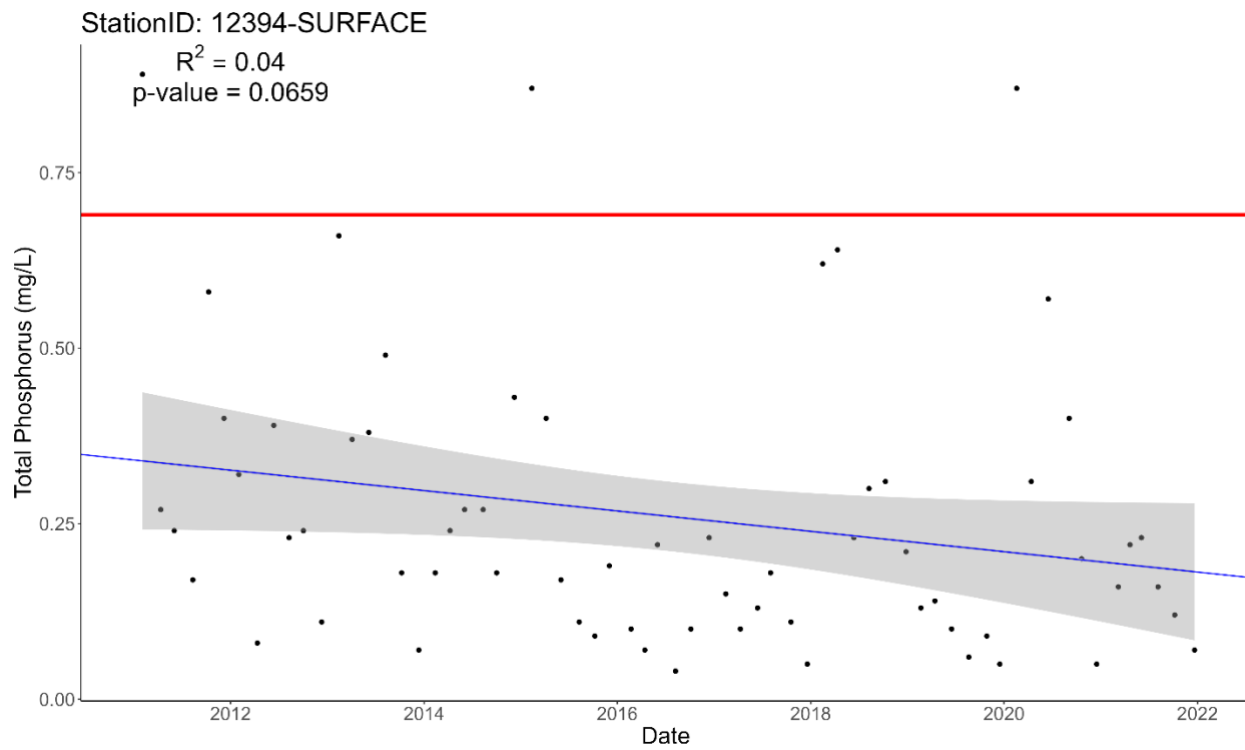


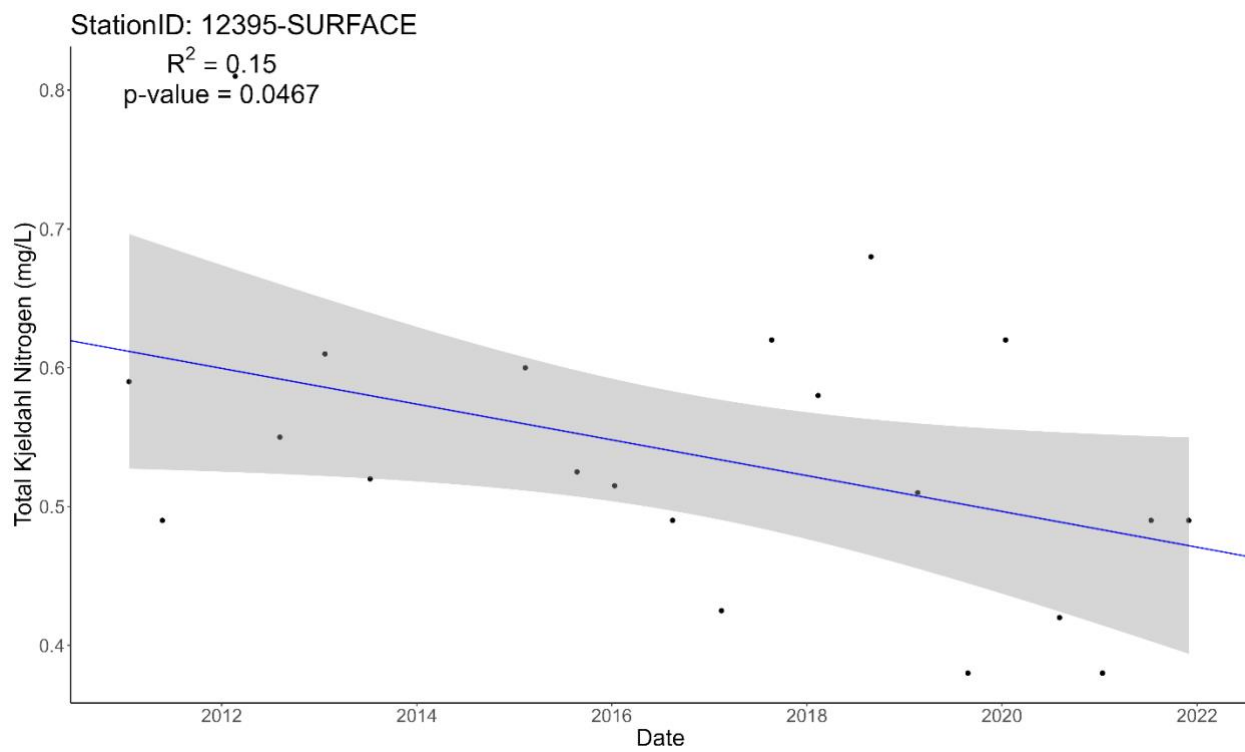
Appendix X4

Significant temporal trend graphs for all stations in the Pecan Bayou Basin by segment.

