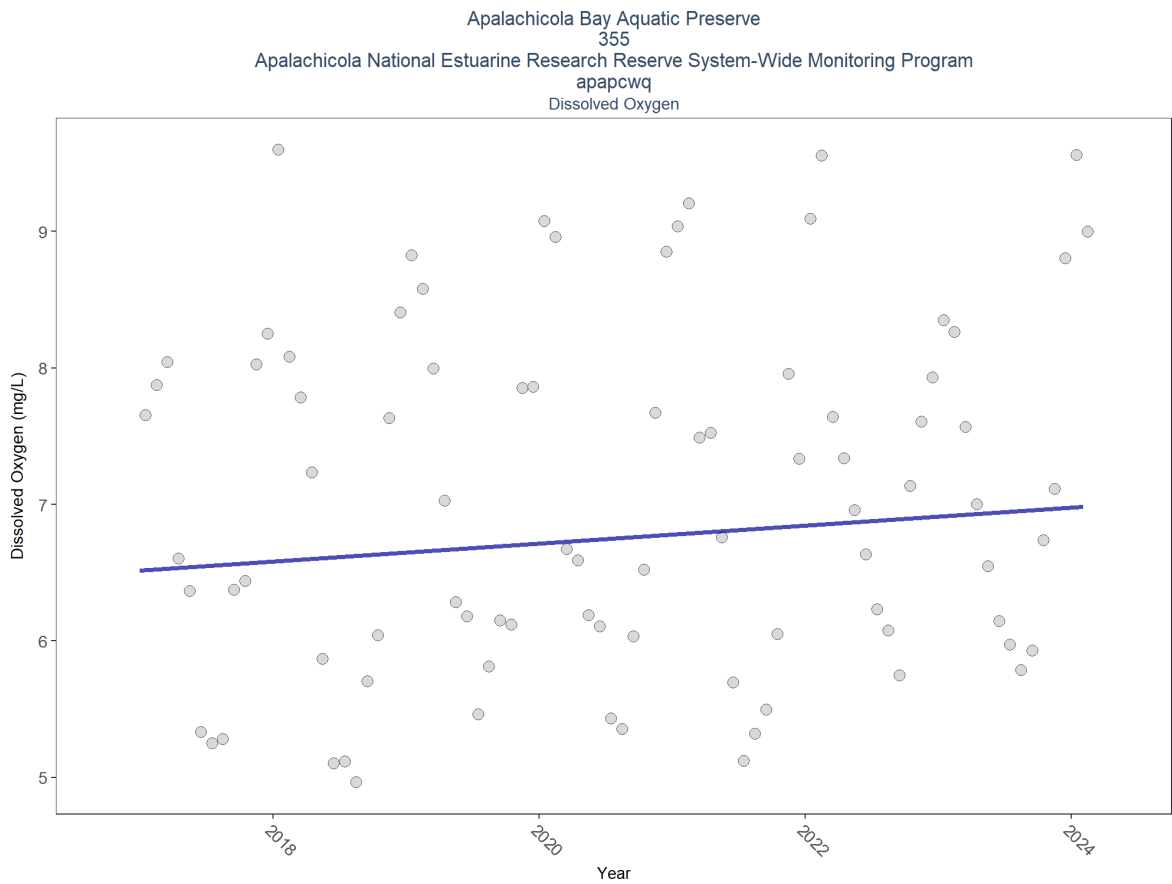


RelativeDepth	N_Data	N_Years	Median	Independent	tau	p	SennSlope	SennIntercept	ChiSquared	pChiSquared	Trend
bottom	588608	23	7.3	TRUE	-0.127	0.0060	-0.01412514	7.46969	10.7741	0.4624	-1

$p < 0.00005$ appear as 0 due to rounding.

SennIntercept is intercept value at beginning of record for monitoring location

apapcwq



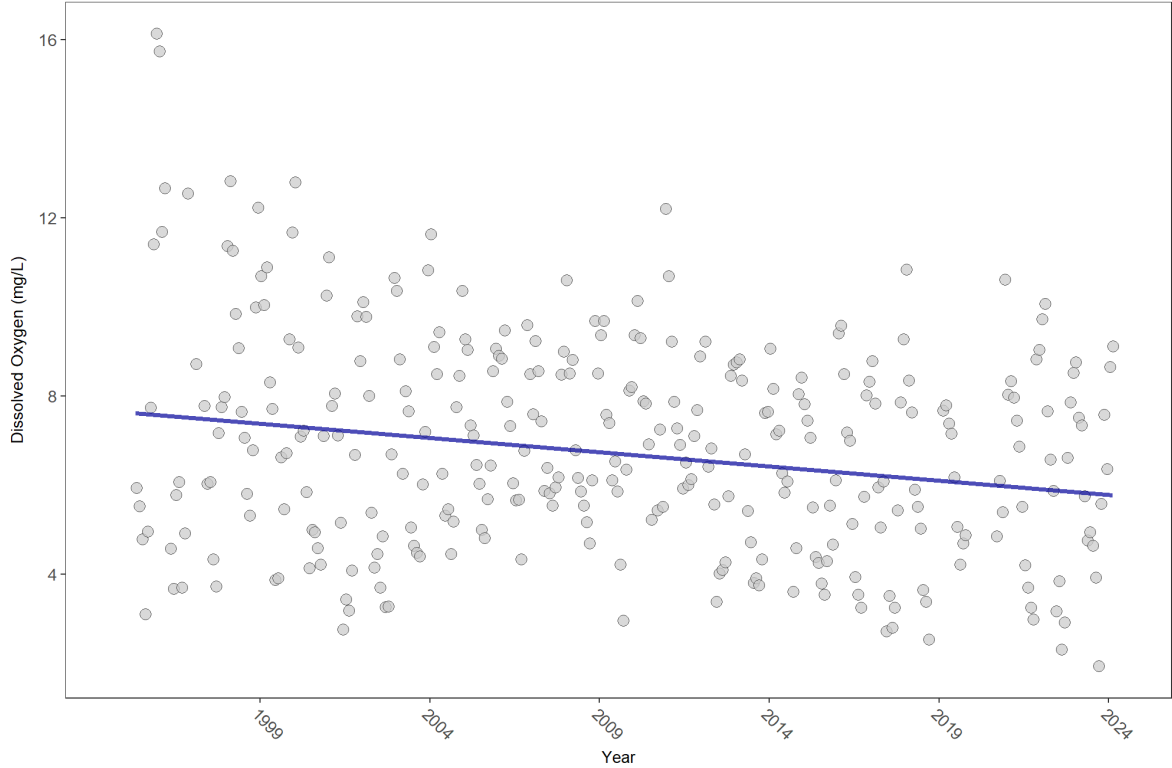
RelativeDepth	N_Data	N_Years	Median	Independent	tau	p	SennSlope	SennIntercept	ChiSquared	pChiSquared	Trend
bottom	232084	8	6.9	TRUE	0.1584	0.0727	0.06595949	6.515778	16.466	0.1247	0

$p < 0.00005$ appear as 0 due to rounding.

SennIntercept is intercept value at beginning of record for monitoring location

apaebwq

Apalachicola Bay Aquatic Preserve
355
Apalachicola National Estuarine Research Reserve System-Wide Monitoring Program
apaebwq
Dissolved Oxygen

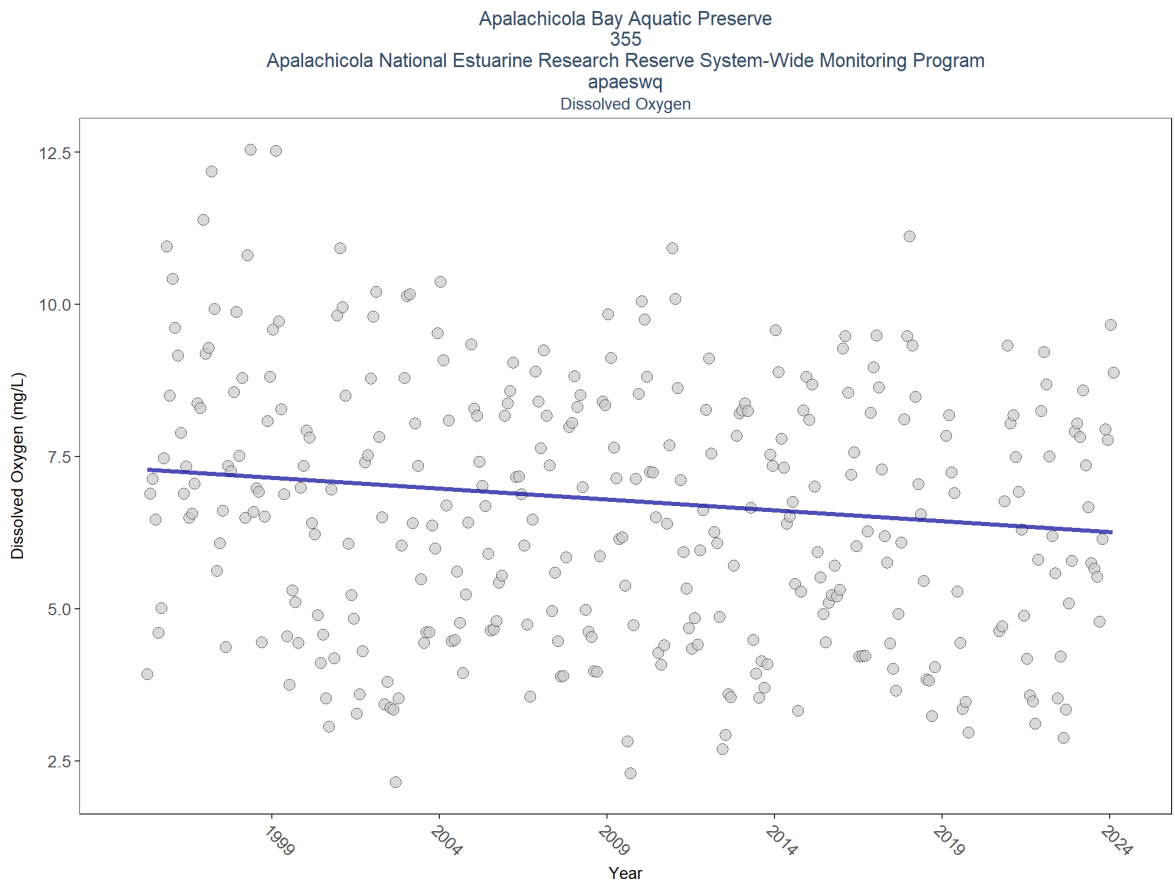


RelativeDepth	N_Data	N_Years	Median	Independent	tau	p	SennSlope	SennIntercept	ChiSquared	pChiSquared	Trend
bottom	630825	30	6.9	TRUE	-0.2896	0.0000	-0.06426285	7.638883	8.3136	0.685	-1

$p < 0.00005$ appear as 0 due to rounding.

SennIntercept is intercept value at beginning of record for monitoring location

apaeswq

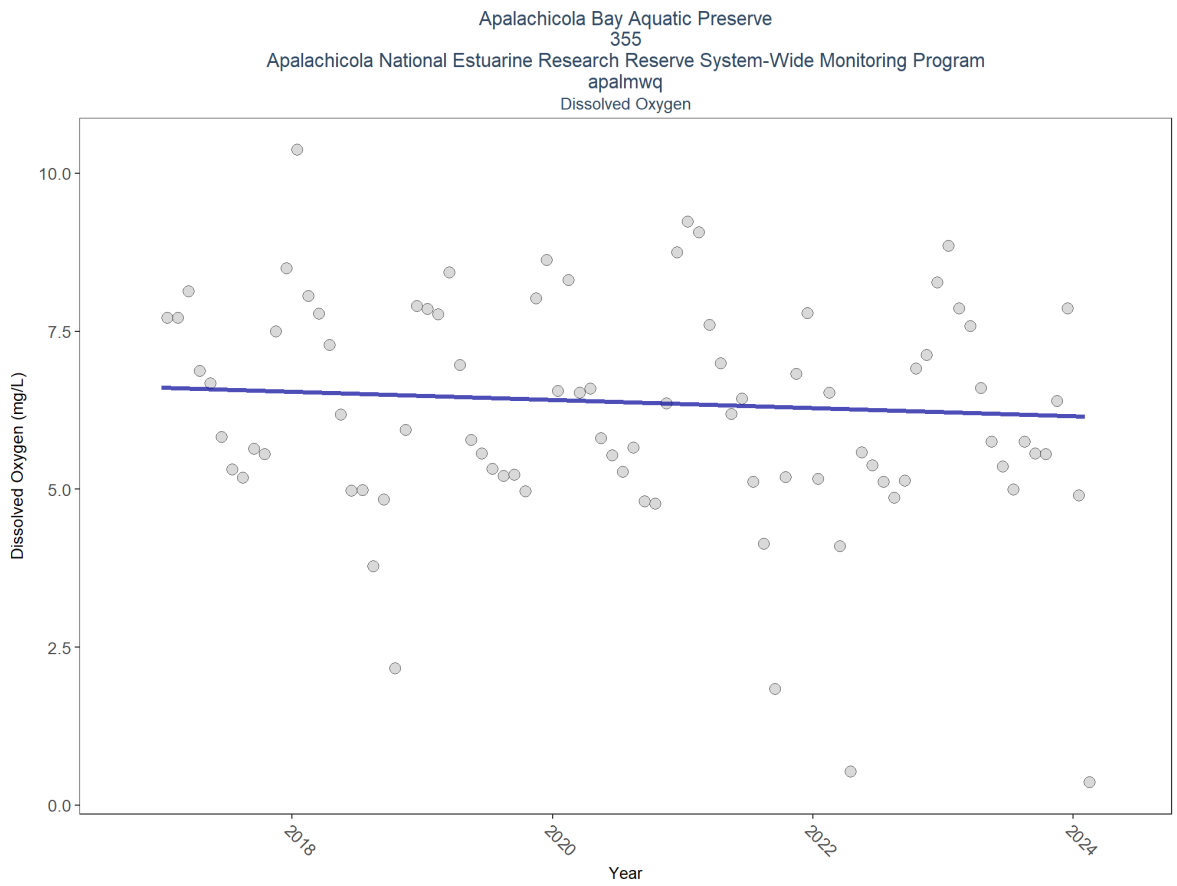


RelativeDepth	N_Data	N_Years	Median	Independent	tau	p	SennSlope	SennIntercept	ChiSquared	pChiSquared	Trend
bottom	681262	30	6.8	TRUE	-0.1868	0.0000	-0.03570202	7.297669	7.9134	0.721	-1

p < 0.00005 appear as 0 due to rounding.

*SennIntercept is intercept value at beginning of
record for monitoring location*

apalmwq



RelativeDepth	N_Data	N_Years	Median	Independent	tau	p	SennSlope	SennIntercept	ChiSquared	pChiSquared	Trend
bottom	228250	8	6.4	TRUE	-0.1783	0.0498	-0.06413717	6.608815	9.8334	0.5454	-1

p < 0.00005 appear as 0 due to rounding.

