

# Florida Keys National Marine Sanctuary

## SEACAR Water Quality Analysis

Last compiled on 18 March, 2025

### Contents

<b>Indicators</b>	<b>2</b>
Nutrients . . . . .	2
Total Nitrogen - Discrete . . . . .	2
Total Phosphorus - Discrete . . . . .	4
Water Quality . . . . .	6
Dissolved Oxygen - Discrete . . . . .	6
Dissolved Oxygen - Continuous . . . . .	8
Dissolved Oxygen Saturation - Discrete . . . . .	10
Dissolved Oxygen Saturation - Continuous . . . . .	12
Salinity - Discrete . . . . .	14
Salinity - Continuous . . . . .	16
Water Temperature - Discrete . . . . .	18
Water Temperature - Continuous . . . . .	19
pH - Discrete . . . . .	37
pH - Continuous . . . . .	39
Water Clarity . . . . .	41
Turbidity - Discrete . . . . .	41
Turbidity - Continuous . . . . .	43
Total Suspended Solids - Discrete . . . . .	45
Chlorophyll a, Uncorrected for Pheophytin - Discrete . . . . .	47
Chlorophyll a, Corrected for Pheophytin - Discrete . . . . .	49
Secchi Depth - Discrete . . . . .	51
Colored Dissolved Organic Matter - Discrete . . . . .	53

# Indicators

## Nutrients

### Total Nitrogen - Discrete

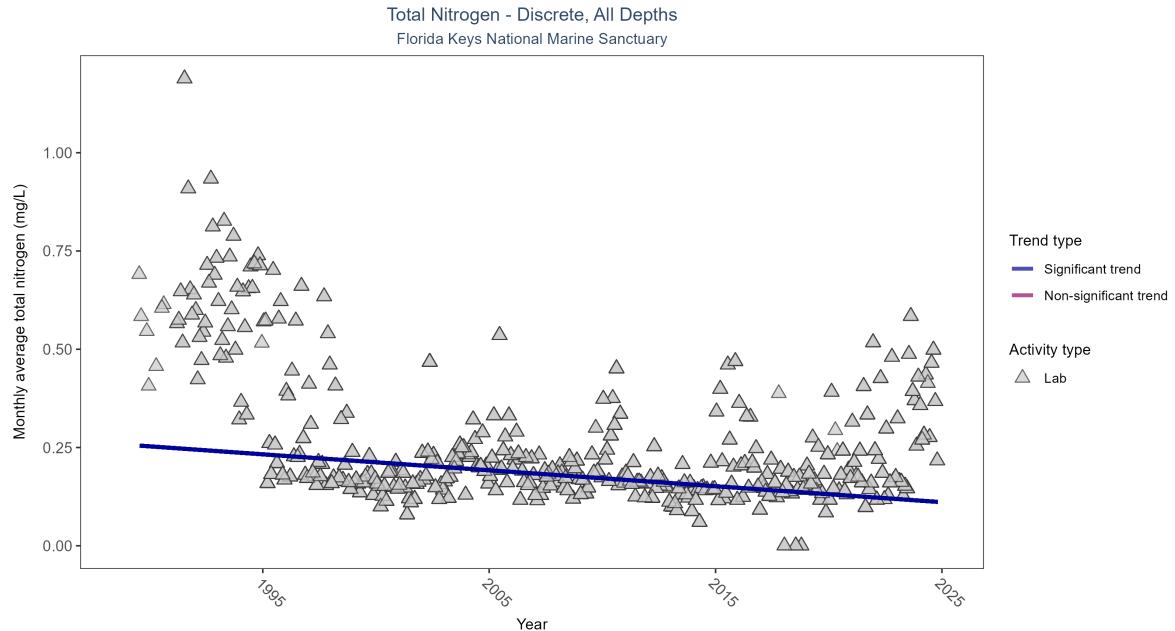
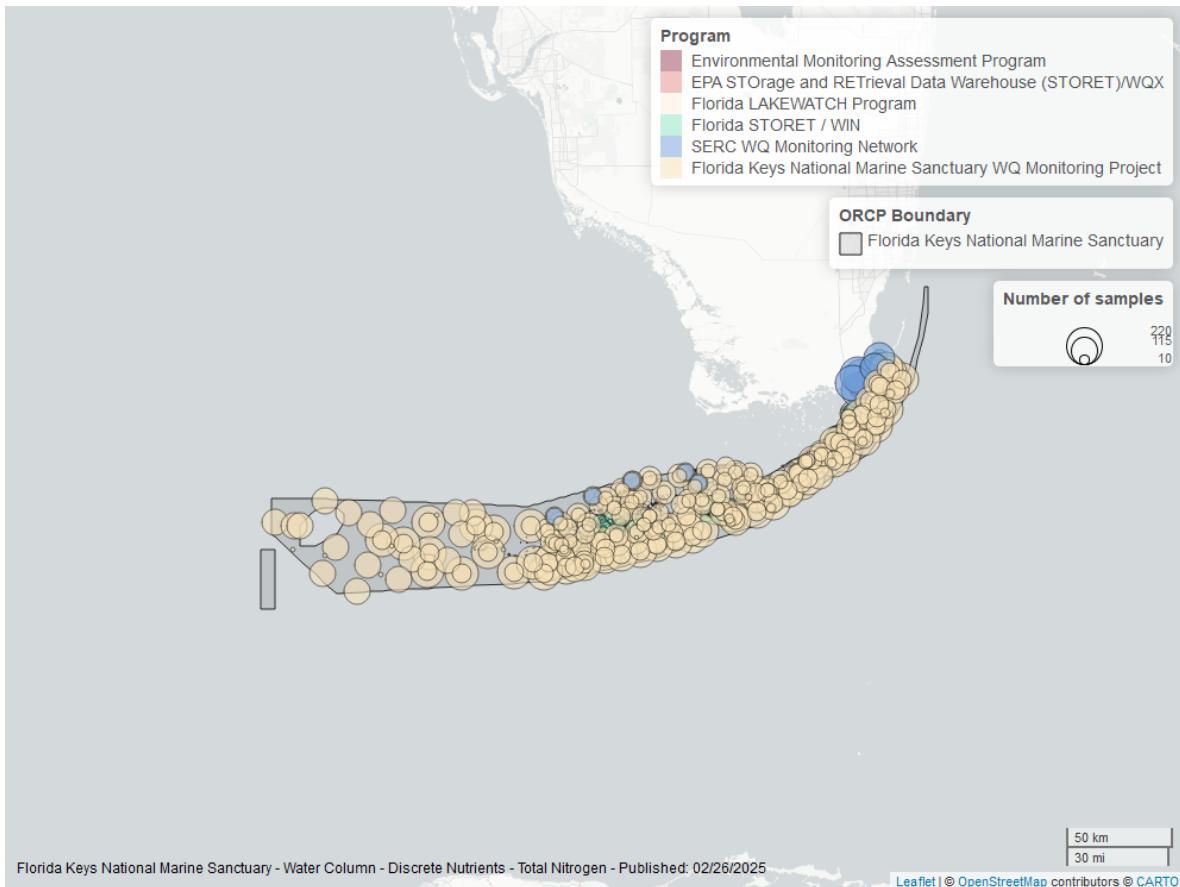


Table 1: Seasonal Kendall-Tau Results for - Total Nitrogen

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	Significantly decreasing trend	34570	36	1989 - 2024	0.14596	-0.26314	0.25701	-0.00406	0.00000000000005619156512641764



## Total Phosphorus - Discrete

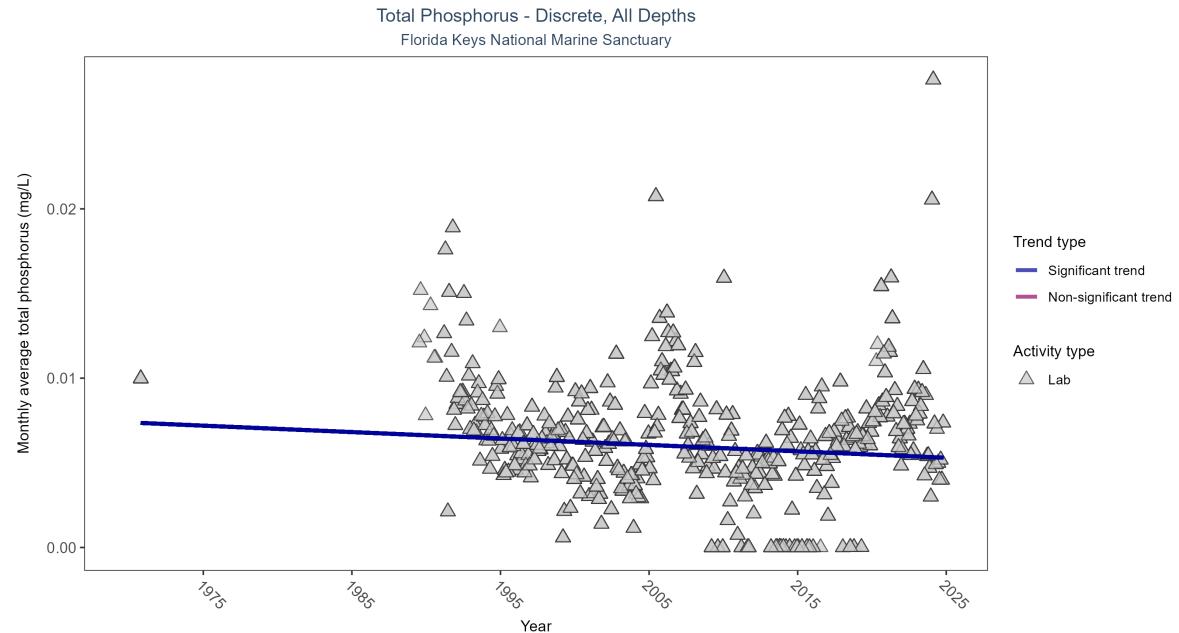
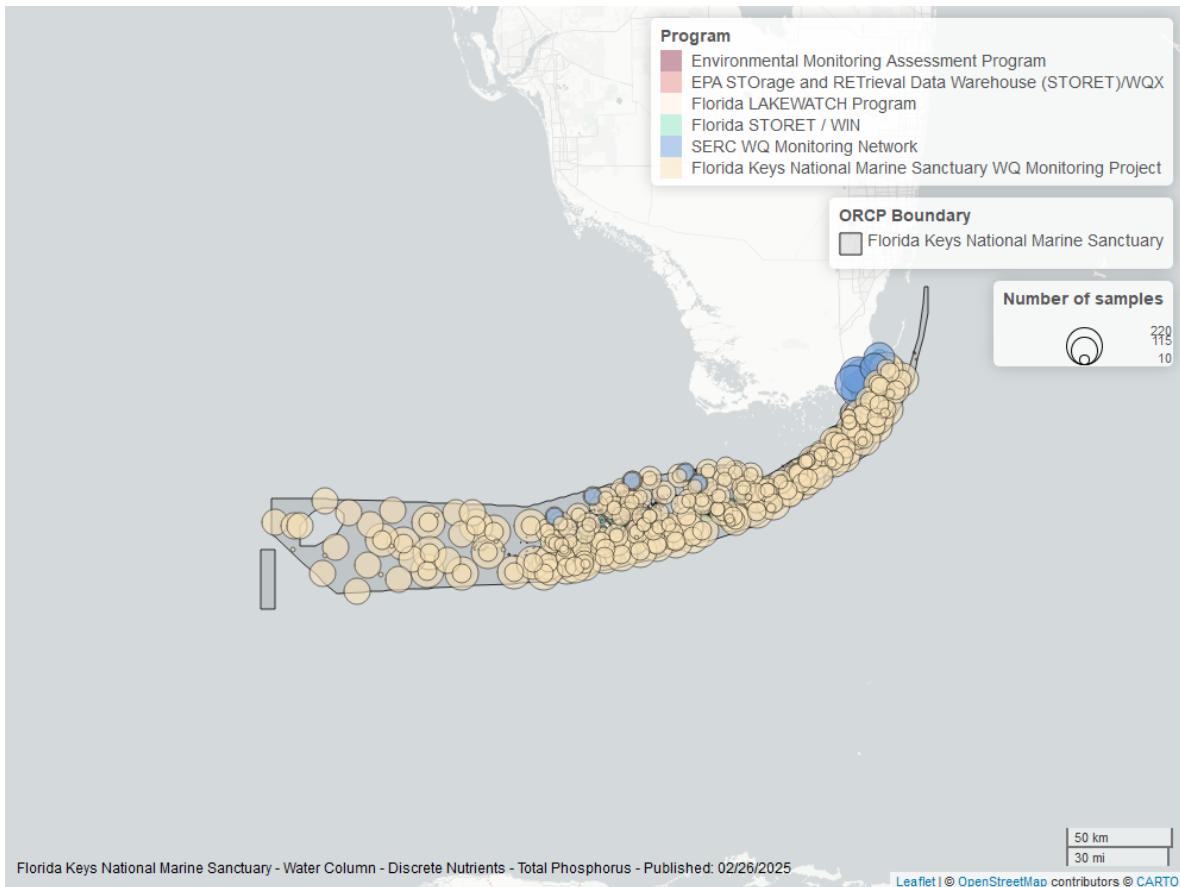


Table 2: Seasonal Kendall-Tau Results for - Total Phosphorus

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	Significantly decreasing trend	32282	37	1970 - 2024	0.00589	-0.08648	0.00738	-0.00004	0.01249065921005325895121185197922386578284204006195068359375000000



## Water Quality

### Dissolved Oxygen - Discrete

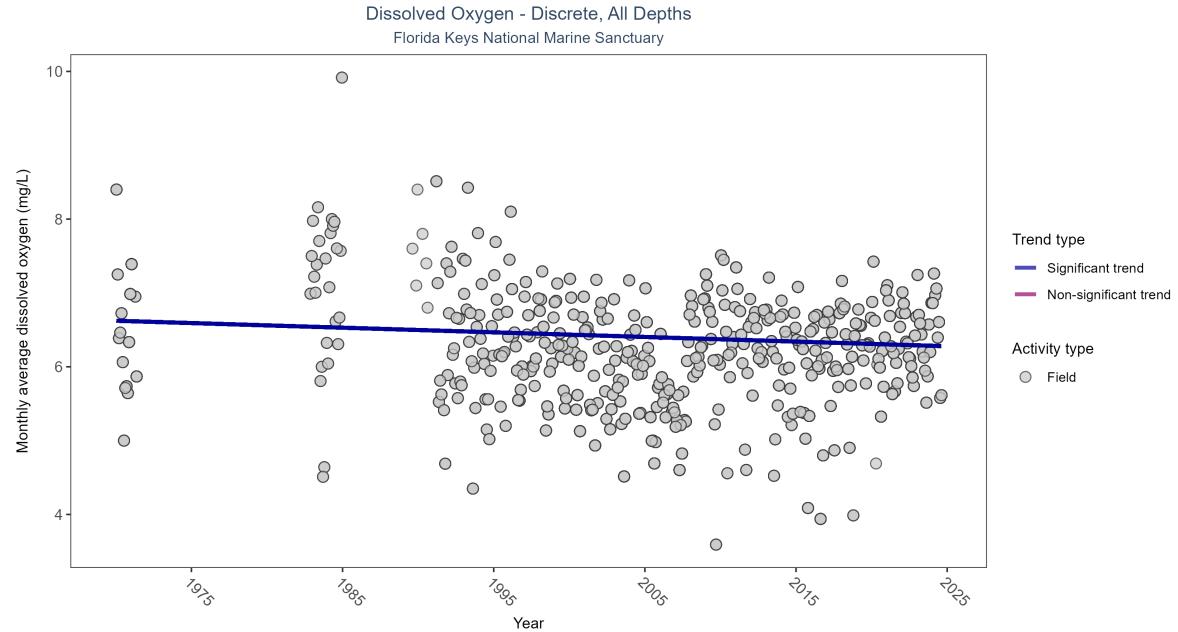
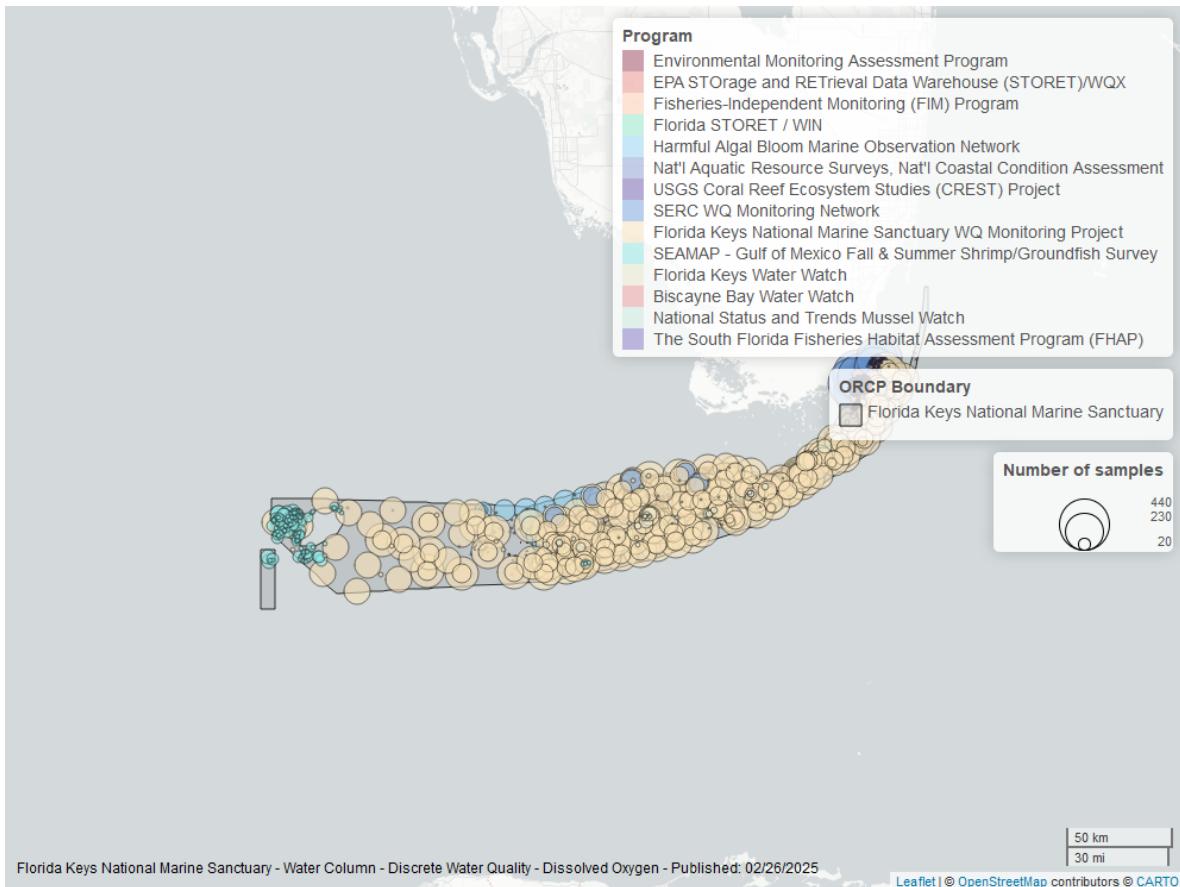


Table 3: Seasonal Kendall-Tau Results for - Dissolved Oxygen

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Field	Significantly decreasing trend	47232	41	1970 - 2024	6.3	-0.09121	6.62346	-0.00628	0.00507132510270411