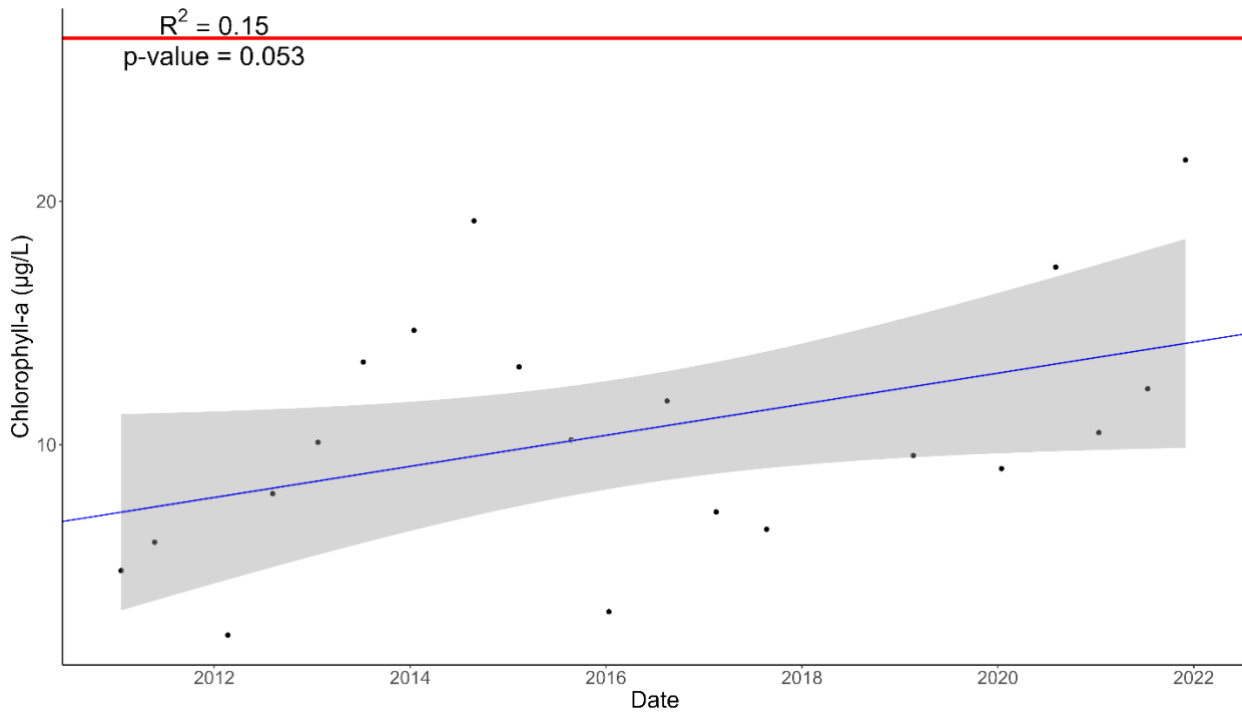
1417 – Lower Pecan Bayou



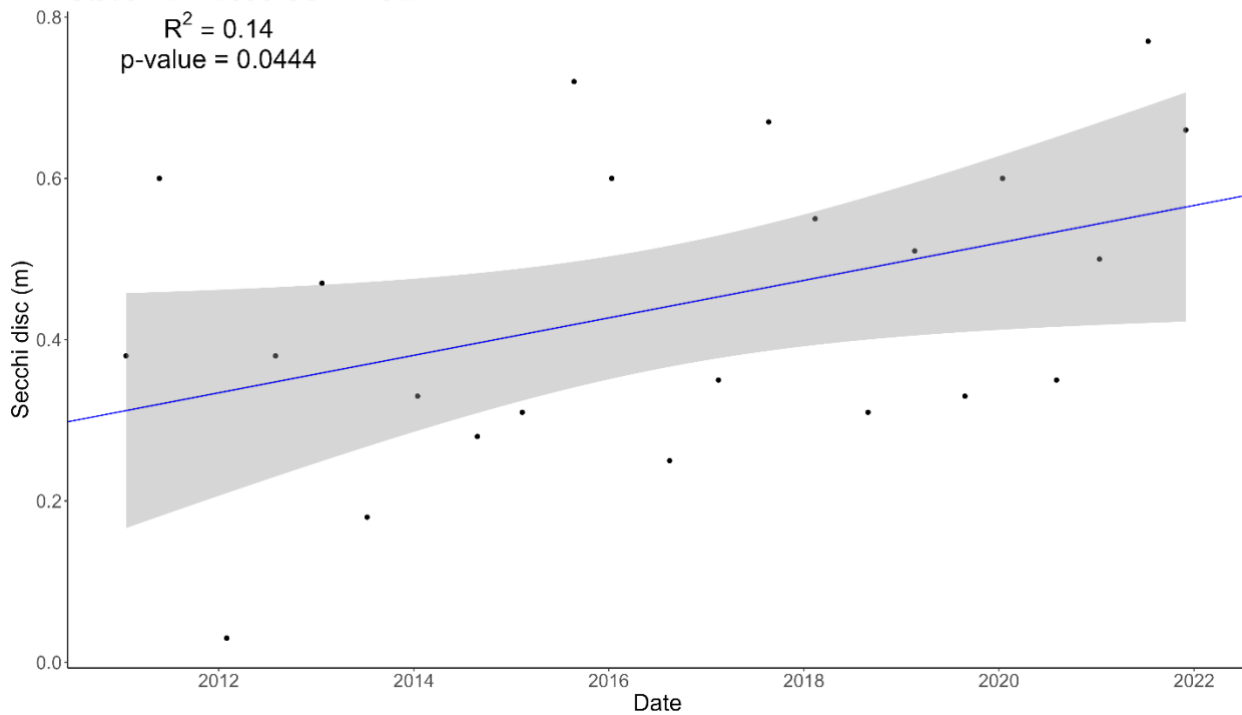
1418 – Lake Brownwood



StationID: 12395-SURFACE

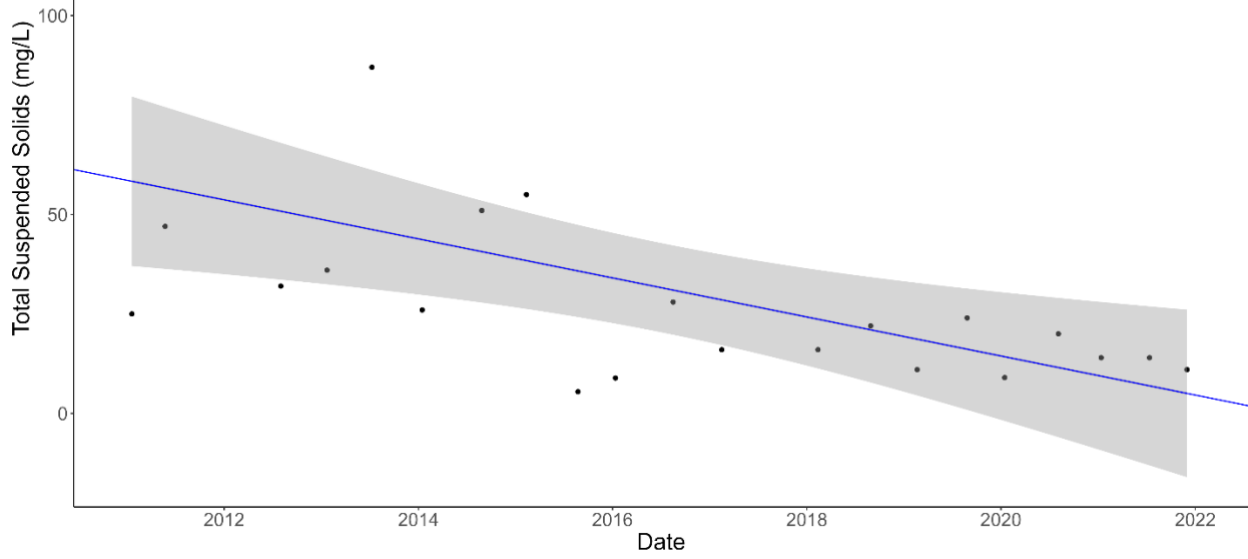


StationID: 12396-SURFACE



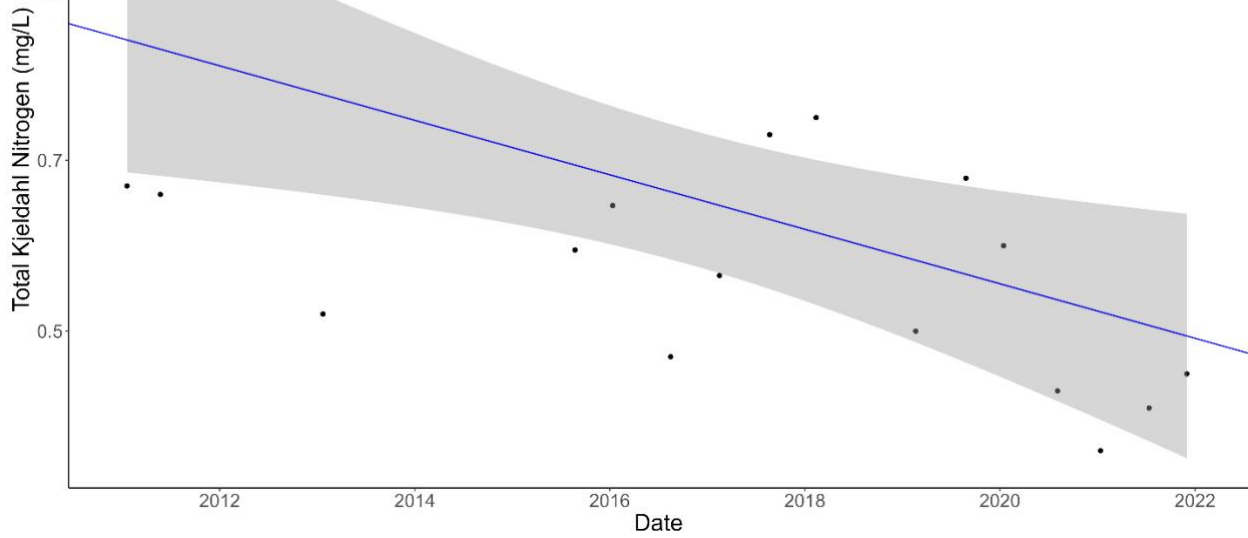
StationID: 12396-SURFACE

$R^2 = 0.29$
p-value = 0.0057

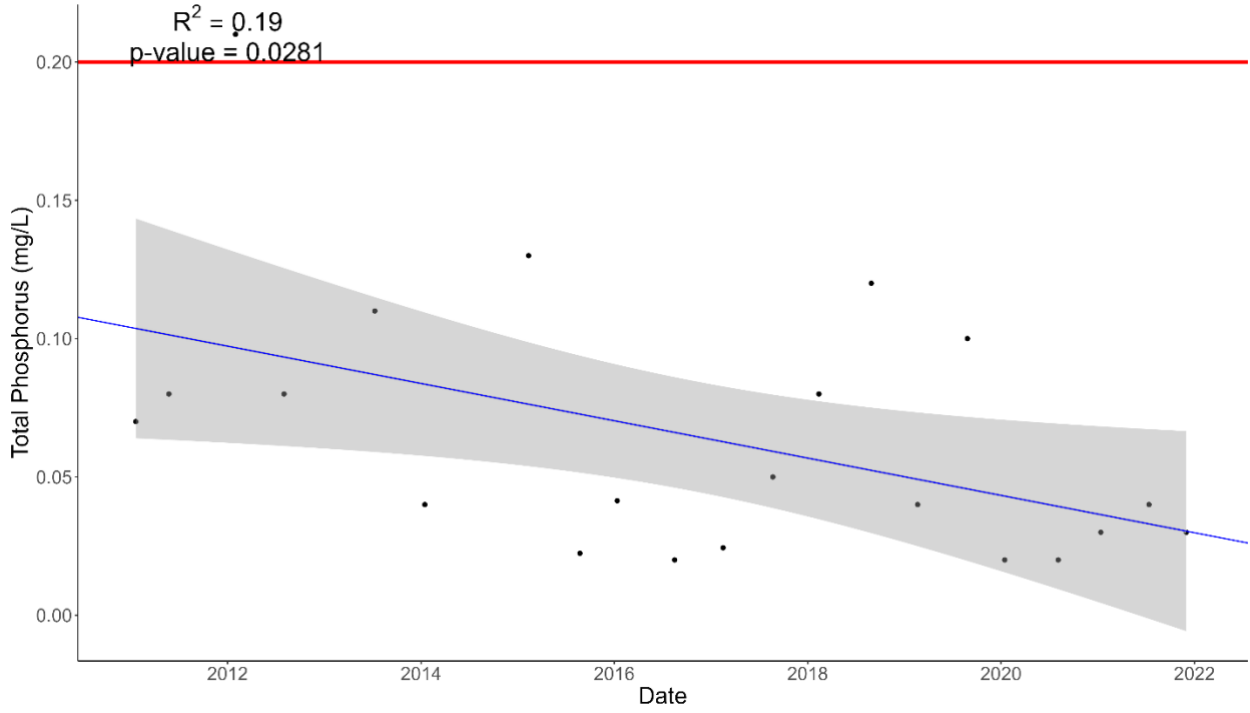


StationID: 12396-SURFACE

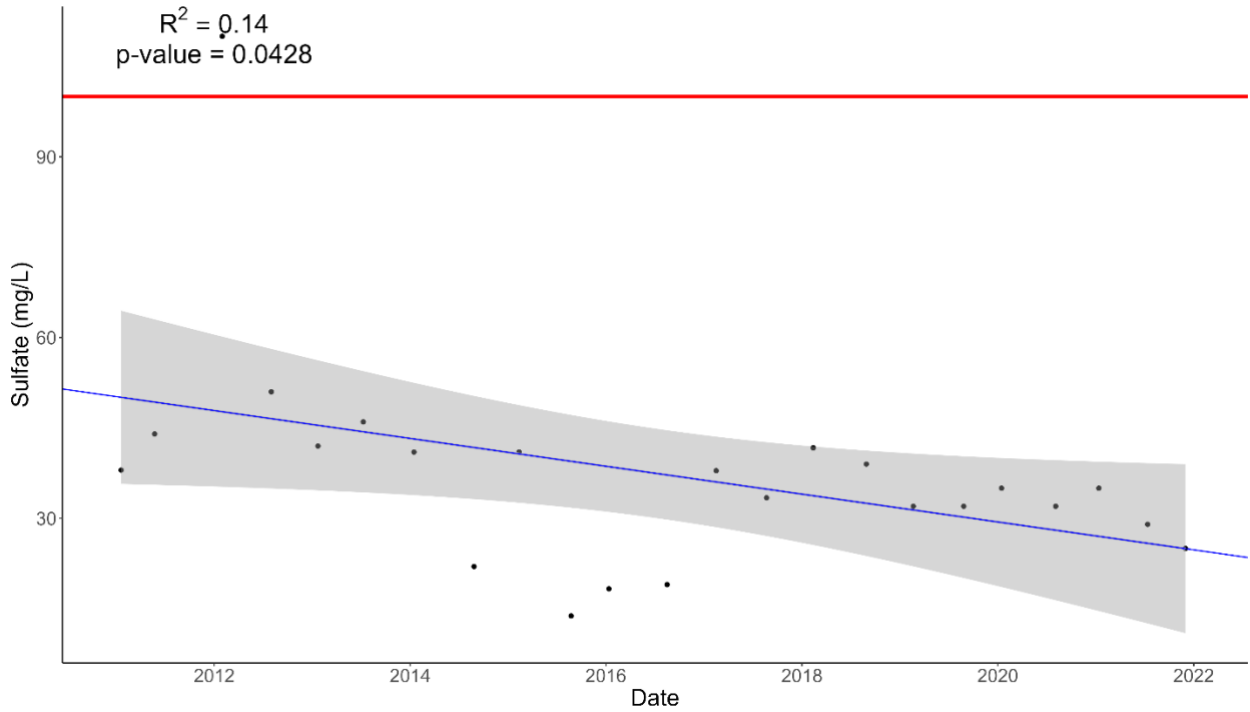
$R^2 = 0.27$
p-value = 0.0098



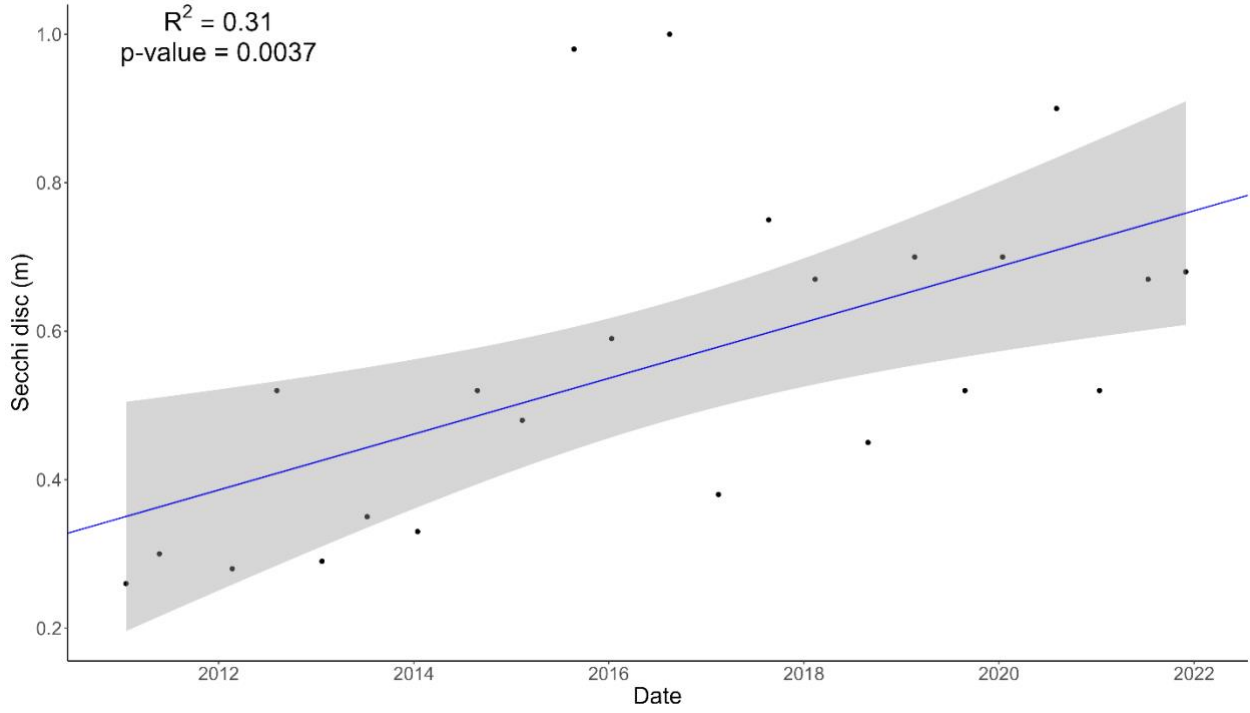
StationID: 12396-SURFACE



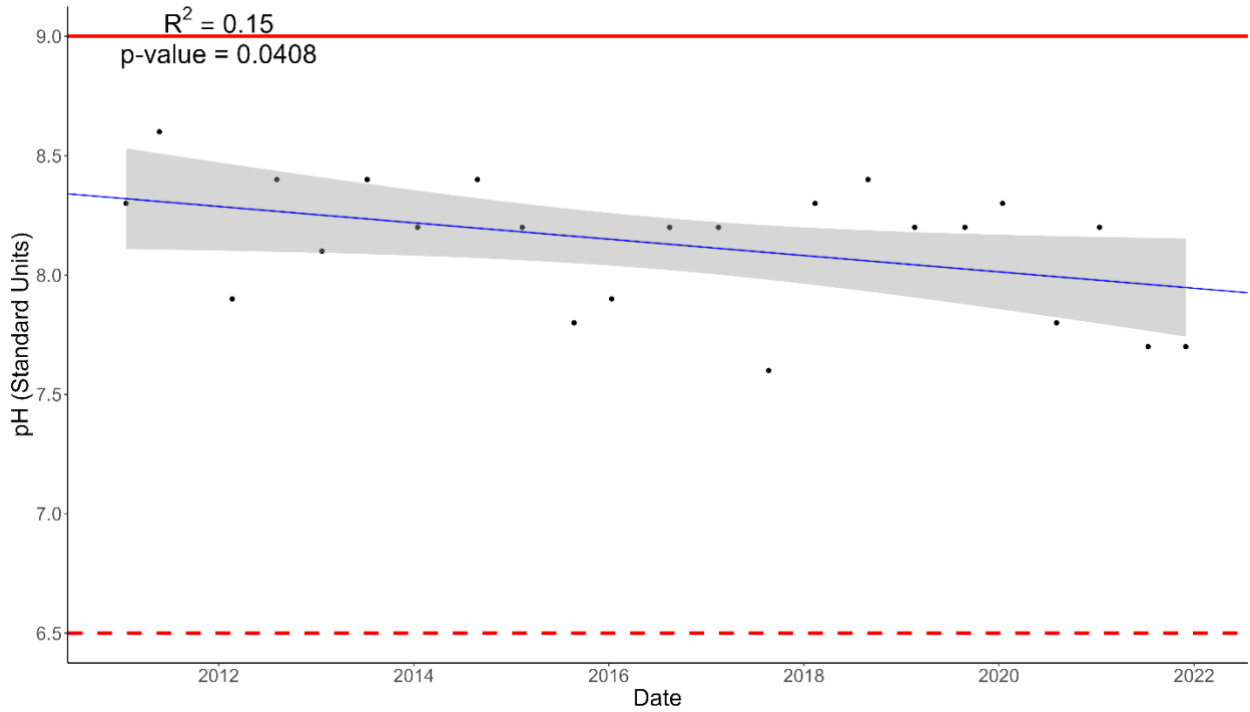
StationID: 12396-SURFACE



StationID: 12397-SURFACE

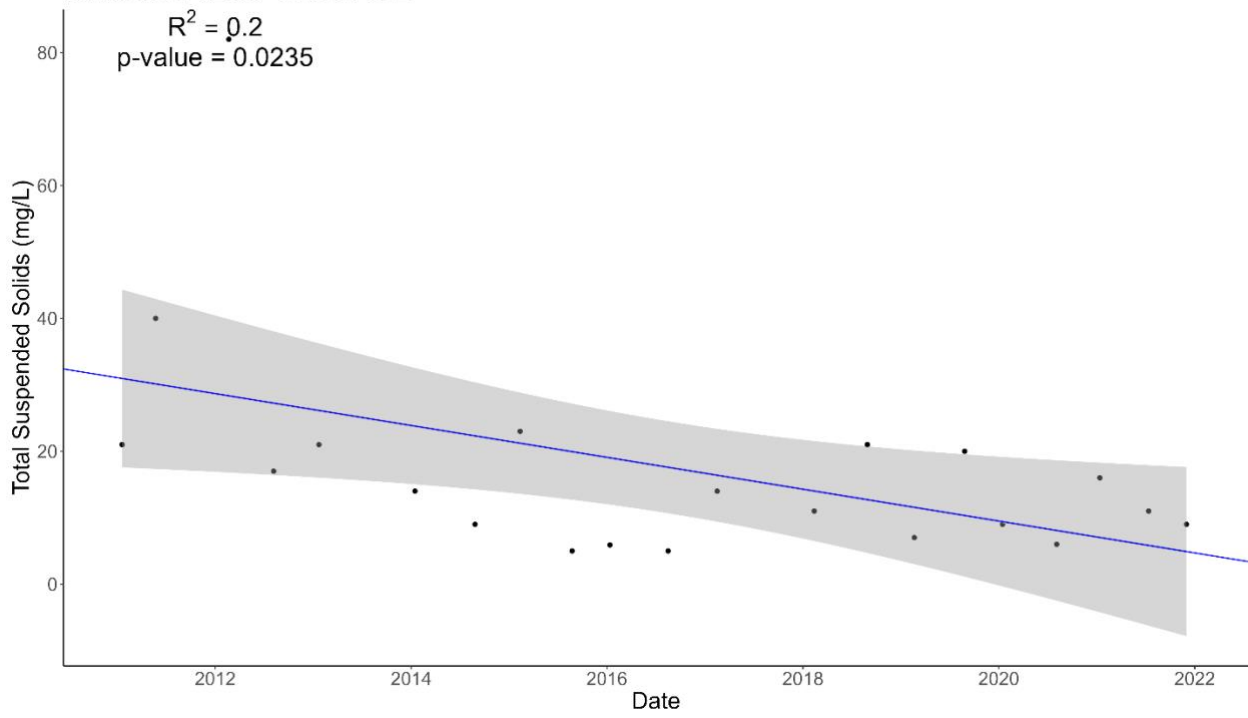