*SennIntercept is intercept value at beginning of
record for monitoring location*

All Stations Combined

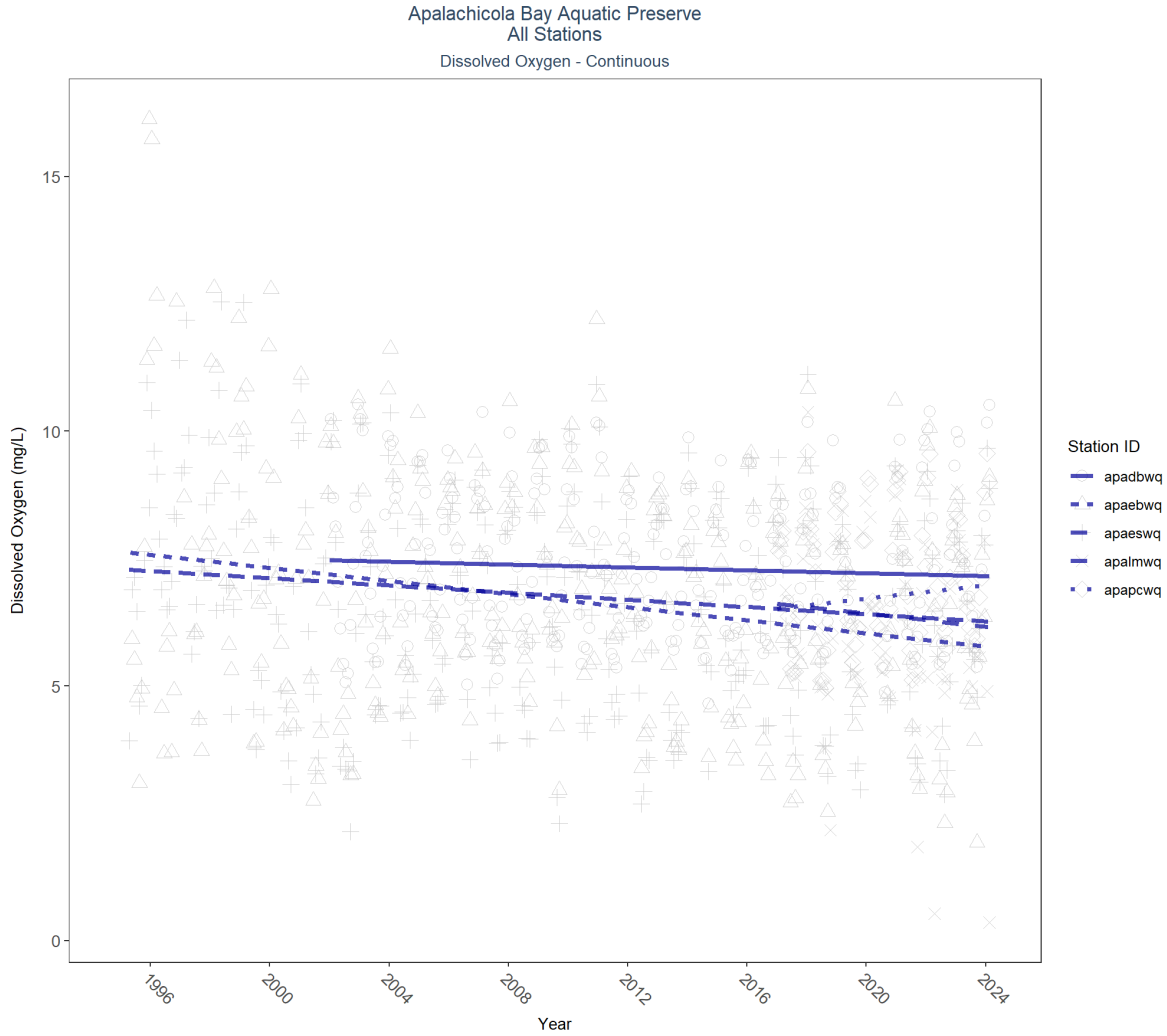
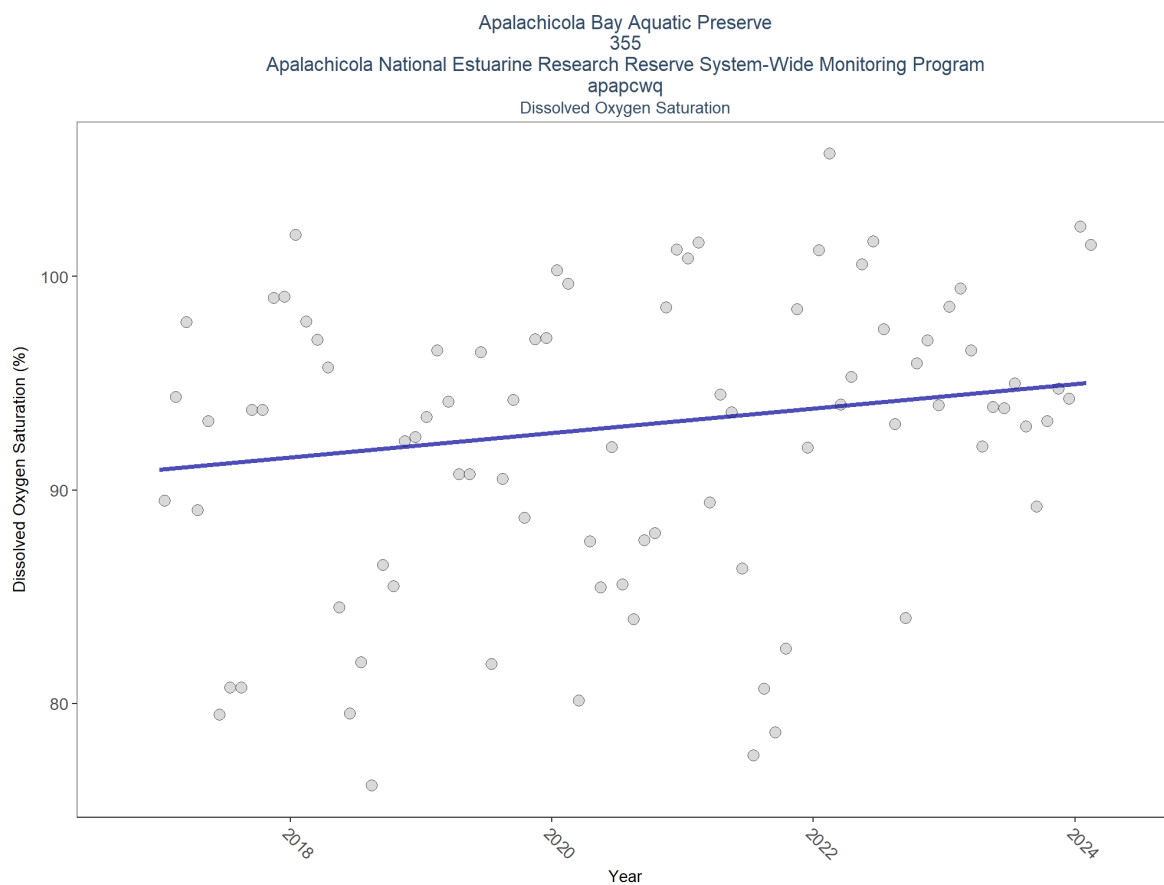


Table 1: Seasonal Kendall-Tau Results for All Stations - Dissolved Oxygen

Station	N_Data	N_Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
apadbwq	588608	23	2002 - 2024	7.3	-0.13	7.47	-0.01	0.0060
apapcwq	232084	8	2017 - 2024	6.9	0.16	6.52	0.07	0.0727
apaebwq	630825	30	1995 - 2024	6.9	-0.29	7.64	-0.06	0.0000
apaeswq	681262	30	1995 - 2024	6.8	-0.19	7.30	-0.04	0.0000
apalmwq	228250	8	2017 - 2024	6.4	-0.18	6.61	-0.06	0.0498

Dissolved Oxygen Saturation

apapcwq

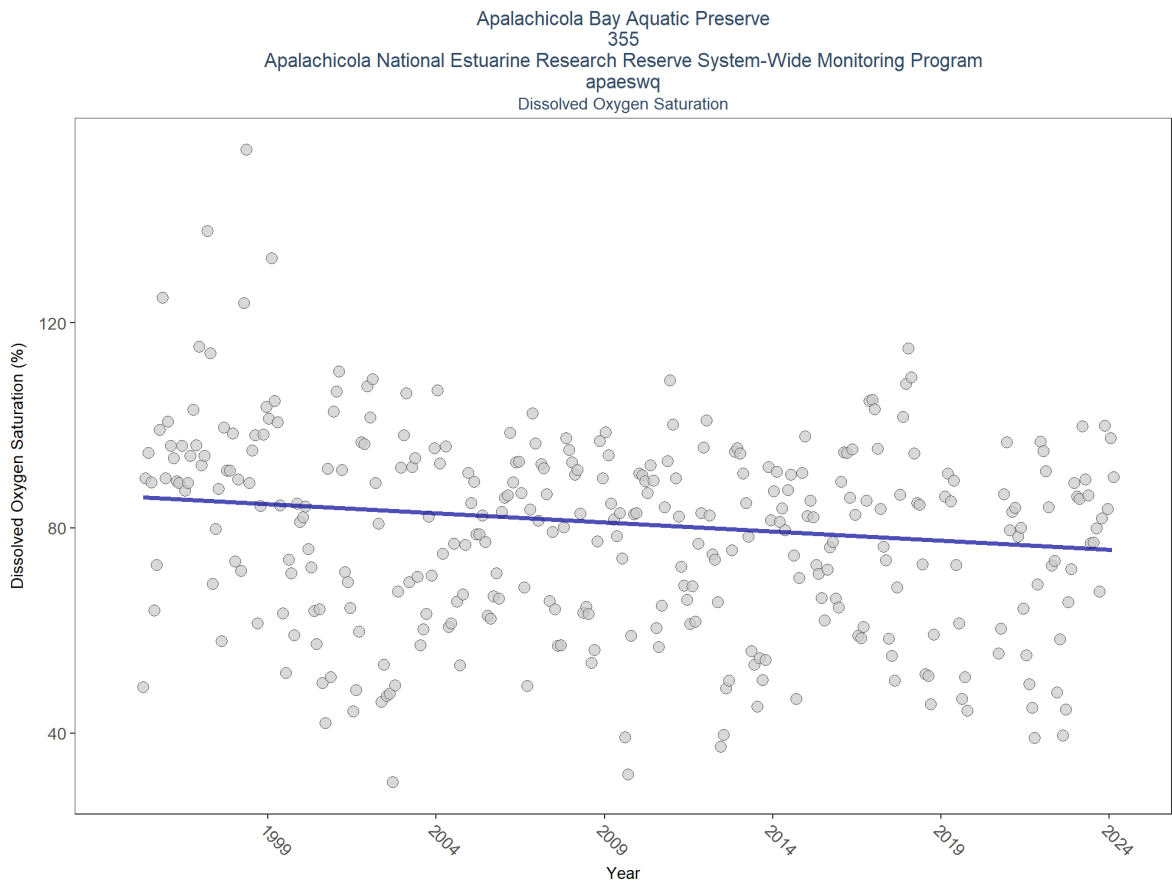


RelativeDepth	N_Data	N_Years	Median	Independent	tau	p	SennSlope	SennIntercept	ChiSquared	pChiSquared	Trend
bottom	235540	8	94.4	TRUE	0.1783	0.0408	0.5699207	90.95942	14.6208	0.2005	1

$p < 0.00005$ appear as 0 due to rounding.

*SennIntercept is intercept value at beginning of
record for monitoring location*

apaeswq

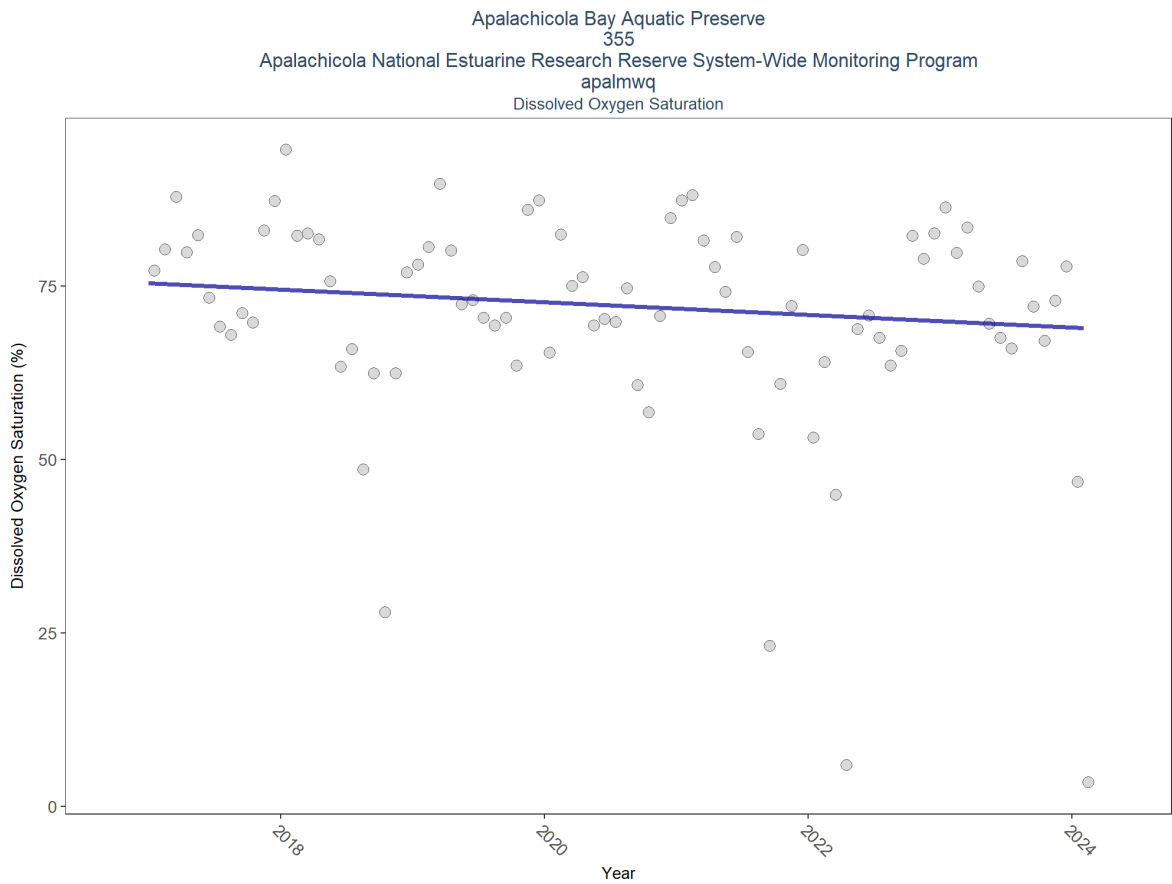


RelativeDepth	N_Data	N_Years	Median	Independent	tau	p	SennSlope	SennIntercept	ChiSquared	pChiSquared	Trend
bottom	682431	30	83.9	TRUE	-0.1475	0.0001	-0.3570521	86.11747	9.1684	0.6063	-1

$p < 0.00005$ appear as 0 due to rounding.

SennIntercept is intercept value at beginning of record for monitoring location

apalmwq

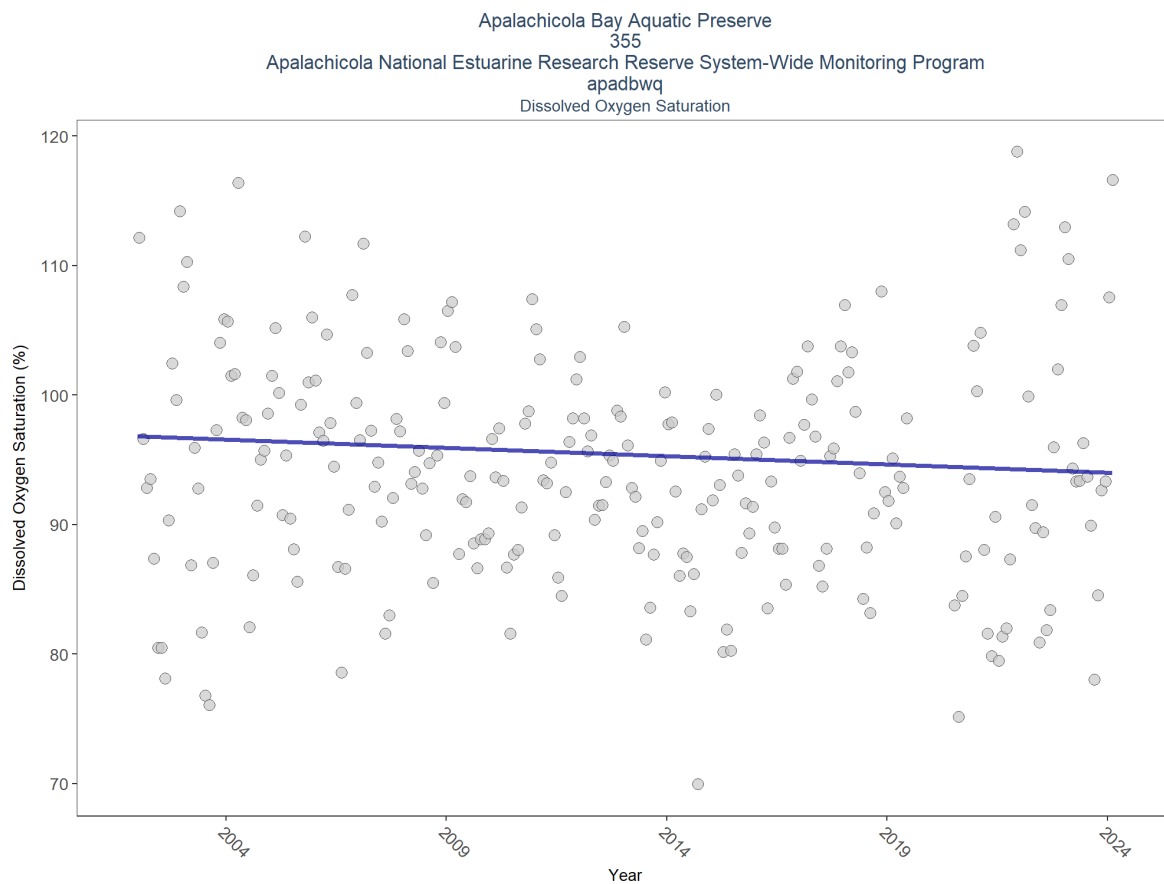


RelativeDepth	N_Data	N_Years	Median	Independent	tau	p	SennSlope	SennIntercept	ChiSquared	pChiSquared	Trend
bottom	228186	8	75	TRUE	-0.1993	0.0270	-0.9097555	75.37145	9.9699	0.5331	-1

$p < 0.00005$ appear as 0 due to rounding.