## Dissolved Oxygen - Continuous

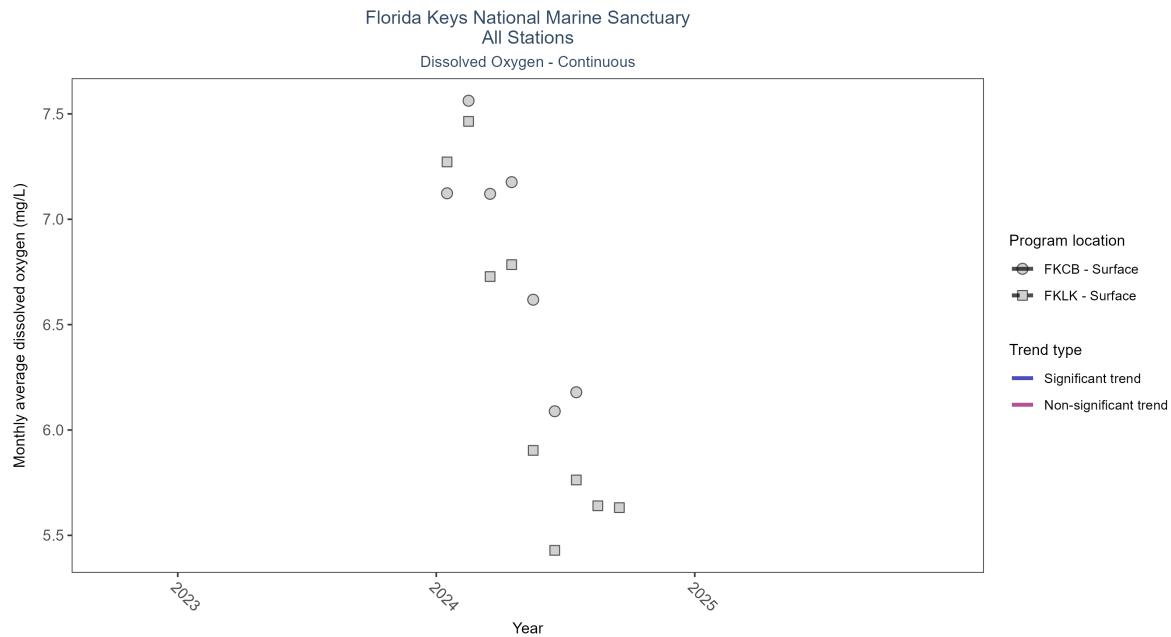
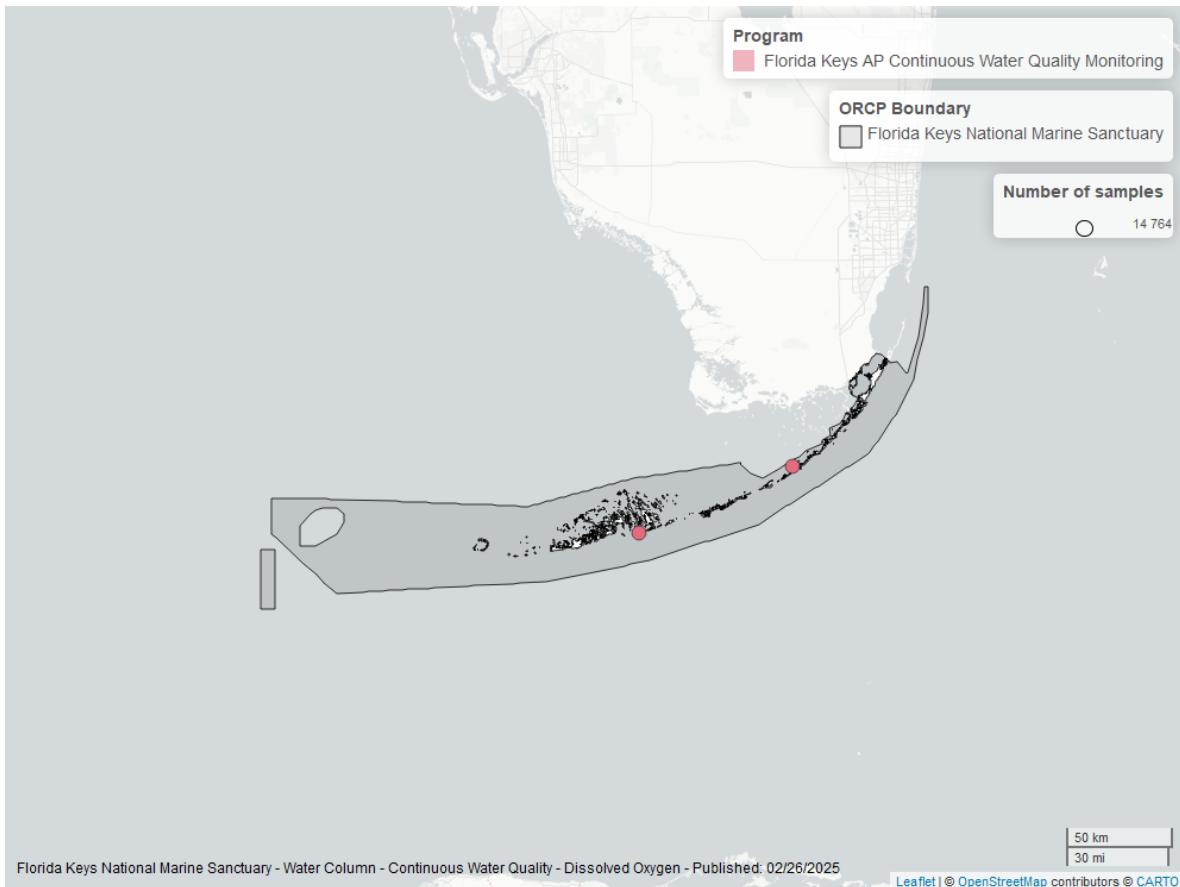


Table 4: Seasonal Kendall-Tau Results for All Stations - Dissolved Oxygen

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
FKLK	Insufficient data to calculate trend	21525	1	2024 - 2024	6.2	-	-	-	NA
FKCB	Insufficient data to calculate trend	16262	1	2024 - 2024	6.8	-	-	-	NA



## Dissolved Oxygen Saturation - Discrete

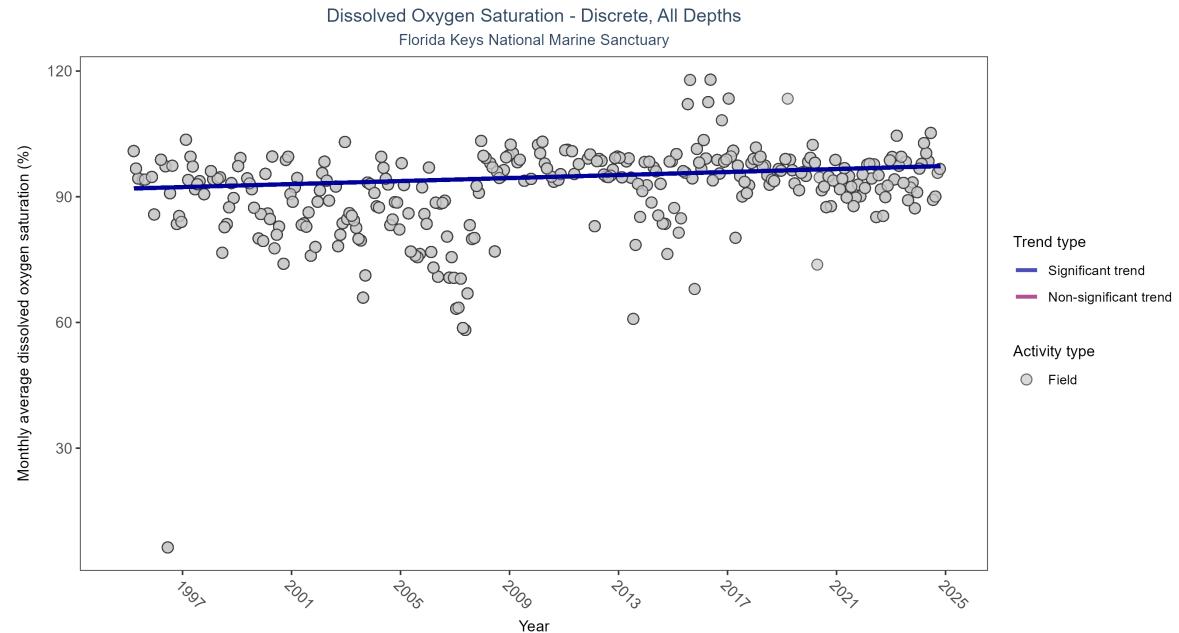
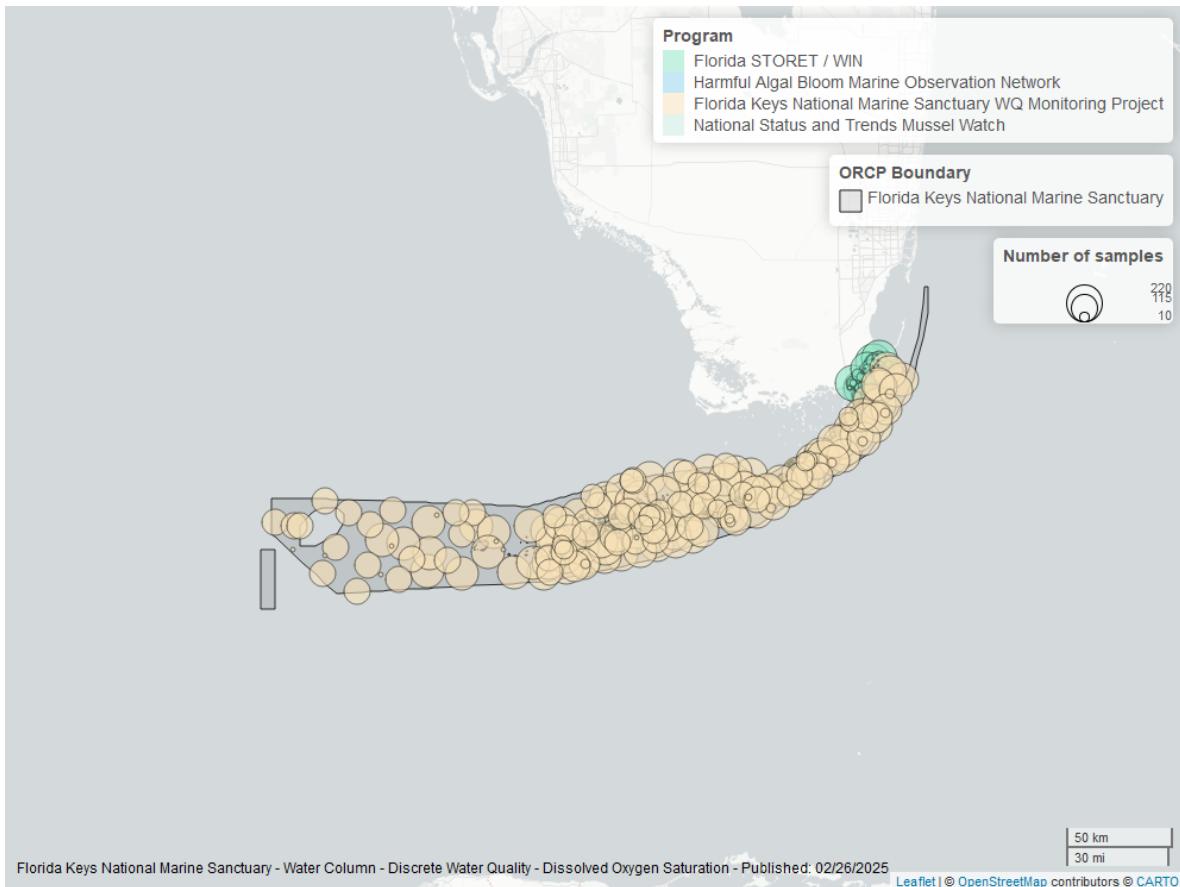


Table 5: Seasonal Kendall-Tau Results for - Dissolved Oxygen Saturation

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Field	Significantly increasing trend	29283	30	1995 - 2024	94.77311	0.19222	91.94411	0.17995	0.000003424186759161166766600448152502167431521229445934295654296875000000



## Dissolved Oxygen Saturation - Continuous

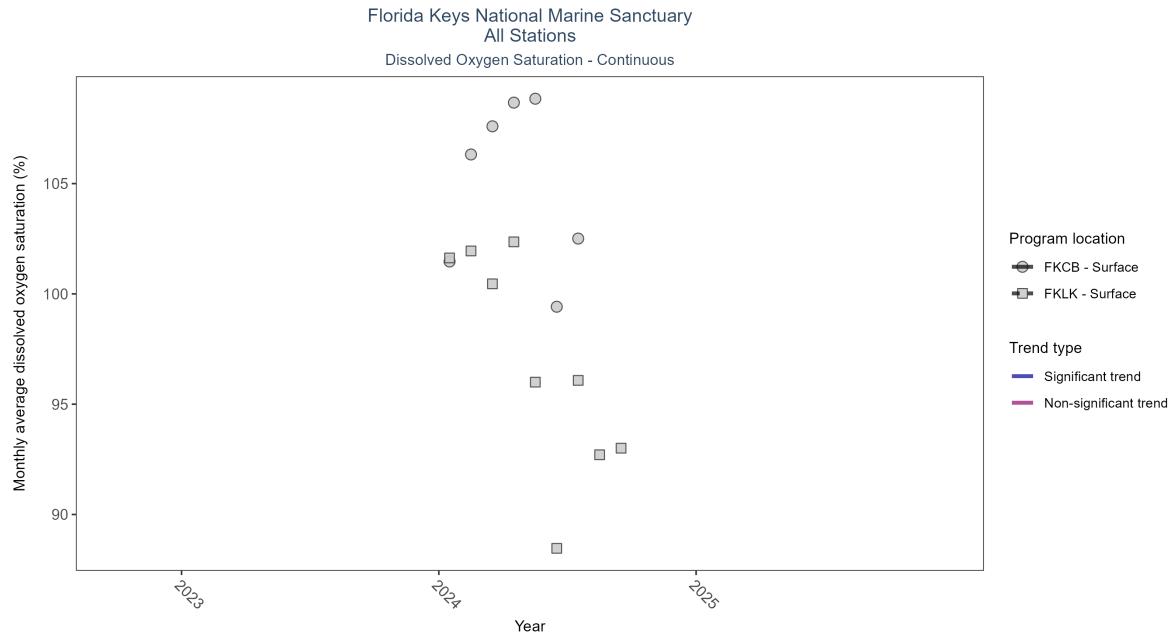


Table 6: Seasonal Kendall-Tau Results for All Stations - Dissolved Oxygen Saturation

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
FKLK	Insufficient data to calculate trend	21525	1	2024 - 2024	91.9	-	-	-	NA
FKCB	Insufficient data to calculate trend	16263	1	2024 - 2024	103.3	-	-	-	NA



## Salinity - Discrete

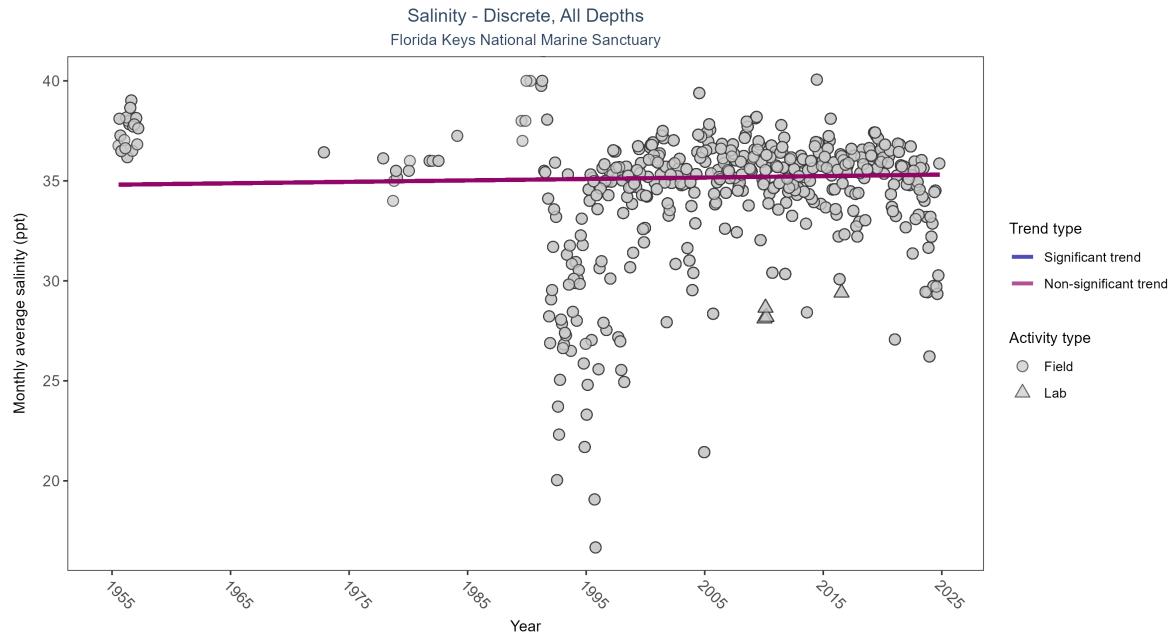
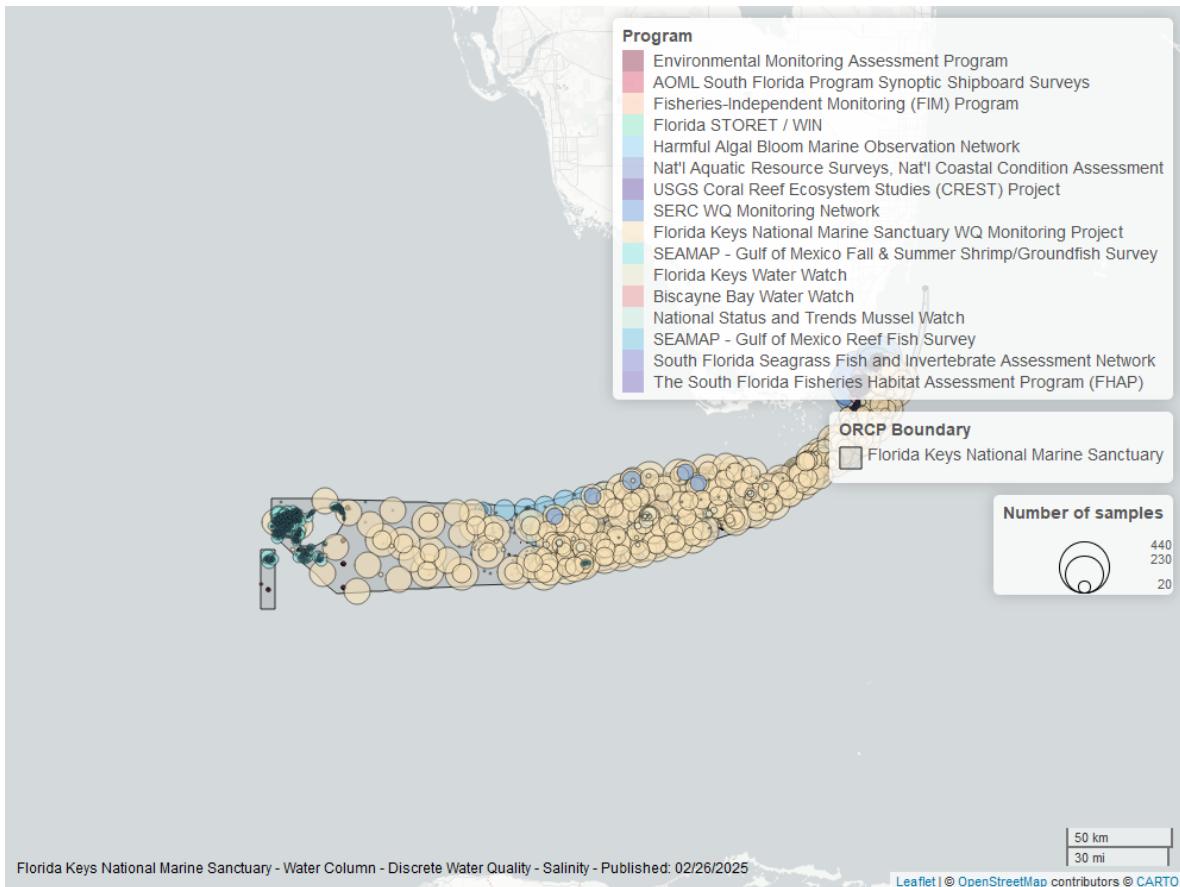