StationID: 12397-BOTTOM



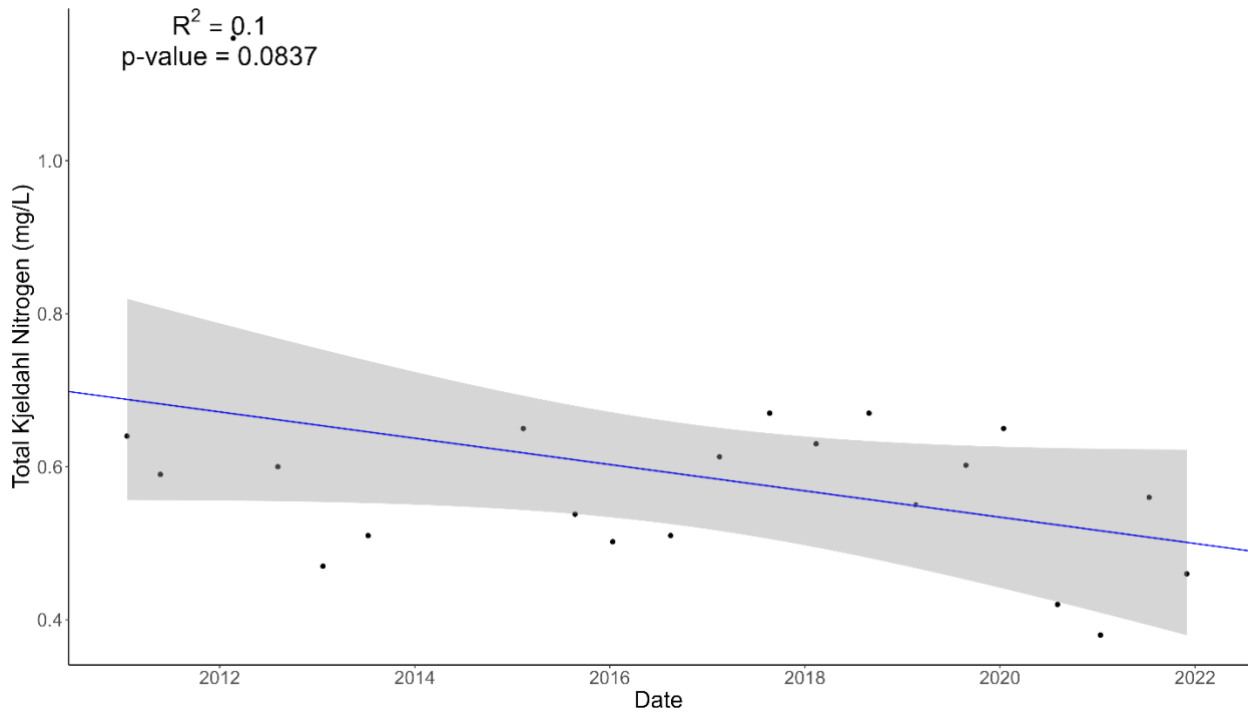
StationID: 12397-SURFACE

$R^2 = 0.2$
p-value = 0.0235

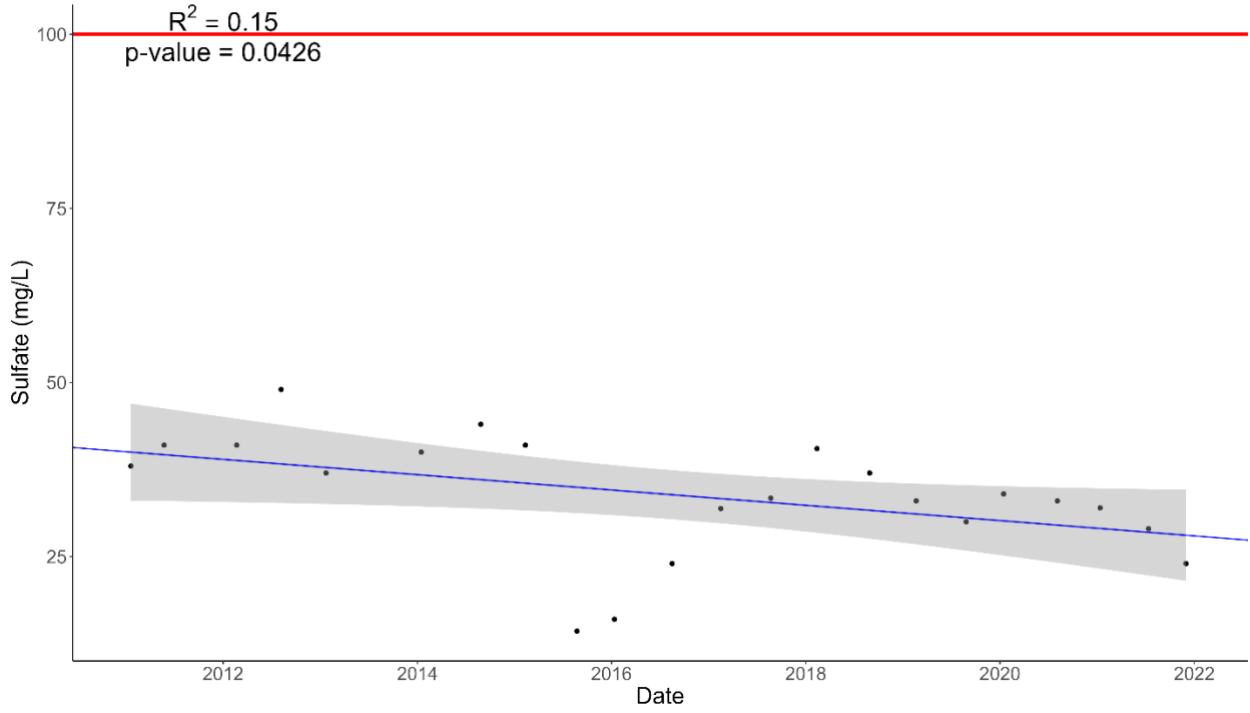


StationID: 12397-SURFACE

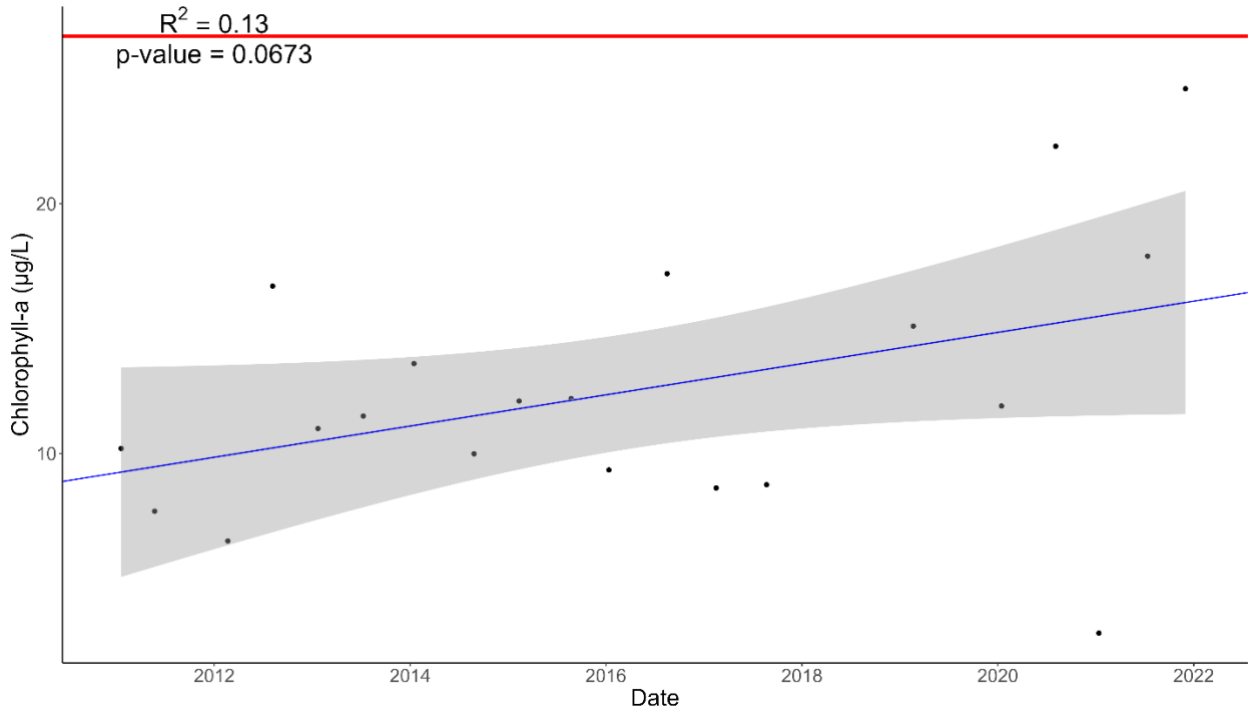
$R^2 = 0.1$
p-value = 0.0837



StationID: 12397-SURFACE

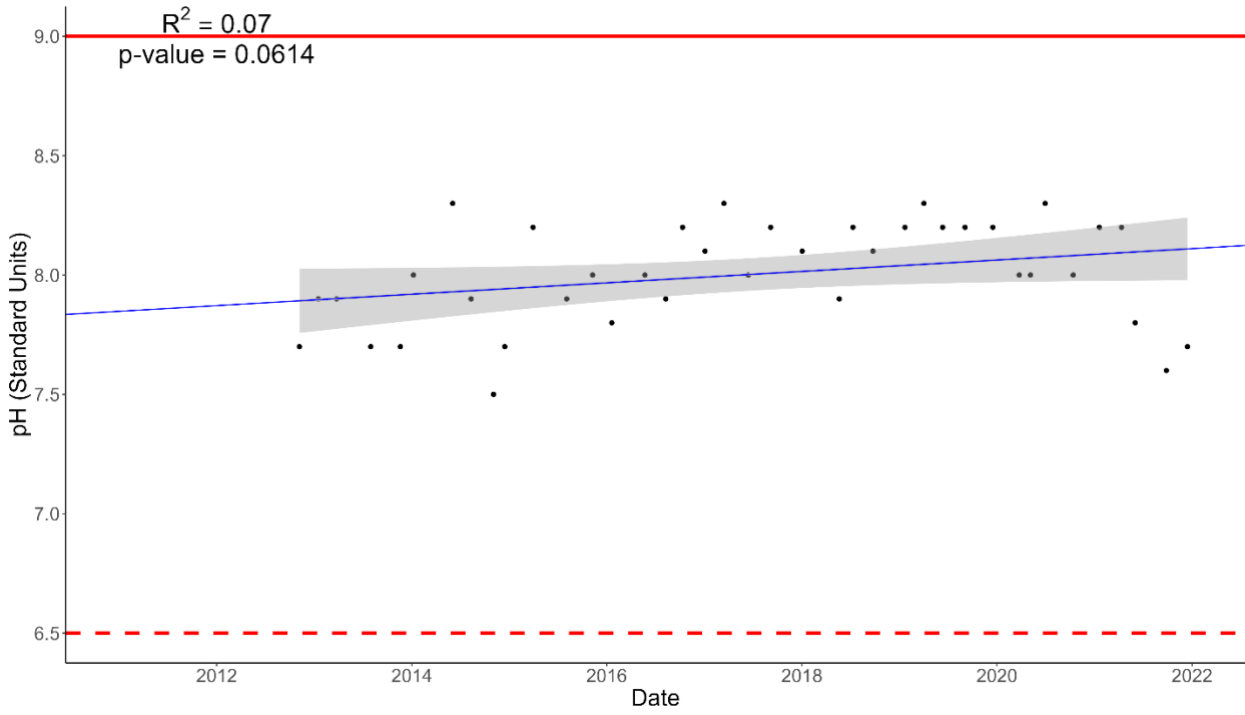


StationID: 12397-SURFACE

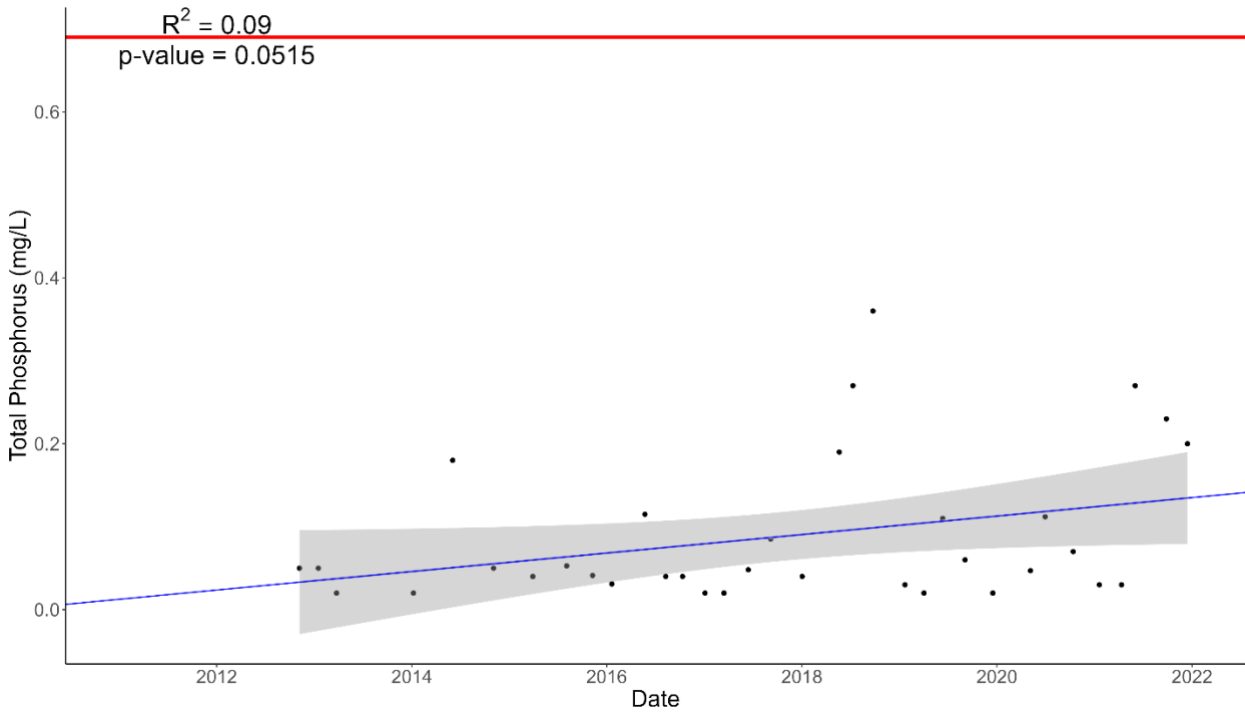


1418A – Hords Creek

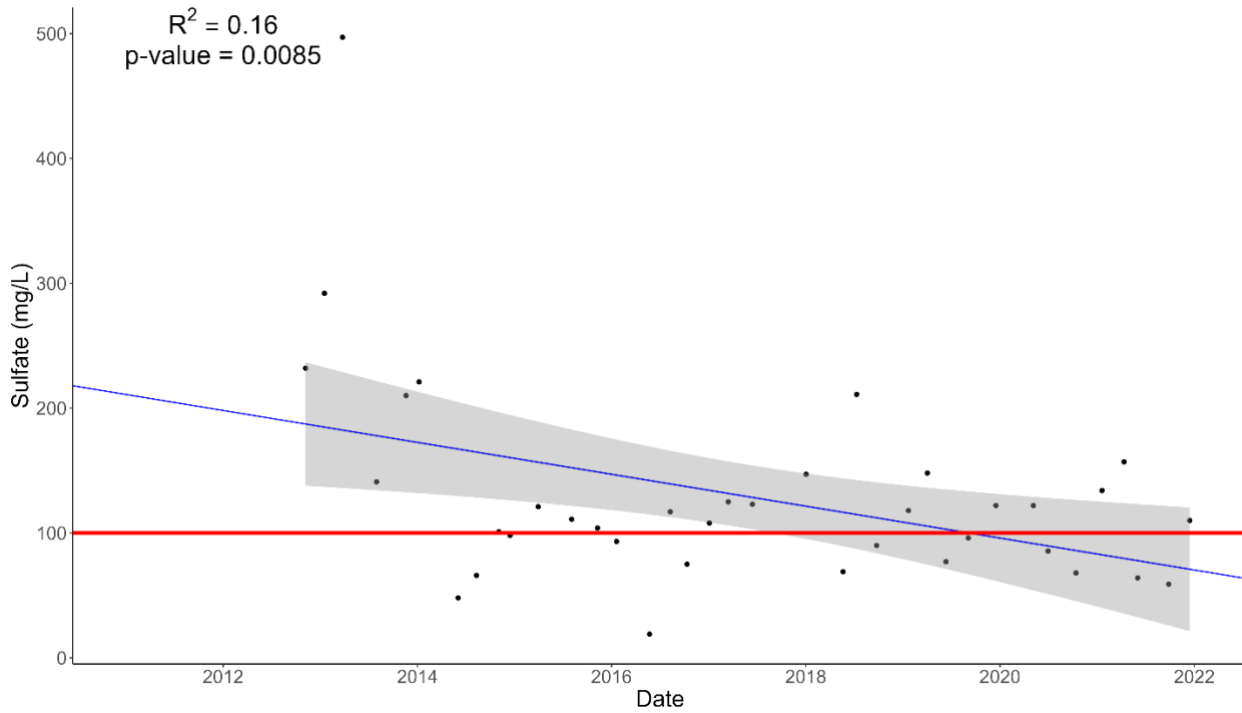
StationID: 12177-SURFACE



StationID: 12177-SURFACE



StationID: 21134-SURFACE

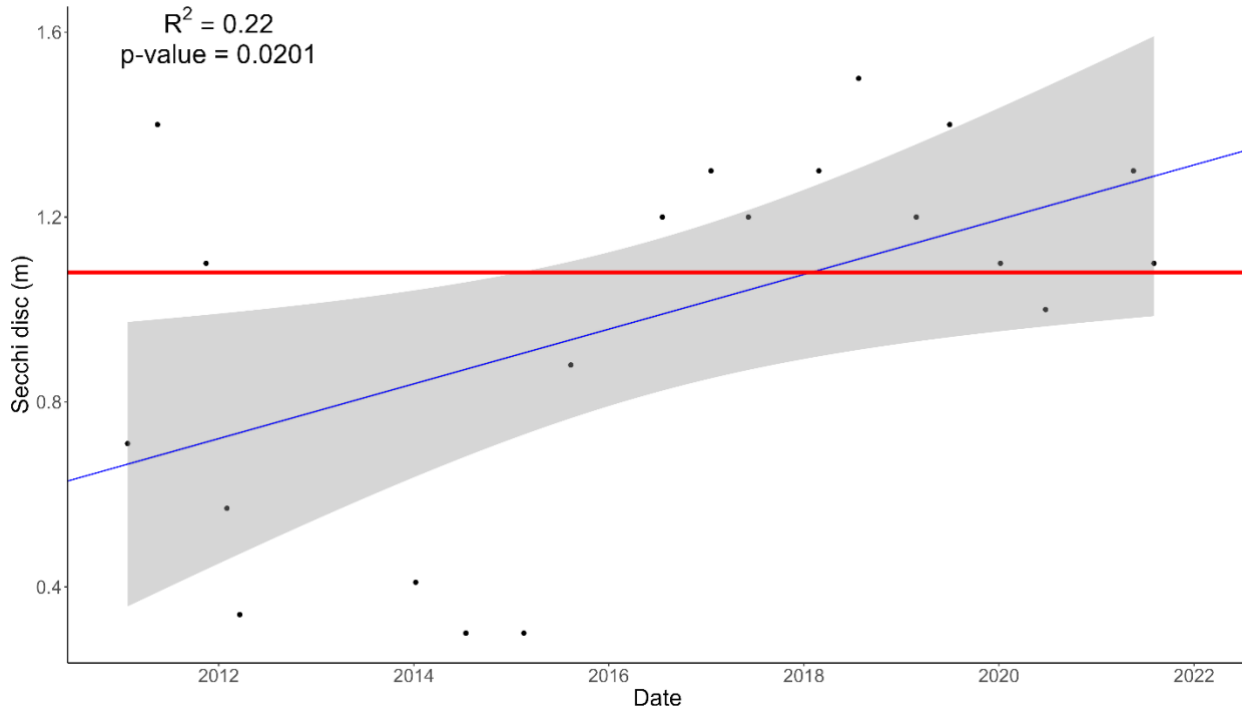


1418C – Hords Creek Reservoir

No significant trends.