SennIntercept is intercept value at beginning of record for monitoring location

apadbwq

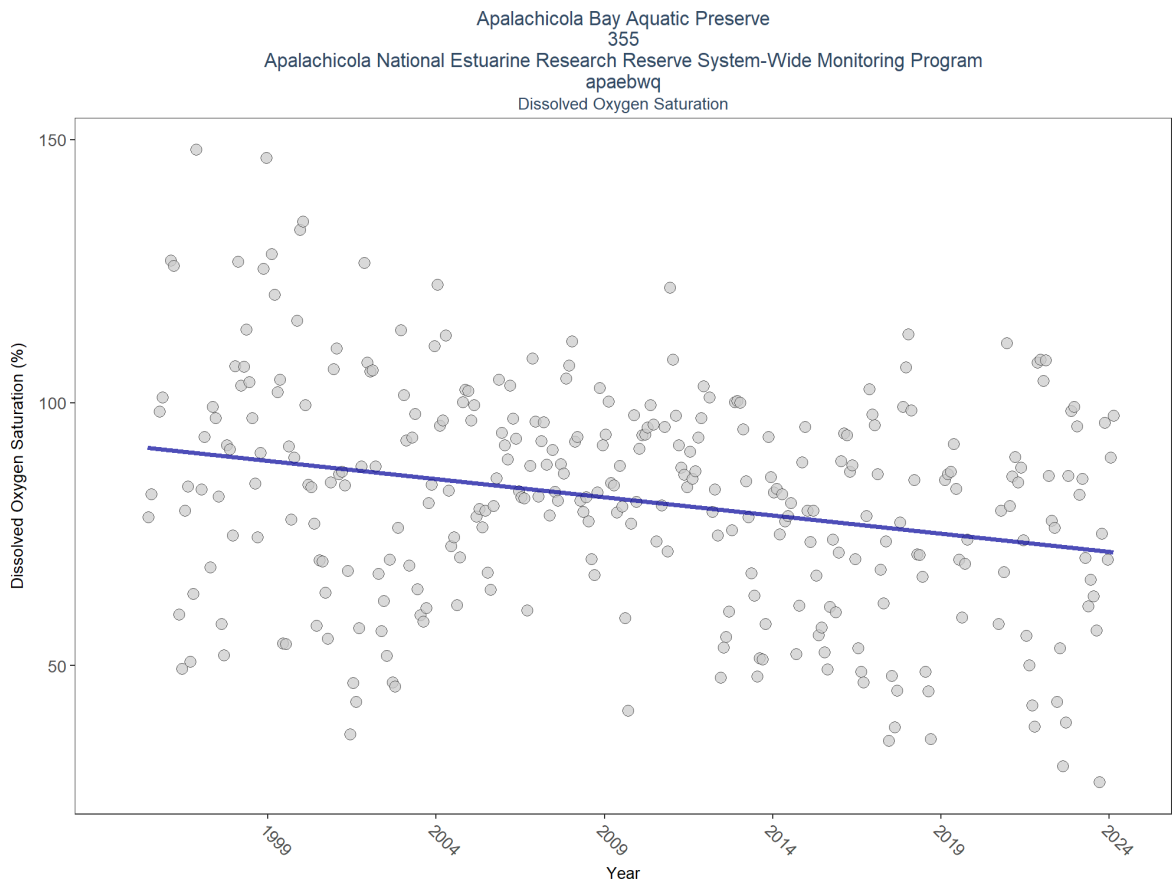


RelativeDepth	N_Data	N_Years	Median	Independent	tau	p	SennSlope	SennIntercept	ChiSquared	pChiSquared	Trend
bottom	592057	23	94.8	TRUE	-0.0822	0.0788	-0.1265844	96.82057	12.6318	0.3181	0

$p < 0.00005$ appear as 0 due to rounding.

SennIntercept is intercept value at beginning of record for monitoring location

apaebwq



RelativeDepth	N_Data	N_Years	Median	Independent	tau	p	SennSlope	SennIntercept	ChiSquared	pChiSquared	Trend
bottom	626646	30	85	TRUE	-0.2623	0.0000	-0.6918942	91.67259	4.0833	0.9674	-1

$p < 0.00005$ appear as 0 due to rounding.

SennIntercept is intercept value at beginning of
record for monitoring location

All Stations Combined

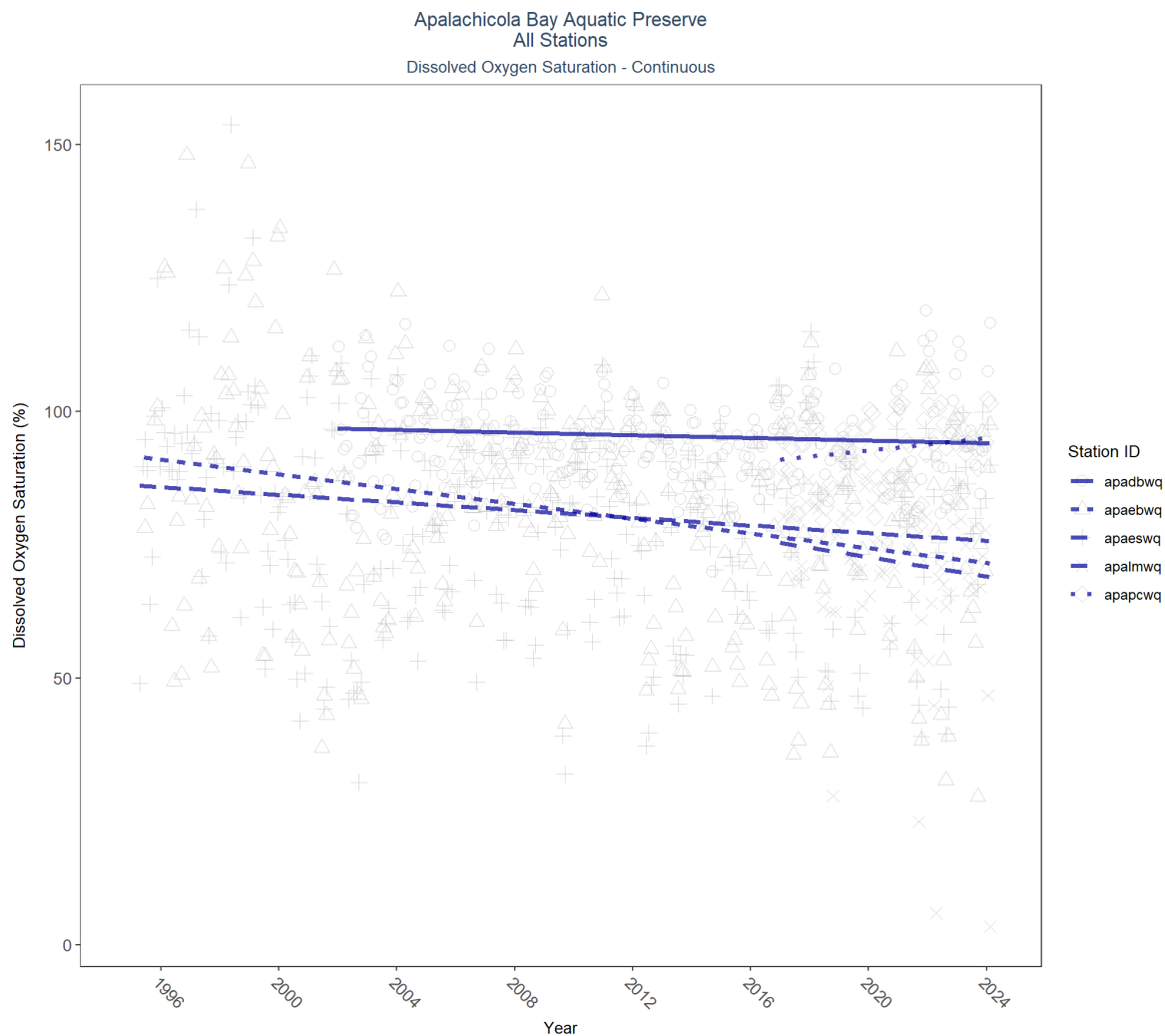
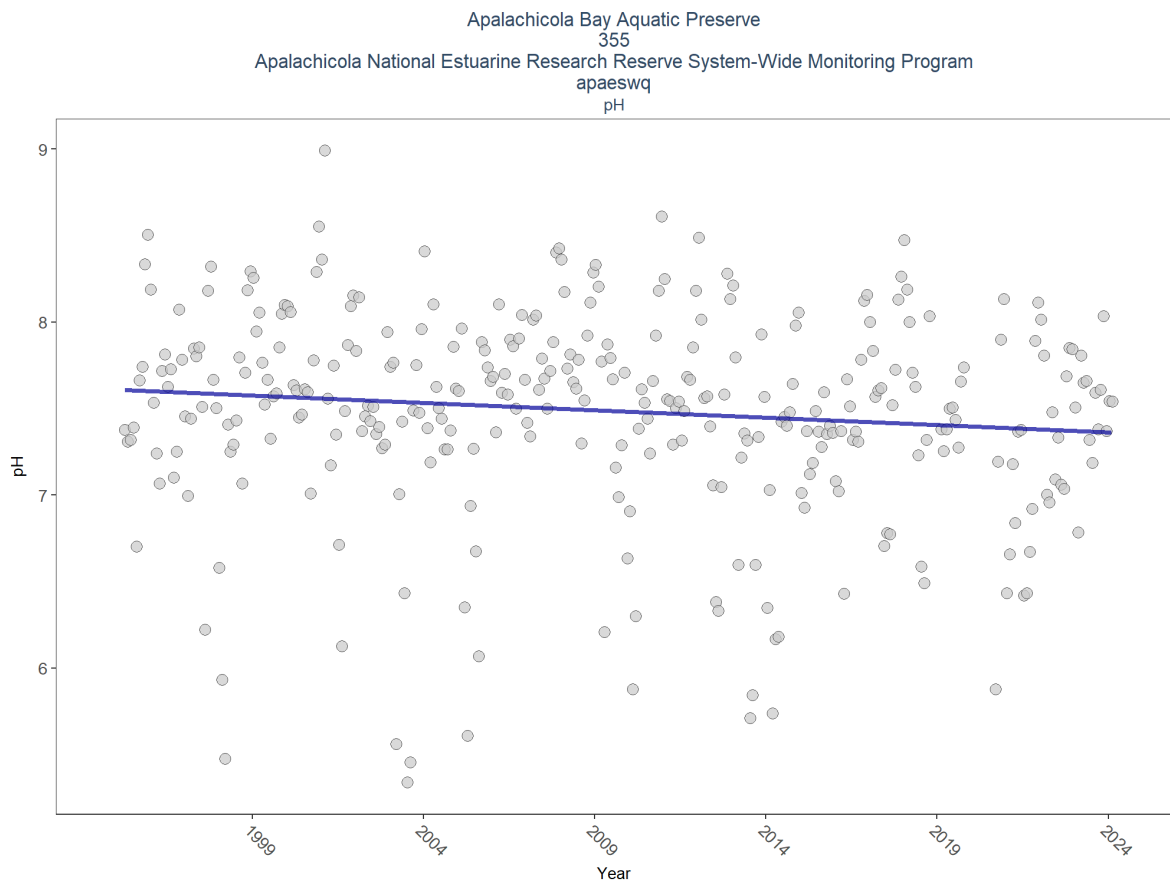


Table 2: Seasonal Kendall-Tau Results for All Stations - Dissolved Oxygen Saturation

Station	N_Data	N_Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
apapcwq	235540	8	2017 - 2024	94.4	0.18	90.96	0.57	0.0408
apaeswq	682431	30	1995 - 2024	83.9	-0.15	86.12	-0.36	0.0001
apalmwq	228186	8	2017 - 2024	75.0	-0.20	75.37	-0.91	0.0270
apadbwq	592057	23	2002 - 2024	94.8	-0.08	96.82	-0.13	0.0788
apaebwq	626646	30	1995 - 2024	85.0	-0.26	91.67	-0.69	0.0000

pH
apaeswq



RelativeDepth	N_Data	N_Years	Median	Independent	tau	p	SennSlope	SennIntercept	ChiSquared	pChiSquared	Trend
bottom	688178	30	7.5	TRUE	-0.1357	0.0004	-0.008583472	7.610967	2.5438	0.9955	-1

p < 0.00005 appear as 0 due to rounding.

*SennIntercept is intercept value at beginning of
record for monitoring location*

apapcwq

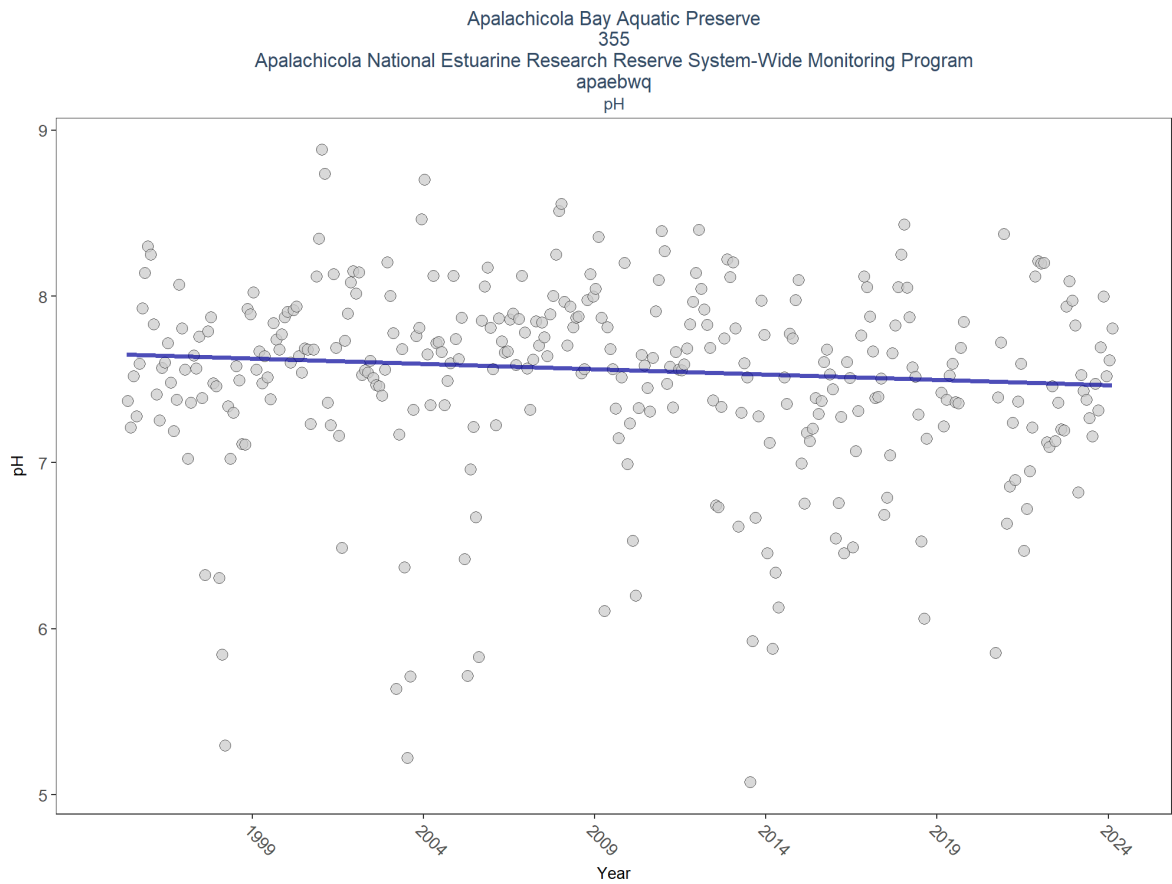


RelativeDepth	N_Data	N_Years	Median	Independent	tau	p	SennSlope	SennIntercept	ChiSquared	pChiSquared	Trend
bottom	231974	8	8.1	TRUE	-0.1417	0.1441	-0.008115376	8.133649	11.865	0.3739	0

p < 0.00005 appear as 0 due to rounding.