Table 7: Seasonal Kendall-Tau Results for - Salinity

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
All	No significant trend	54590	47	1955 - 2024	36.19	0.0275	34.80624	0.00723	0.43443303895182916463113542704377323389053344727



## Salinity - Continuous

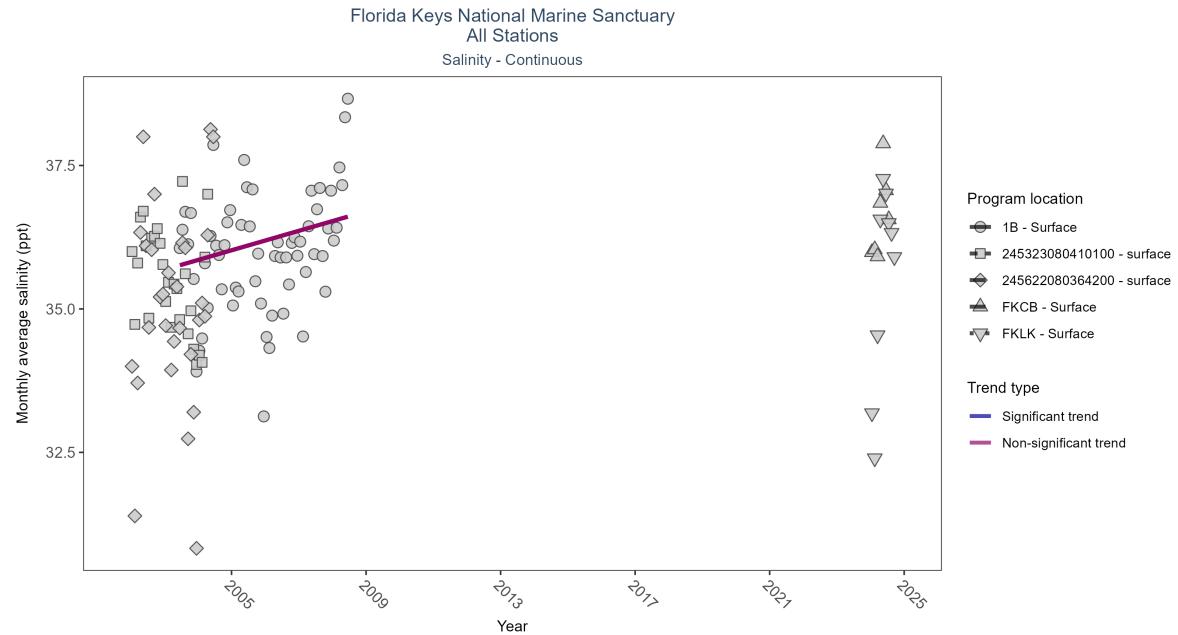
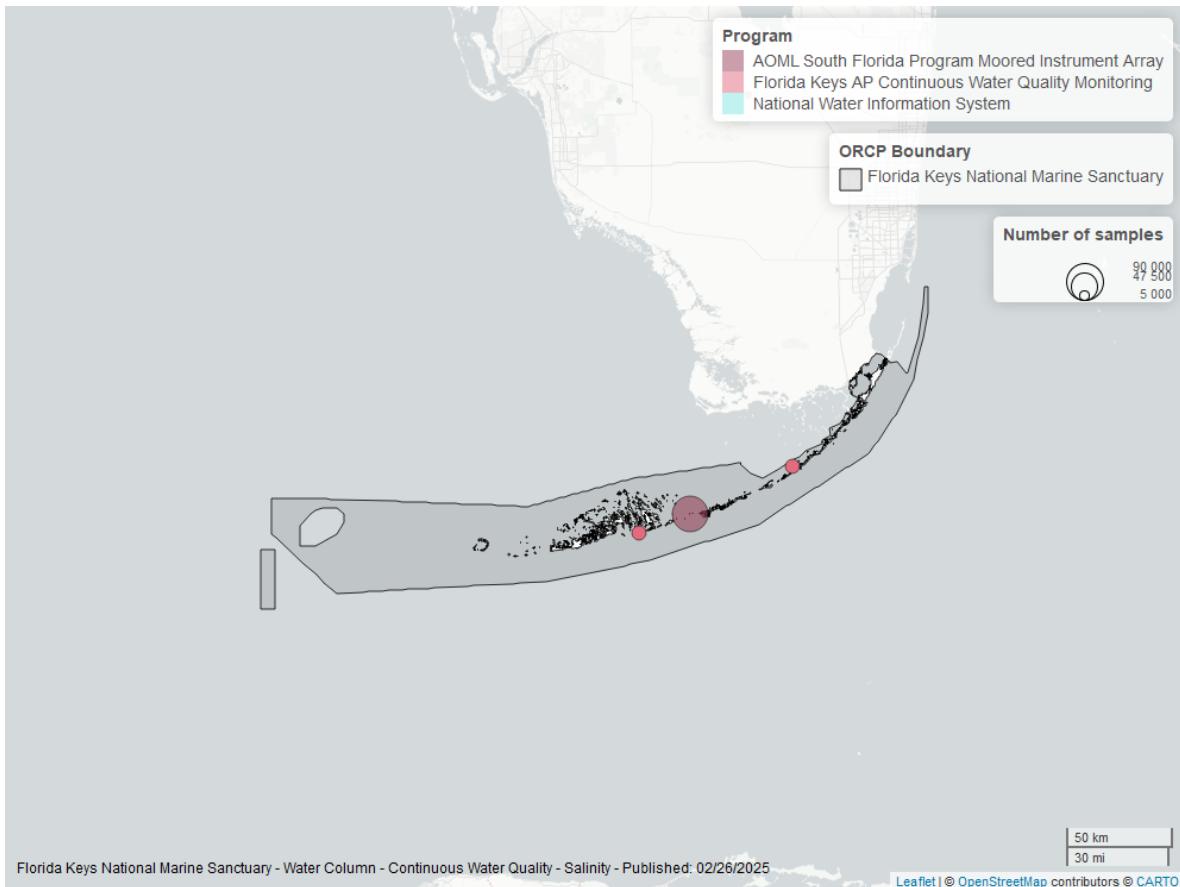


Table 8: Seasonal Kendall-Tau Results for All Stations - Salinity

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
1B	No significant trend	86204	6	2003 - 2008	36.07	0.24	35.68	0.17	0.05428424
245323080410100	Insufficient data to calculate trend	746	3	2002 - 2004	35.00	-	-	-	NA
245622080364200	Insufficient data to calculate trend	764	3	2002 - 2004	35.00	-	-	-	NA
FKLK	Insufficient data to calculate trend	21517	1	2024 - 2024	36.10	-	-	-	NA
FKCB	Insufficient data to calculate trend	16258	1	2024 - 2024	36.50	-	-	-	NA



## Water Temperature - Discrete

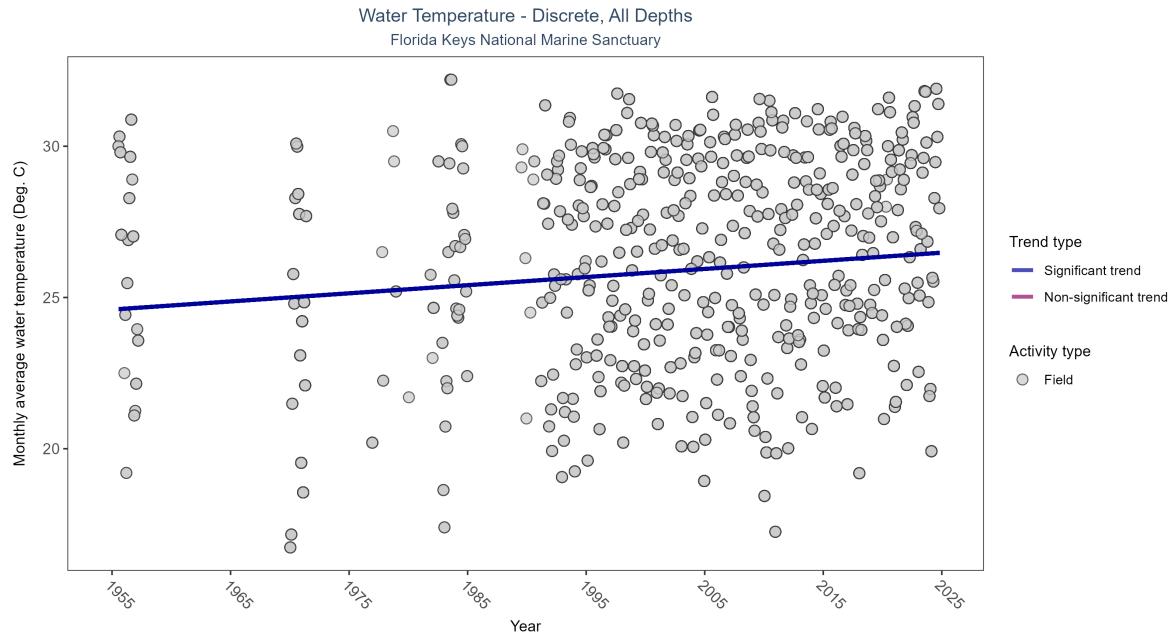
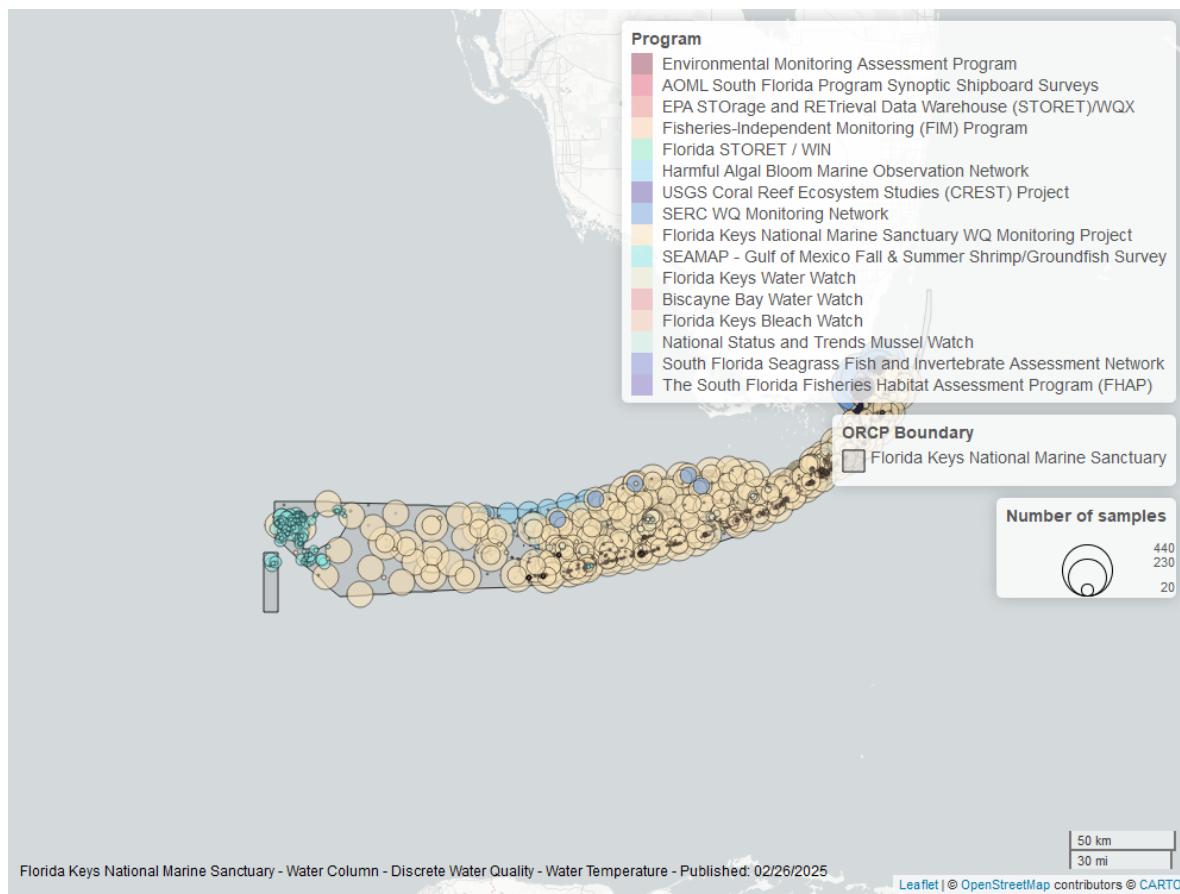


Table 9: Seasonal Kendall-Tau Results for - Water Temperature

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Field	Significantly increasing trend	53391	49	1955 - 2024	27.1769	0.22467	24.60065	0.02686	0.00000000001438125



### Water Temperature - Continuous

Atlantic Oceanographic and Meteorological Laboratory (AOML) South Florida Program  
Moored Instrument Array - 2

Florida Keys National Marine Sanctuary  
 Atlantic Oceanographic and Meteorological Laboratory (AOML) South Florida Program Moored Instrument Array  
 ProgramID: 2  
 Water Temperature - Continuous

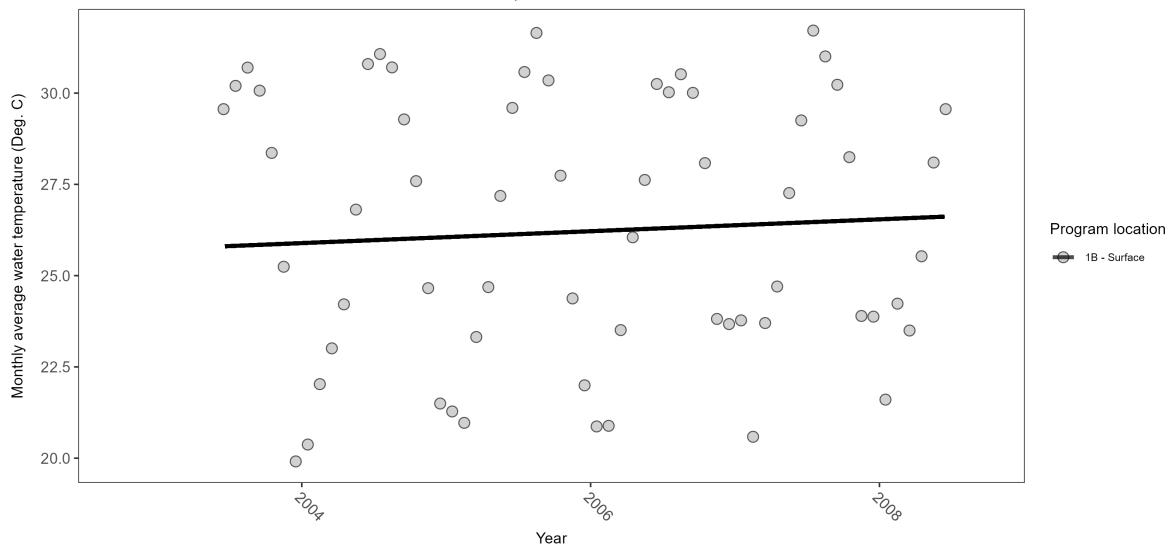
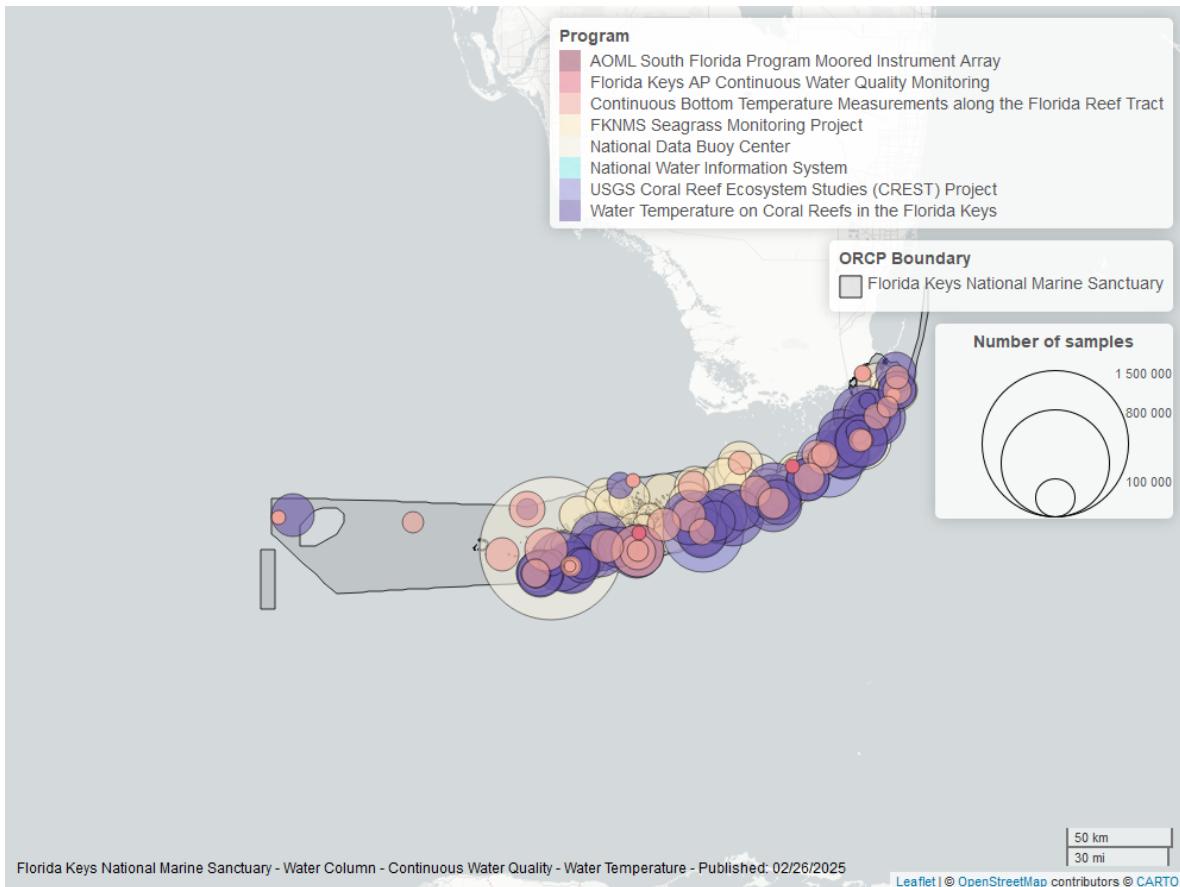


Table 10: Seasonal Kendall-Tau Results for All Stations - Water Temperature

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
1B	Significantly increasing trend	86204	6	2003 - 2008	26.38	0.26	25.73	0.16	0.03920486181008357023936028440-40287891