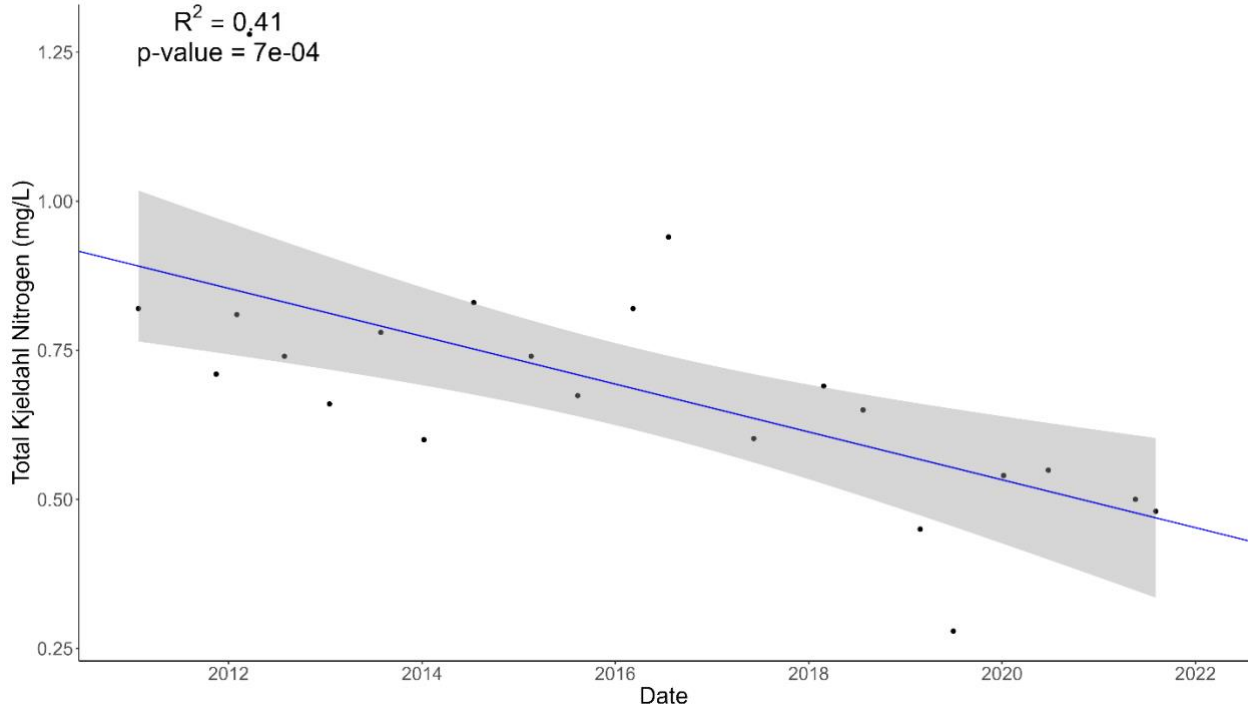
1419 – Lake Coleman

StationID: 12398-SURFACE



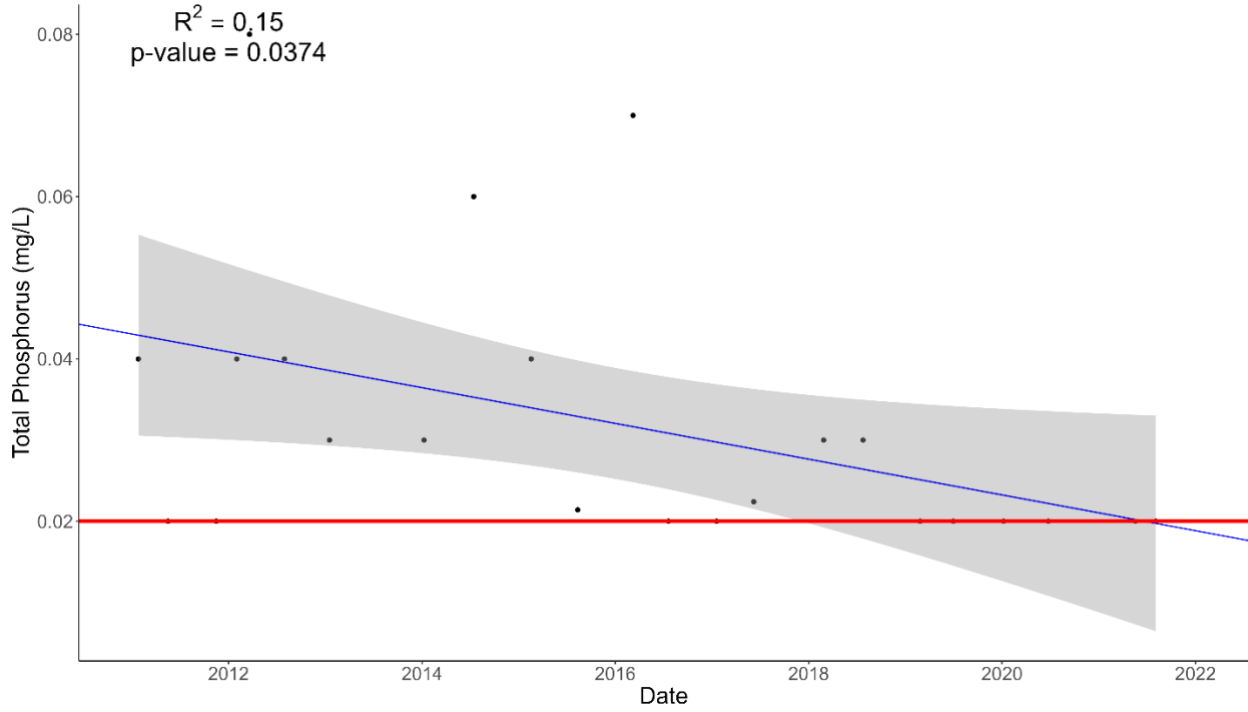
StationID: 12398-SURFACE

$R^2 = 0.41$
p-value = $7e-04$

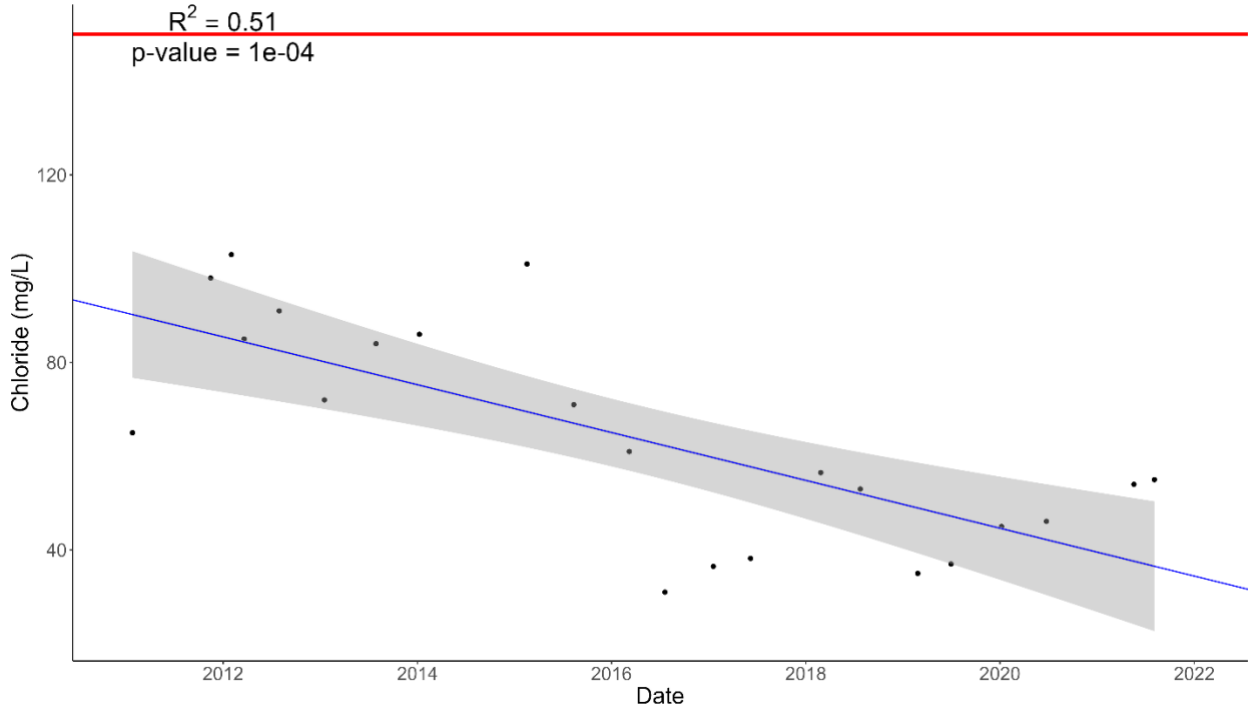


StationID: 12398-SURFACE

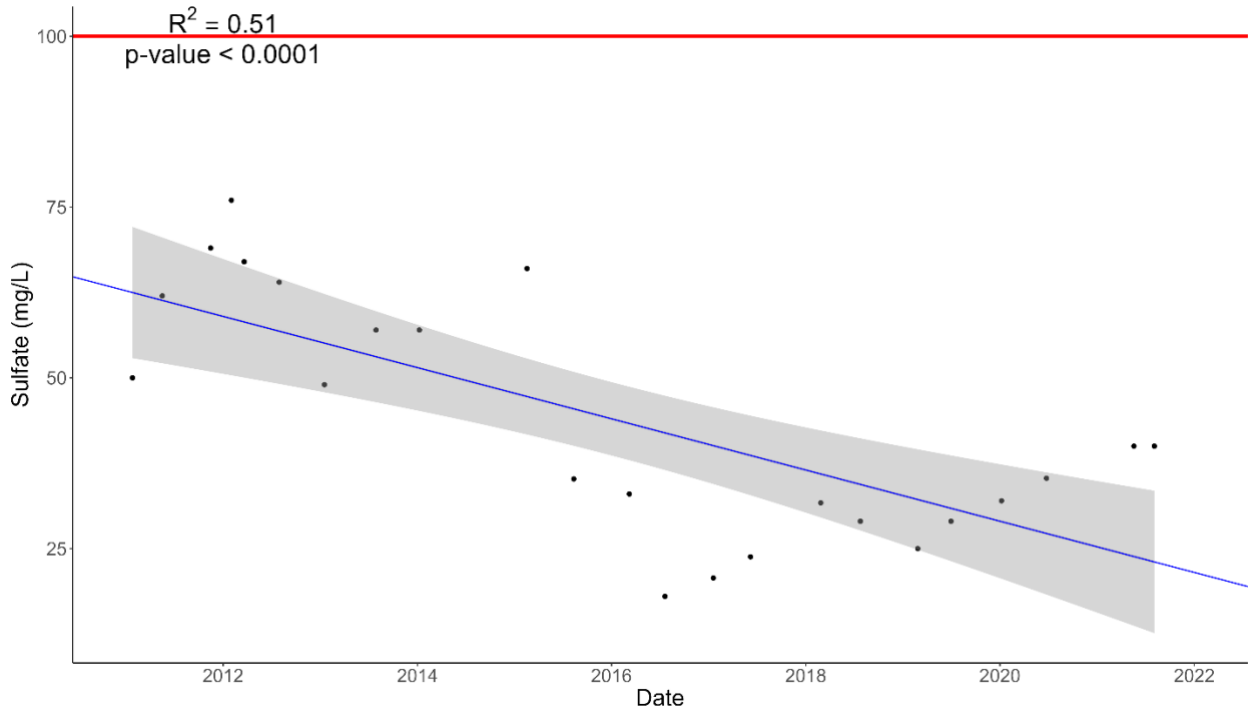
$R^2 = 0.15$
p-value = 0.0374



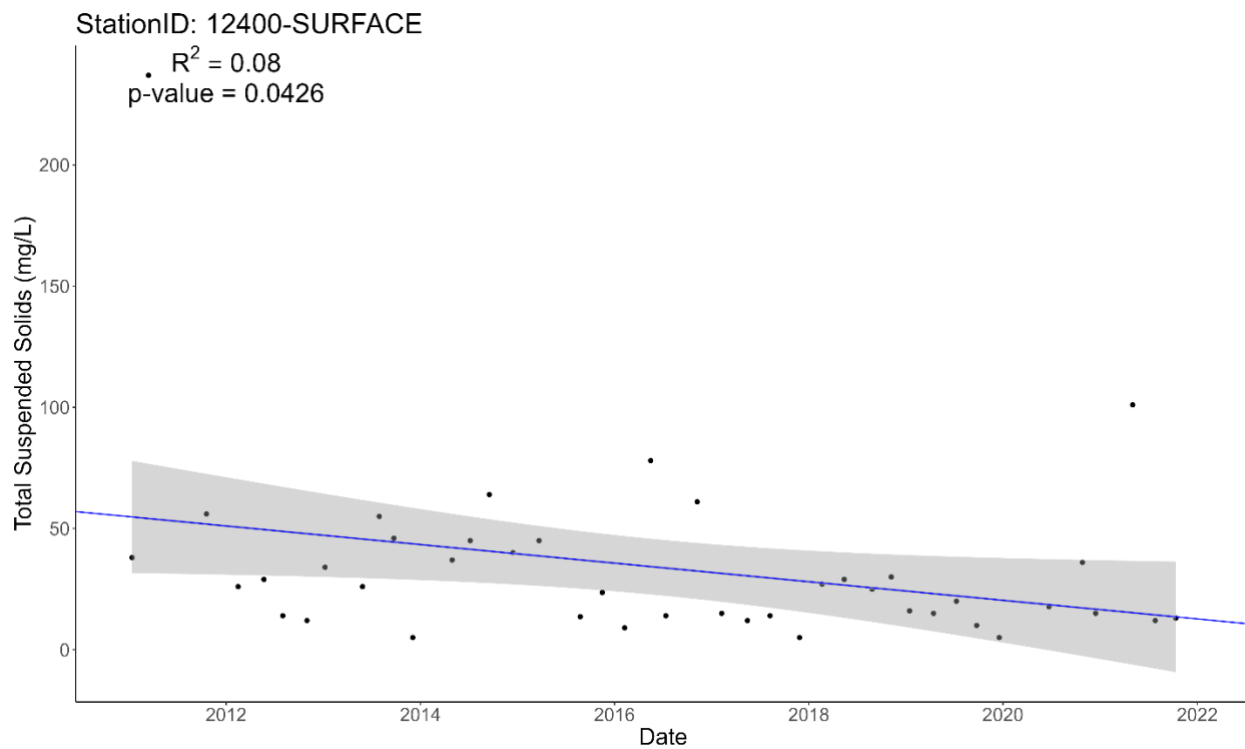
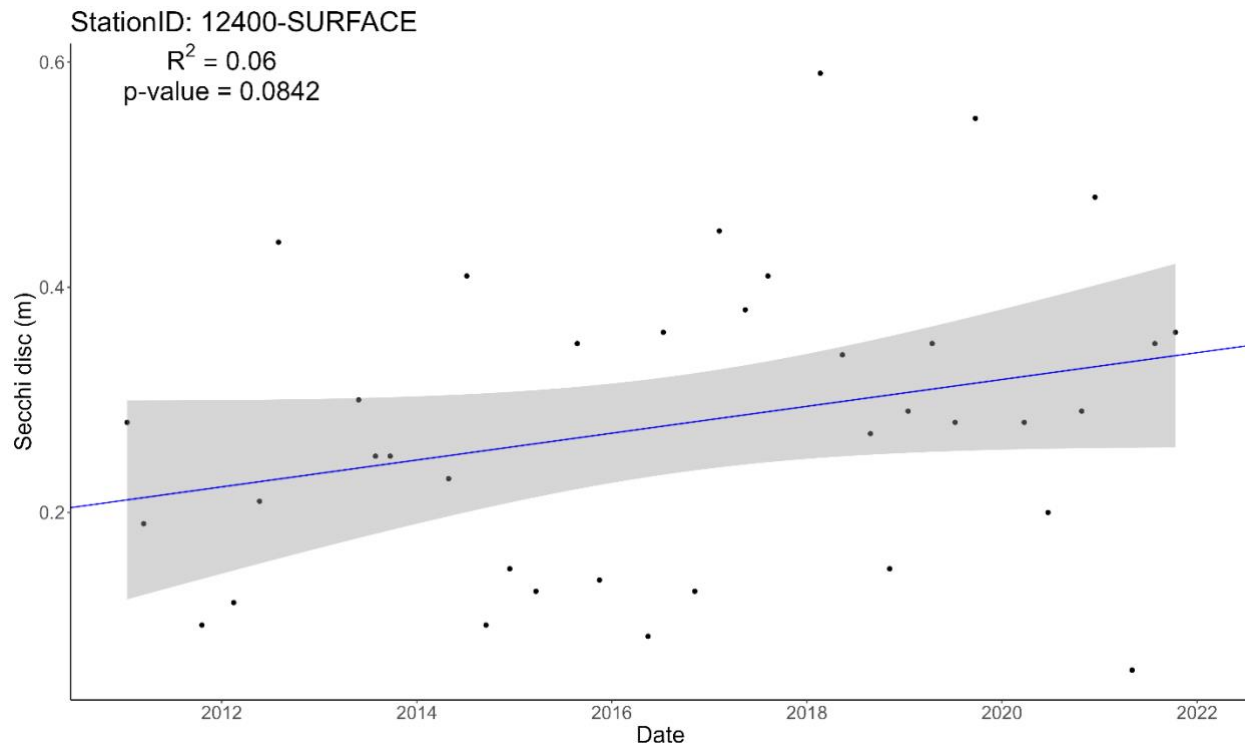
StationID: 12398-SURFACE