*SennIntercept is intercept value at beginning of
record for monitoring location*

apaebwq

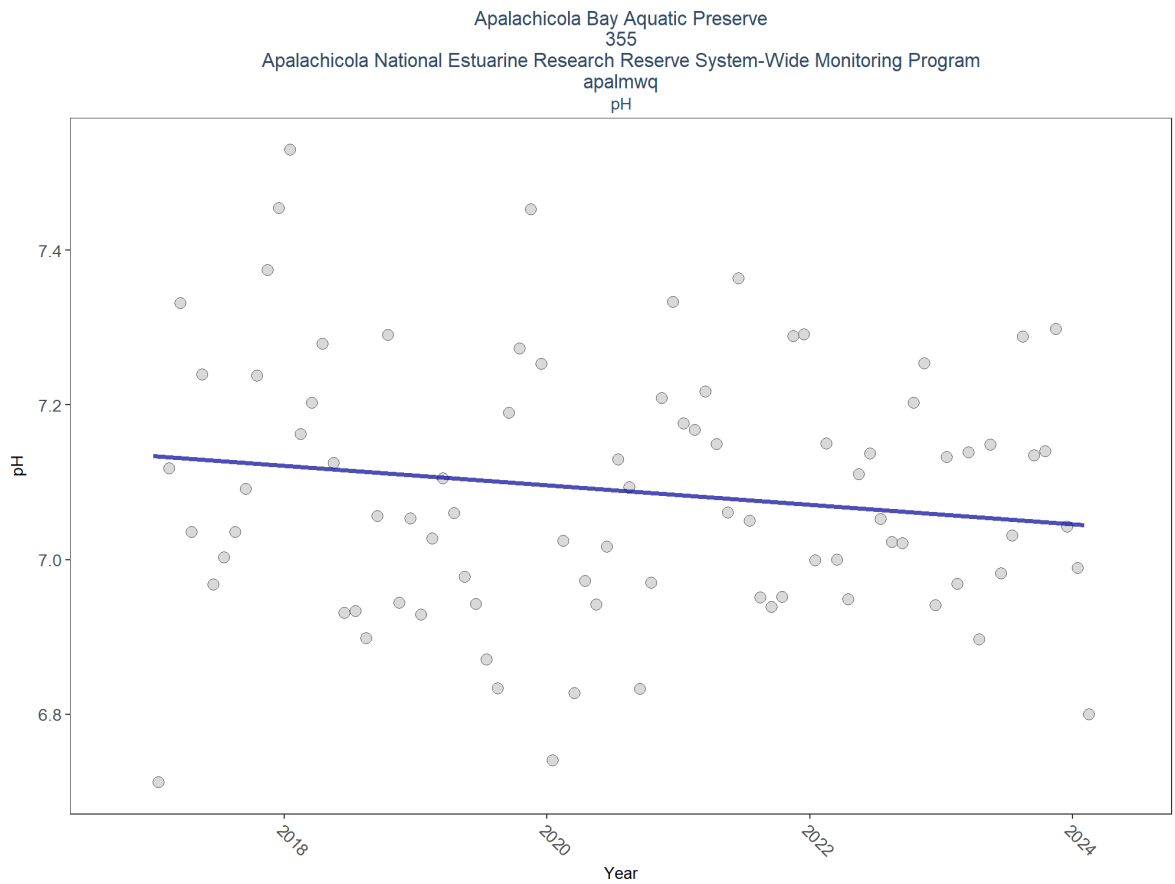


RelativeDepth	N_Data	N_Years	Median	Independent	tau	p	SennSlope	SennIntercept	ChiSquared	pChiSquared	Trend
bottom	683408	30	7.6	TRUE	-0.1091	0.0049	-0.006424367	7.653363	5.9238	0.8784	-1

p < 0.00005 appear as 0 due to rounding.

*SennIntercept is intercept value at beginning of
record for monitoring location*

apalmwq

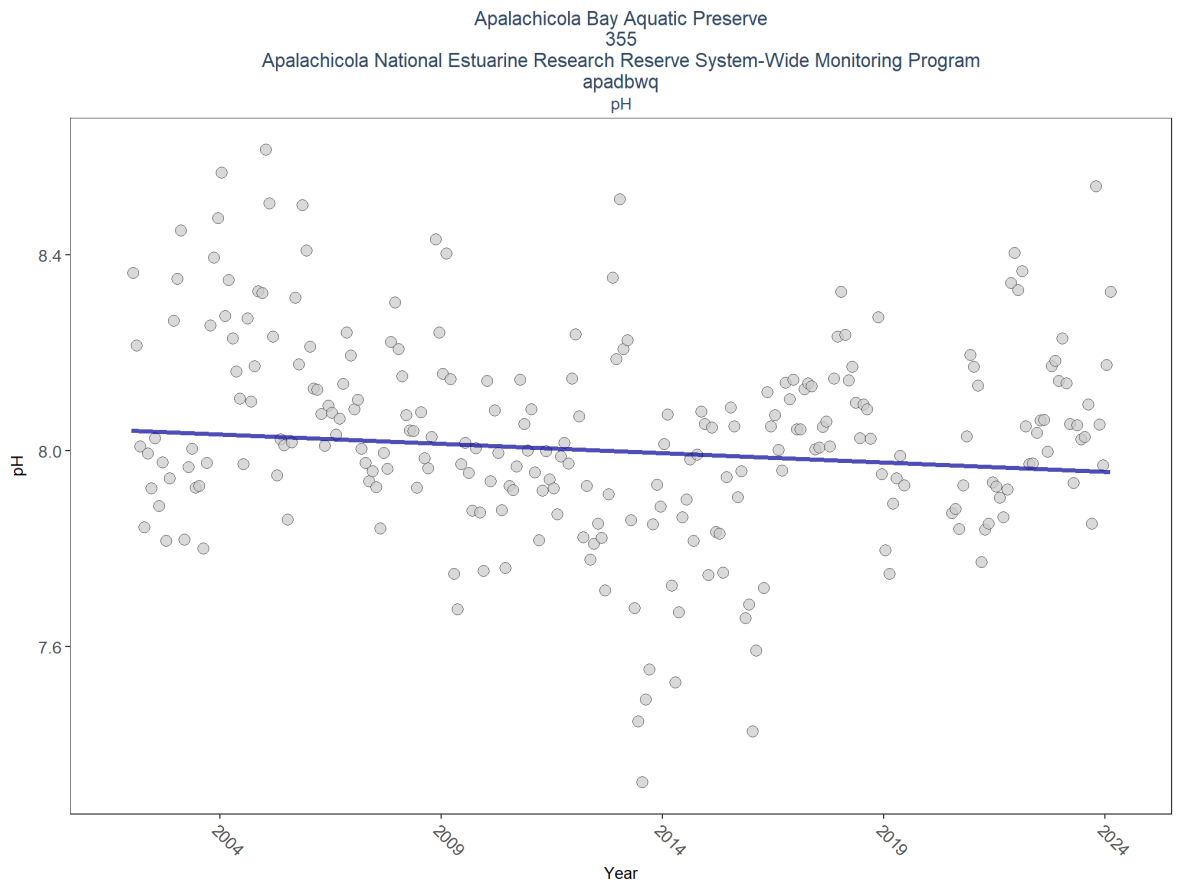


RelativeDepth	N_Data	N_Years	Median	Independent	tau	p	SennSlope	SennIntercept	ChiSquared	pChiSquared	Trend
bottom	230318	8	7.1	TRUE	-0.0886	0.3371	-0.01264713	7.134075	12.5424	0.3243	0

p < 0.00005 appear as 0 due to rounding.

*SennIntercept is intercept value at beginning of
record for monitoring location*

apadbwq



RelativeDepth	N_Data	N_Years	Median	Independent	tau	p	SennSlope	SennIntercept	ChiSquared	pChiSquared	Trend
bottom	569023	23	8	TRUE	-0.1126	0.0131	-0.003822226	8.041222	10.7993	0.4602	-1

p < 0.00005 appear as 0 due to rounding.

*SennIntercept is intercept value at beginning of
record for monitoring location*

All Stations Combined

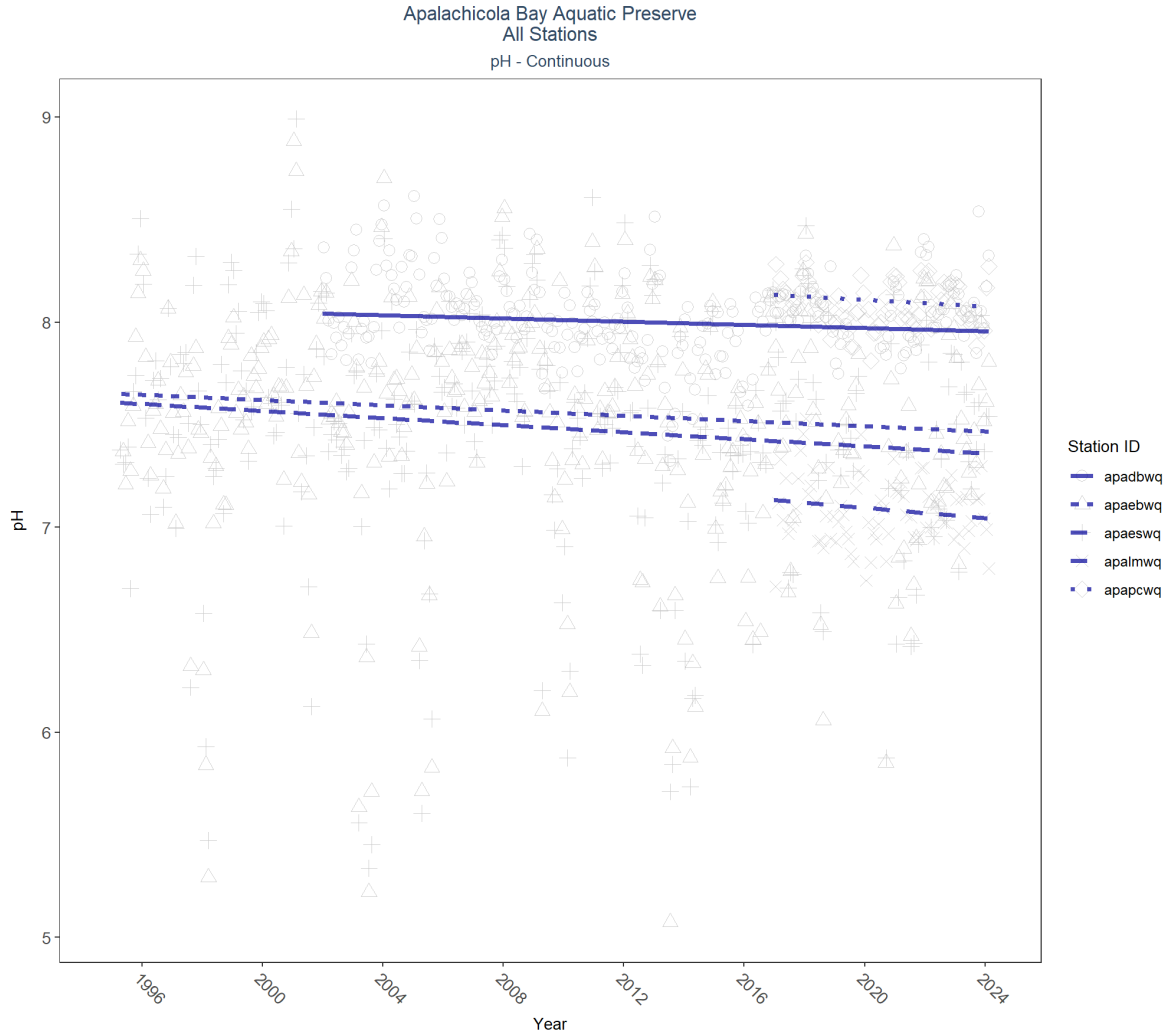
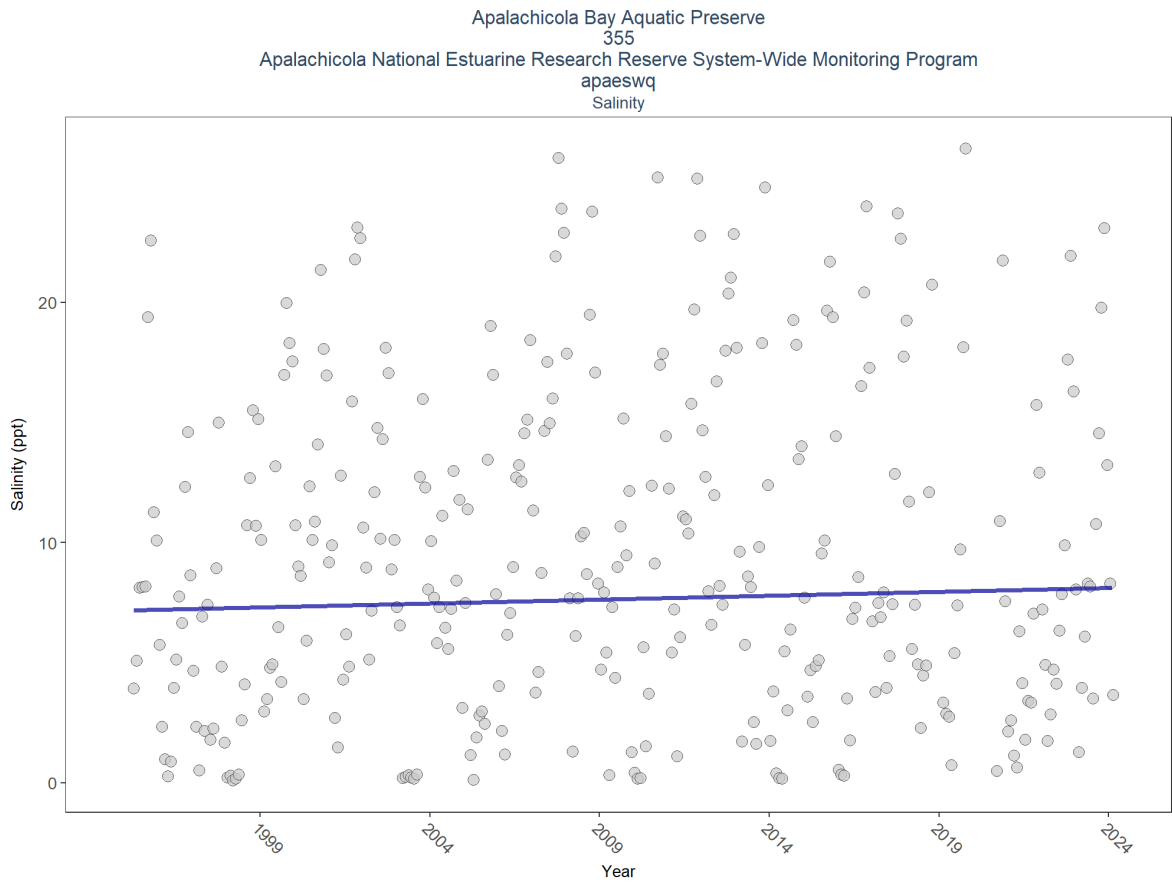


Table 3: Seasonal Kendall-Tau Results for All Stations - pH

Station	N_Data	N_Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
apaeswq	688178	30	1995 - 2024	7.5	-0.14	7.61	-0.01	0.0004
apapcwq	231974	8	2017 - 2024	8.1	-0.14	8.13	-0.01	0.1441
apaebwq	683408	30	1995 - 2024	7.6	-0.11	7.65	-0.01	0.0049
apalmwq	230318	8	2017 - 2024	7.1	-0.09	7.13	-0.01	0.3371
apadbwq	569023	23	2002 - 2024	8.0	-0.11	8.04	0.00	0.0131