National Data Buoy Center - 5

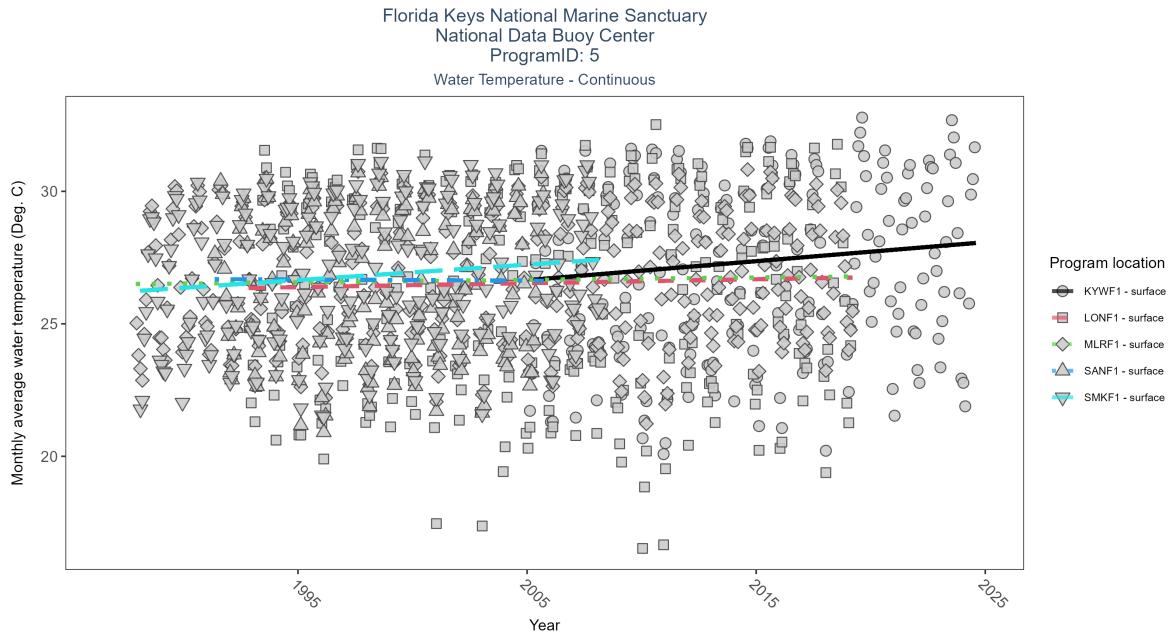
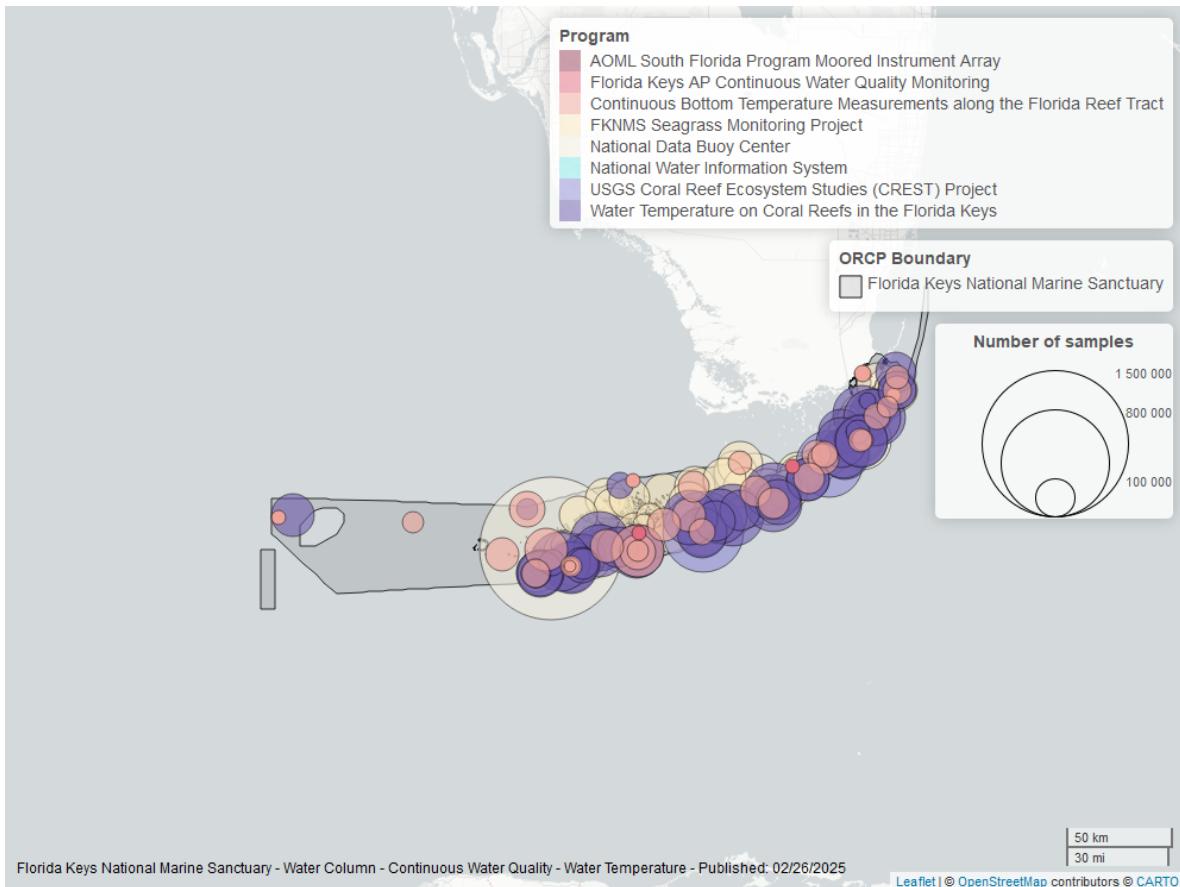


Table 11: Seasonal Kendall-Tau Results for All Stations - Water Temperature

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
SMKF1	Significantly increasing trend	154326	21	1988 - 2008	26.8	0.34	26.24	0.06	0.00000000000073168672650185074186370005
KYWF1	Significantly increasing trend	1441302	20	2005 - 2024	27.6	0.31	26.65	0.07	0.0000000002404555339927113849583101279
LONF1	No significant trend	205971	28	1992 - 2019	26.6	0.07	26.34	0.01	0.082485809356741157660763974906919077
MLRF1	Significantly increasing trend	256798	33	1987 - 2019	26.5	0.10	26.49	0.01	0.0042995252750875840100364122520204546
SANF1	No significant trend	117833	15	1991 - 2005	26.7	-0.03	26.69	0.00	0.6199225346783039380937907480983994901



National Water Information System - 7

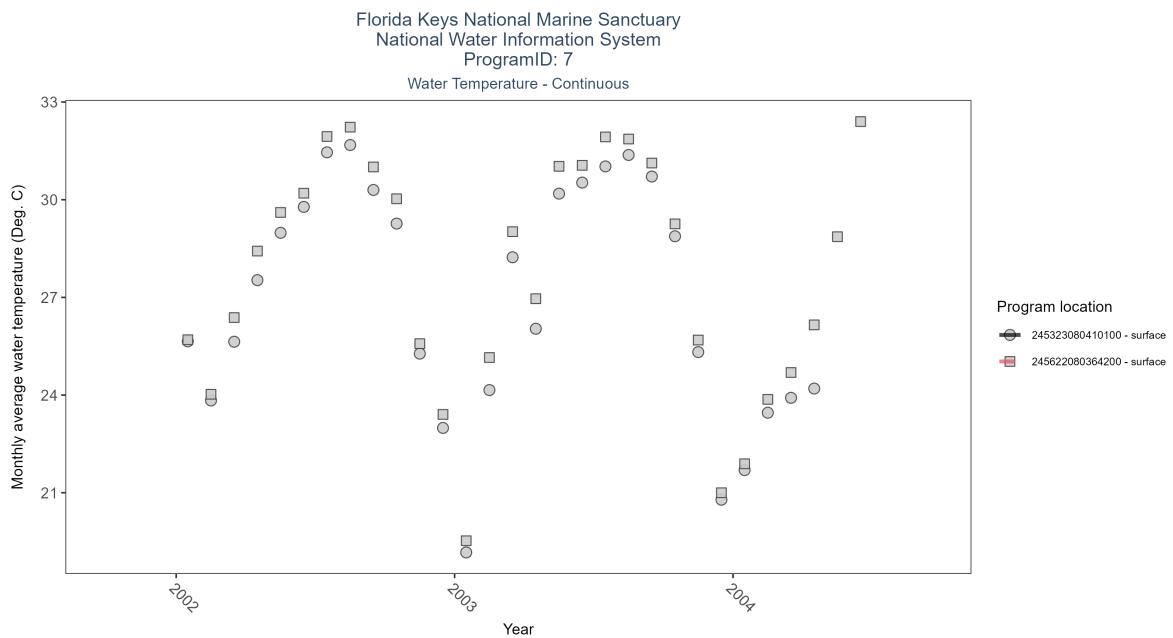
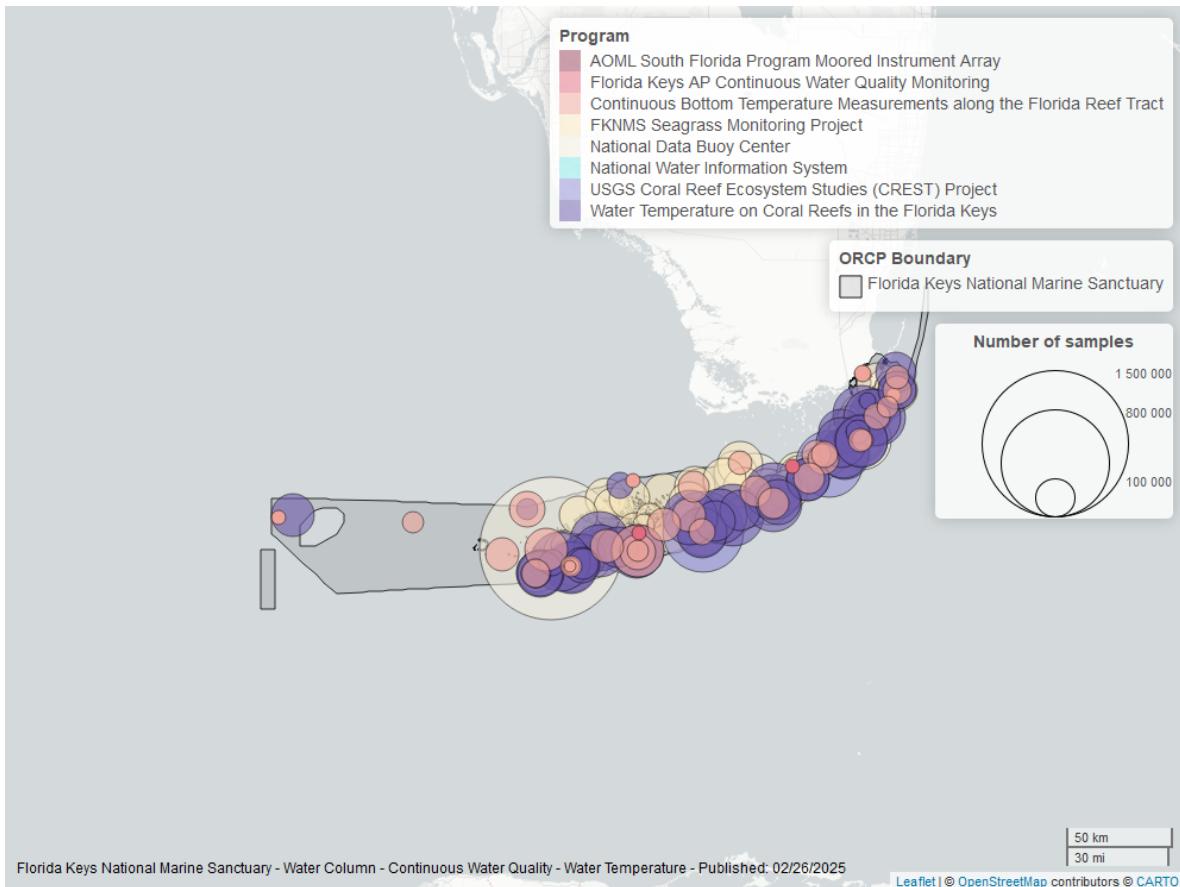


Table 12: Seasonal Kendall-Tau Results for All Stations - Water Temperature

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
245323080410100	Insufficient data to calculate trend	791	3	2002 - 2004	27.9	-	-	-	NA
245622080364200	Insufficient data to calculate trend	853	3	2002 - 2004	28.3	-	-	-	NA



### Florida Keys National Marine Sanctuary Seagrass Monitoring Project - 296

Florida Keys National Marine Sanctuary  
Florida Keys National Marine Sanctuary Seagrass Monitoring Project  
ProgramID: 296  
Water Temperature - Continuous

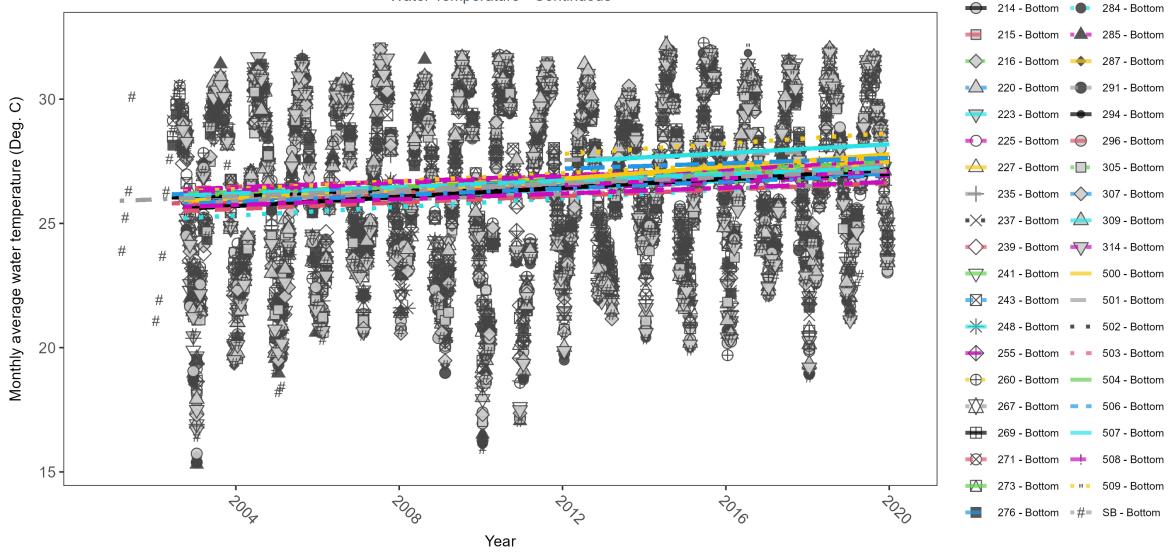
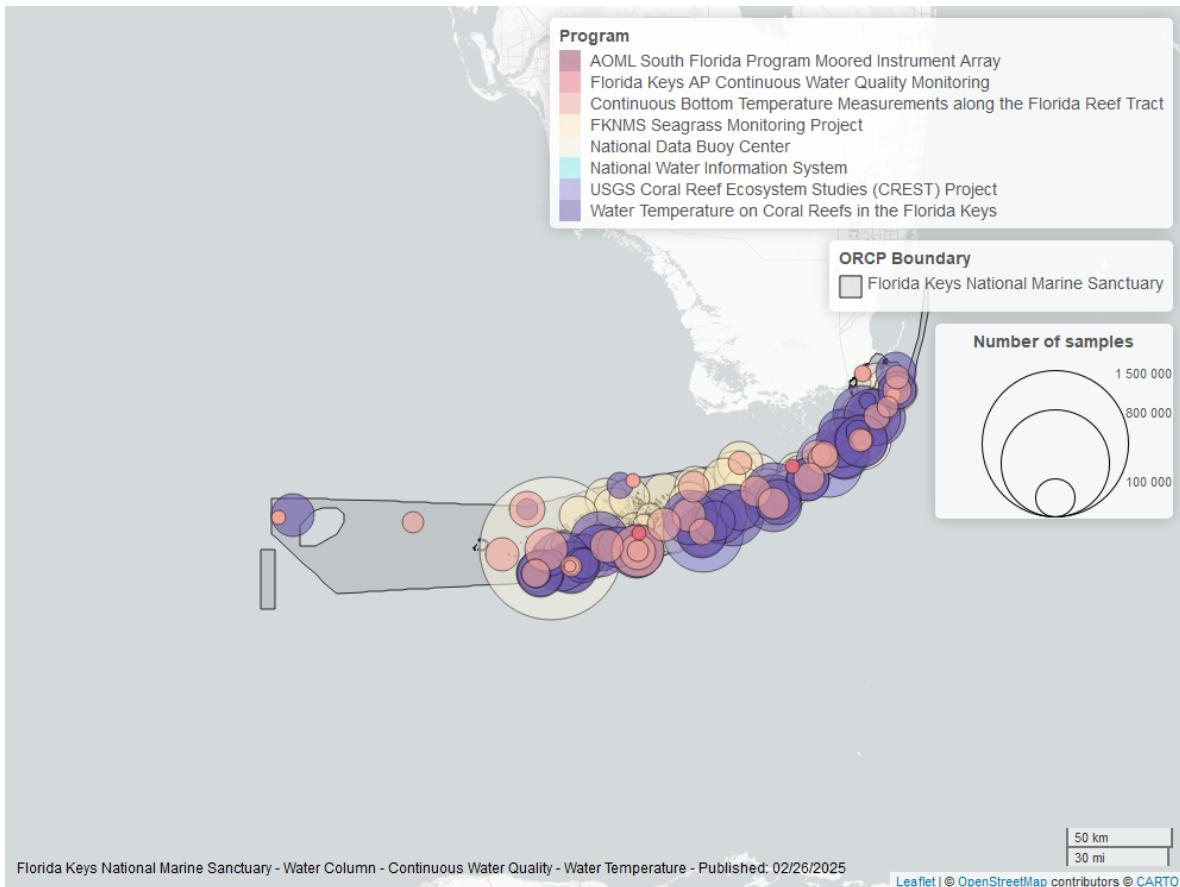