StationID: 12398-SURFACE

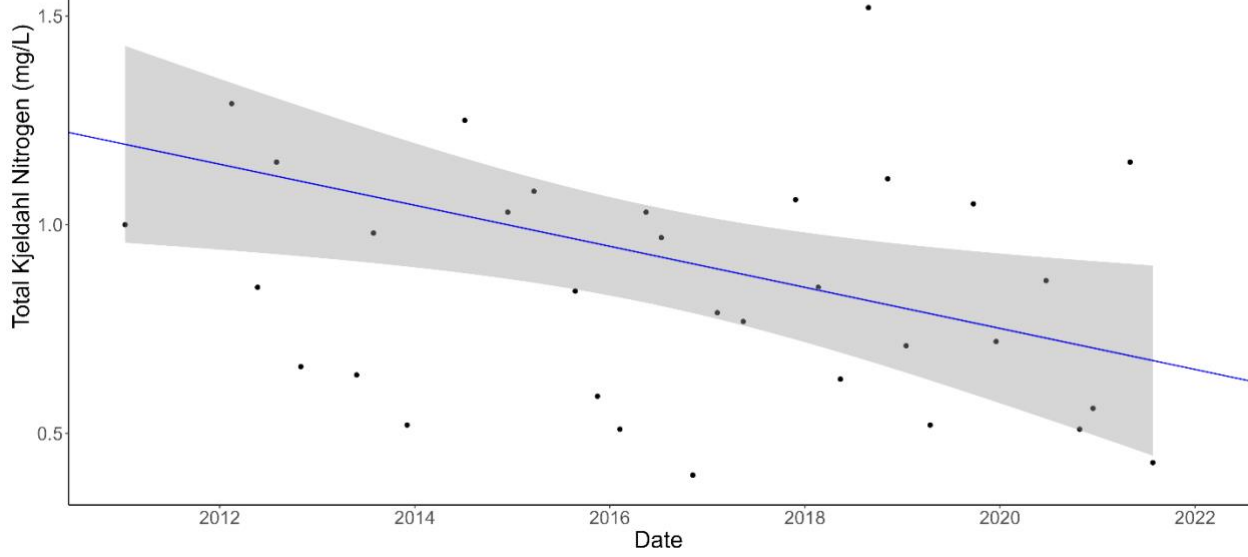


1420 – Pecan Bayou Above Lake Brownwood



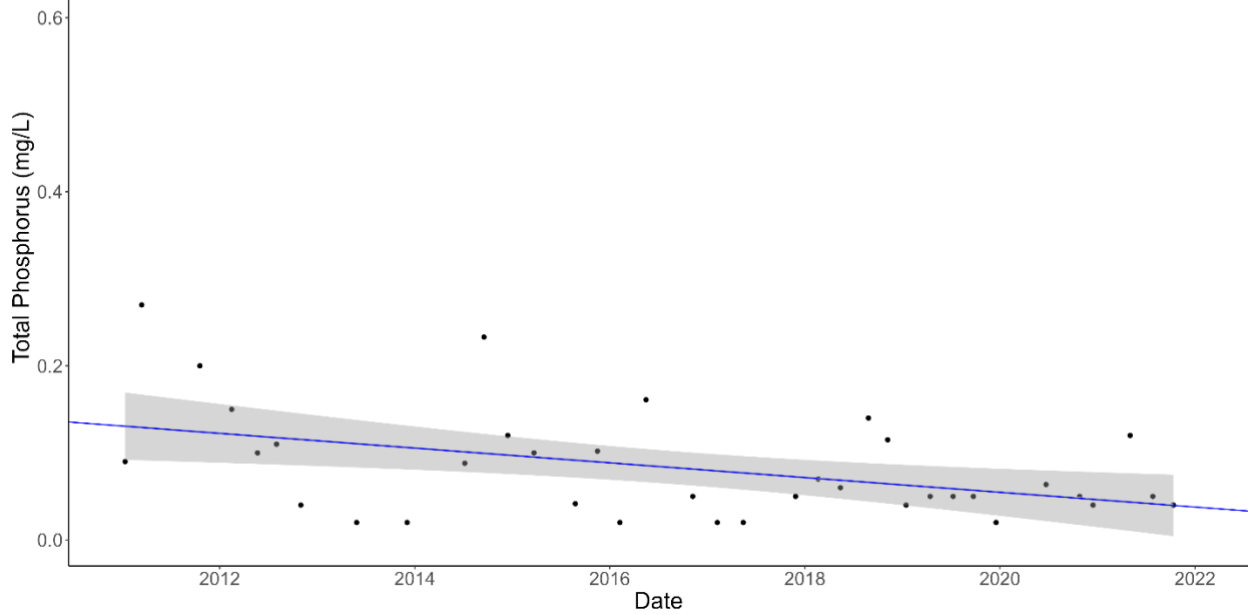
StationID: 12400-SURFACE

$R^2 = 0.14$
 $p\text{-value} = 0.0127$

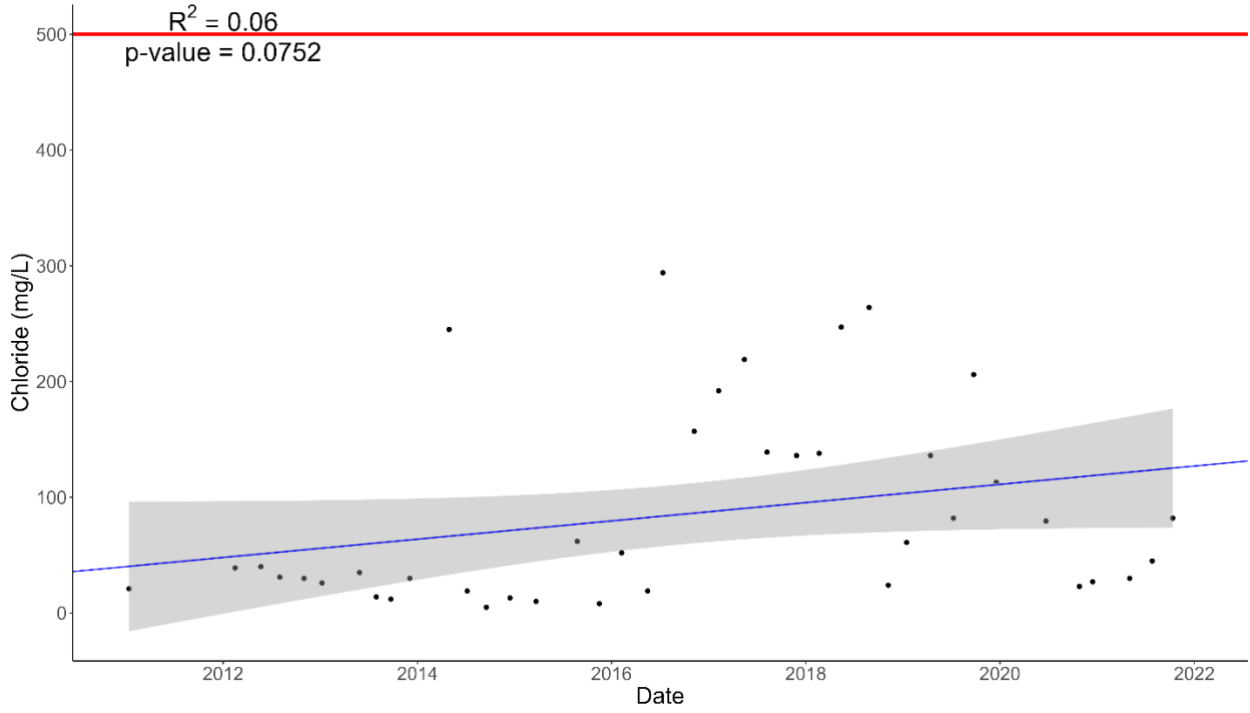


StationID: 12400-SURFACE

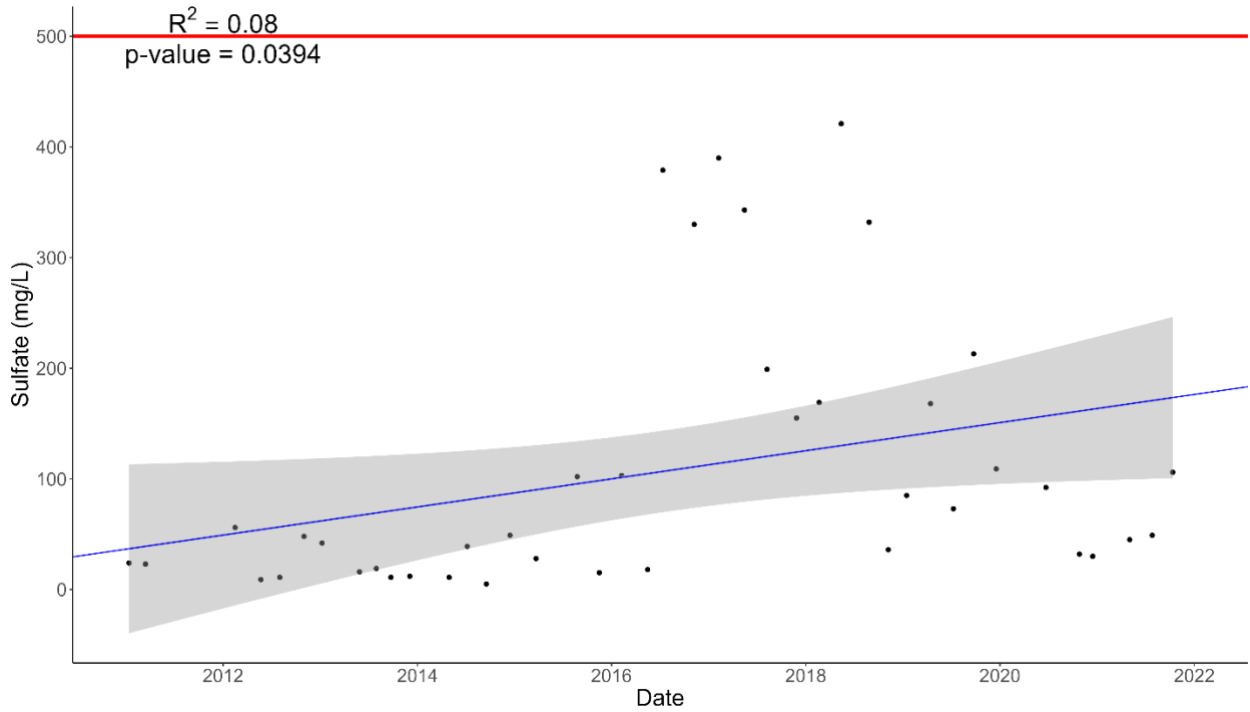
$R^2 = 0.18$
 $p\text{-value} = 0.0063$



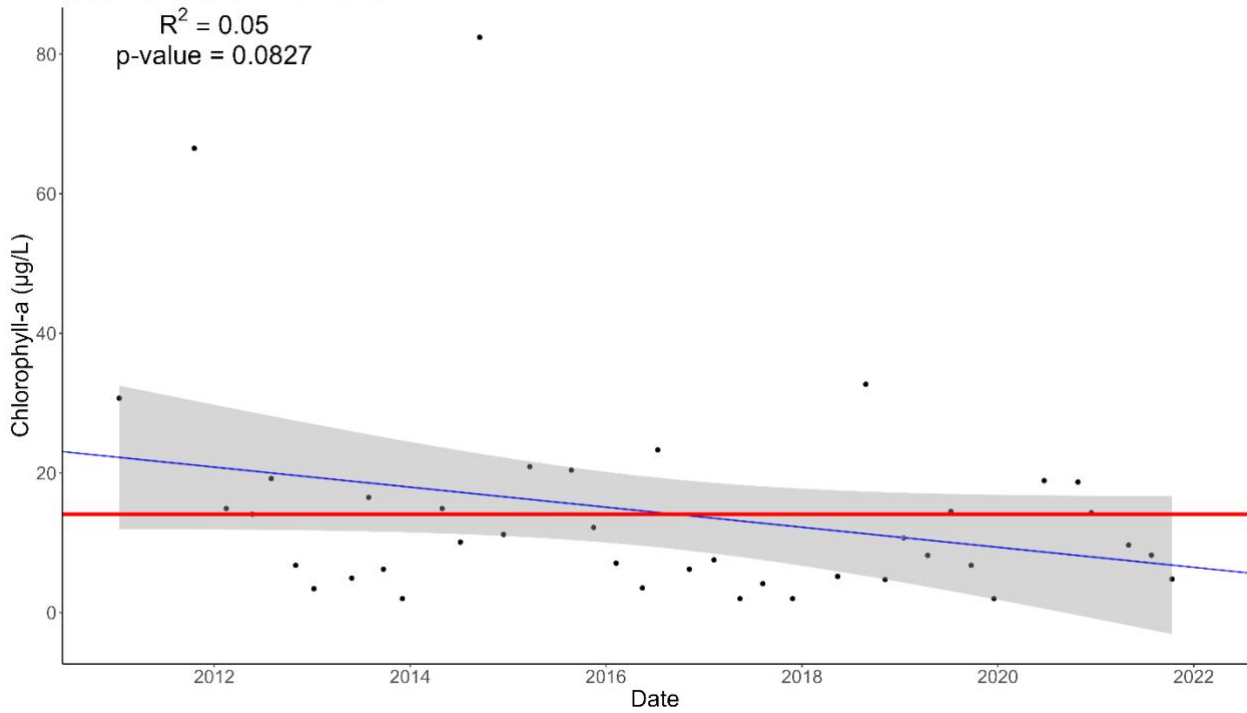
StationID: 12400-SURFACE



StationID: 12400-SURFACE

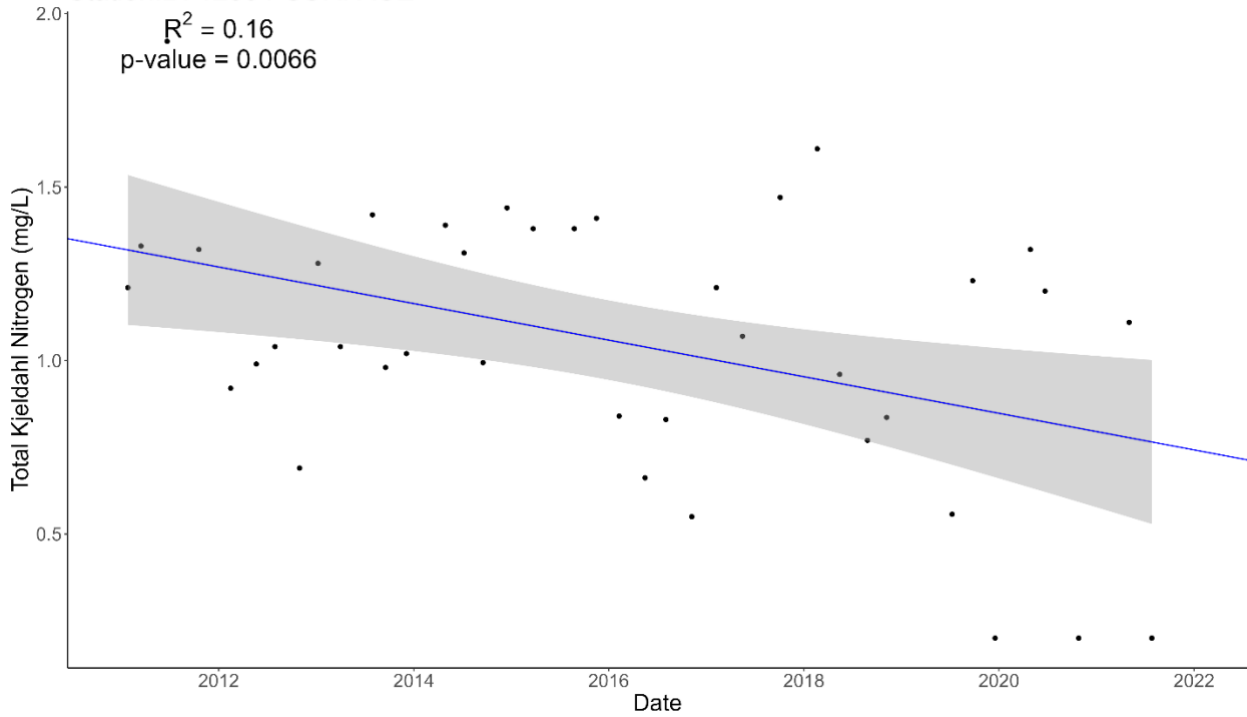


StationID: 12400-SURFACE

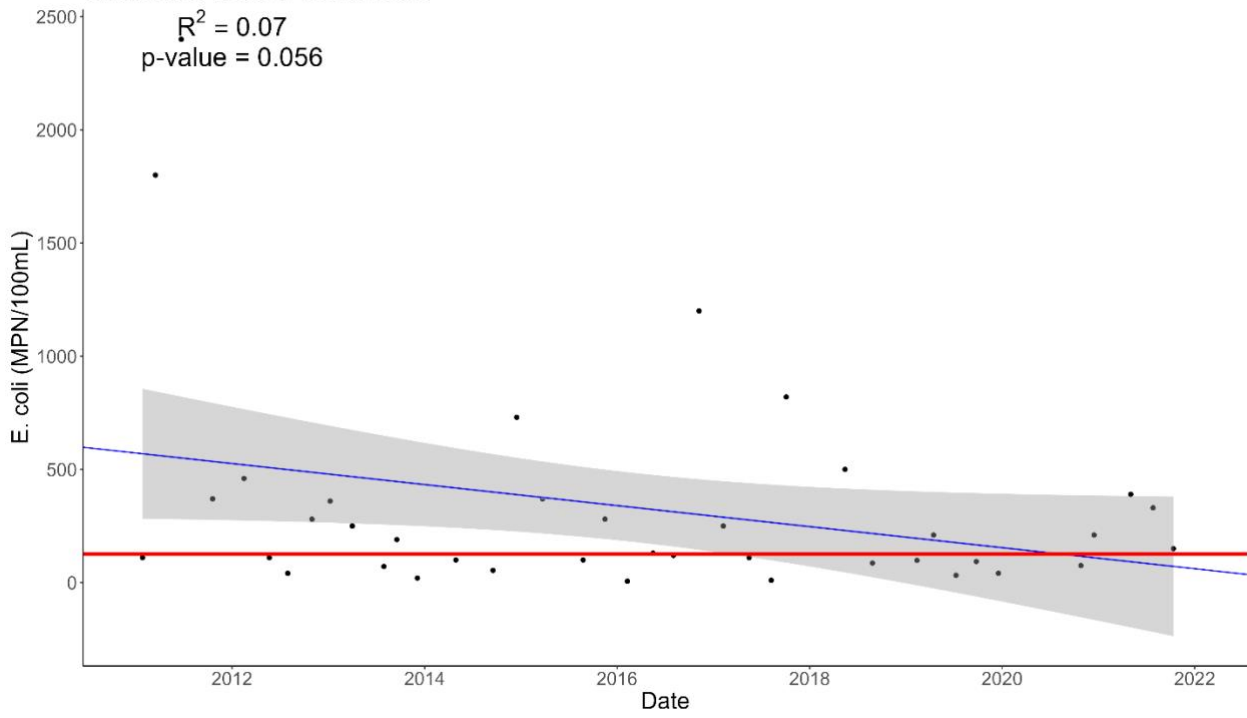


1431 – Mid Pecan Bayou

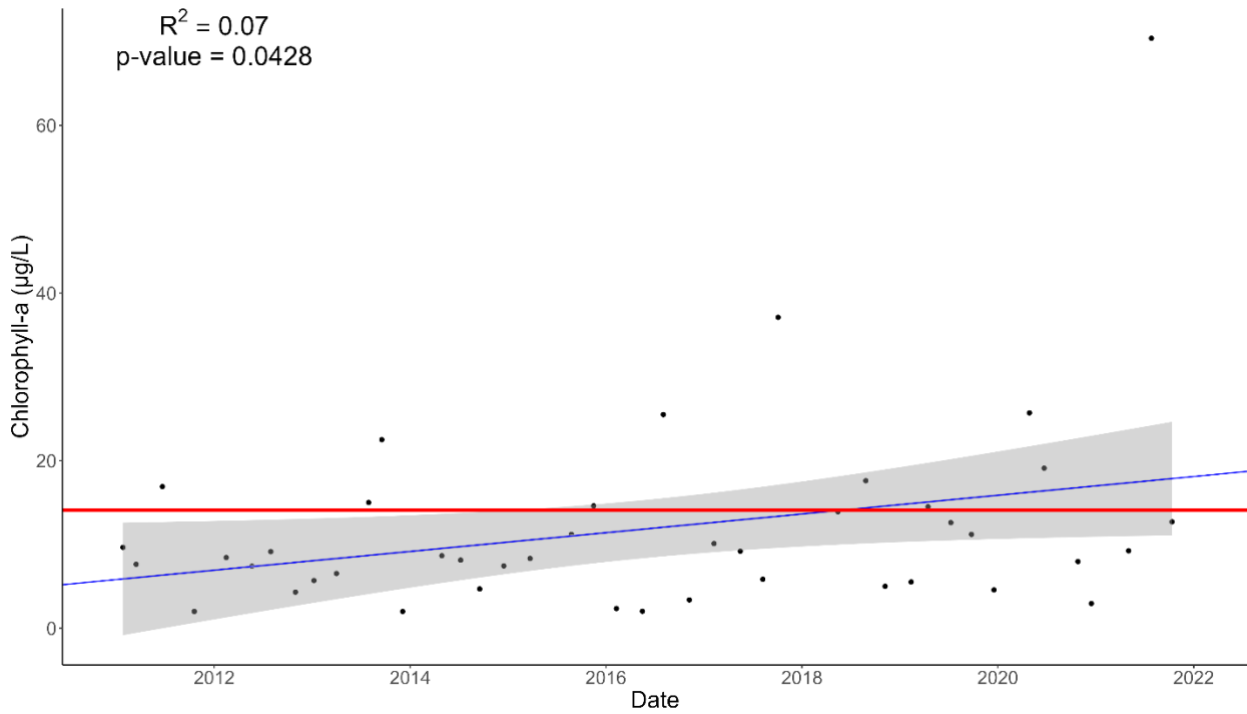
StationID: 12504-SURFACE



StationID: 12504-SURFACE

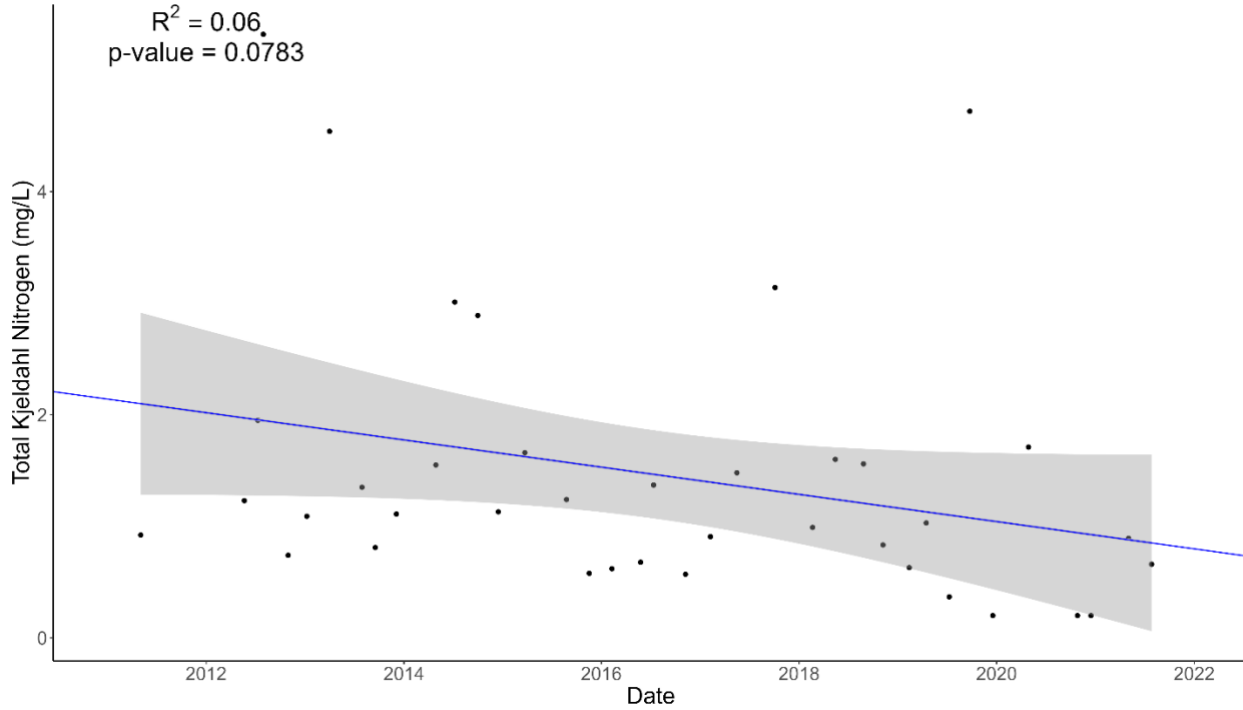