Salinity

apaeswq

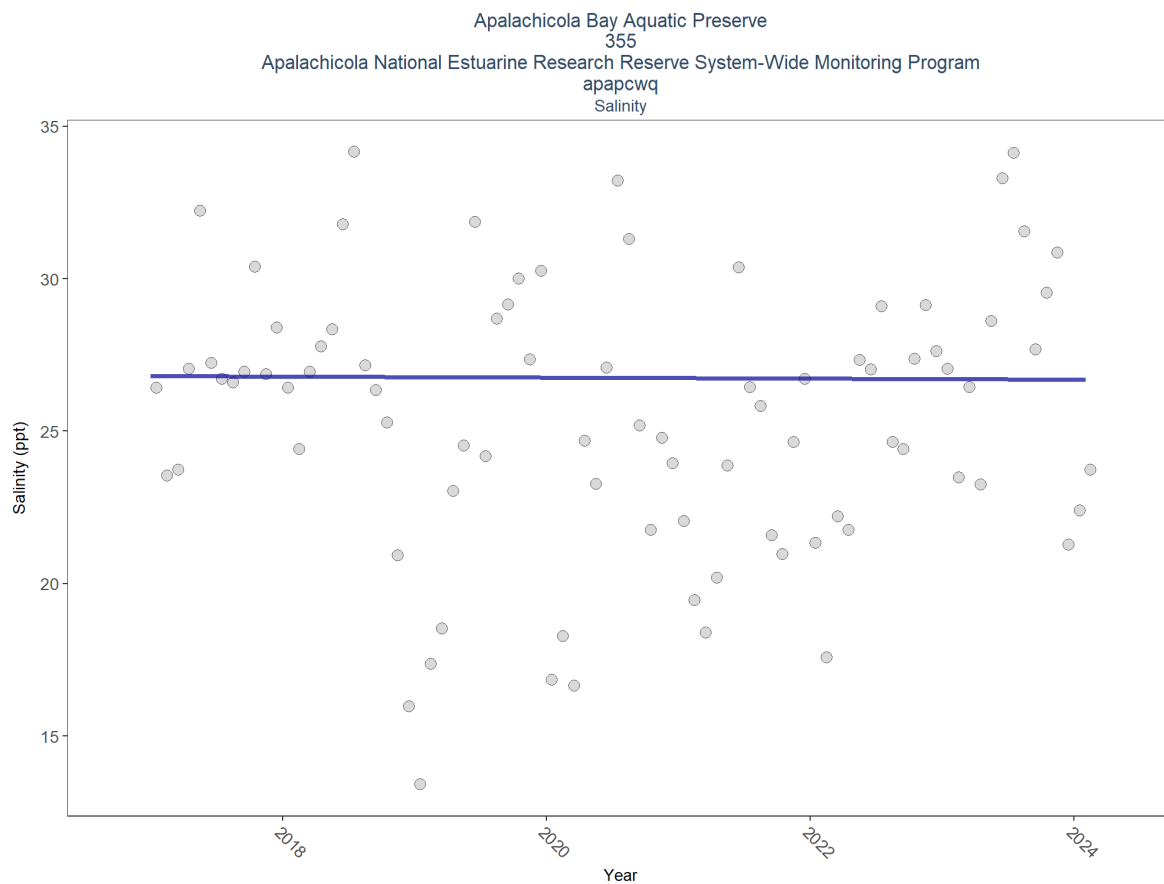


RelativeDepth	N_Data	N_Years	Median	Independent	tau	p	SennSlope	SennIntercept	ChiSquared	pChiSquared	Trend
bottom	725430	30	7.5	TRUE	0.053	0.1880	0.03221921	7.176649	10.54	0.4826	0

$p < 0.00005$ appear as 0 due to rounding.

SennIntercept is intercept value at beginning of record for monitoring location

apapcwq

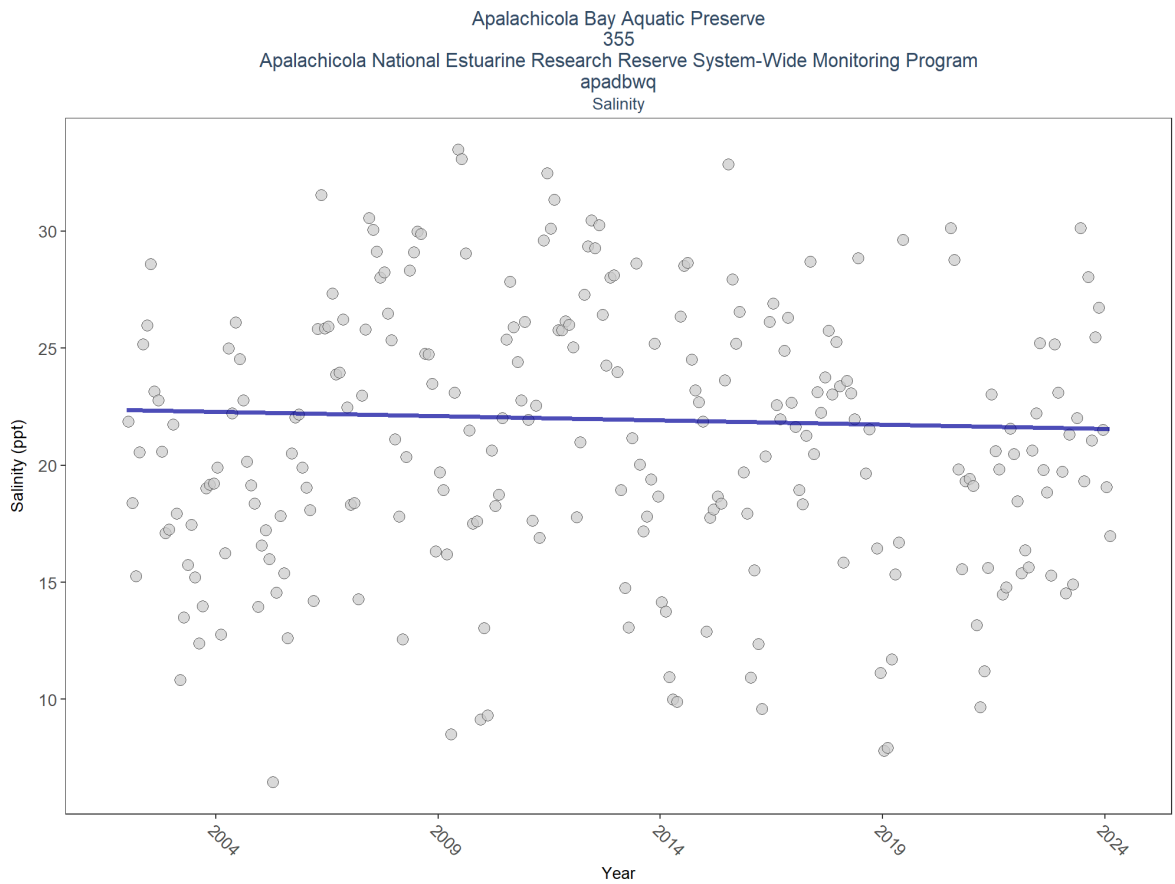


RelativeDepth	N_Data	N_Years	Median	Independent	tau	p	SennSlope	SennIntercept	ChiSquared	pChiSquared	Trend
bottom	234391	8	26.6	TRUE	-0.0255	0.8347	-0.0186066	26.81743	5.677	0.894	0

$p < 0.00005$ appear as 0 due to rounding.

SennIntercept is intercept value at beginning of
record for monitoring location

apadbwq

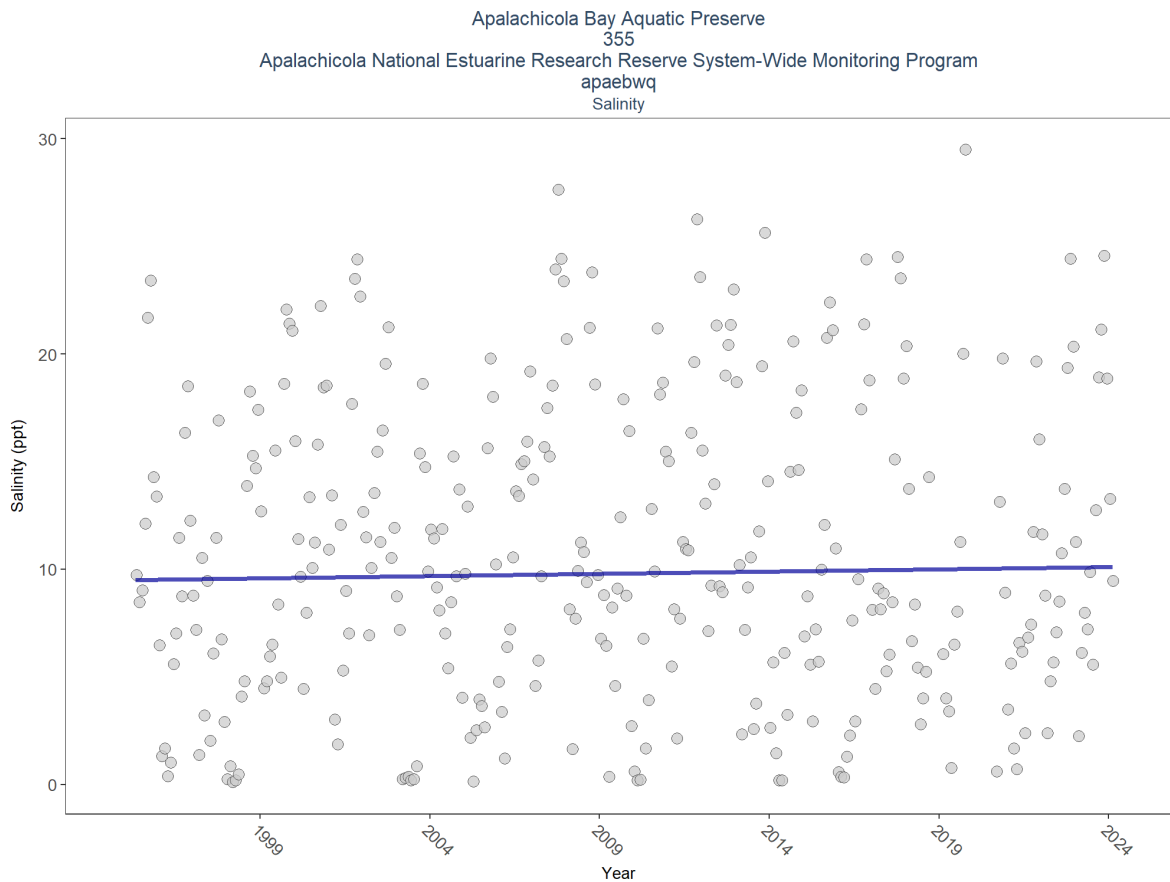


RelativeDepth	N_Data	N_Years	Median	Independent	tau	p	SennSlope	SennIntercept	ChiSquared	pChiSquared	Trend
bottom	586052	23	22.1	TRUE	-0.0331	0.4487	-0.03677575	22.3597	8.3821	0.6787	0

$p < 0.00005$ appear as 0 due to rounding.

SennIntercept is intercept value at beginning of
record for monitoring location

apaebwq

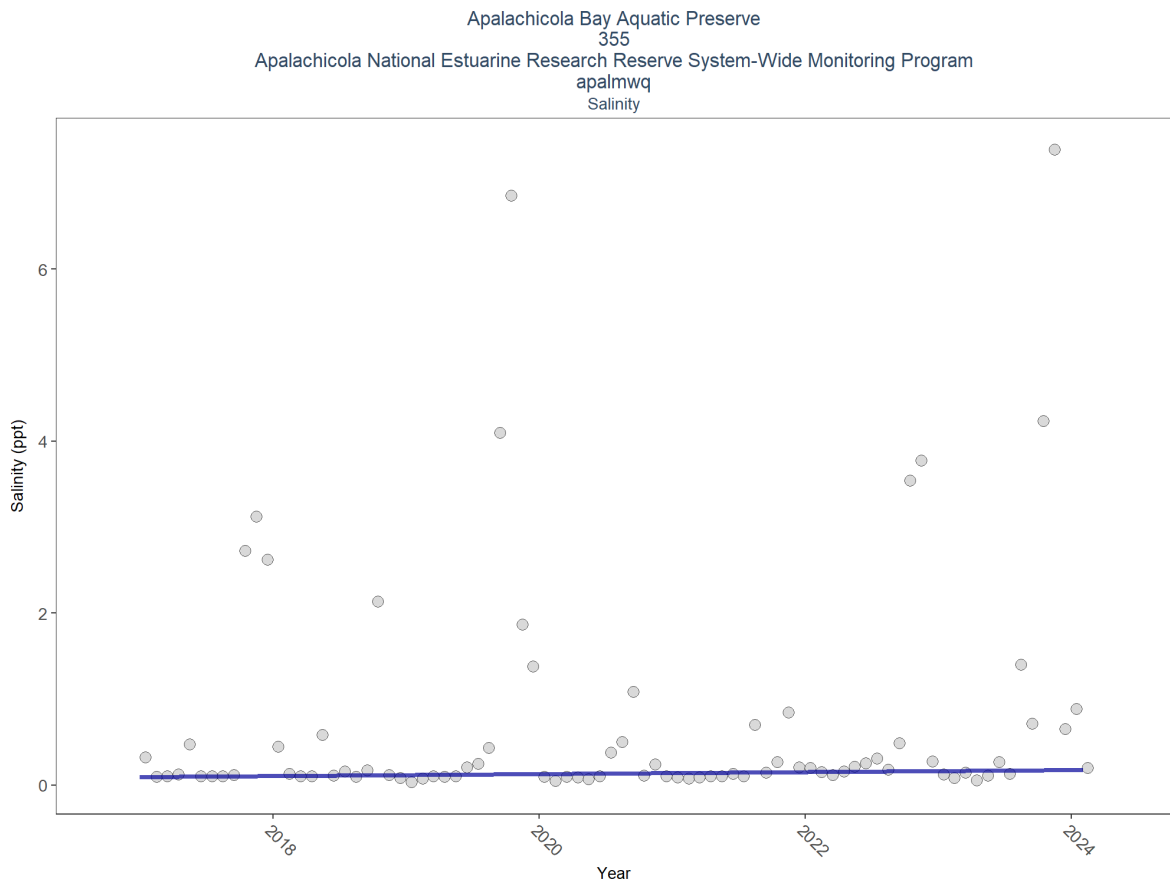


RelativeDepth	N_Data	N_Years	Median	Independent	tau	p	SennSlope	SennIntercept	ChiSquared	pChiSquared	Trend
bottom	712575	30	9.9	TRUE	0.0367	0.3779	0.02104722	9.503467	11.6363	0.3916	0

p < 0.00005 appear as 0 due to rounding.

*SennIntercept is intercept value at beginning of
record for monitoring location*

apalmwq



RelativeDepth	N_Data	N_Years	Median	Independent	tau	p	SennSlope	SennIntercept	ChiSquared	pChiSquared	Trend
bottom	240151	8	0.1	TRUE	0.1805	0.0494	0.01154874	0.09906767	8.7159	0.6481	2

p < 0.00005 appear as 0 due to rounding.