Table 13: Seasonal Kendall-Tau Results for All Stations - Water Temperature

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
241	Significantly increasing trend	127914	18	2002 - 2019	27.26	0.27	25.91	0.09	0.00000110987165575740955856983066540877
243	Significantly increasing trend	121593	18	2002 - 2019	26.62	0.3	26	0.07	0.0000009020140518772497610220721514
255	Significantly increasing trend	119939	18	2002 - 2019	26.35	0.24	25.73	0.07	0.00003190532024271295049217038730966008
260	Significantly increasing trend	97832	16	2002 - 2019	27.07	0.28	26.22	0.08	0.00001229619672407914218606808953396631
284	Significantly increasing trend	123977	17	2002 - 2019	26.86	0.28	25.14	0.09	0.000006544118397733029597693882317699
285	Significantly increasing trend	121423	18	2002 - 2019	26.86	0.25	26.17	0.07	0.00001107835206634849761039419729835
287	Significantly increasing trend	133008	18	2002 - 2019	26.87	0.29	25.84	0.08	0.000001380989767407873186517985575099
291	Significantly increasing trend	116240	18	2002 - 2019	26.38	0.26	25.72	0.08	0.000008850890121724533771914302171524
294	Significantly increasing trend	112348	18	2002 - 2019	26.92	0.27	25.52	0.09	0.00006352272436771561681421703136834
239	Significantly increasing trend	111523	17	2002 - 2018	26.92	0.24	25.96	0.07	0.000060413447565318355005046759842458
267	Significantly increasing trend	99735	18	2002 - 2019	26.57	0.24	25.64	0.05	0.0001830603068500645893602885028172977
269	Significantly increasing trend	106458	17	2002 - 2019	26.74	0.21	26.02	0.05	0.00100971593914705141069121693300579395
271	Significantly increasing trend	133627	18	2002 - 2019	26.92	0.26	25.77	0.07	0.00001698314705141069121693300579395
273	Significantly increasing trend	129817	18	2002 - 2019	27.16	0.24	26.16	0.05	0.00004040546424919297937347024466977
276	Significantly increasing trend	128383	18	2002 - 2019	26.87	0.21	26.15	0.05	0.000209849639718200304053241649082120
216	Significantly increasing trend	98535	17	2002 - 2018	26.26	0.31	25.86	0.06	0.000020247156558382847933632436854268
220	Significantly increasing trend	126033	17	2003 - 2019	26.52	0.25	25.94	0.06	0.000055849537799565772194440582687491
223	Significantly increasing trend	133082	18	2002 - 2019	26.89	0.3	25.84	0.08	0.000000442087565763511781261100091887
225	Significantly increasing trend	117692	17	2002 - 2019	26.82	0.32	26.32	0.06	0.000000798968230717817116687956557897
227	Significantly increasing trend	105351	17	2003 - 2019	26.67	0.29	26.06	0.08	0.000007569874719899404787292245655408
235	Significantly increasing trend	128499	18	2002 - 2019	27.14	0.28	25.77	0.08	0.0000066016907298763158629031216895200
237	Significantly increasing trend	122250	18	2002 - 2019	26.38	0.31	25.74	0.09	0.00000050429547125808935724964321423
296	Significantly increasing trend	111497	17	2002 - 2019	27.36	0.21	25.45	0.07	0.0001887589101598403786504897519502333
305	Significantly increasing trend	122296	18	2002 - 2019	26.43	0.22	26.07	0.06	0.000141762460259436424538933358974191
307	Significantly increasing trend	110802	17	2002 - 2019	26.74	0.22	25.73	0.07	0.0002667560498061019446739761917797296
SB	Significantly increasing trend	145514	19	2001 - 2019	26.34	0.23	25.9	0.06	0.0000102242381022848747781917033705608
214	Significantly increasing trend	136333	18	2002 - 2019	26.52	0.27	25.84	0.07	0.00000807422152411772121746724728553
215	Significantly increasing trend	133286	16	2003 - 2018	26.74	0.26	26.42	0.05	0.000013389433046367808849072544852277
314	Significantly increasing trend	110686	18	2002 - 2019	27.41	0.23	25.63	0.06	0.0002169956305905852761487601076950682
309	Significantly increasing trend	107410	18	2002 - 2019	27.85	0.27	26.07	0.06	0.000016972681164844817950913109660022
248	Significantly increasing trend	111702	18	2002 - 2019	26.79	0.31	25.54	0.08	0.000000872958977628357943139014718525
500	Significantly increasing trend	69048	8	2012 - 2019	27.33	0.23	26.79	0.12	0.00739369049915856194166239260994189
506	No significant trend	35198	7	2012 - 2019	27.41	0.04	27.2	0.05	0.7350128913948084097285118332365527749
507	No significant trend	47517	8	2012 - 2019	27.36	0.18	27.48	0.08	0.121335250358482110710761878111432306
508	No significant trend	24021	6	2012 - 2019	26.67	0.33	26.54	0.07	0.2948939838180871797490567587374243885
509	No significant trend	38607	8	2012 - 2019	27.70	0.05	27.79	0.11	0.4739204201721386455758988631714601070
502	Insufficient data to calculate trend	22765	4	2016 - 2019	26.70	-	-	-	NA
501	No significant trend	34805	5	2012 - 2018	27.48	0.11	27.55	0.05	0.6480766861391461116803432936022121
503	Insufficient data to calculate trend	7490	1	2016 - 2016	28.74	-	-	-	NA
504	Insufficient data to calculate trend	4339	1	2018 - 2018	29.84	-	-	-	NA



### USGS Coral Reef Ecosystem Studies (CREST) Project - 899

Florida Keys National Marine Sanctuary  
 USGS Coral Reef Ecosystem Studies (CREST) Project  
 ProgramID: 899  
 Water Temperature - Continuous

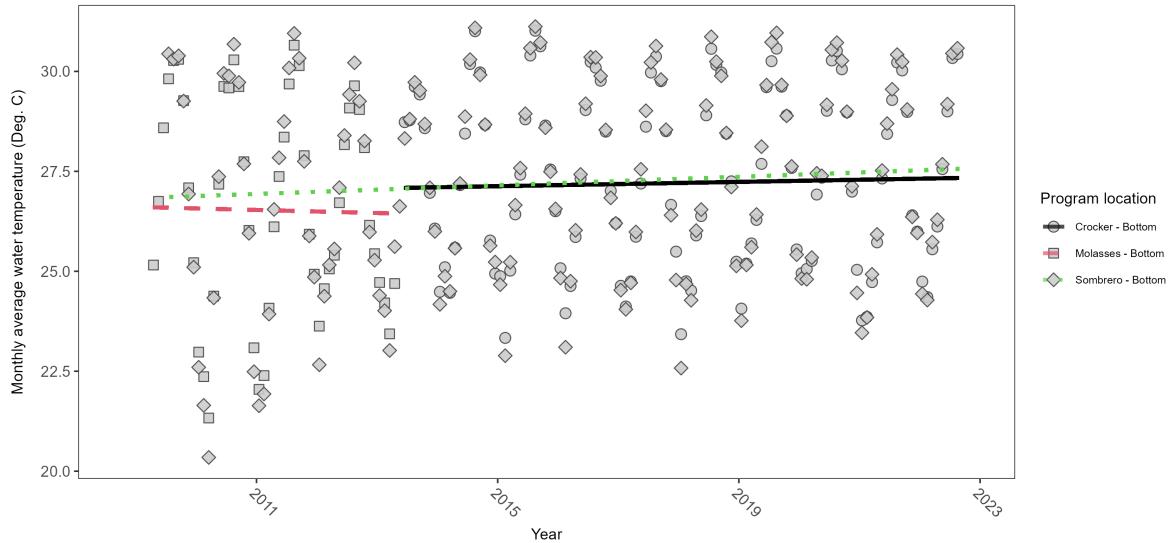
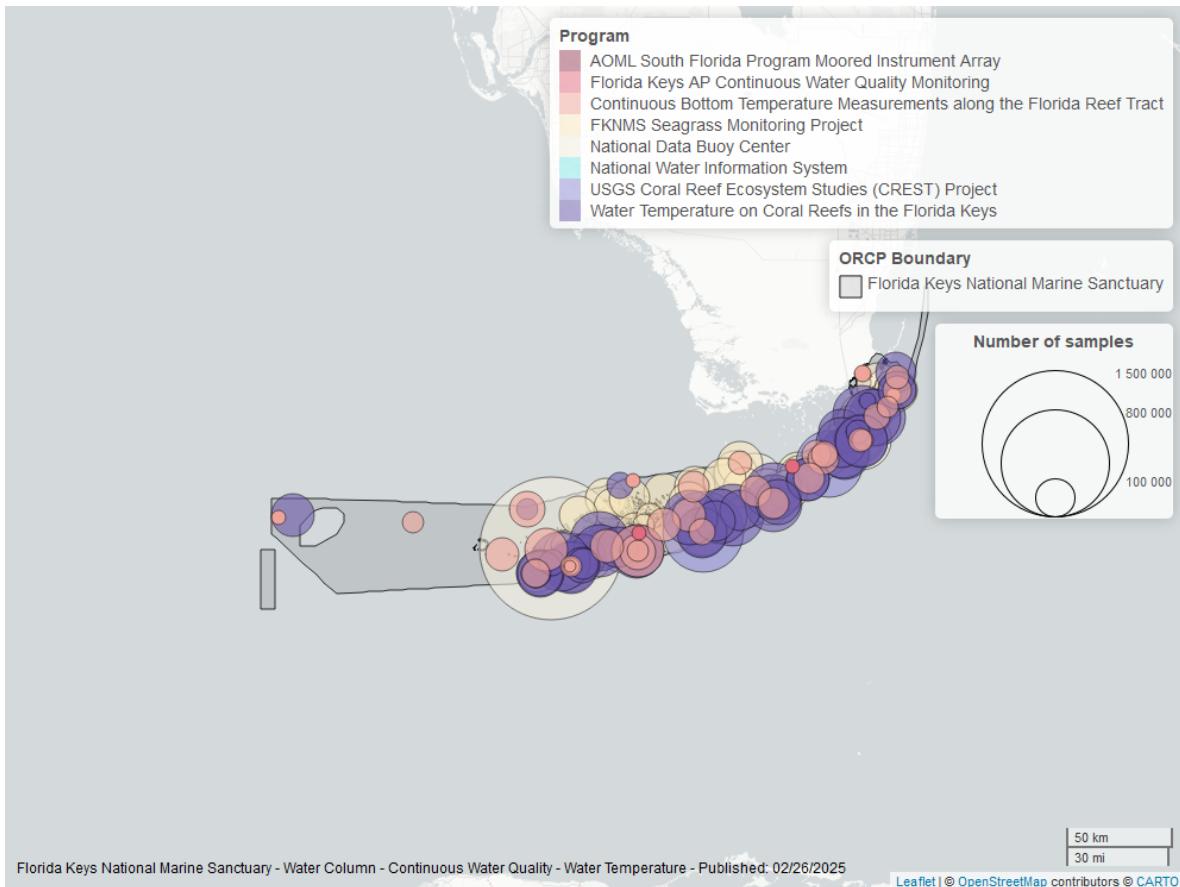


Table 14: Seasonal Kendall-Tau Results for All Stations - Water Temperature

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Sombrero	Significantly increasing trend	459354	14	2009 - 2022	27.16	0.26	26.83	0.05	0.0000146402356701539787704746675700562
Crocker	Significantly increasing trend	322670	10	2013 - 2022	27.32	0.15	27.07	0.03	0.0435699405215028423565826187768834643
Molasses	No significant trend	140713	5	2009 - 2013	26.72	-0.03	26.61	-0.04	0.9247190374867695350502572182449512184



### Water Temperature on Coral Reefs in the Florida Keys - 986

**Florida Keys National Marine Sanctuary**  
**Water Temperature on Coral Reefs in the Florida Keys**  
**ProgramID: 986**  
**Water Temperature - Continuous**

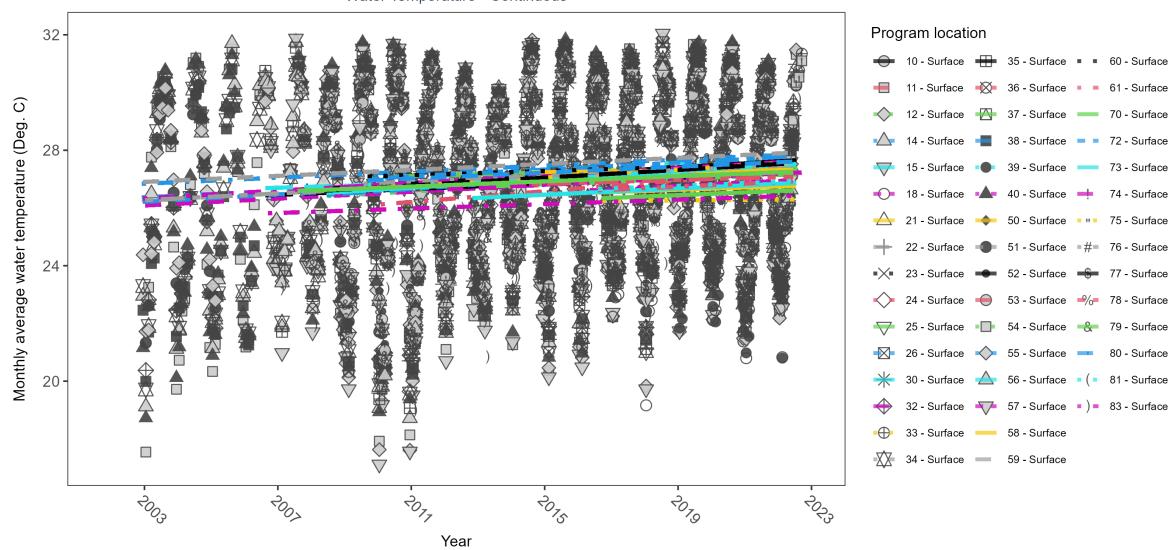
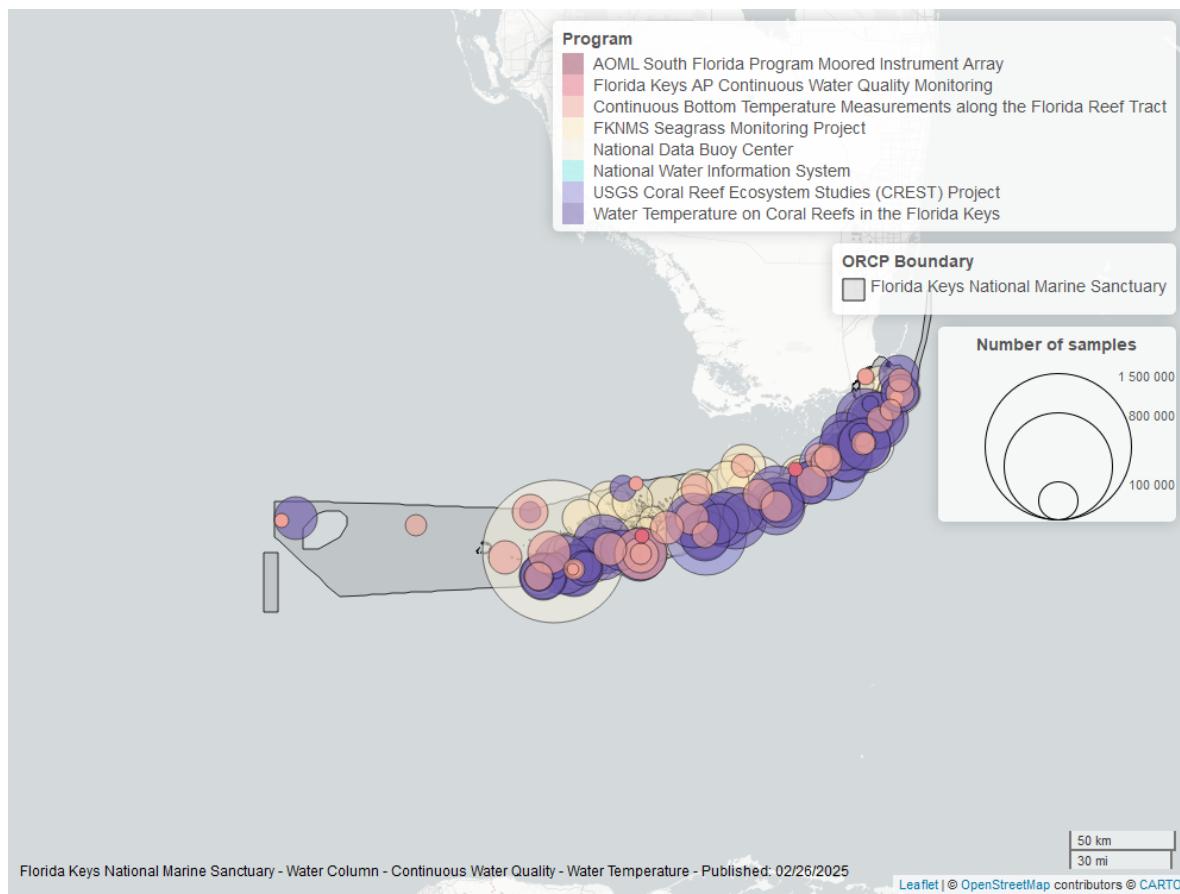


Table 15: Seasonal Kendall-Tau Results for All Stations - Water Temperature

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
35	Significantly increasing trend	217666	17	2006 - 2022	26.84	0.22	26.41	0.05	0.0000460200172042366686259162733563244
36	Significantly increasing trend	192871	16	2007 - 2022	26.89	0.24	26.52	0.06	0.0000518627148680520755601869393959131
34	Significantly increasing trend	274006	21	2002 - 2022	26.74	0.31	26.19	0.07	0.0000000016193131396982701899082968122
56	Significantly increasing trend	175648	17	2006 - 2022	26.67	0.14	26.67	0.03	0.01866855501229464781021150088823602693
79	Significantly increasing trend	175394	16	2007 - 2022	26.79	0.21	26.56	0.04	0.000645069711120380243567058921883017
53	Significantly increasing trend	179447	15	2008 - 2022	26.98	0.37	26.53	0.07	0.000000007041053485864253930811423876
14	Significantly increasing trend	223851	19	2002 - 2022	26.84	0.24	26.31	0.06	0.0000127578518430923919904932763666284
24	Significantly increasing trend	111388	11	2010 - 2022	26.89	0.33	26.12	0.09	0.0000184242901163364974697830844796442
32	Significantly increasing trend	223104	18	2003 - 2022	26.69	0.31	26.09	0.06	0.000000054963099065532086725840987818
40	Significantly increasing trend	244138	21	2002 - 2022	26.79	0.28	26.27	0.07	0.000000415680804323172700610709469916
59	Significantly increasing trend	191677	18	2002 - 2022	26.81	0.27	26.85	0.05	0.0000008733891779873251018546931323527
22	Significantly increasing trend	171553	14	2009 - 2022	26.91	0.25	26.43	0.07	0.00002853616204235411292853606634354344
72	Significantly increasing trend	188119	15	2008 - 2022	26.77	0.42	26.42	0.08	0.00000000005381411028703998232578659
15	Significantly increasing trend	212659	17	2006 - 2022	26.99	0.19	26.4	0.05	0.0006119461895038663068636237050921227
77	Significantly increasing trend	188336	15	2008 - 2022	26.89	0.27	26.57	0.07	0.0000033117090045295438625622824746486
76	Significantly increasing trend	168914	14	2009 - 2022	26.84	0.23	26.82	0.05	0.000154133923621751789964910338762980
12	Significantly increasing trend	138064	13	2008 - 2022	27.16	0.21	26.39	0.06	0.001967442036030021344557297453548017
57	Significantly increasing trend	187914	15	2008 - 2022	26.96	0.3	26.66	0.07	0.000004245933571933026267047200930094
80	Significantly increasing trend	167362	14	2009 - 2022	26.87	0.21	26.92	0.05	0.0004730958160615875911052252700272902
74	Significantly increasing trend	130333	11	2012 - 2022	26.87	0.24	26.64	0.05	0.000478317610528996033056719950420074
73	Significantly increasing trend	179435	15	2008 - 2022	26.74	0.35	26.49	0.07	0.00000010581495075430002387583545875
58	No significant trend	72230	9	2014 - 2022	27.11	0.01	27.23	0.01	0.9631309361720843368686928429191217625
11	Significantly increasing trend	228643	18	2003 - 2022	26.81	0.3	26.1	0.06	0.000000370699340319175461849094955
55	Significantly increasing trend	225636	21	2002 - 2022	26.86	0.28	26.79	0.05	0.0000001289719068758530202511152875466
54	Significantly increasing trend	130399	11	2012 - 2022	27.06	0.25	26.77	0.06	0.0001937590208241675578896417997398771
75	Significantly increasing trend	144589	13	2010 - 2022	27.06	0.27	26.71	0.07	0.0000961167937555415052928303731860638
60	Significantly increasing trend	150013	14	2009 - 2022	26.94	0.17	27.07	0.04	0.0093836896470192738411997268599407107
38	Significantly increasing trend	256177	21	2002 - 2022	26.47	0.28	26.15	0.06	0.000000157603594323695350644561063991
61	No significant trend	54044	7	2016 - 2022	27.06	0.15	26.58	0.05	0.1513210342032438038284425374513375753
33	No significant trend	38112	6	2016 - 2022	27.13	0.08	26.23	0.01	0.6585313664905157372530935980476439
23	Significantly increasing trend	113161	11	2012 - 2022	27.33	0.19	26.83	0.07	0.0111273906962974019153277600618383438
83	Significantly increasing trend	130599	16	2006 - 2022	25.79	0.14	25.79	0.04	0.0105535864437863664474283709182600433
52	Significantly increasing trend	188237	15	2008 - 2022	26.92	0.34	26.63	0.07	0.000000049208719811141137644855403366
39	No significant trend	33723	5	2018 - 2022	27.01	-0.09	27.6	-0.08	0.68767289425510671604522576720250249
37	No significant trend	52521	7	2016 - 2022	26.74	0.07	26.3	0.05	0.4650620460256335575444097685249289498
78	No significant trend	87924	9	2014 - 2022	26.98	0.11	26.81	0.03	0.1924766250640619902334549351508030668
50	Significantly increasing trend	103998	10	2013 - 2022	27.01	0.23	26.85	0.05	0.00350754350124940885227200652529047
18	No significant trend	44119	7	2016 - 2022	27.03	0.13	26.59	0.06	0.28896206360221877108924556918049008
25	No significant trend	117274	12	2010 - 2022	27.19	0.08	27.07	0.03	0.266889061052065508761438758717151359
26	Significantly increasing trend	142040	14	2009 - 2022	26.96	0.21	26.97	0.06	0.0024141493293090441703202462263042
51	Significantly increasing trend	222780	18	2003 - 2022	26.67	0.31	26.27	0.06	0.0000000298763307577369913740978902
30	Significantly increasing trend	116701	11	2012 - 2022	26.62	0.21	26.3	0.05	0.0054606350982045622219751066131721
21	No significant trend	55870	7	2016 - 2022	27.18	0.13	26.51	0.04	0.22284511782413626845845897522324305
81	No significant trend	53957	7	2016 - 2022	27.03	0.13	26.63	0.05	0.2246980828174069960252091035130433738
70	Significantly increasing trend	104819	10	2013 - 2022	26.91	0.22	26.73	0.05	0.004413015112355633642699254973831557
10	Insufficient data to calculate trend	18268	3	2020 - 2022	27.72	-	-	-	NA