StationID: 12504-SURFACE



StationID: 12507-SURFACE

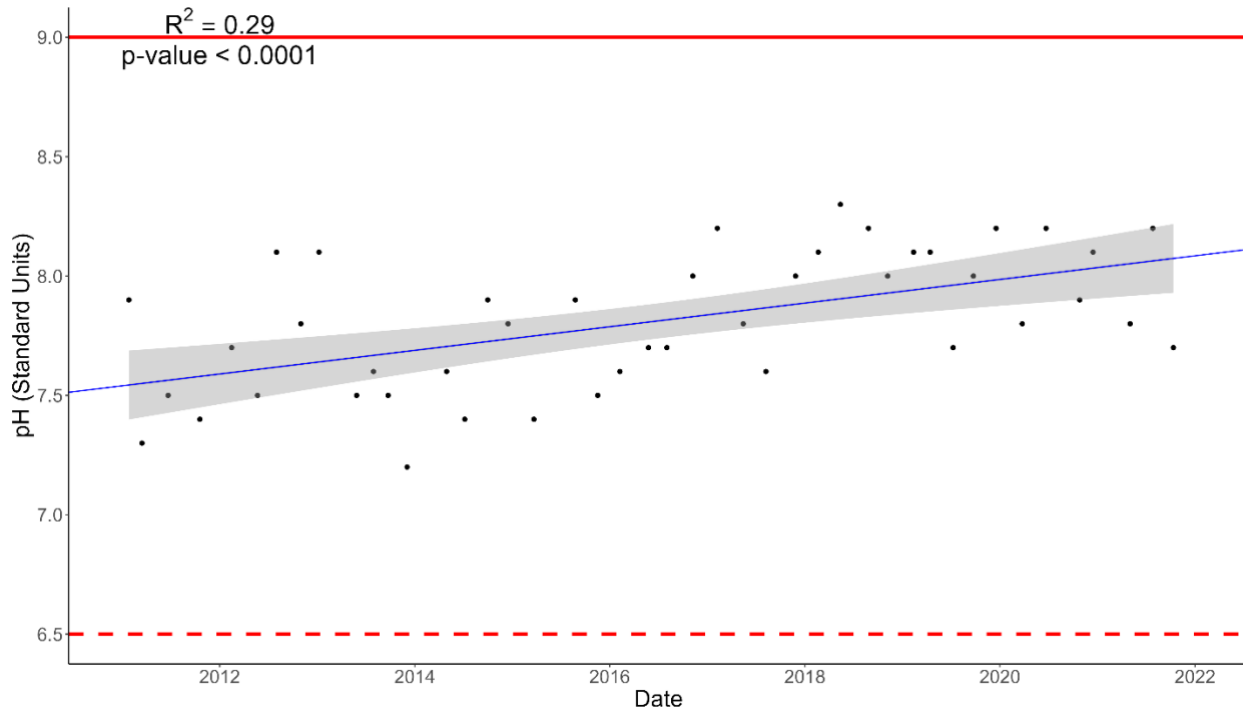
$R^2 = 0.06$
p-value = 0.0783



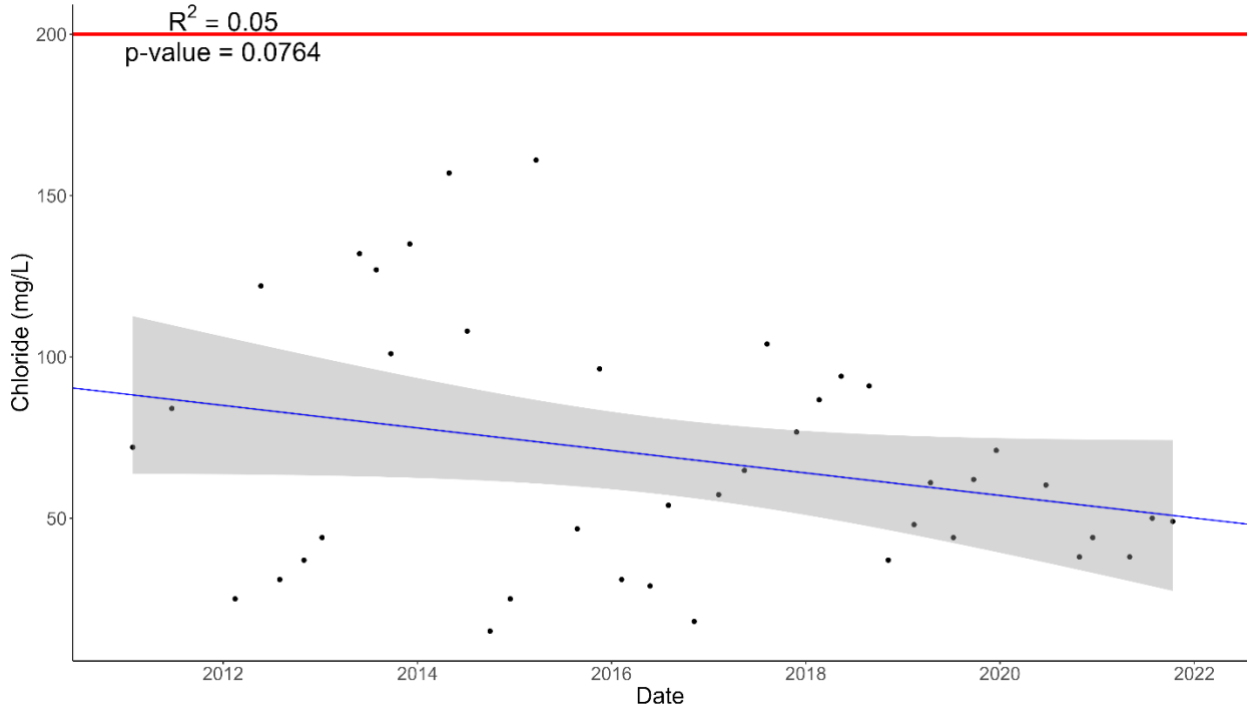
1432 – Upper Pecan Bayou

StationID: 12508-SURFACE

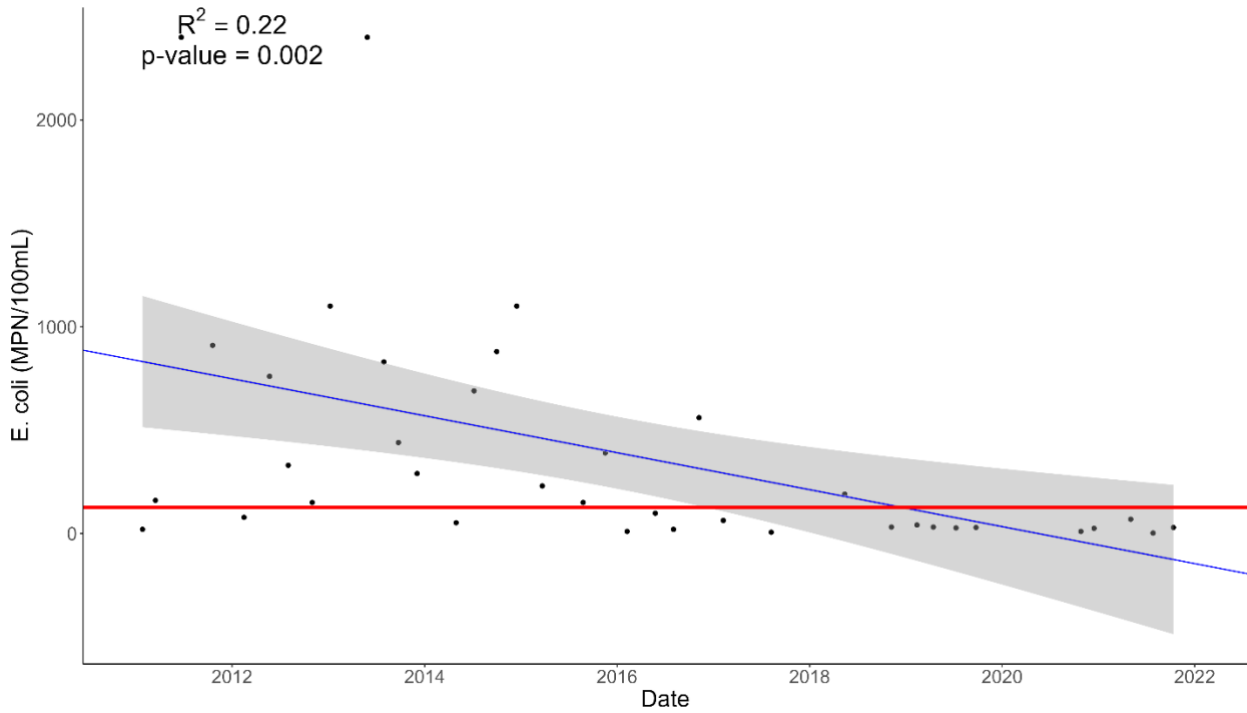
$R^2 = 0.29$
p-value < 0.0001



StationID: 12508-SURFACE



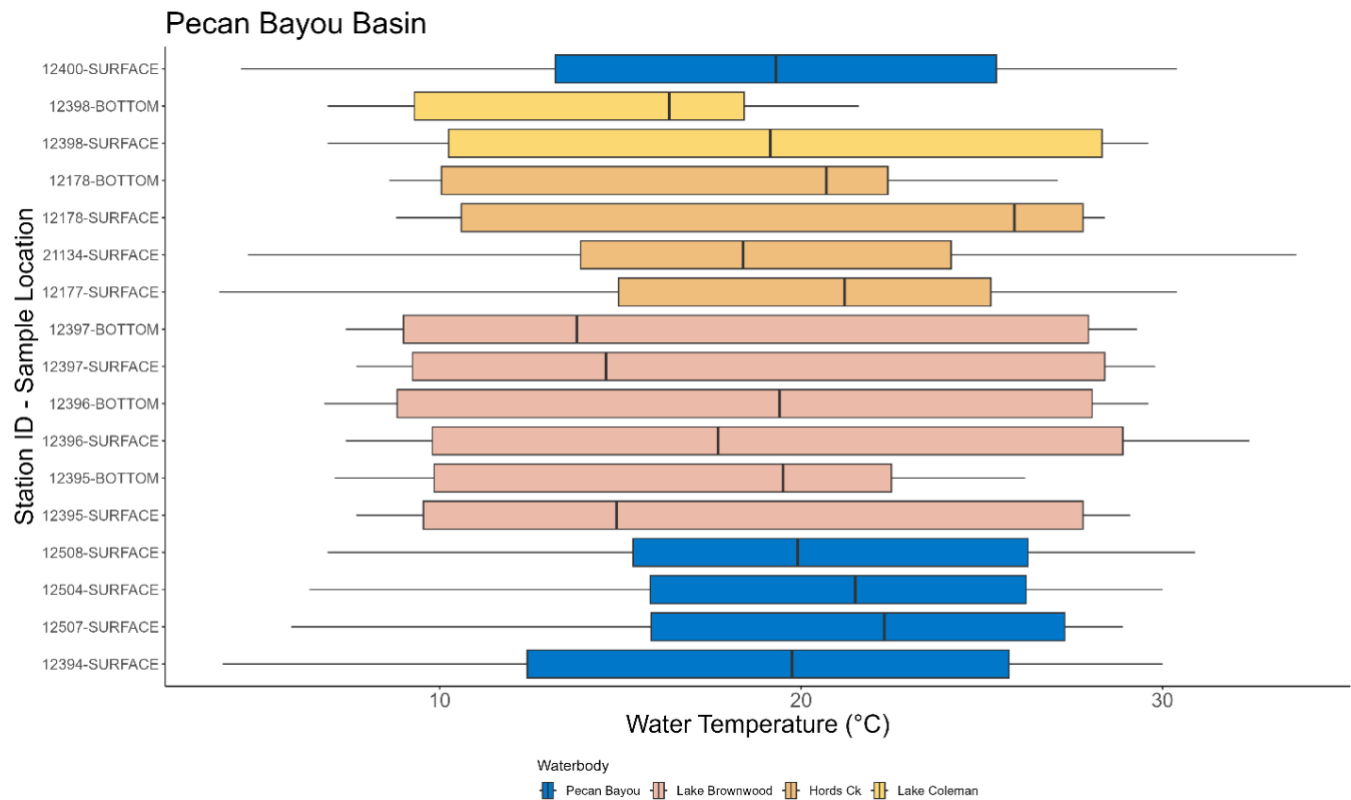
StationID: 12508-SURFACE



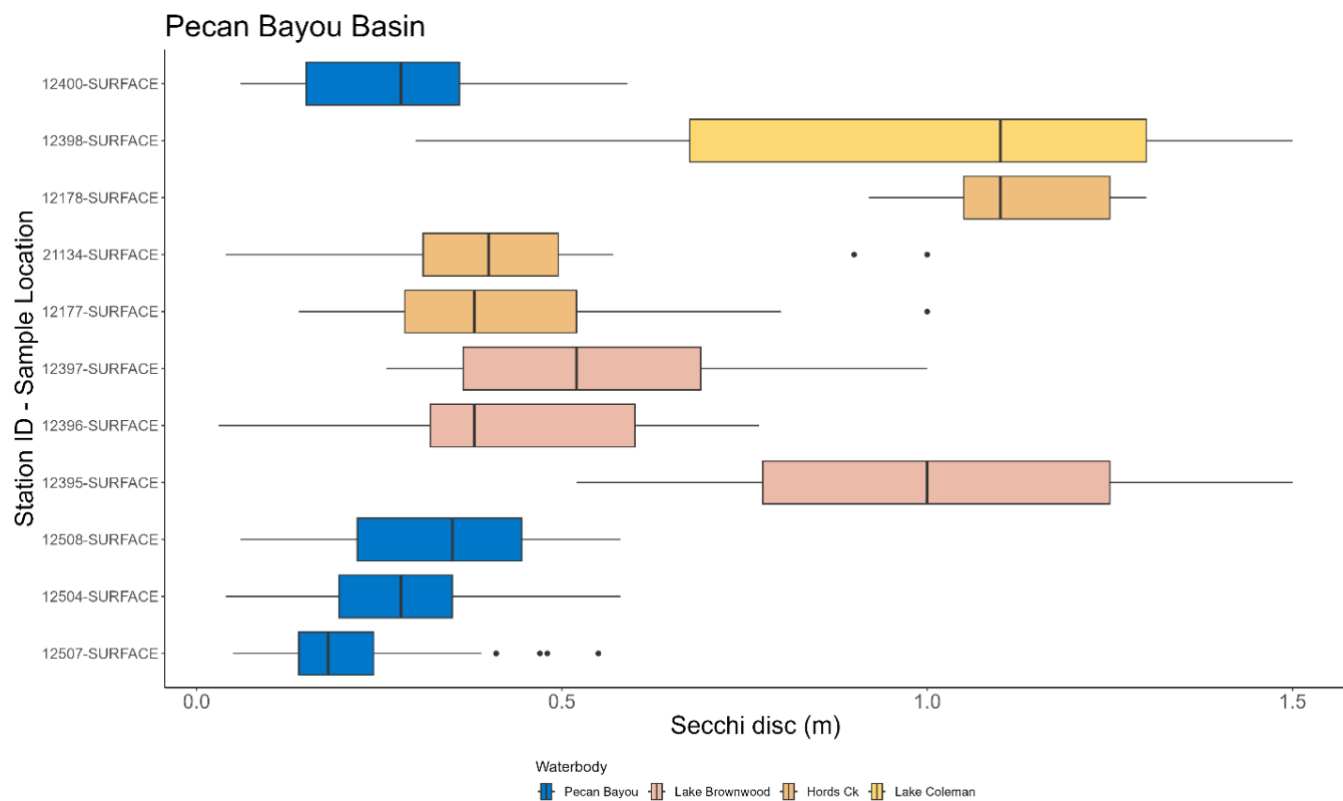
Appendix X5

Spatial comparison of parameters collected within the Pecan Bayou Basin. Boxplots of each parameter are presented first followed by a table of site-by-site comparisons using a Tukey-HSD analysis. Only statistically different station comparisons for each parameter are presented (p-value < 0.05).