*SennIntercept is intercept value at beginning of
record for monitoring location*

All Stations Combined

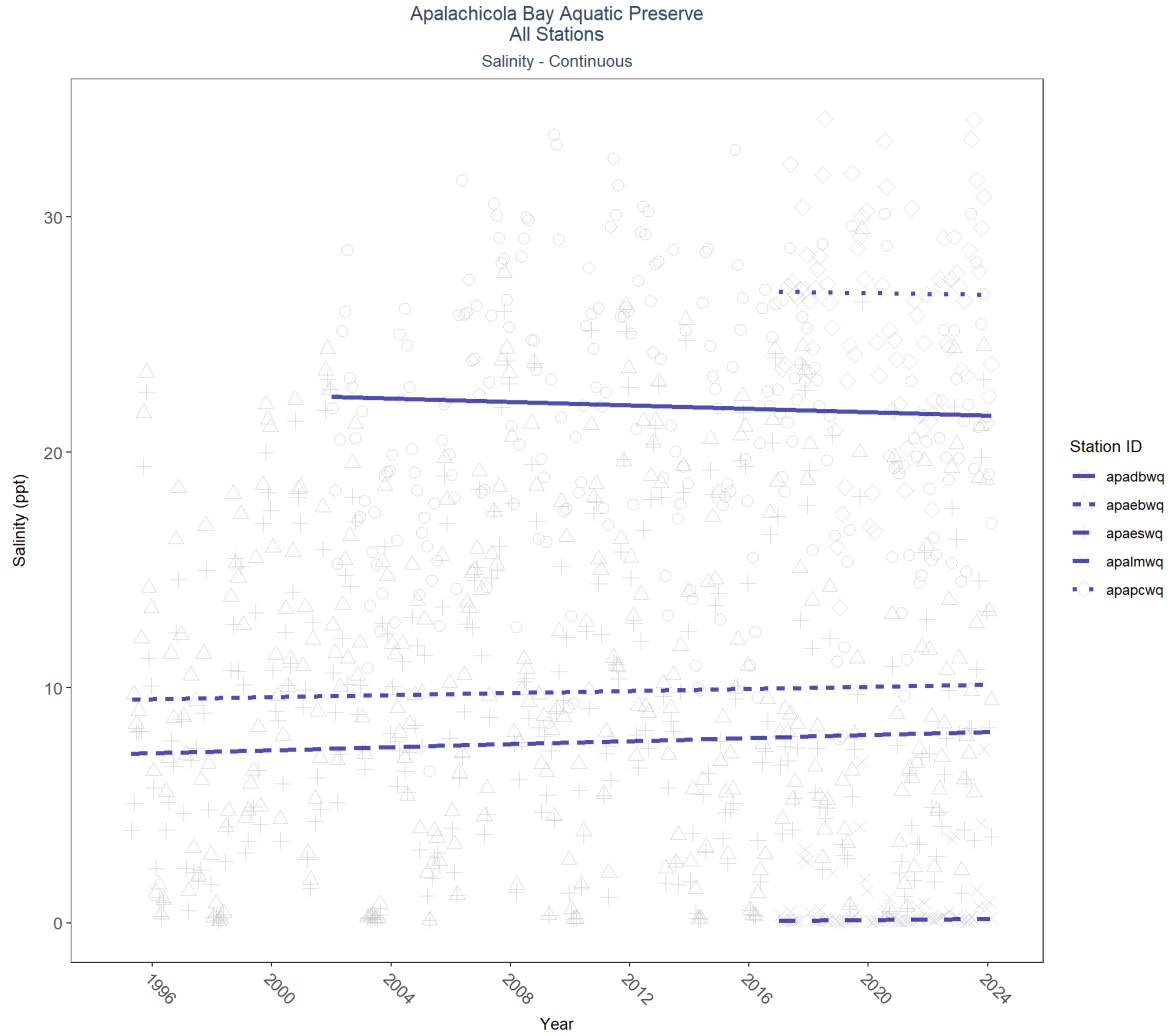
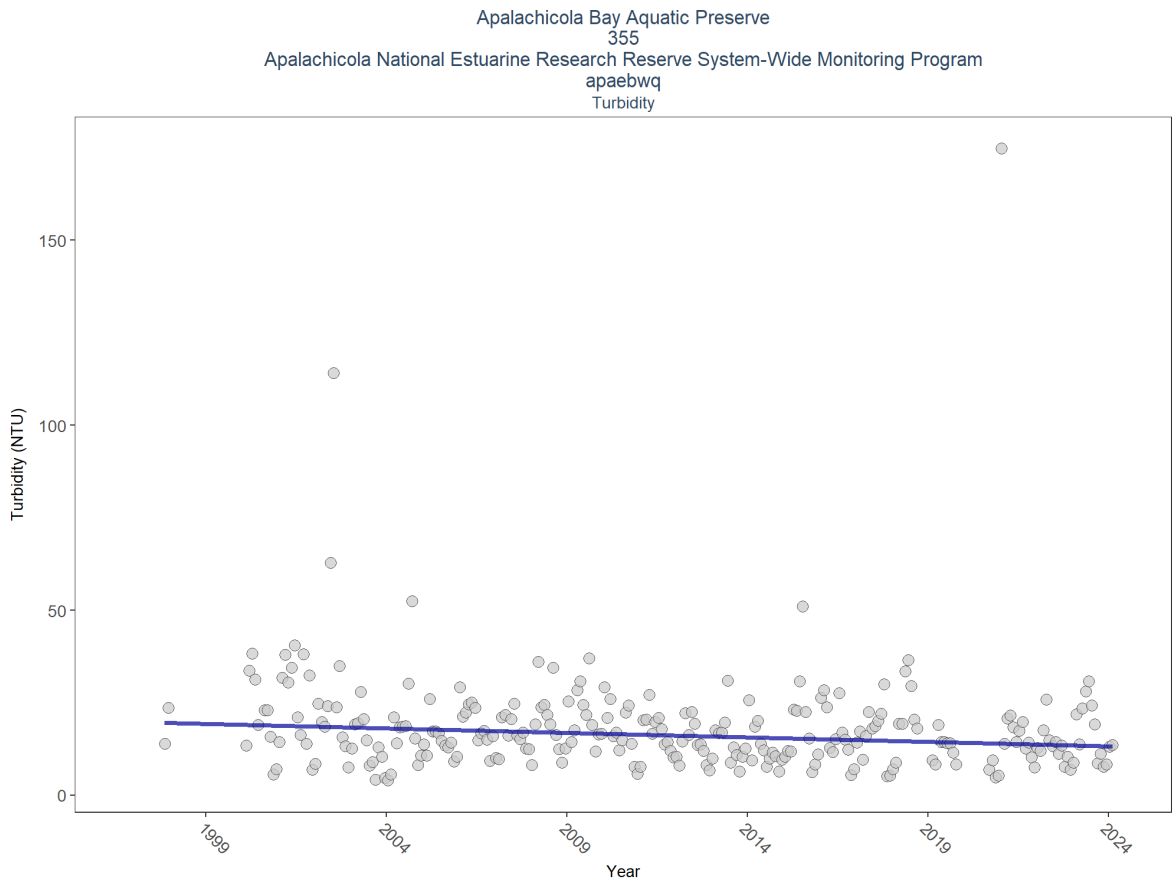


Table 4: Seasonal Kendall-Tau Results for All Stations - Salinity

Station	N_Data	N_Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
apaeswq	725430	30	1995 - 2024	7.5	0.05	7.18	0.03	0.1880
apapcwq	234391	8	2017 - 2024	26.6	-0.03	26.82	-0.02	0.8347
apadbwq	586052	23	2002 - 2024	22.1	-0.03	22.36	-0.04	0.4487
apaebwq	712575	30	1995 - 2024	9.9	0.04	9.50	0.02	0.3779
apalmwq	240151	8	2017 - 2024	0.1	0.18	0.10	0.01	0.0494

Turbidity
apaebwq

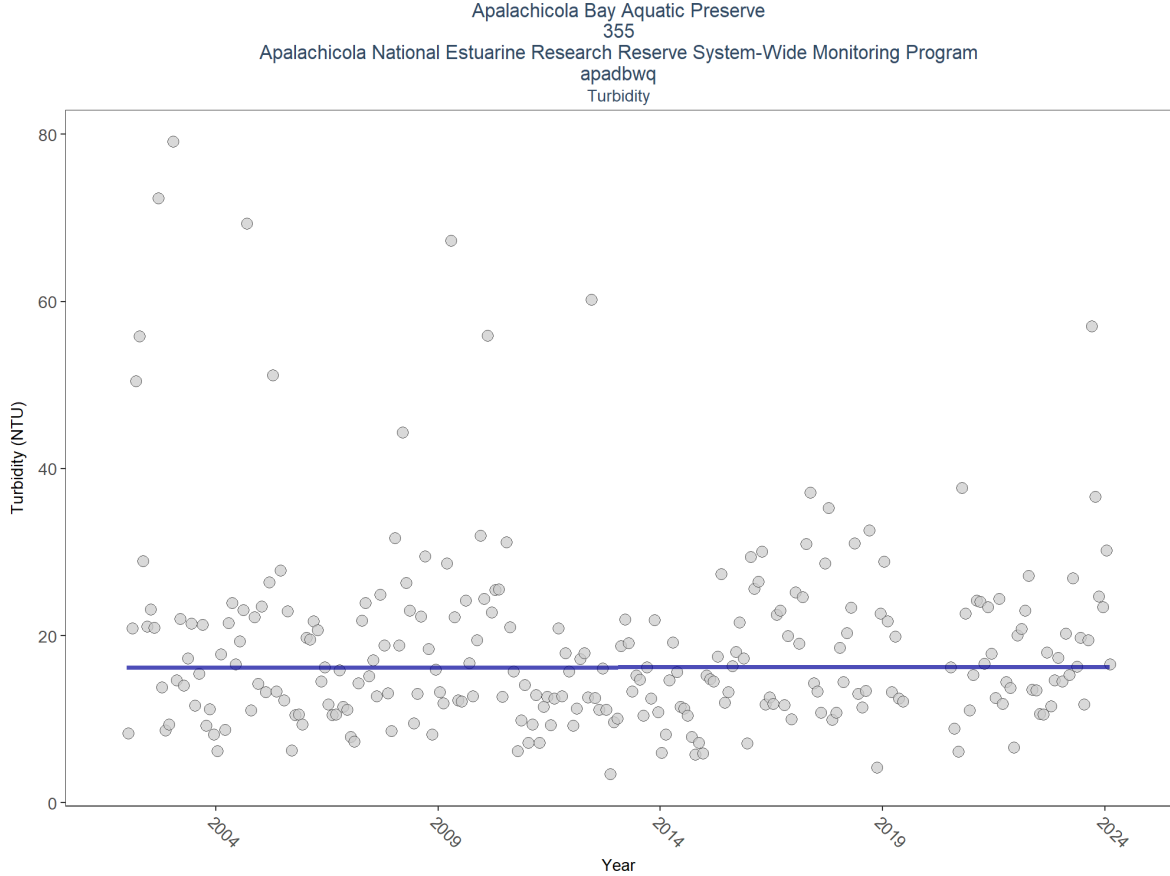


RelativeDepth	N_Data	N_Years	Median	Independent	tau	p	SennSlope	SennIntercept	ChiSquared	pChiSquared	Trend
bottom	601147	26	13	TRUE	-0.2146	0.0000	-0.2390843	19.73698	13.1971	0.2806	-1

p < 0.00005 appear as 0 due to rounding.

*SennIntercept is intercept value at beginning of
record for monitoring location*

apadbwq

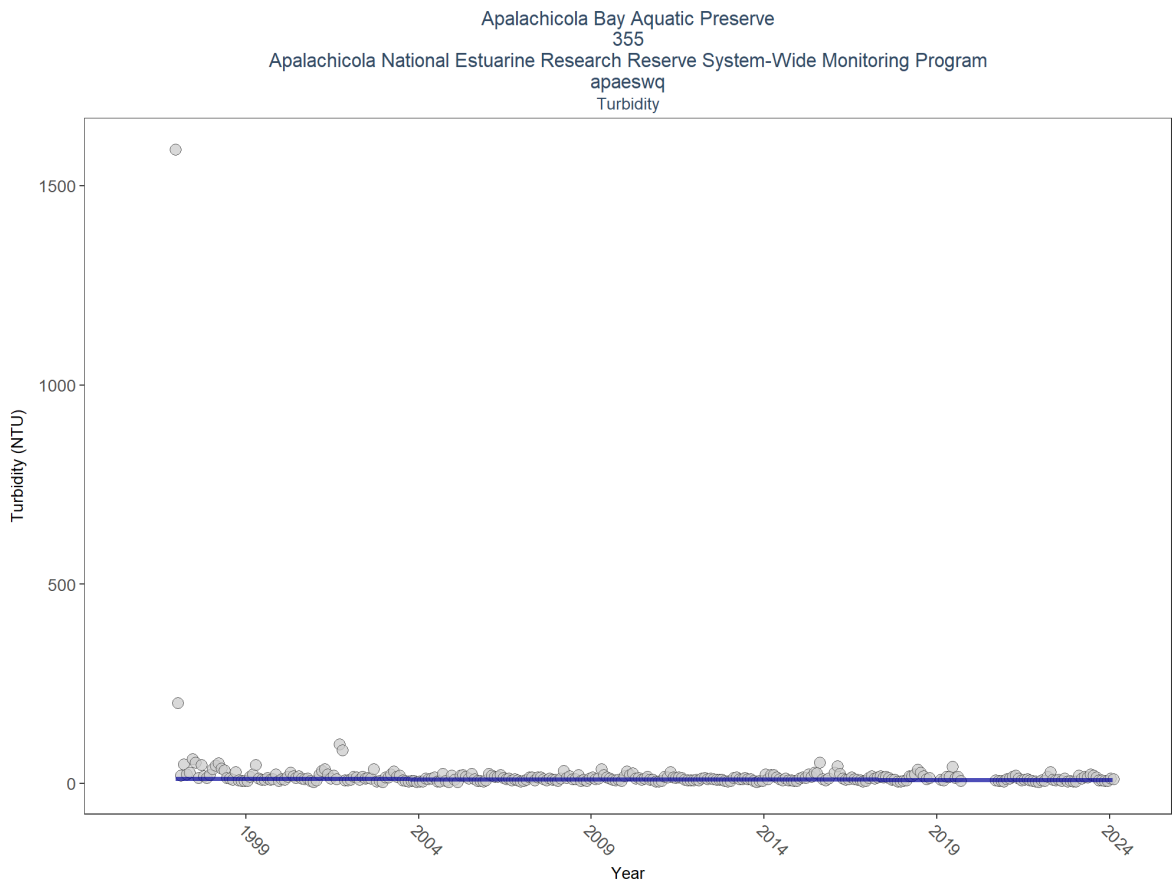


RelativeDepth	N_Data	N_Years	Median	Independent	tau	p	SennSlope	SennIntercept	ChiSquared	pChiSquared	Trend
bottom	575230	23	10	TRUE	0.002	0.9655	0.003647613	16.21442	11.5743	0.3965	0

p < 0.00005 appear as 0 due to rounding.

*SennIntercept is intercept value at beginning of
record for monitoring location*

apaeswq



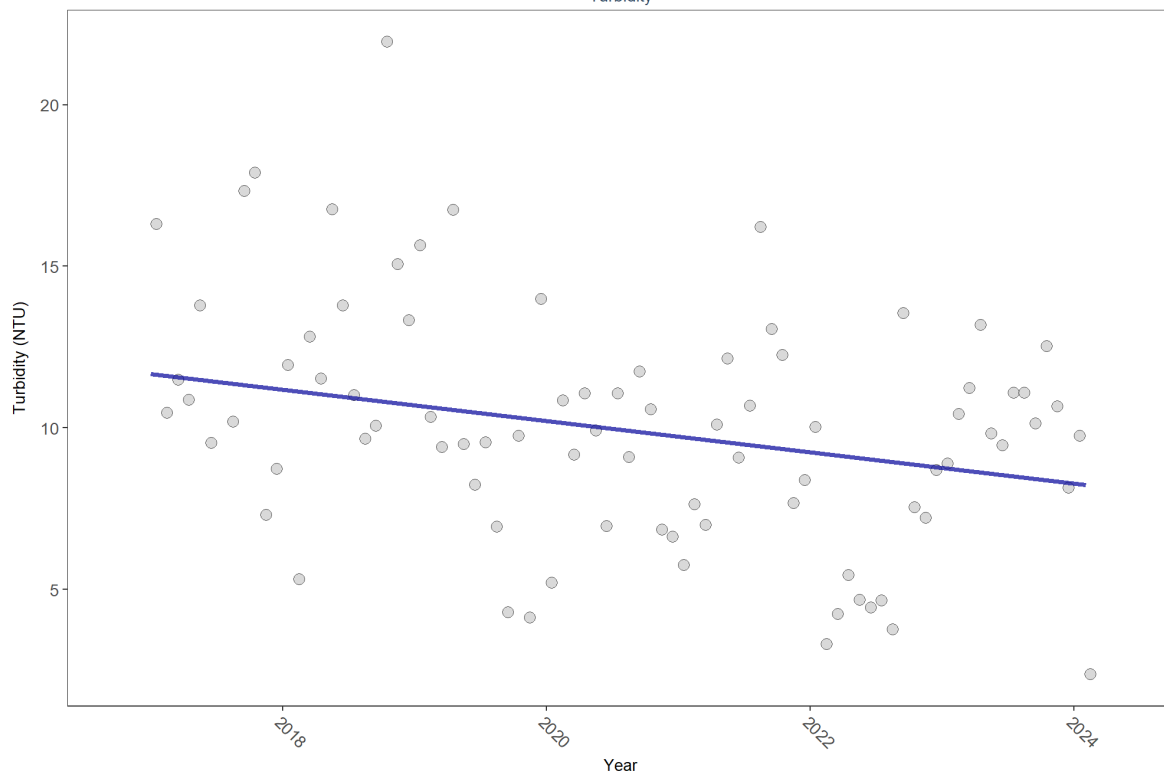
RelativeDepth	N_Data	N_Years	Median	Independent	tau	p	SennSlope	SennIntercept	ChiSquared	pChiSquared	Trend
bottom	669279	29	9	TRUE	-0.1736	0.0000	-0.12673	11.57636	11.4231	0.4085	-1

p < 0.00005 appear as 0 due to rounding.