### Continuous Bottom Temperature Measurements along the Florida Reef Tract - 989

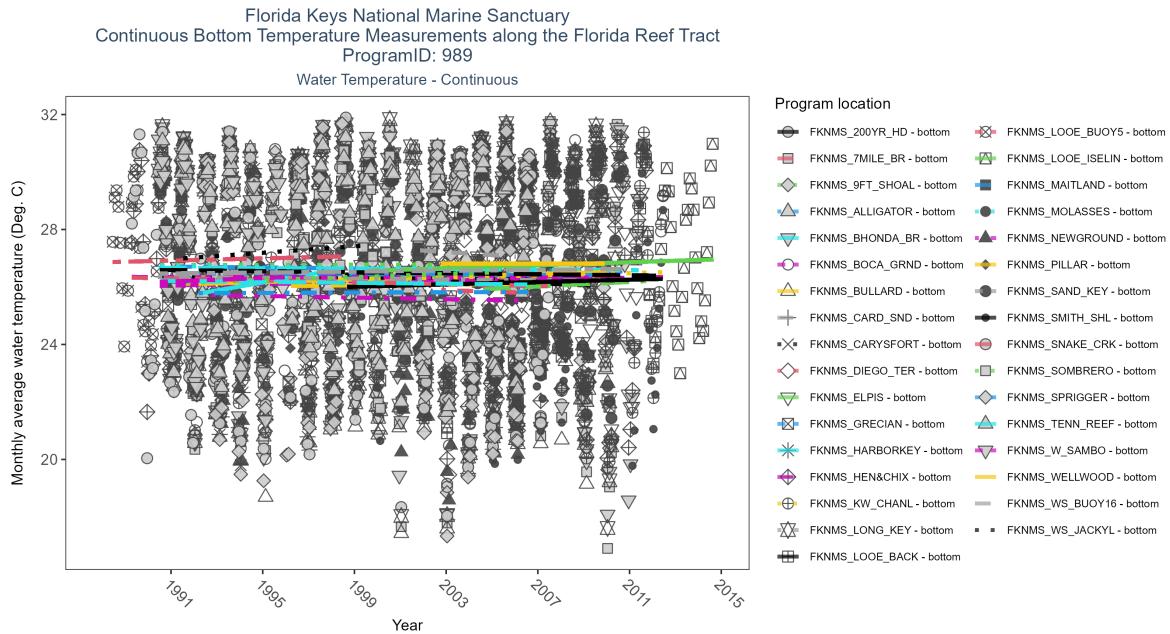
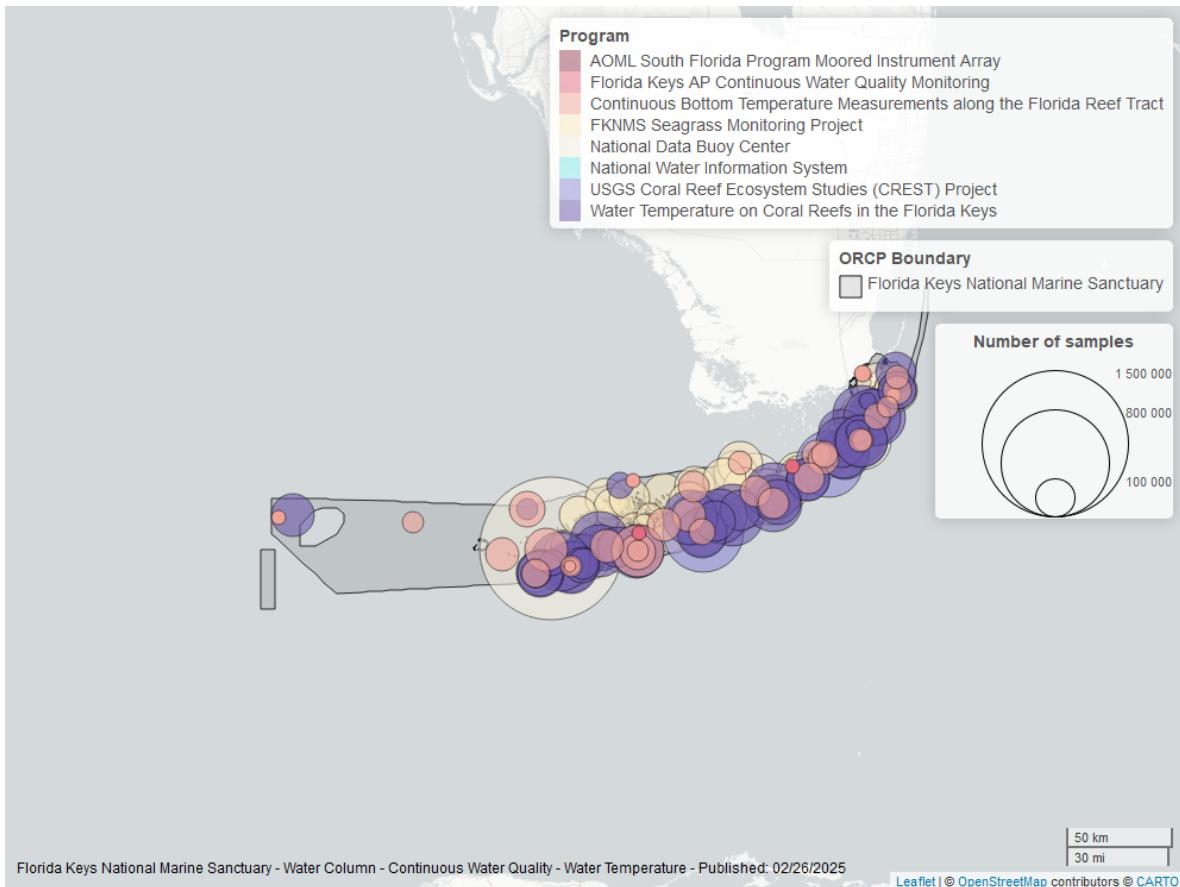


Table 16: Seasonal Kendall-Tau Results for All Stations - Water Temperature

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result	Value	Tau	Sen Intercept	Sen Slope	P
FKNMS-SMITH-SHL	No significant trend	94527	10	1998 - 2012	25.45	0.13	25.99	0.02	0.1932635874105476658790729403873807415	
FKNMS-AND-SAKEY	No significant trend	59287	18	1990 - 2010	26.70	0.05	26.46	0.01	0.32295431705673572550539158410837	
FKNMS-SPRIGGER	No significant trend	41834	13	1992 - 2006	26.10	0.02	25.78	0	0.8553266946971402438505295058087	
FKNMS-TENNEE-REEF	No significant trend	63260	16	1990 - 2006	26.70	-0.06	26.22	-0.01	0.27375623299698108057676388441351588	
FKNMS-SOMBREIRO	No significant trend	48074	13	1991 - 2005	26.50	0.13	26.14	0.03	0.050796089036395884409146674413036318	
FKNMS-200YR-RID	No significant trend	44601	12	1998 - 2009	26.10	-0.1	26.45	-0.04	0.1784900490610376950873514933586	
FKNMS-7MILE-FLR	No significant trend	73055	19	1991 - 2010	26.66	0.05	26.22	0.01	0.354869688877028716317748871167856	
FKNMS-DIEGO-TER	No significant trend	16693	5	2002 - 2006	25.58	-0.05	25.91	-0.03	0.840629660354585905367191660677116856	
FKNMS-ELP19	No significant trend	31035	8	2004 - 2011	26.35	0.06	25.9	0.04	0.53125728604388741303704561613875	
FKNMS-BHONDA-BR	No significant trend	77111	22	1990 - 2011	26.60	-0.02	26.67	0	0.65714716231691497487443653162868222	
FKNMS-BULLARD	Significantly increasing trend	66230	18	1992 - 2009	26.31	0.12	26.11	0.02	0.0312393073361410613196128057621436	
FKNMS-LOOE-ISELIN	No significant trend	194367	13	1999 - 2014	26.88	0.13	26.55	0.03	0.08012395920544758080574087624436	
FKNMS-PILLAR	No significant trend	40805	11	1996 - 2006	26.24	0.02	26.04	0.01	0.936276806167224501068940897234062	
FKNMS-MOLASSES	No significant trend	36146	13	1990 - 2002	26.70	-0.05	26.74	0.01	0.486004121491891802607272340791545066	
FKNMS-BOCA-GRND	No significant trend	73434	17	1990 - 2012	26.14	0.08	26.04	0.01	0.1662043785253525838053515459587141	
FKNMS-MAITLAND	Insufficient data to calculate trend	12421	4	2004 - 2007	26.07	-	-	-	NA	
FKNMS-CARYSPORT	No significant trend	55001	16	1990 - 2006	26.40	-0.03	26.38	0	0.635360633934603069583602040854258099	
FKNMS-9FT-SHOAL	No significant trend	80299	21	1990 - 2010	26.50	0	26.76	0	0.99168343679799063388218919629113333	
FKNMS-HEN-and-CHIX	No significant trend	72285	21	1989 - 2011	26.50	-0.01	26.35	0	0.87631152767443712352712096628471	
FKNMS-KW-CHANL	No significant trend	123578	18	1991 - 2012	26.27	0.1	26.11	0.02	0.0805458245150788927343750295635	
FKNMS-GRECAN	No significant trend	51723	18	1990 - 2010	26.65	-0.03	26.48	0	0.663395880174293415118199458956254625416	
FKNMS-LONG-KEY	No significant trend	69656	19	1990 - 2010	26.64	-0.03	26.35	-0.01	0.5768103737733542988908422588084	
FKNMS-WELLWOOD	No significant trend	30427	8	2002 - 2009	26.43	0	26.82	0	1.00000000000000000000000000000000000000	
FKNMS-SNAKE-CRK	No significant trend	56777	19	1989 - 2007	26.16	-0.06	26.33	-0.02	0.2771304671486199153977061792399	
FKNMS-ALLIGATOR	No significant trend	65144	19	1990 - 2010	26.55	-0.06	26.72	-0.01	0.3736716154635104948193202795226	
FKNMS-W-SAMBRA	No significant trend	18786	6	1990 - 1995	26.90	0.09	26.16	0.03	0.559669872919411525657320312562855	
FKNMS-LOOE-BACK	No significant trend	84984	18	1990 - 2012	26.80	-0.06	26.6	-0.01	0.4518208574951796197016024325913	
FKNMS-LOOE-BUOY5	No significant trend	35252	10	1988 - 1998	26.90	0.05	26.86	0.02	0.362180018288398198548597467638052	
FKNMS-NEWGROUND	No significant trend	35329	12	1992 - 2006	25.49	-0.05	25.73	-0.01	0.520746629425158336493251628530949	
FKNMS-WS-JACKYL	No significant trend	29557	9	1991 - 1999	26.40	0.17	26.96	0.06	0.0860012337656227688704214032139	
FKNMS-CARD-SND	No significant trend	18249	6	2001 - 2006	26.52	-0.05	27.32	-0.05	0.79082329462241612339875204014590	
FKNMS-HARBORKEY	No significant trend	15407	5	1992 - 1997	26.50	0.14	25.74	0.14	0.326109452024088965379396604253574014	
FKNMS-WS-BUYO1	Insufficient data to calculate trend	8123	3	2003 - 2005	25.99	-	-	-	NA	



### Florida Keys Aquatic Preserves Continuous Water Quality Monitoring - 10004

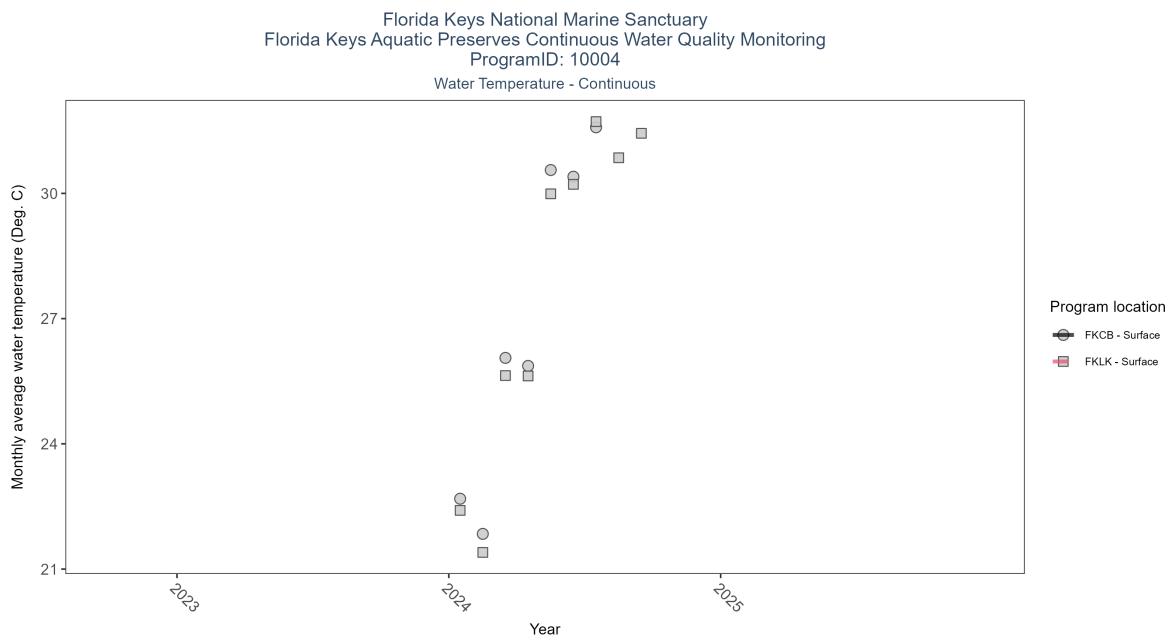
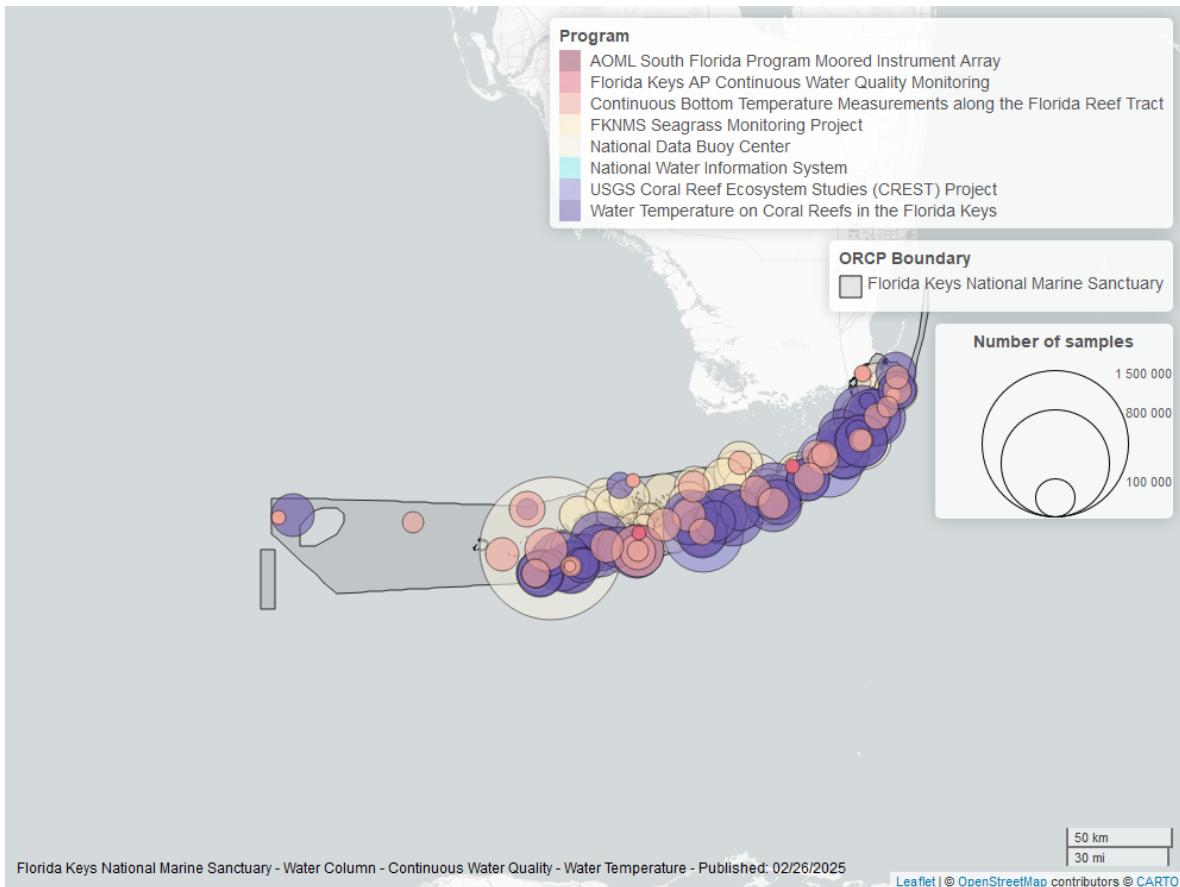


Table 17: Seasonal Kendall-Tau Results for All Stations - Water Temperature

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
FKLK	Insufficient data to calculate trend	21517	1	2024 - 2024	29.0	-	-	-	NA
FKCB	Insufficient data to calculate trend	16263	1	2024 - 2024	26.8	-	-	-	NA