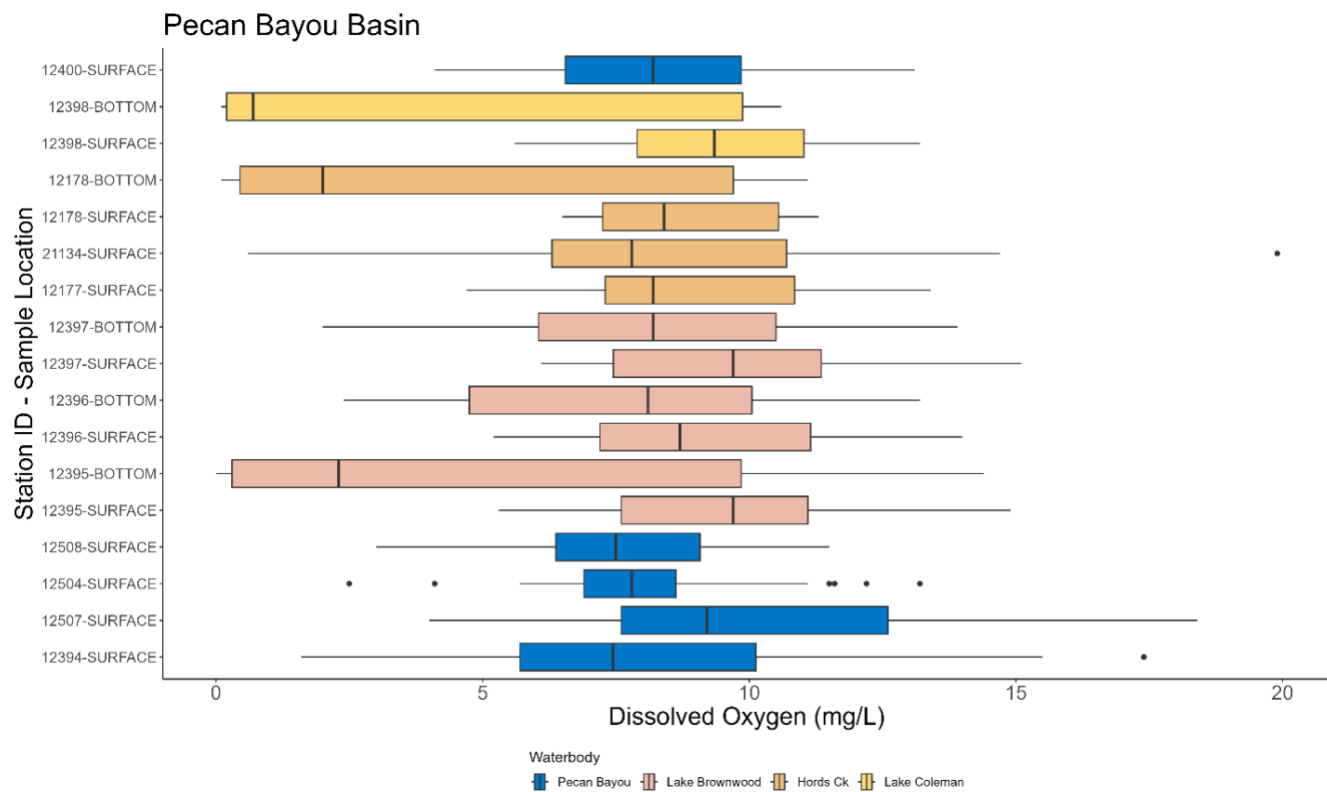
Water Temperature



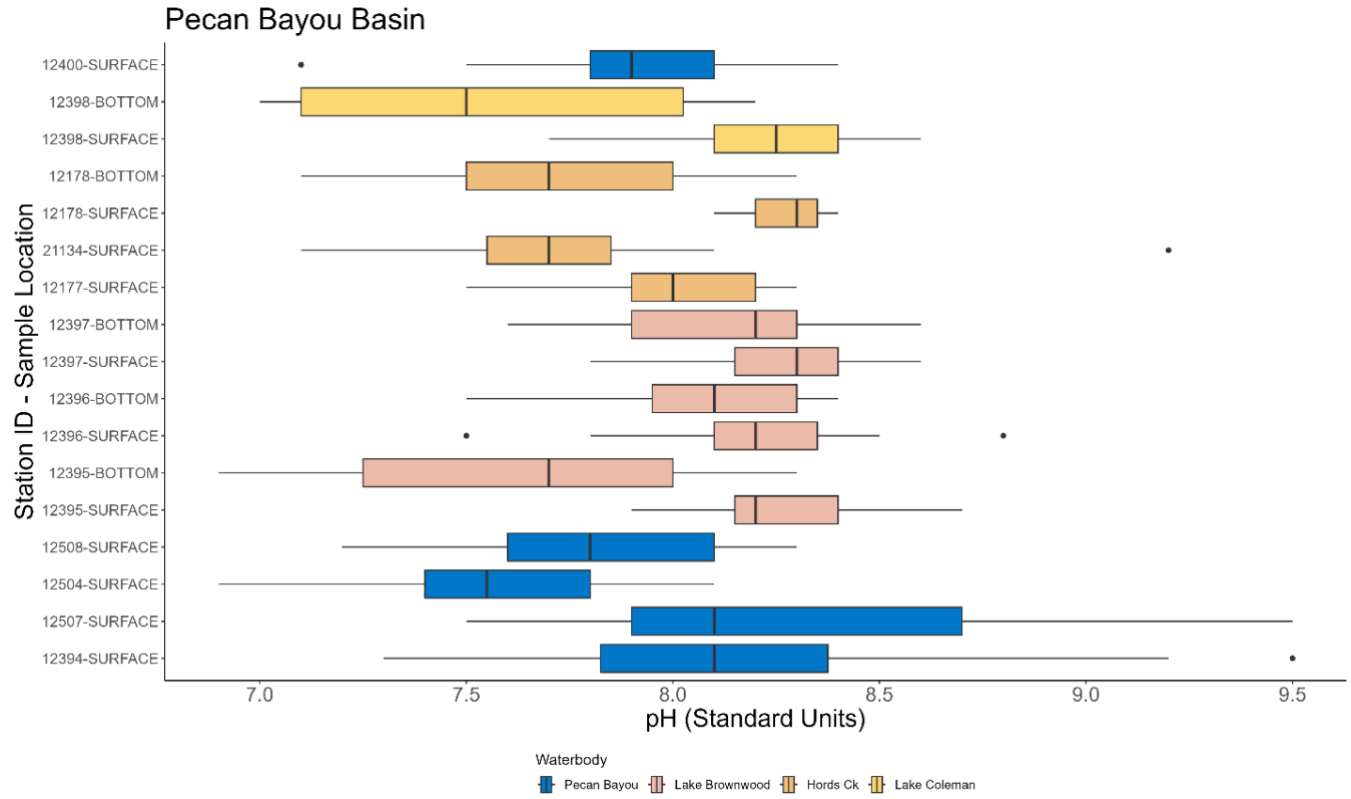
Secchi disc depth



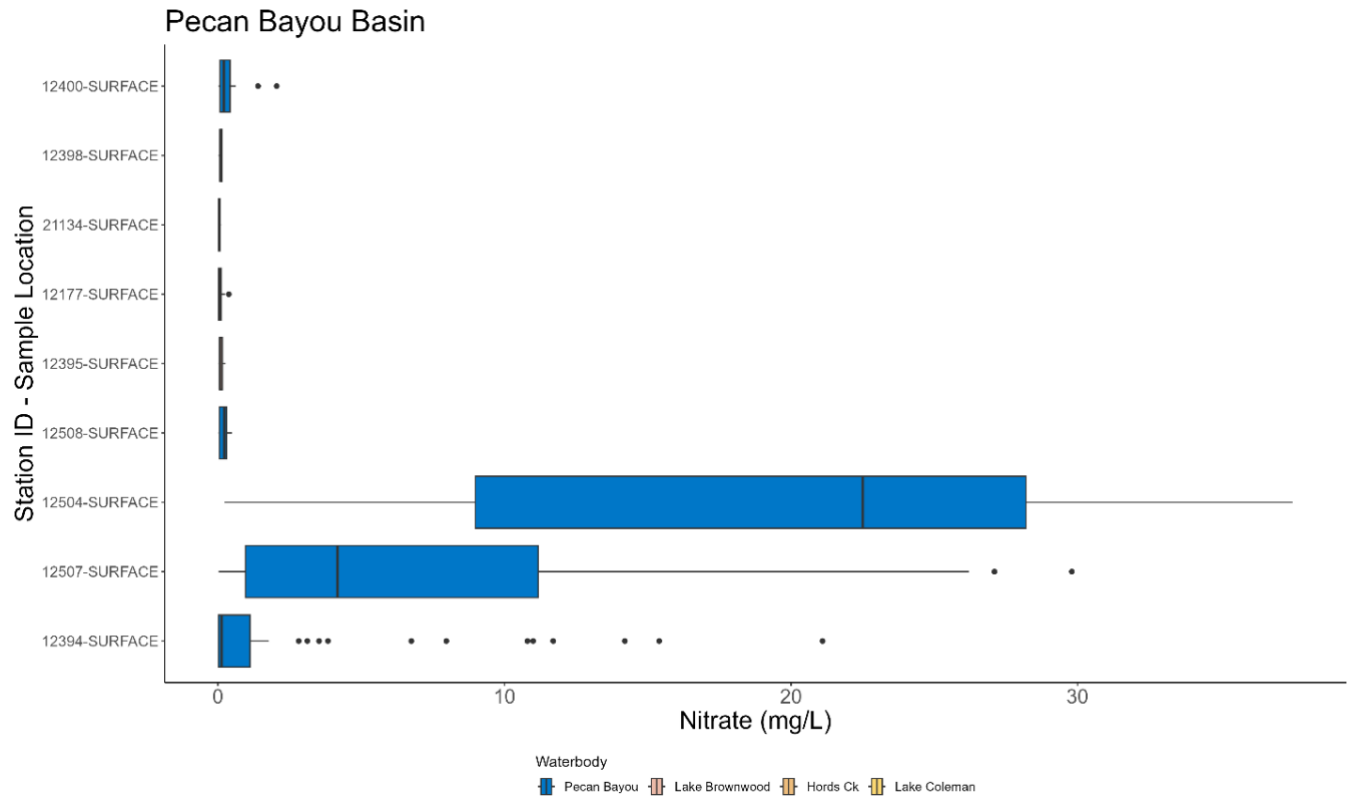
Dissolved Oxygen



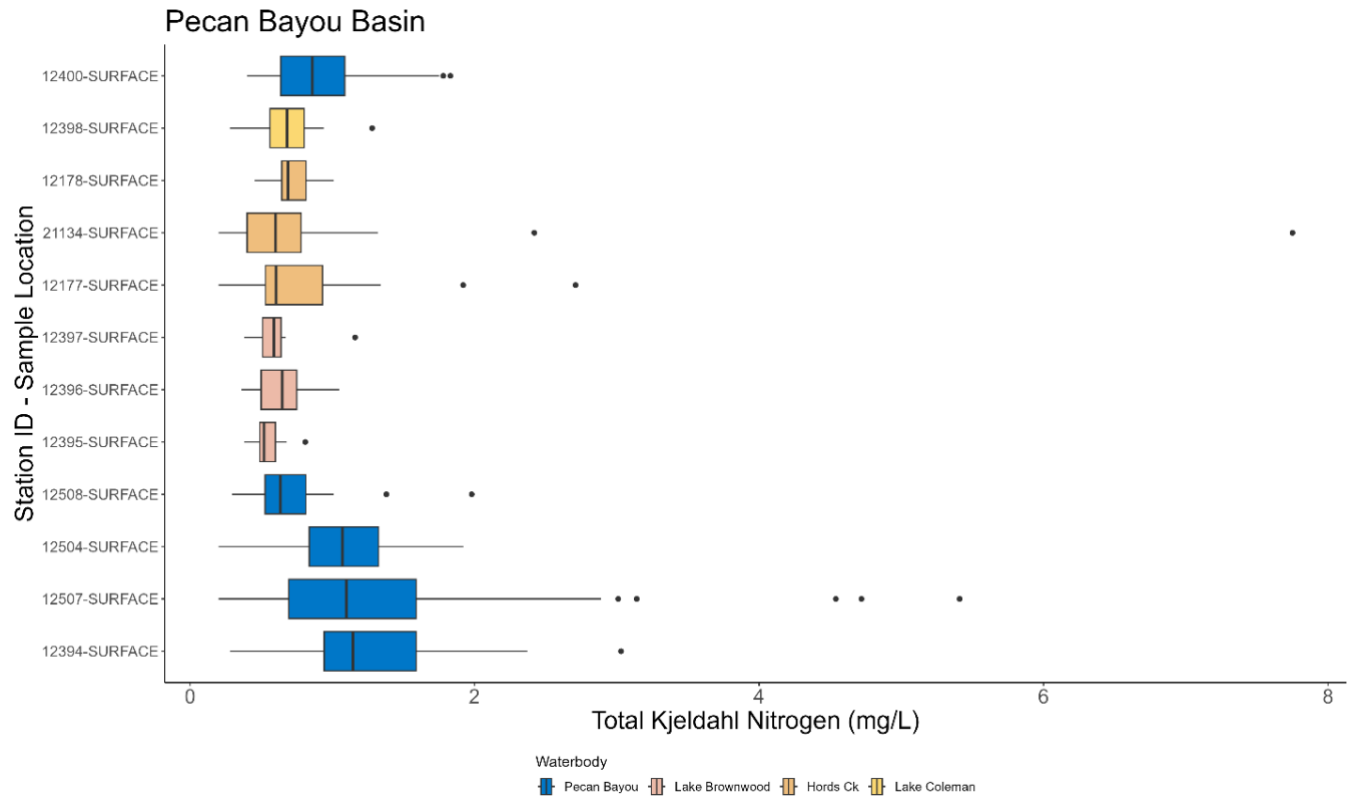
pH



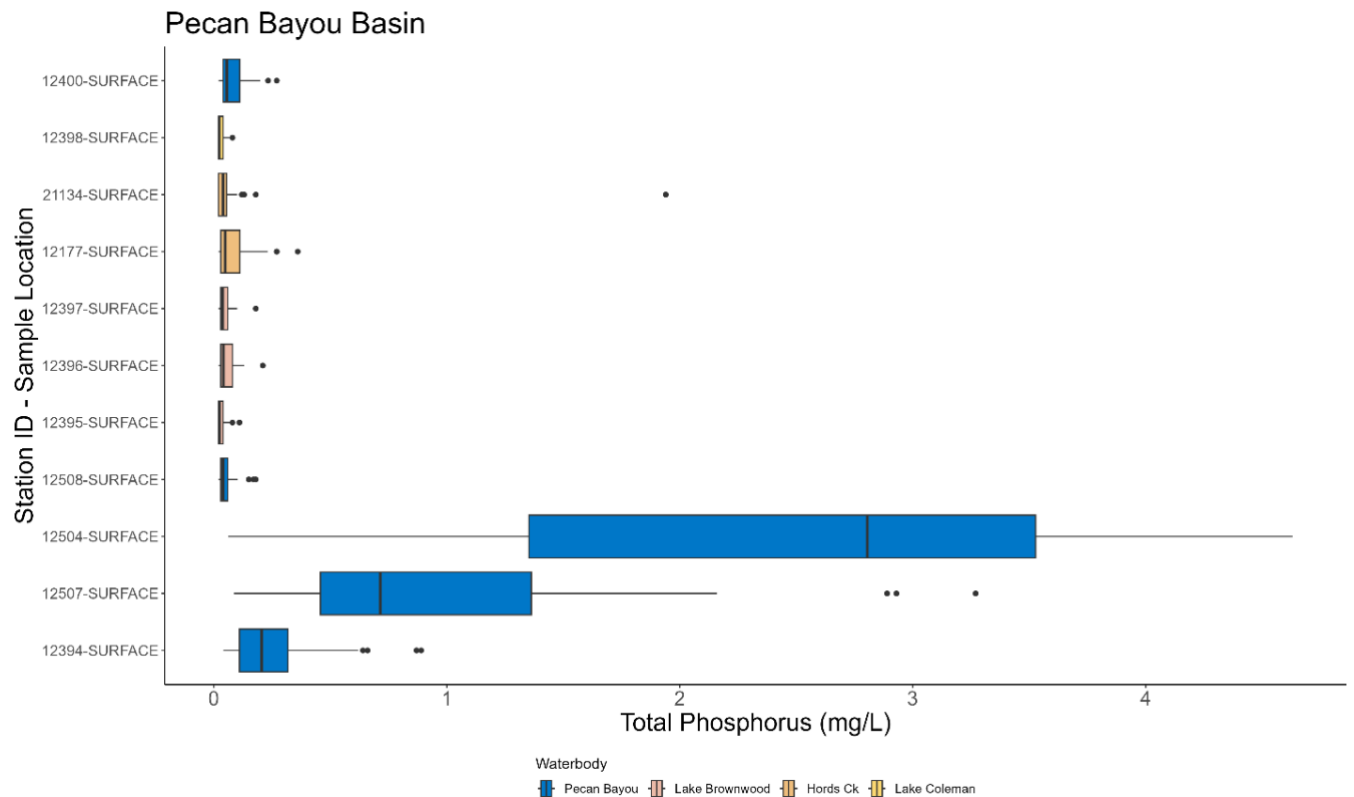
Nitrate



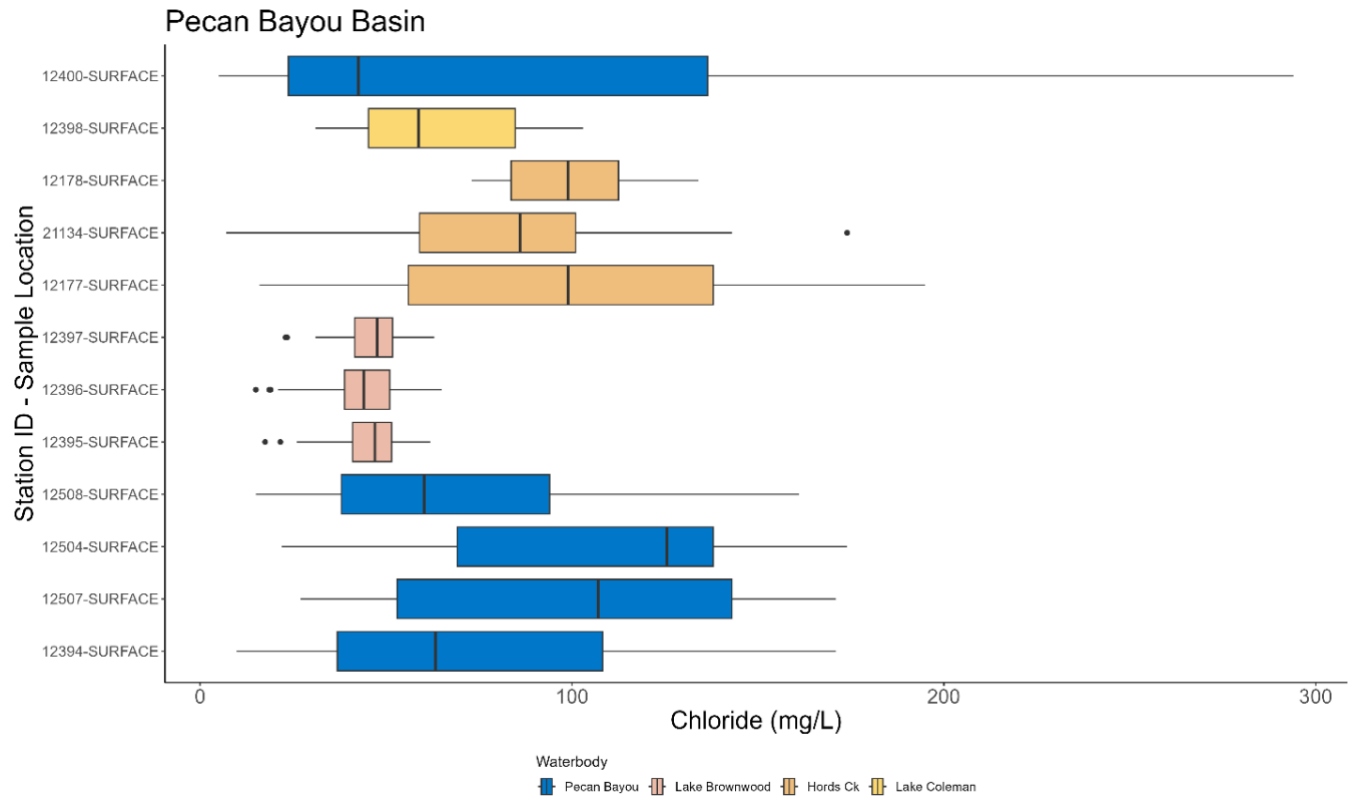
Total Kjeldahl Nitrogen



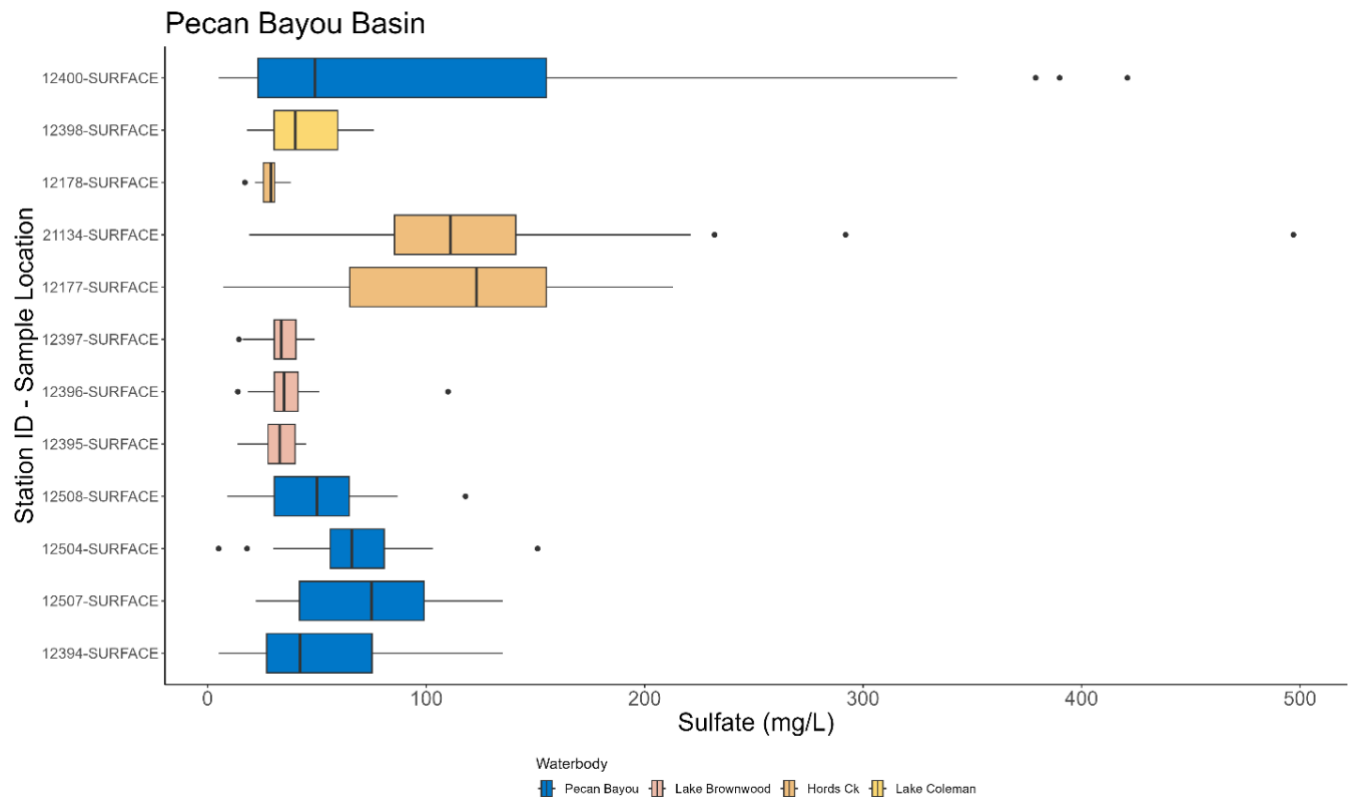
Total Phosphorus



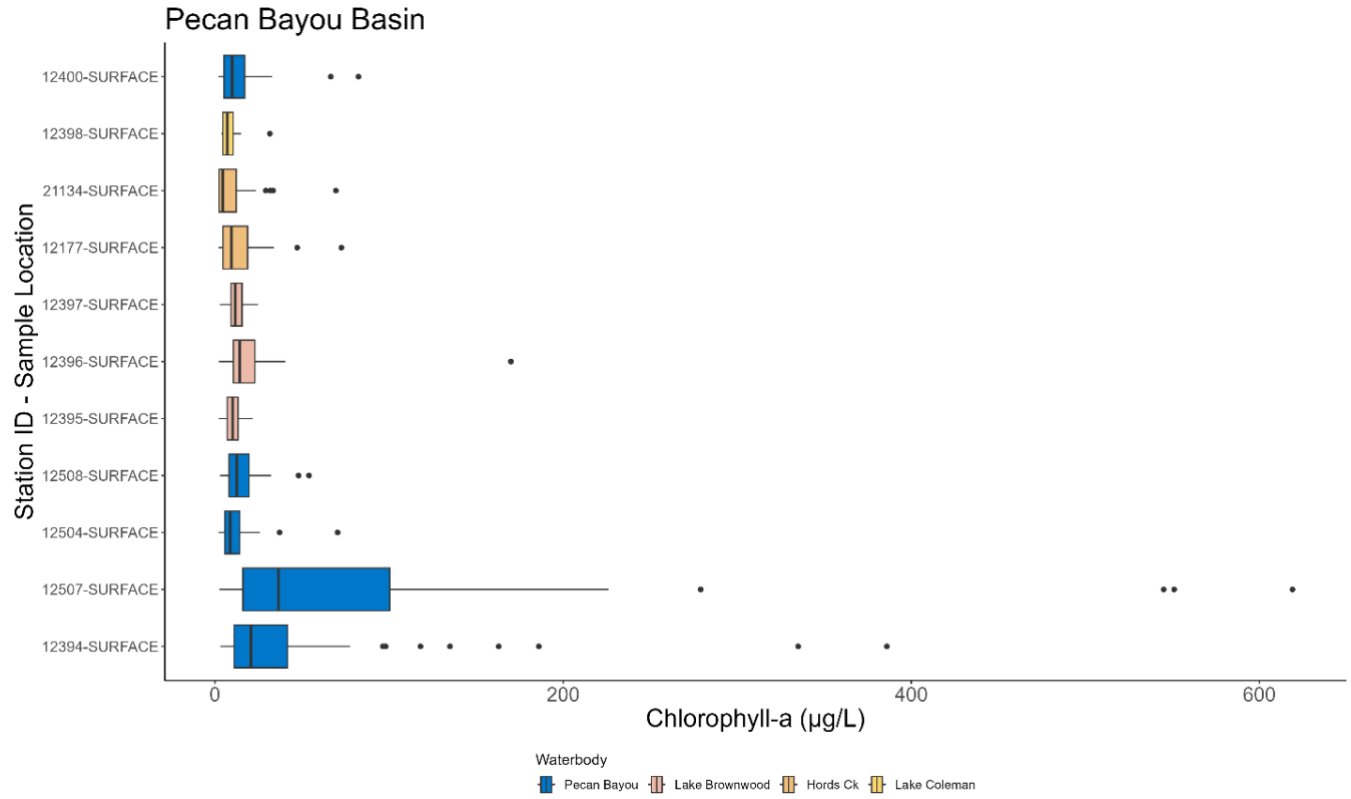
Chloride



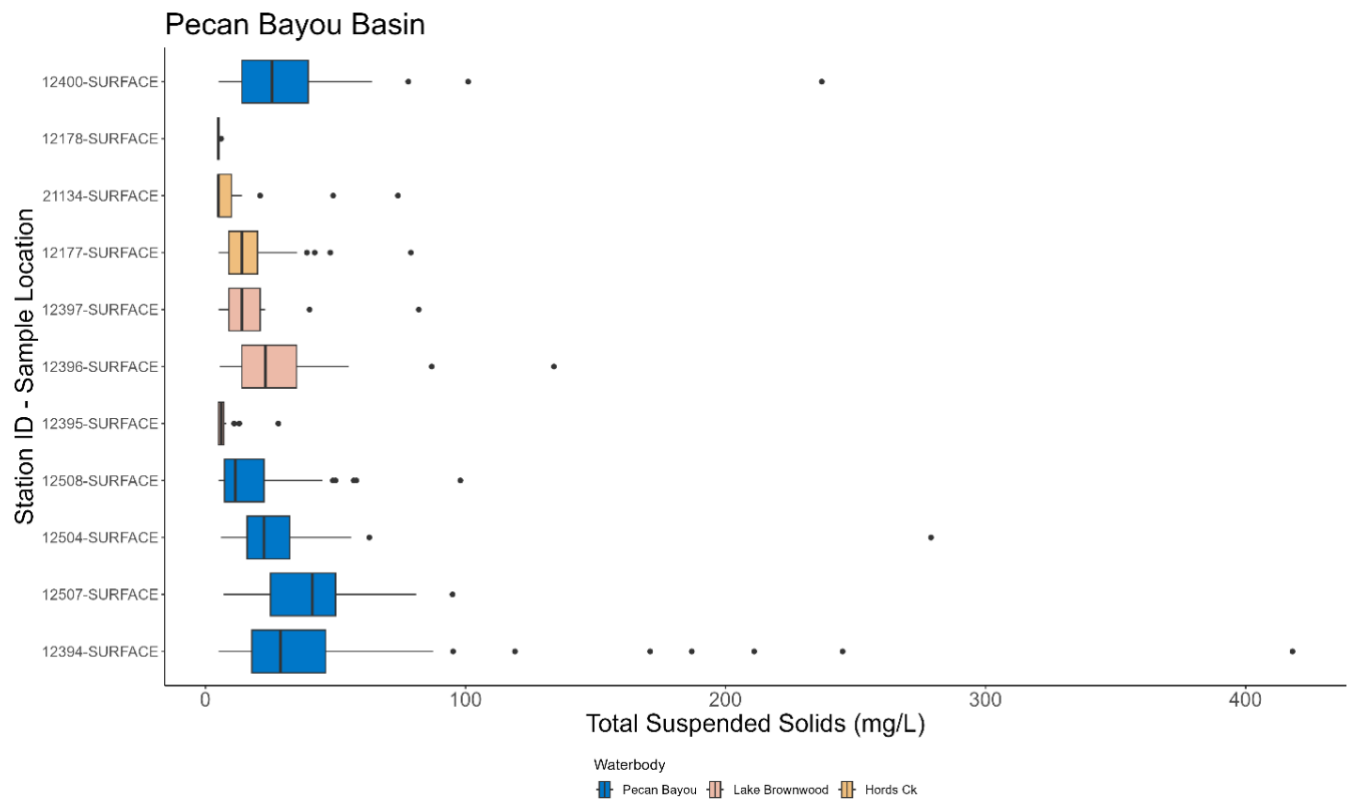
Sulfate



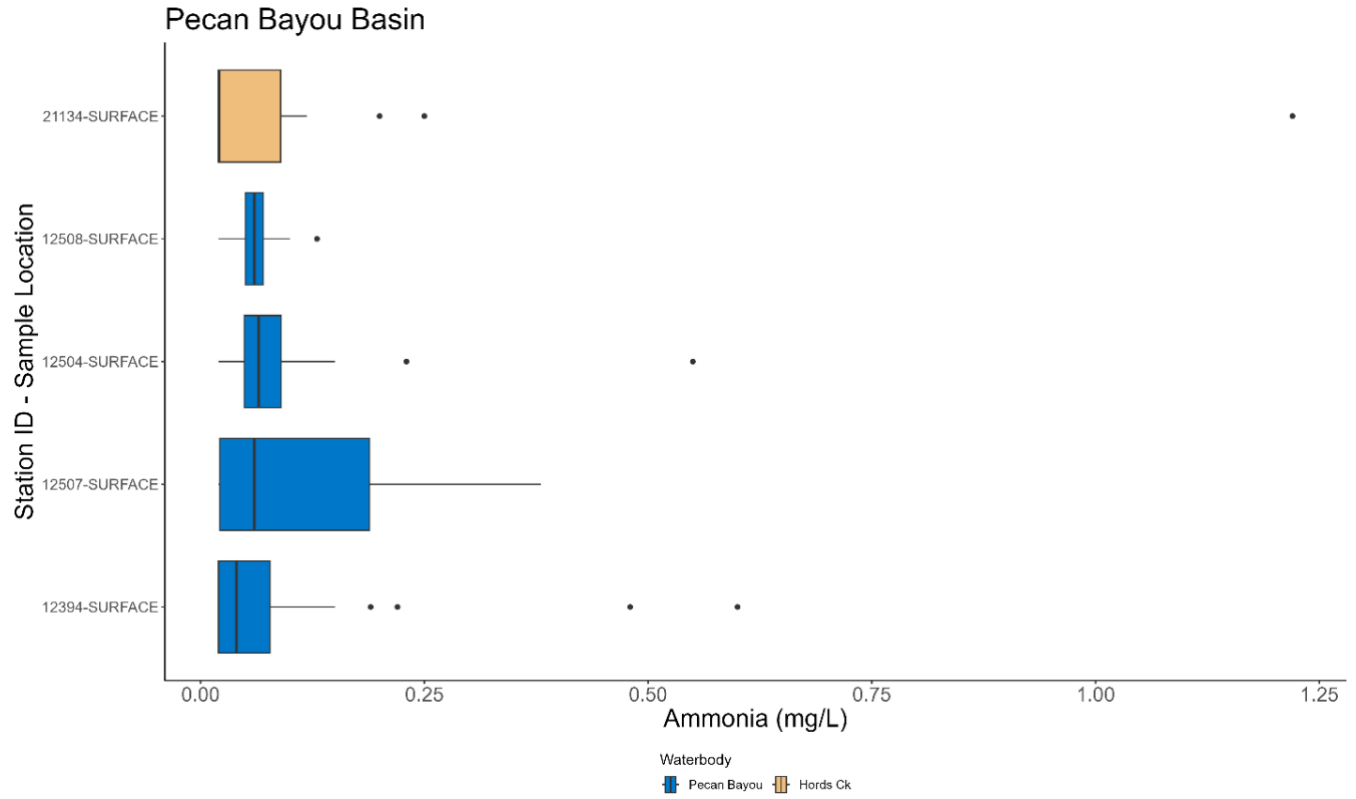
Chlorophyll a



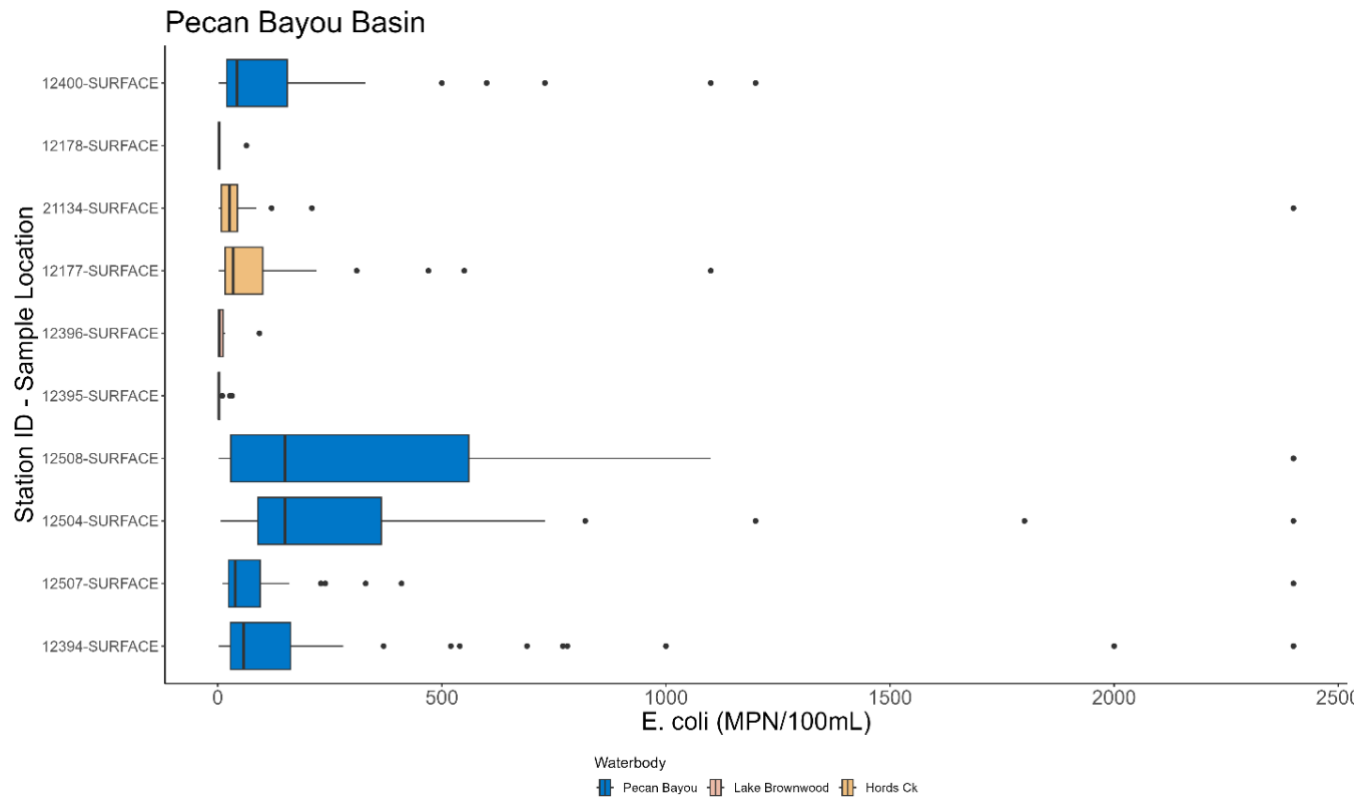
Total Suspended Solids



Ammonia



E. coli



Multiple Comparison Table

Multiple comparisons using Tukey-HSD after a significant ANOVA has been noted for the parameter. Sites that are being compared on a given row are mentioned in the Site Comparison column. The estimated difference between the sites for a given parameter is in the Difference column with the 95% confidence interval for the difference lying between the 95% Low and 95% High columns. As long as the 95% confidence interval does not contain zero, the sites should be statistically different (p-value < 0.05) for a given parameter.

Parameter Code	Parameter	WSHED	Site Comparison	Difference	95% Low Diff	95% High Diff	p-value
00078	Secchi disc (m)	PecanBayou	12178-SURFACE-12177-SURFACE	0.7161	0.4815	0.9508	<0.0001
00078	Secchi disc (m)	PecanBayou	12395-SURFACE-12177-SURFACE	0.5862	0.4000	0.7723	<0.0001
00078	Secchi disc (m)	PecanBayou	12398-SURFACE-12177-SURFACE	0.5675	0.3740	0.7611	<0.0001
00078	Secchi disc (m)	PecanBayou	12507-SURFACE-12177-SURFACE	-0.1963	-0.3633	-0.0293	0.0077
00078	Secchi disc (m)	PecanBayou	12396-SURFACE-12178-SURFACE	-0.6887	-0.9292	-0.4482	<0.0001
00078	Secchi disc (m)	PecanBayou	12397-SURFACE-12178-SURFACE	-0.5708	-0.8113	-0.3303	<0.0001
00078	Secchi disc (m)	PecanBayou	12400-SURFACE-12178-SURFACE	-0.8504	-1.0757	-0.6251	<0.0001
00078	Secchi disc (m)	PecanBayou	12504-SURFACE-12178-SURFACE	-0.8382	-1.0598	-0.6165	<0.0001
00078	Secchi disc (m)	PecanBayou	12507-SURFACE-12178-SURFACE	-0.9124	-1.1384	-0.6864	<0.0001
00078	Secchi disc (m)	PecanBayou	12508-SURFACE-12178-SURFACE	-0.7972	-1.0274	-0.5669	<0.0001
00078	Secchi disc (m)	PecanBayou	21134-SURFACE-12178-SURFACE	-0.6836	-0.9634	-0.4039	<0.0001
00078	Secchi disc (m)	PecanBayou	12396-SURFACE-12395-SURFACE	-0.5587	-0.7522	-0.3652	<0.0001
00078	Secchi disc (m)	PecanBayou	12397-SURFACE-12395-SURFACE	-0.4409	-0.6343	-0.2474	<0.0001
00078	Secchi disc (m)	PecanBayou	12400-SURFACE-12395-SURFACE	-0.7205	-0.8947	-0.5463	<0.0001
00078	Secchi disc (m)	PecanBayou	12504-SURFACE-12395-SURFACE	-0.7082	-0.8777	-0.5387	<0.0001
00078	Secchi disc (m)	PecanBayou	12507-SURFACE-12395-SURFACE	-0.7825	-0.9576	-0.6073	<0.0001
00078	Secchi disc (m)	PecanBayou	12508-SURFACE-12395-SURFACE	-0.6672	-0.8477	-0.4866	<0.0001
00078	Secchi disc (m)	PecanBayou	21134-SURFACE-12395-SURFACE	-0.5537	-0.7942	-0.3132	<0.0001
00078	Secchi disc (m)	PecanBayou	12398-SURFACE-12396-SURFACE	0.5401	0.3395	0.7406	<0.0001
00078	Secchi disc (m)	PecanBayou	12507-SURFACE-12396-SURFACE	-0.2238	-0.3989	-0.0486	0.0022