*SennIntercept is intercept value at beginning of
record for monitoring location*

apapcwq

Apalachicola Bay Aquatic Preserve
355
Apalachicola National Estuarine Research Reserve System-Wide Monitoring Program
apapcwq
Turbidity

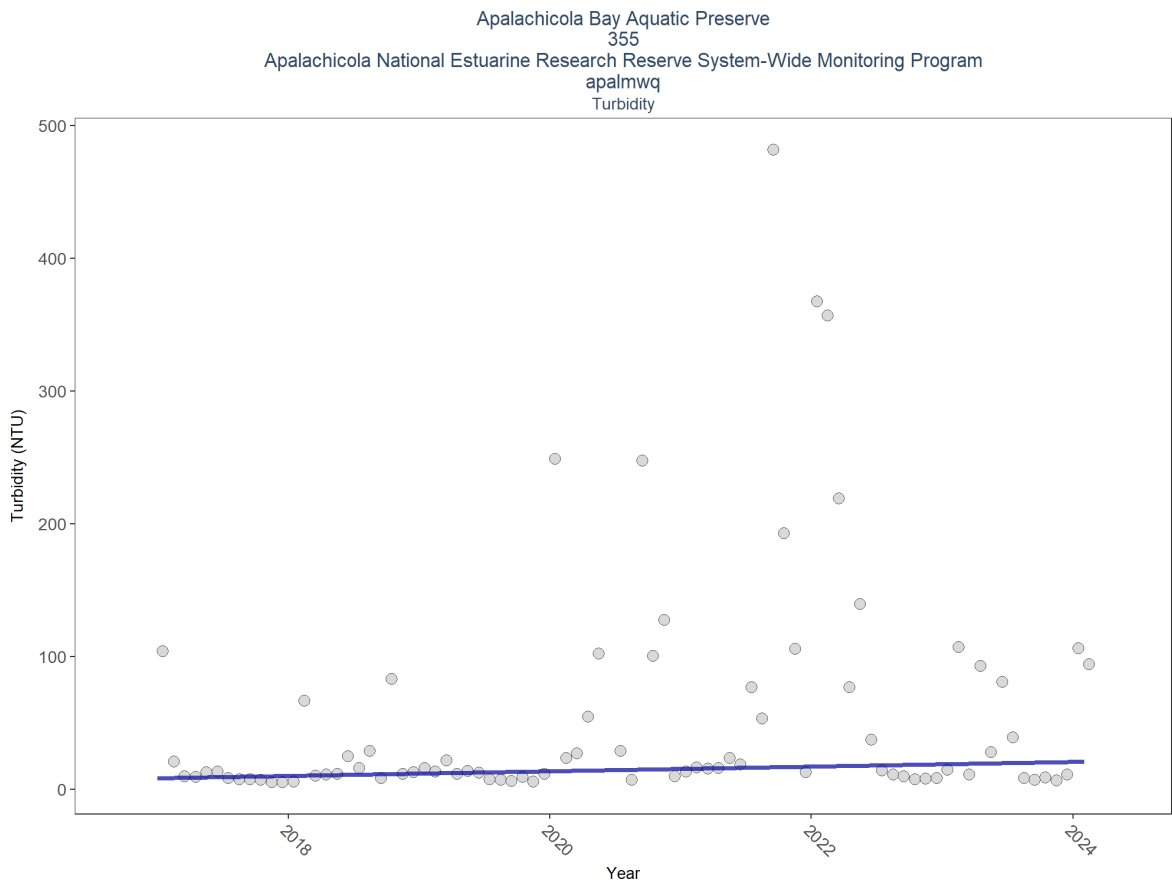


RelativeDepth	N_Data	N_Years	Median	Independent	tau	p	SennSlope	SennIntercept	ChiSquared	pChiSquared	Trend
bottom	223412	8	7	TRUE	-0.2155	0.0158	-0.4837693	11.66961	5.3517	0.9129	-1

$p < 0.00005$ appear as 0 due to rounding.

SennIntercept is intercept value at beginning of record for monitoring location

apalmwq



RelativeDepth	N_Data	N_Years	Median	Independent	tau	p	SennSlope	SennIntercept	ChiSquared	pChiSquared	Trend
bottom	214143	8	12	TRUE	0.3275	0.0004	1.796144	8.067747	8.1173	0.7028	2

p < 0.00005 appear as 0 due to rounding.

*SennIntercept is intercept value at beginning of
record for monitoring location*

All Stations Combined

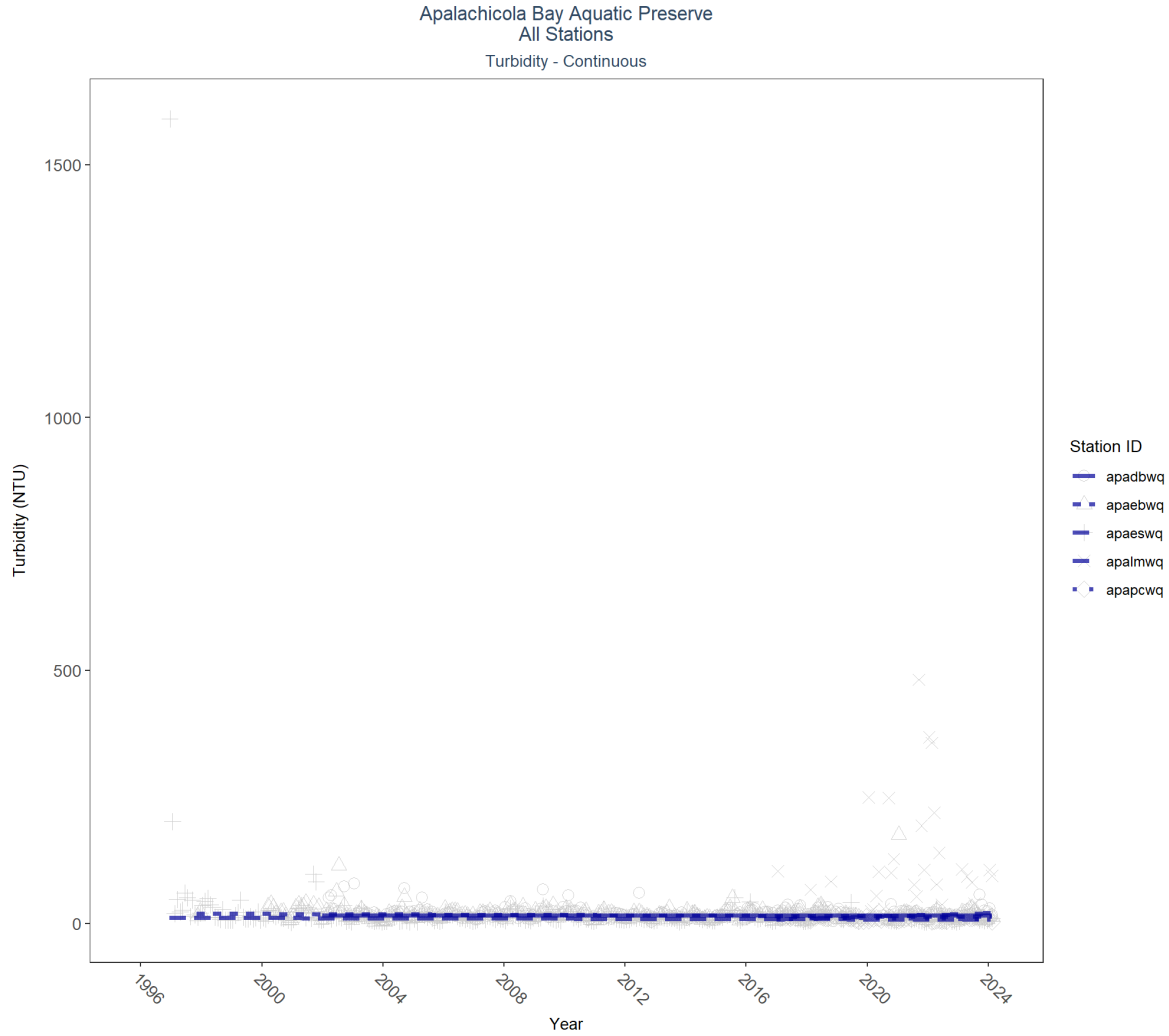
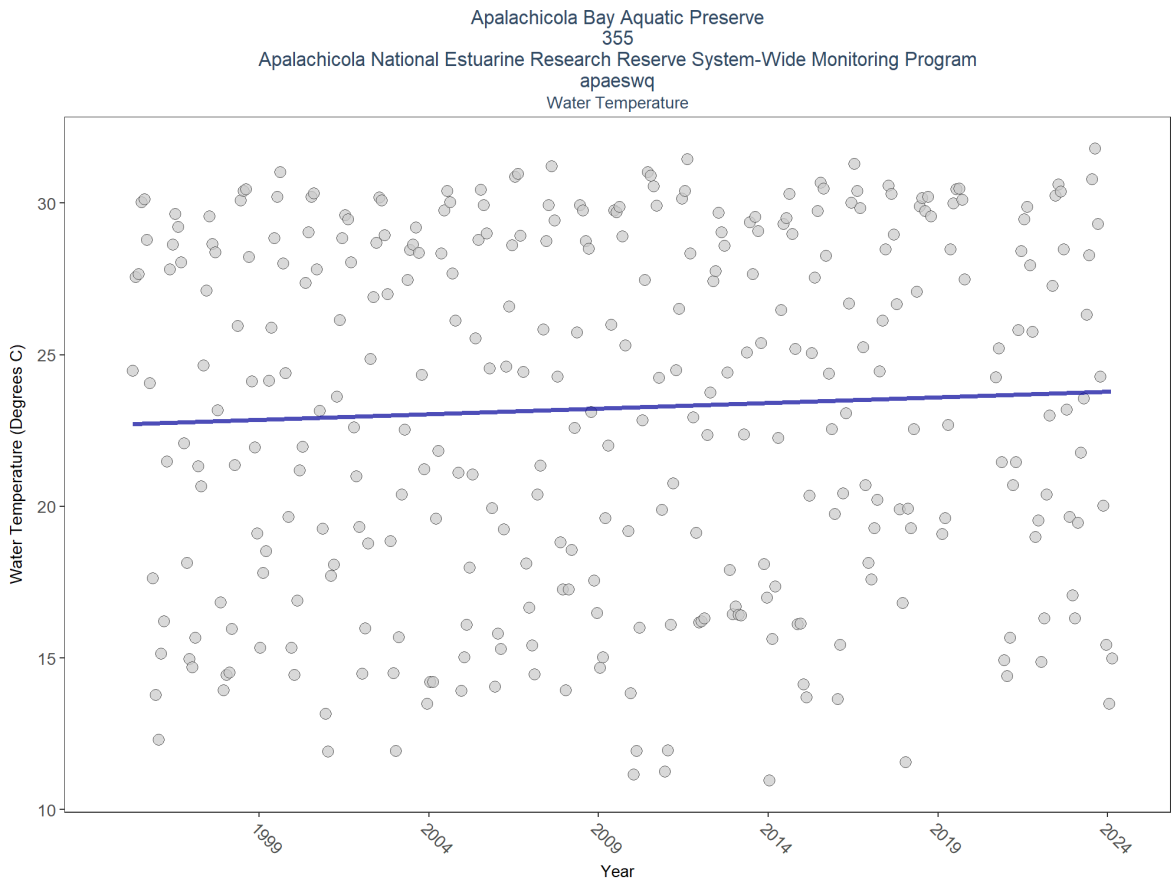


Table 5: Seasonal Kendall-Tau Results for All Stations - Turbidity

Station	N_Data	N_Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
apaebwq	601147	26	1997 - 2024	13	-0.21	19.74	-0.24	0.0000
apadbwq	575230	23	2002 - 2024	10	0.00	16.21	0.00	0.9655
apaeswq	669279	29	1996 - 2024	9	-0.17	11.58	-0.13	0.0000
apapcwq	223412	8	2017 - 2024	7	-0.22	11.67	-0.48	0.0158
apalmwq	214143	8	2017 - 2024	12	0.33	8.07	1.80	0.0004

Water Temperature

apaeswq

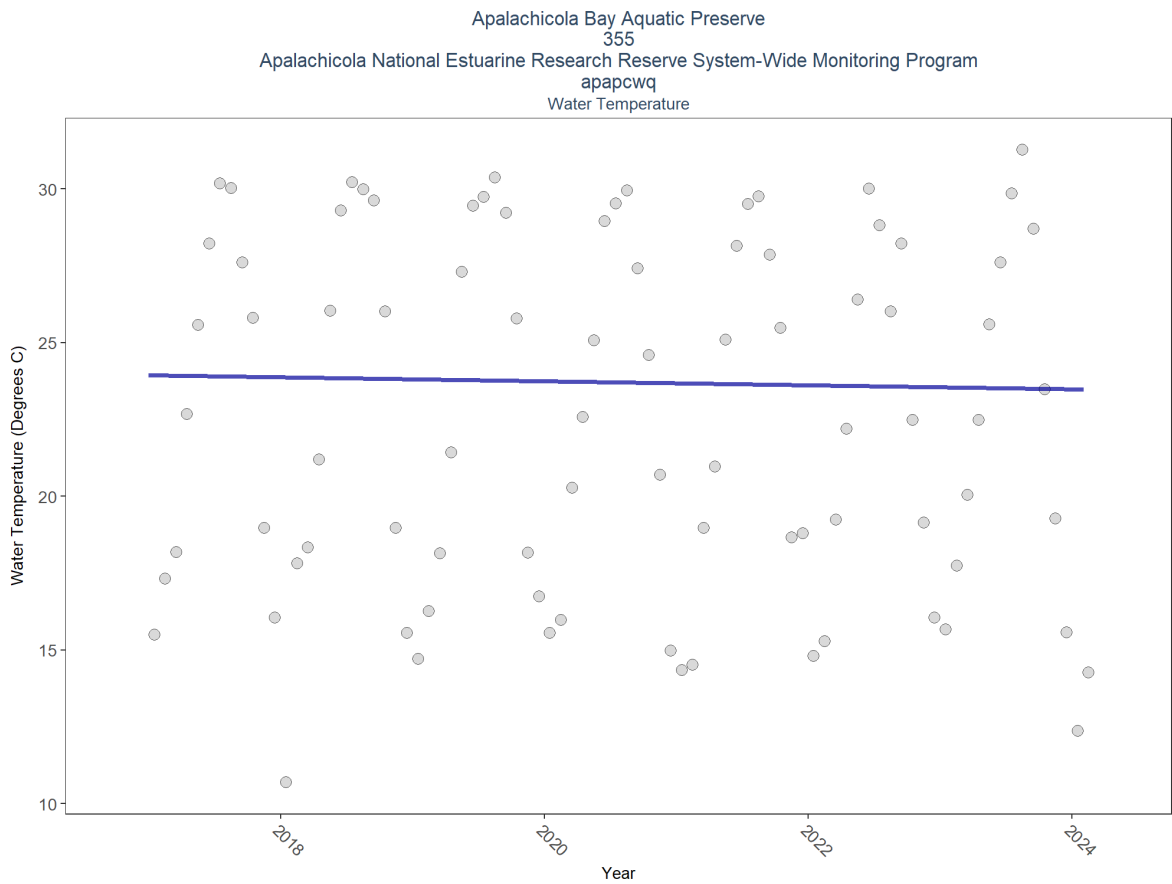


RelativeDepth	N_Data	N_Years	Median	Independent	tau	p	SennSlope	SennIntercept	ChiSquared	pChiSquared	Trend
bottom	734660	30	24.1	TRUE	0.1731	0.0000	0.03686426	22.71664	5.3278	0.9143	1

p < 0.00005 appear as 0 due to rounding.