## pH - Discrete

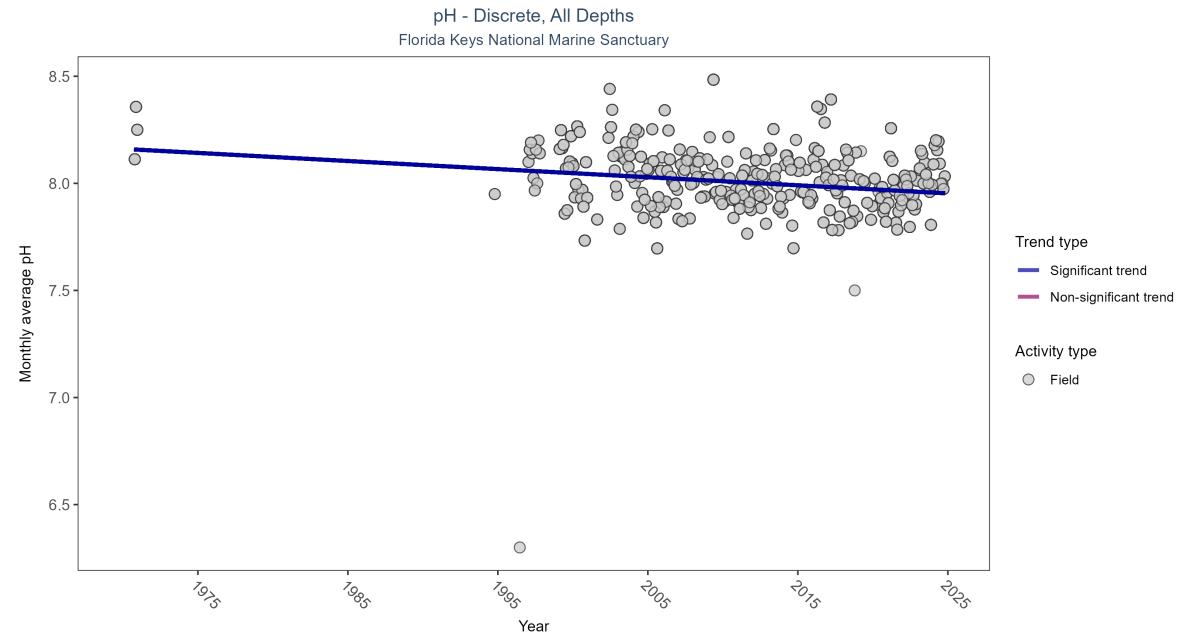
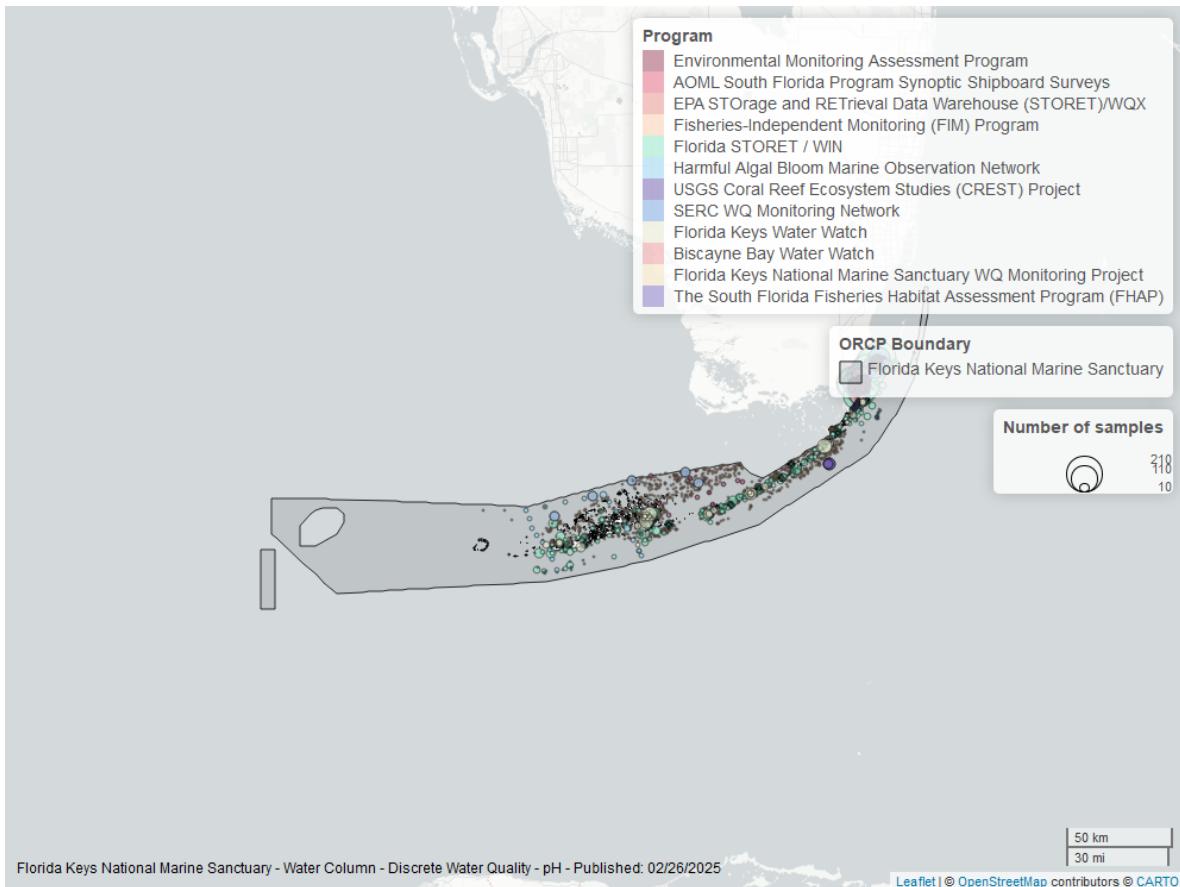


Table 18: Seasonal Kendall-Tau Results for - pH

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Field	Significantly decreasing trend	9785	30	1970 - 2024	8.04	-0.16704	8.16093	-0.00378	0.00004617755528633164097476737630643128796



## pH - Continuous

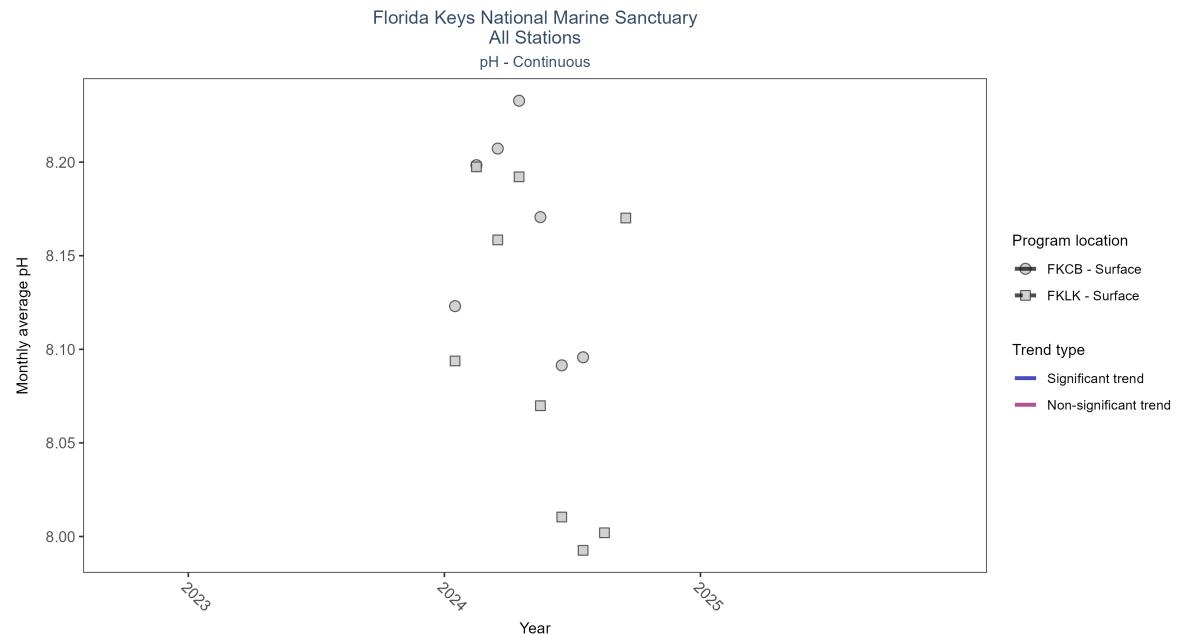
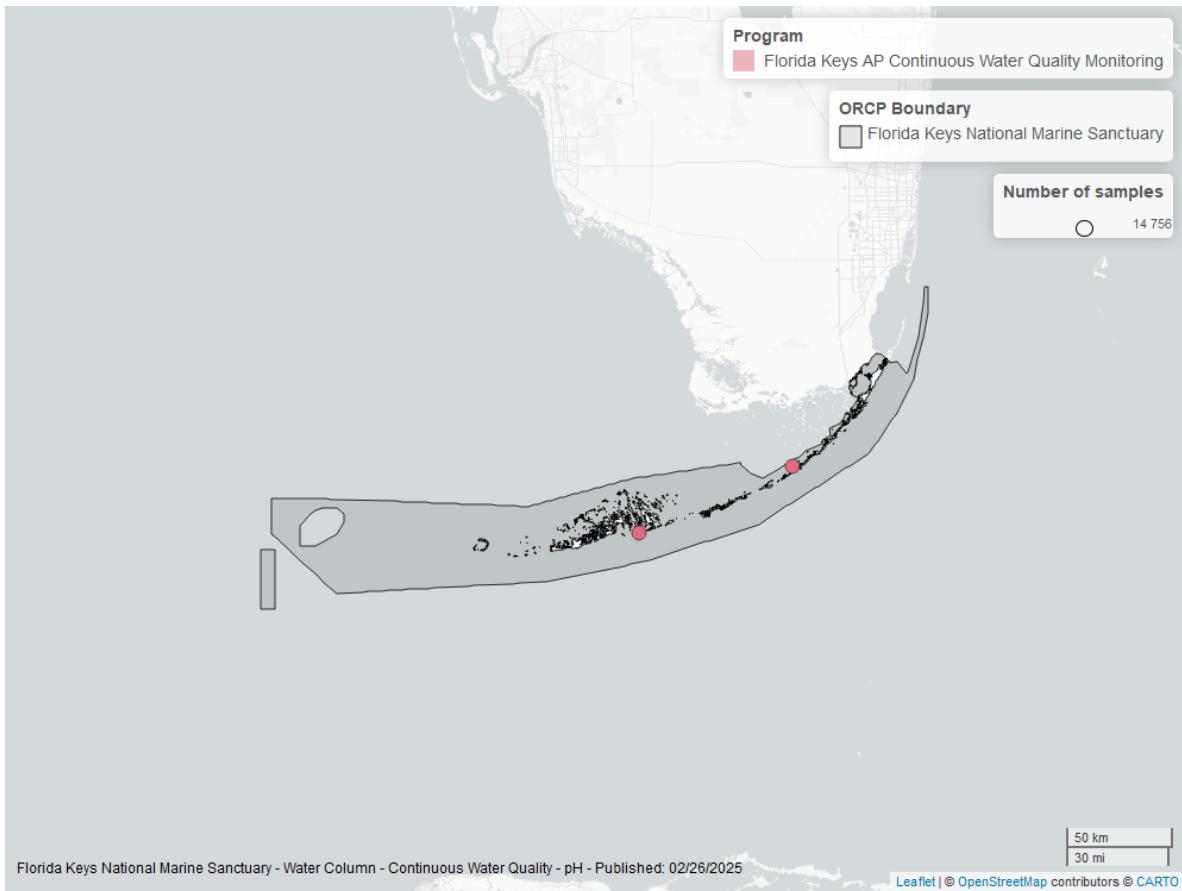


Table 19: Seasonal Kendall-Tau Results for All Stations - pH

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
FKLK	Insufficient data to calculate trend	21517	1	2024 - 2024	8.1	-	-	-	NA
FKCB	Insufficient data to calculate trend	16263	1	2024 - 2024	8.2	-	-	-	NA



## Water Clarity

### Turbidity - Discrete

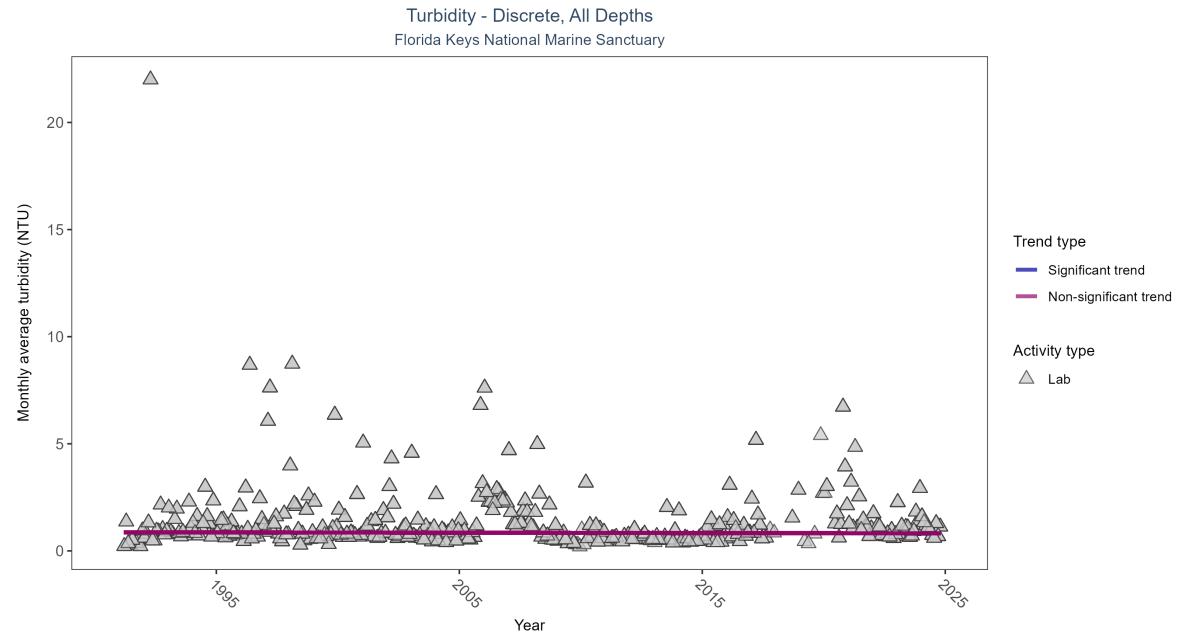
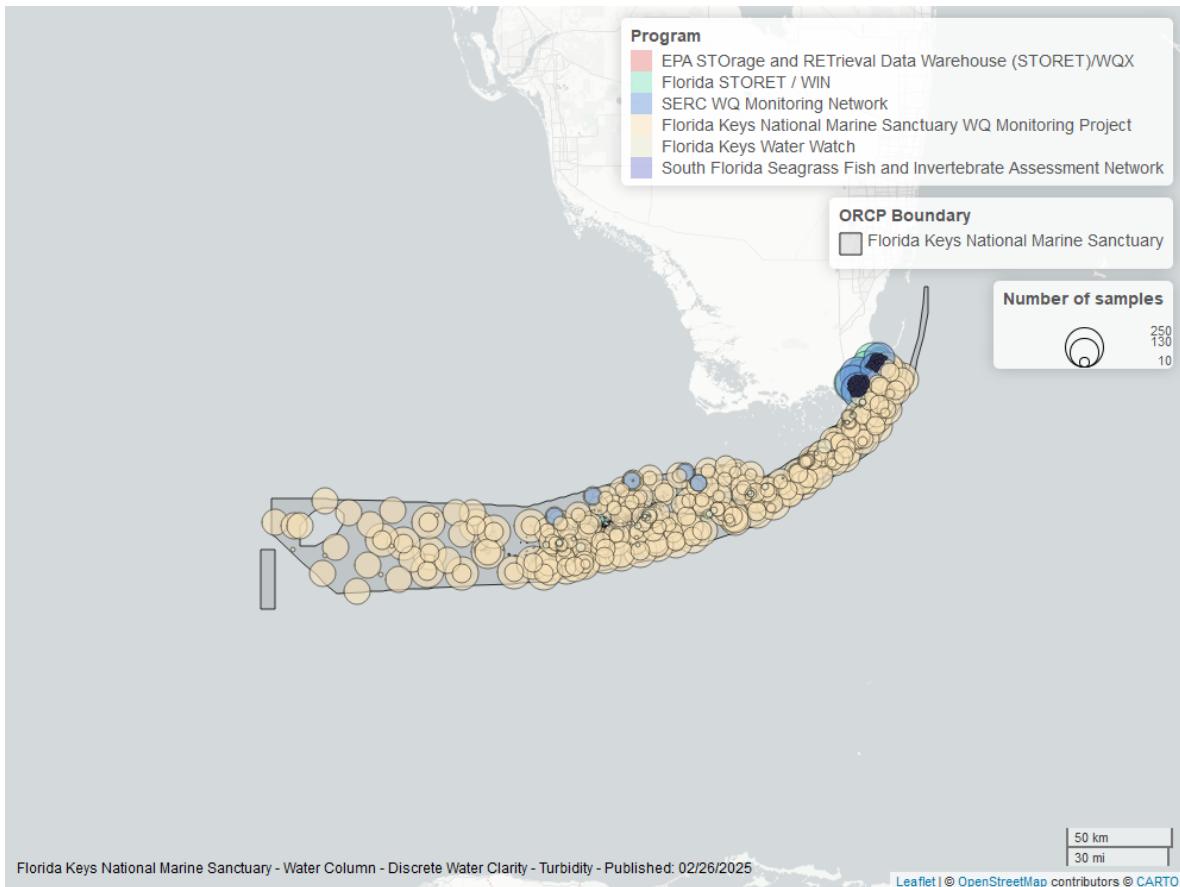


Table 20: Seasonal Kendall-Tau Results for - Turbidity

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	No significant trend	3529	34	1991 - 2024	0.705	-0.02026	0.86919	-0.00151	0.58372459087444361625



## Turbidity - Continuous

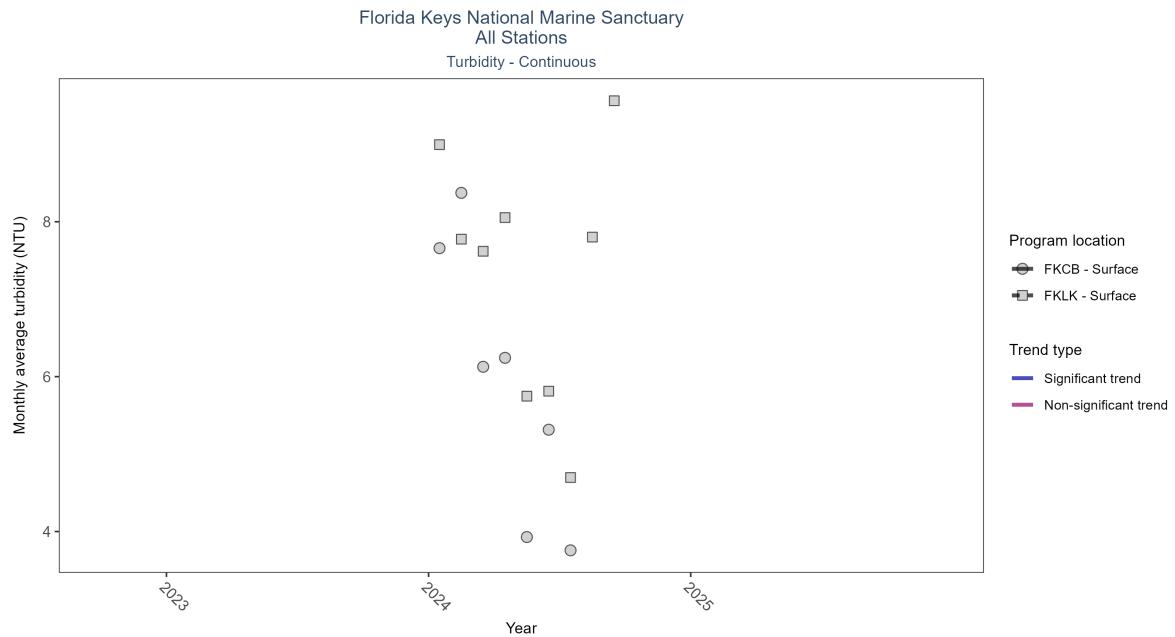
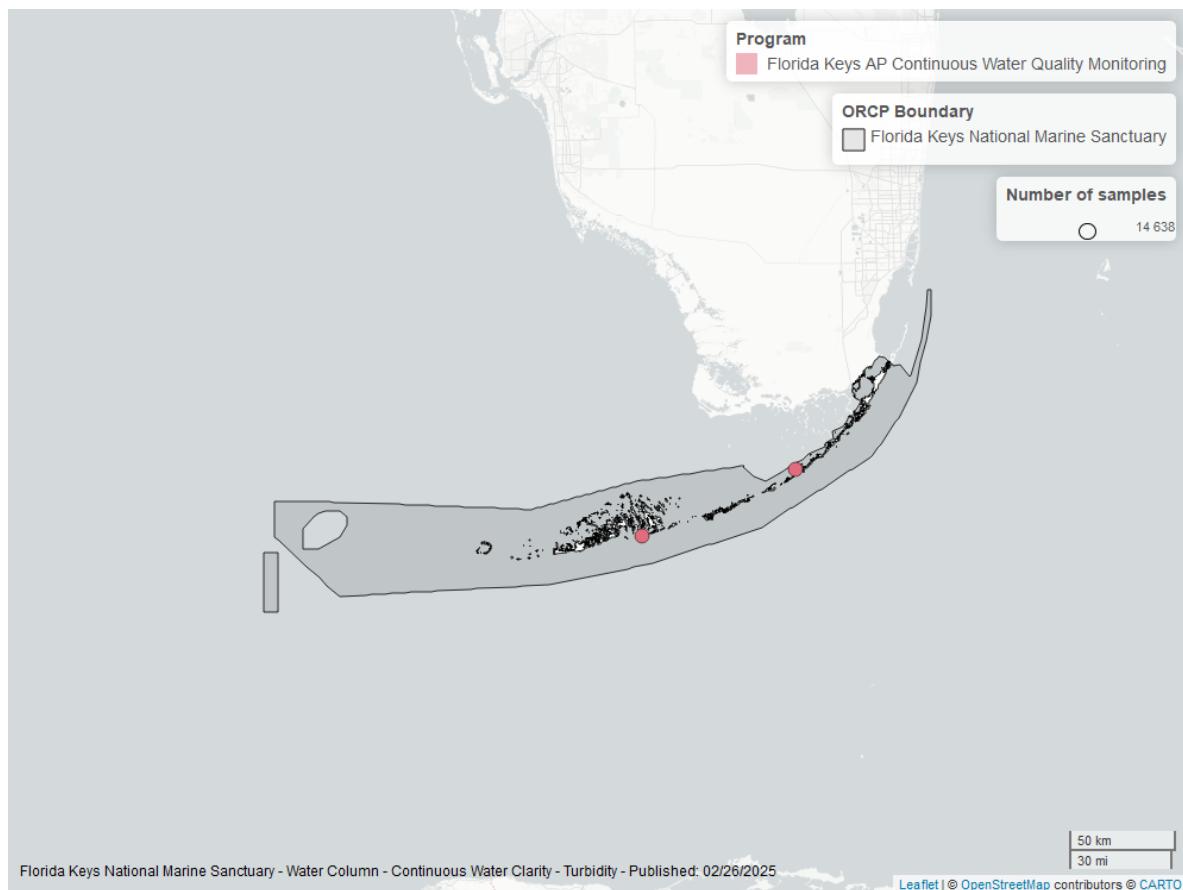


Table 21: Seasonal Kendall-Tau Results for All Stations - Turbidity

Program Location	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
FKLK	Insufficient data to calculate trend	21399	1	2024 - 2024	6	-	-	-	NA
FKCB	Insufficient data to calculate trend	16240	1	2024 - 2024	4	-	-	-	NA



## Total Suspended Solids - Discrete

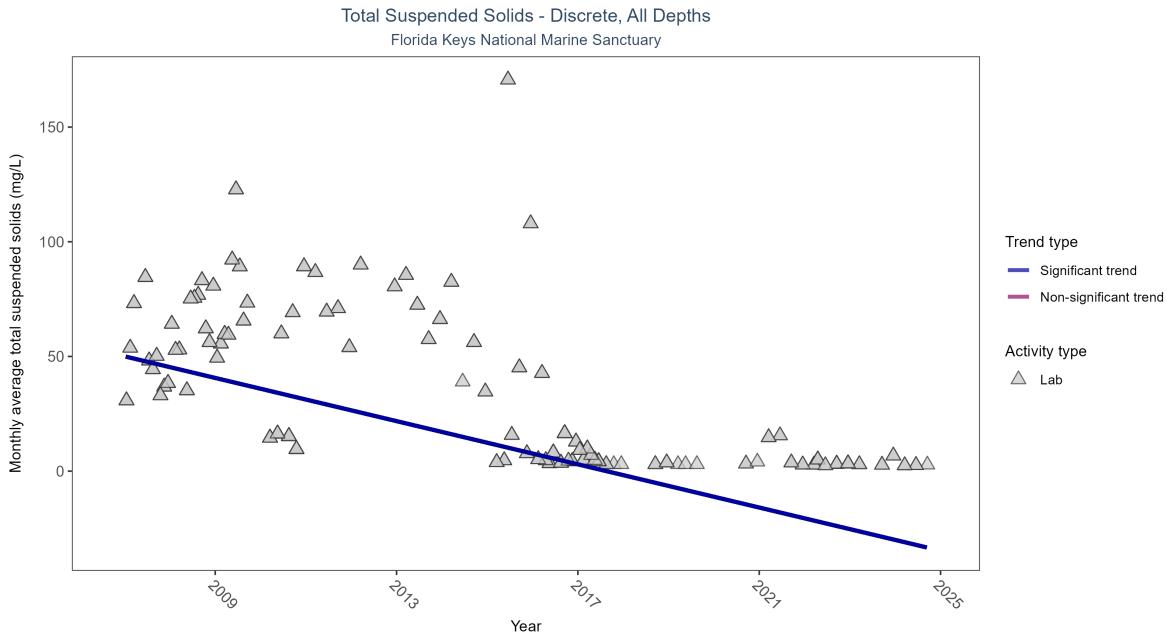


Table 22: Seasonal Kendall-Tau Results for - Total Suspended Solids

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	Significantly decreasing trend	536	18	2007 - 2024	12	-0.59759	50.05297	-4.70889	0.000000000000288327713752492141332



## Chlorophyll a, Uncorrected for Pheophytin - Discrete

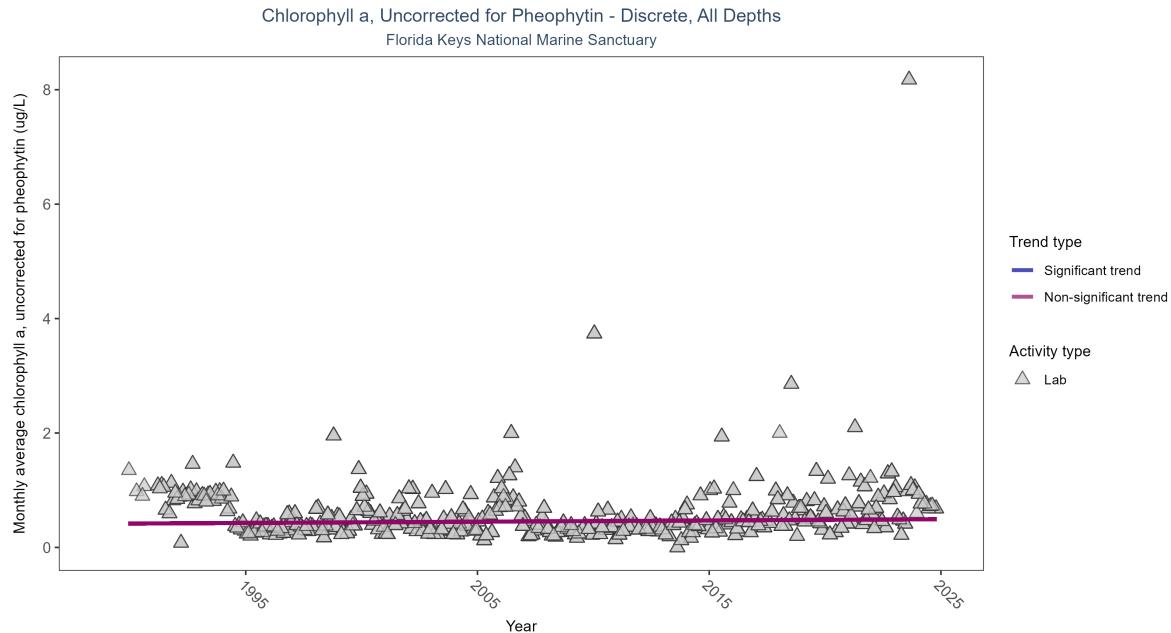
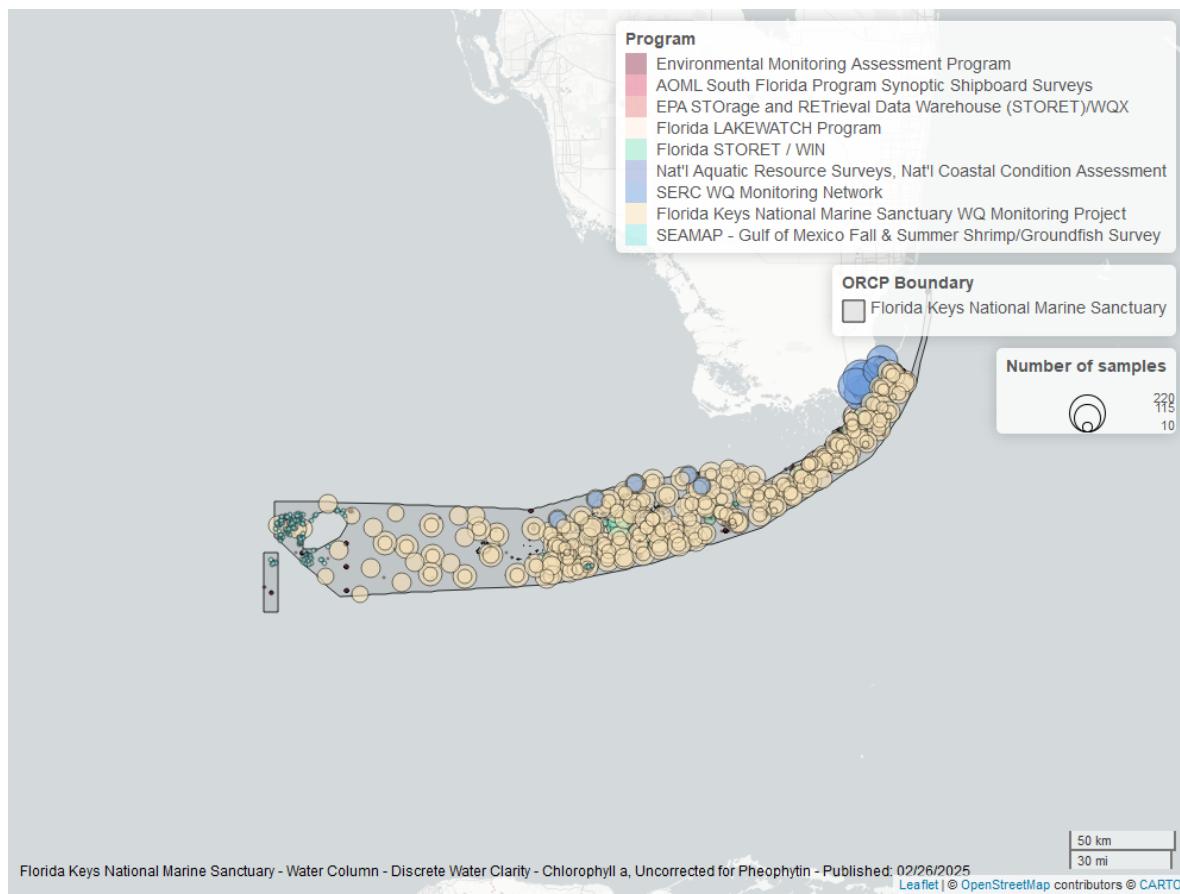


Table 23: Seasonal Kendall-Tau Results for - Chlorophyll a, Uncorrected for Pheophytin

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	No significant trend	21249	36	1989 - 2024	0.29729	0.05544	0.41524	0.00217	0.12606896474864984214470098



## Chlorophyll a, Corrected for Pheophytin - Discrete

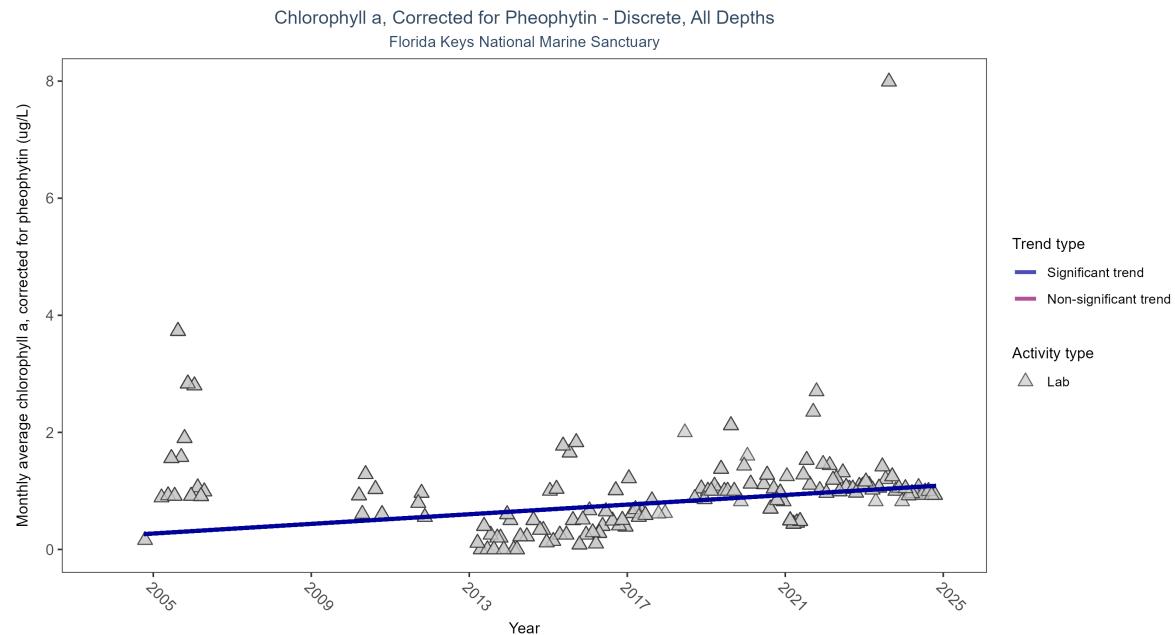


Table 24: Seasonal Kendall-Tau Results for - Chlorophyll a, Corrected for Pheophytin

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	Significantly increasing trend	2048	17	2004 - 2024	0.62	0.28266	0.23095	0.04114	0.0000076467363055149289814347



## Secchi Depth - Discrete

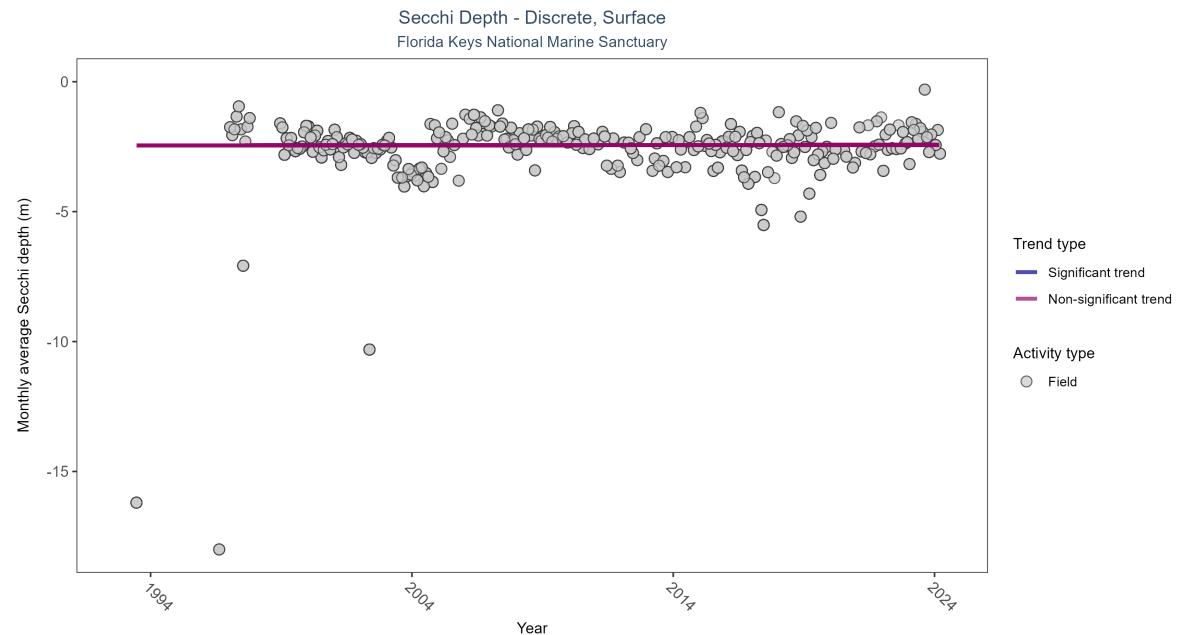


Table 25: Seasonal Kendall-Tau Results for - Secchi Depth

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Field	No significant trend	5051	30	1993 - 2024	-2.13363	0.00355	-2.45431	0.00069	0.8805194070268517192445756336383



## Colored Dissolved Organic Matter - Discrete

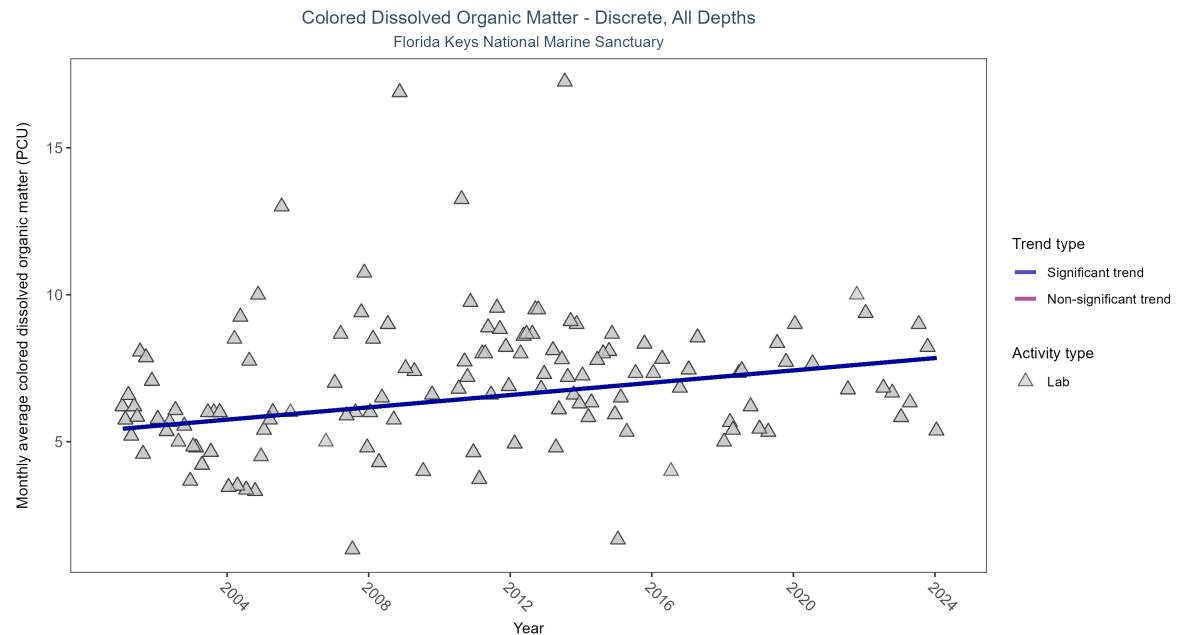


Table 26: Seasonal Kendall-Tau Results for - Colored Dissolved Organic Matter

Activity Type	Statistical Trend	Sample Count	Years with Data	Period of Record	Median Result Value	Tau	Sen Intercept	Sen Slope	P
Lab	Significantly increasing trend	1025	24	2001 - 2024	6	0.2457	5.43536	0.10476	0.000262852255138510901029