*SennIntercept is intercept value at beginning of
record for monitoring location*

apapcwq

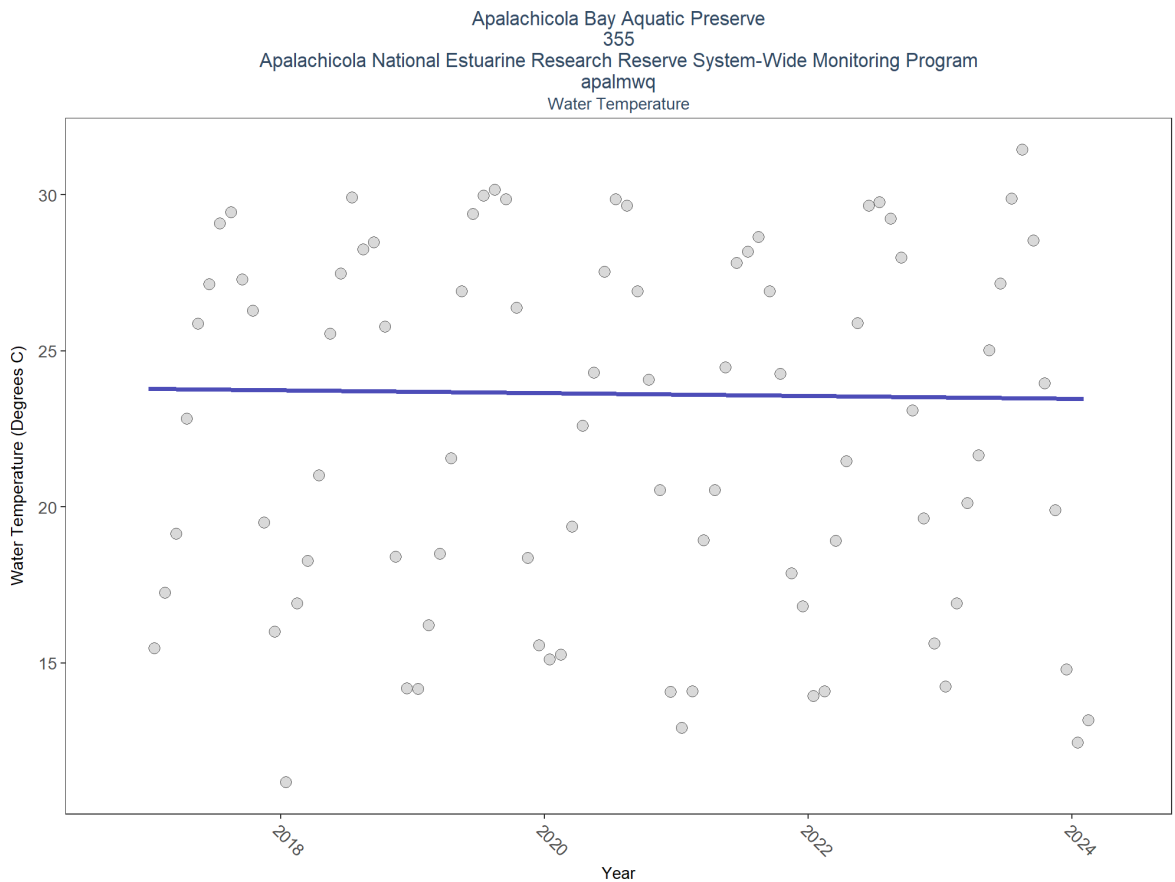


RelativeDepth	N_Data	N_Years	Median	Independent	tau	p	SennSlope	SennIntercept	ChiSquared	pChiSquared	Trend
bottom	237844	8	23	TRUE	-0.1019	0.2598	-0.0631506	23.93469	14.298	0.2169	0

p < 0.00005 appear as 0 due to rounding.

*SennIntercept is intercept value at beginning of
record for monitoring location*

apalmwq

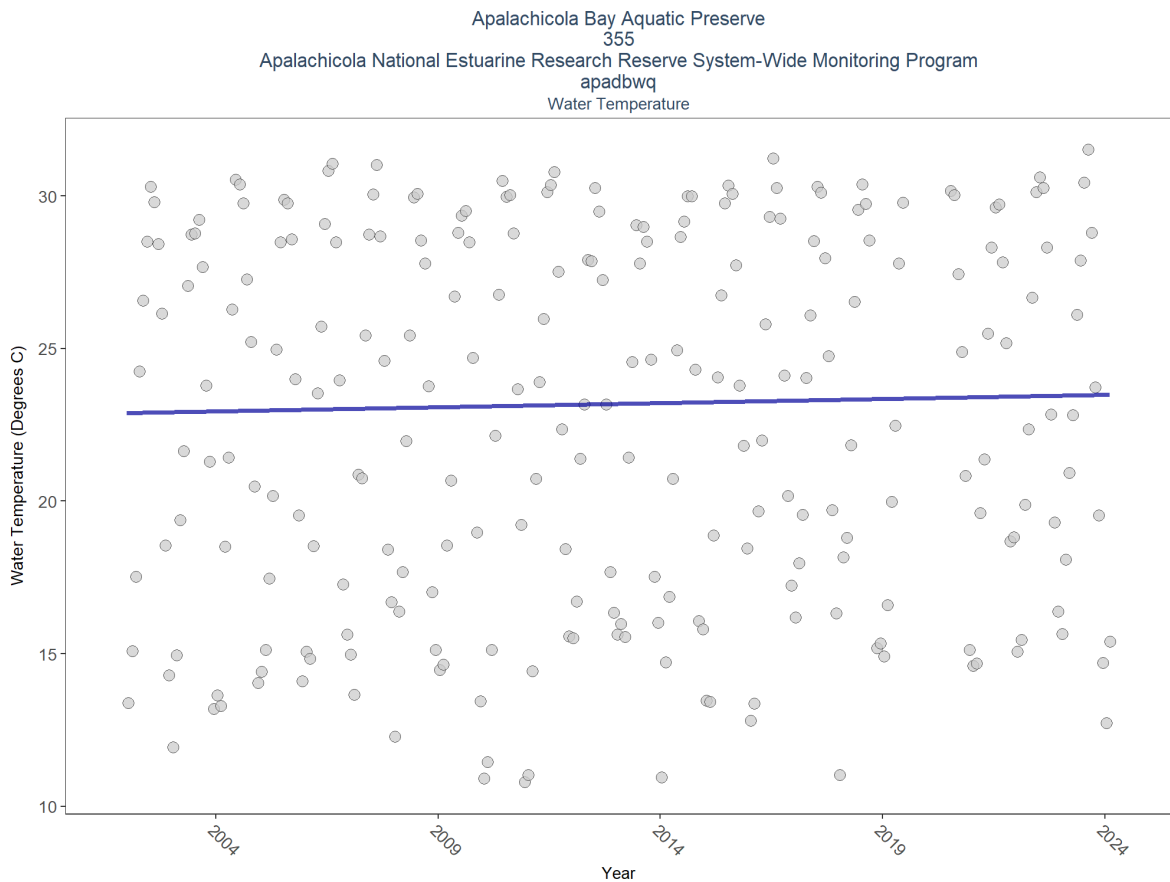


RelativeDepth	N_Data	N_Years	Median	Independent	tau	p	SennSlope	SennIntercept	ChiSquared	pChiSquared	Trend
bottom	240151	8	22.5	TRUE	-0.0709	0.3807	-0.04478551	23.77631	13.5468	0.2591	0

p < 0.00005 appear as 0 due to rounding.

*SennIntercept is intercept value at beginning of
record for monitoring location*

apadbwq

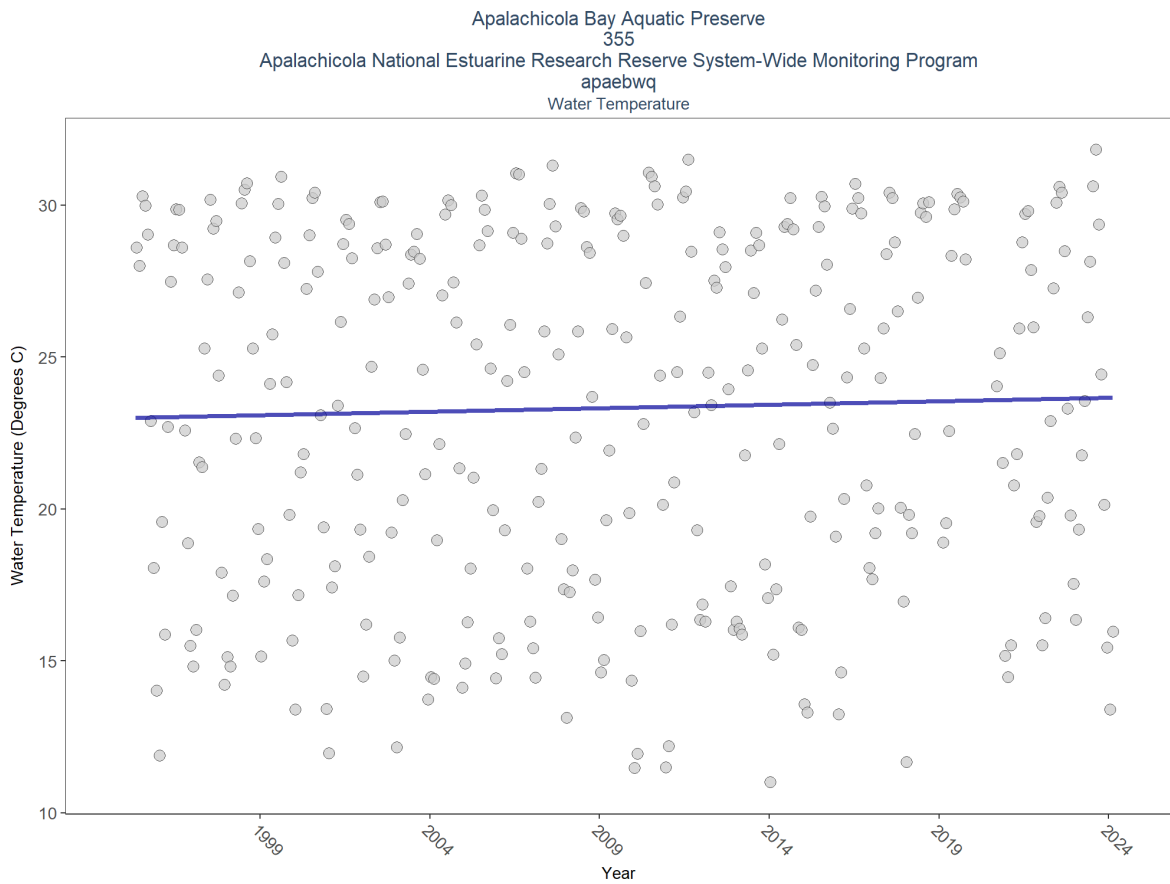


RelativeDepth	N_Data	N_Years	Median	Independent	tau	p	SennSlope	SennIntercept	ChiSquared	pChiSquared	Trend
bottom	611217	23	23.2	TRUE	0.1307	0.0037	0.02751177	22.88535	7.7075	0.7392	1

$p < 0.00005$ appear as 0 due to rounding.

SennIntercept is intercept value at beginning of
record for monitoring location

apaebwq



RelativeDepth	N_Data	N_Years	Median	Independent	tau	p	SennSlope	SennIntercept	ChiSquared	pChiSquared	Trend
bottom	727646	30	24.1	TRUE	0.1304	0.0009	0.02242776	23.00322	4.7759	0.9415	1

$p < 0.00005$ appear as 0 due to rounding.

SennIntercept is intercept value at beginning of
record for monitoring location

All Stations Combined

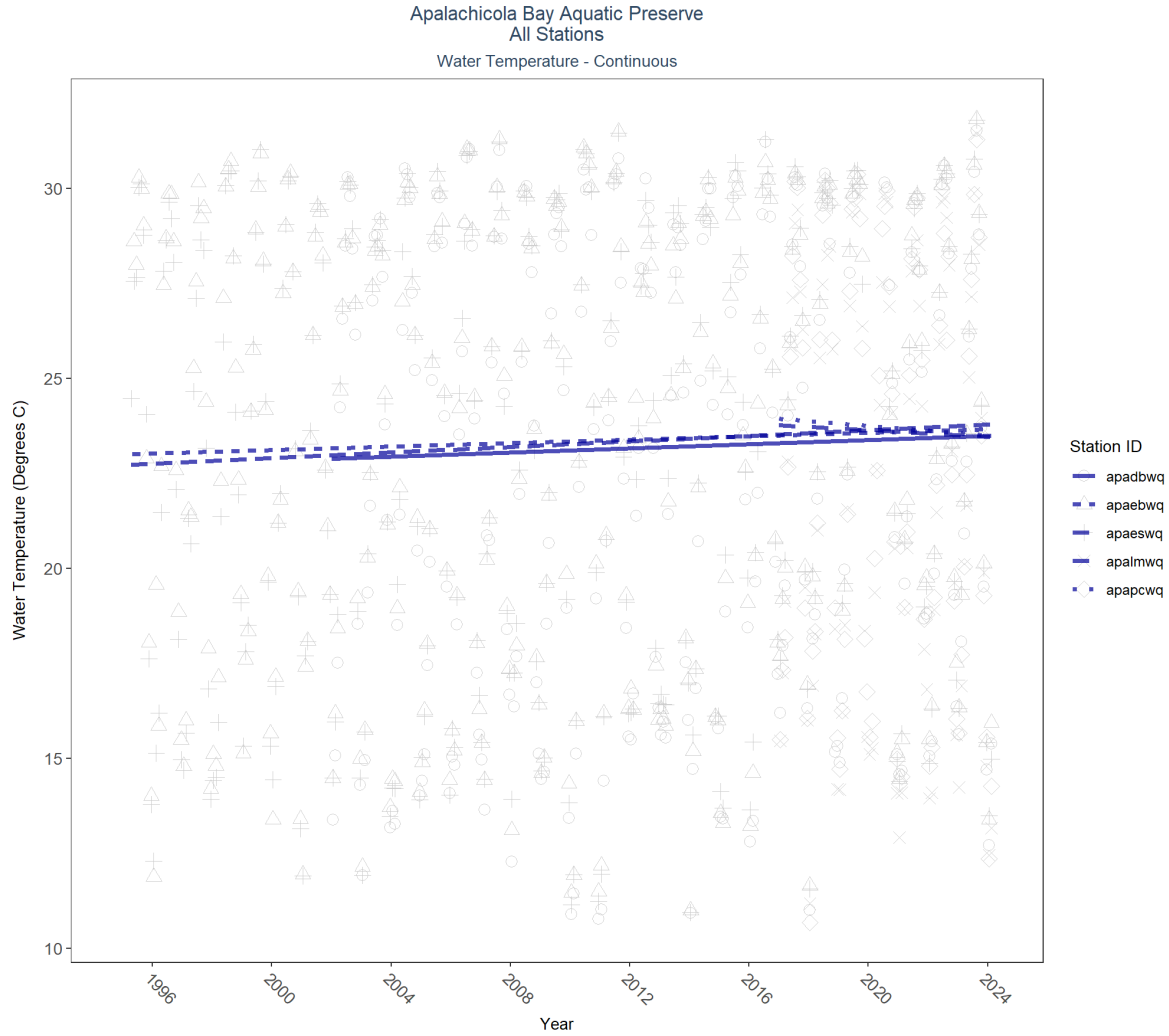


Table 6: Seasonal Kendall-Tau Results for All Stations - Water Temperature

Station	N_Data	N_Years	Period of Record	Median	tau	SennIntercept	SennSlope	p
apaeswq	734660	30	1995 - 2024	24.1	0.17	22.72	0.04	0.0000
apapcwq	237844	8	2017 - 2024	23.0	-0.10	23.93	-0.06	0.2598
apalmwq	240151	8	2017 - 2024	22.5	-0.07	23.78	-0.04	0.3807
apadbwq	611217	23	2002 - 2024	23.2	0.13	22.89	0.03	0.0037
apaebwq	727646	30	1995 - 2024	24.1	0.13	23.00	0.02	0.0009