00078	Secchi disc (m)	PecanBayou	12398-SURFACE-12397-SURFACE	0.4222	0.2217	0.6228	<0.0001
00078	Secchi disc (m)	PecanBayou	12400-SURFACE-12397-SURFACE	-0.2796	-0.4538	-0.1054	<0.0001
00078	Secchi disc (m)	PecanBayou	12504-SURFACE-12397-SURFACE	-0.2673	-0.4368	-0.0979	<0.0001
00078	Secchi disc (m)	PecanBayou	12507-SURFACE-12397-SURFACE	-0.3416	-0.5167	-0.1665	<0.0001

00078	Secchi disc (m)	PecanBayou	12508-SURFACE-12397-SURFACE	-0.2263	-0.4069	-0.0458	0.003
00078	Secchi disc (m)	PecanBayou	12400-SURFACE-12398-SURFACE	-0.7019	-0.8839	-0.5198	<0.0001
00078	Secchi disc (m)	PecanBayou	12504-SURFACE-12398-SURFACE	-0.6896	-0.8671	-0.5120	<0.0001
00078	Secchi disc (m)	PecanBayou	12507-SURFACE-12398-SURFACE	-0.7638	-0.9468	-0.5809	<0.0001
00078	Secchi disc (m)	PecanBayou	12508-SURFACE-12398-SURFACE	-0.6486	-0.8367	-0.4604	<0.0001
00078	Secchi disc (m)	PecanBayou	21134-SURFACE-12398-SURFACE	-0.5350	-0.7813	-0.2888	<0.0001
00078	Secchi disc (m)	PecanBayou	21134-SURFACE-12507-SURFACE	0.2288	0.0028	0.4548	0.0444
00300	Dissolved Oxygen (mg/L)	PecanBayou	12178-BOTTOM-12177-SURFACE	-4.2399	-7.8313	-0.6484	0.0054
00300	Dissolved Oxygen (mg/L)	PecanBayou	12395-BOTTOM-12177-SURFACE	-3.5150	-6.4582	-0.5718	0.0045
00300	Dissolved Oxygen (mg/L)	PecanBayou	12398-BOTTOM-12177-SURFACE	-4.2933	-7.4165	-1.1701	3e-04
00300	Dissolved Oxygen (mg/L)	PecanBayou	12394-SURFACE-12178-BOTTOM	3.5818	0.1558	7.0078	0.0299
00300	Dissolved Oxygen (mg/L)	PecanBayou	12395-SURFACE-12178-BOTTOM	5.0482	1.1917	8.9047	8e-04
00300	Dissolved Oxygen (mg/L)	PecanBayou	12396-SURFACE-12178-BOTTOM	4.8265	0.9700	8.6830	0.002
00300	Dissolved Oxygen (mg/L)	PecanBayou	12397-SURFACE-12178-BOTTOM	5.1960	1.3396	9.0525	5e-04
00300	Dissolved Oxygen (mg/L)	PecanBayou	12398-SURFACE-12178-BOTTOM	5.0883	1.2579	8.9187	6e-04
00300	Dissolved Oxygen (mg/L)	PecanBayou	12400-SURFACE-12178-BOTTOM	3.8068	0.2523	7.3613	0.0221
00300	Dissolved Oxygen (mg/L)	PecanBayou	12504-SURFACE-12178-BOTTOM	3.5955	0.0492	7.1417	0.0429
00300	Dissolved Oxygen (mg/L)	PecanBayou	12507-SURFACE-12178-BOTTOM	5.6245	2.0330	9.2159	<0.0001
00300	Dissolved Oxygen (mg/L)	PecanBayou	21134-SURFACE-12178-BOTTOM	4.1809	0.5895	7.7723	0.0067
00300	Dissolved Oxygen (mg/L)	PecanBayou	12398-BOTTOM-12178-SURFACE	-4.4534	-8.5738	-0.3330	0.0196
00300	Dissolved Oxygen (mg/L)	PecanBayou	12395-BOTTOM-12394-SURFACE	-2.8569	-5.5958	-0.1181	0.0308
00300	Dissolved Oxygen (mg/L)	PecanBayou	12398-BOTTOM-12394-SURFACE	-3.6352	-6.5667	-0.7038	0.0023
00300	Dissolved Oxygen (mg/L)	PecanBayou	12395-SURFACE-12395-BOTTOM	4.3233	1.0620	7.5847	6e-04
00300	Dissolved Oxygen (mg/L)	PecanBayou	12396-SURFACE-12395-BOTTOM	4.1016	0.8403	7.3629	0.0018

00300	Dissolved Oxygen (mg/L)	PecanBayou	12397-SURFACE-12395-BOTTOM	4.4712	1.2098	7.7325	3e-04
00300	Dissolved Oxygen (mg/L)	PecanBayou	12398-SURFACE-12395-BOTTOM	4.3634	1.1329	7.5938	4e-04
00300	Dissolved Oxygen (mg/L)	PecanBayou	12400-SURFACE-12395-BOTTOM	3.0819	0.1839	5.9799	0.0242
00300	Dissolved Oxygen (mg/L)	PecanBayou	12507-SURFACE-12395-BOTTOM	4.8996	1.9564	7.8428	<0.0001
00300	Dissolved Oxygen (mg/L)	PecanBayou	21134-SURFACE-12395-BOTTOM	3.4560	0.5128	6.3992	0.0059
00300	Dissolved Oxygen (mg/L)	PecanBayou	12398-BOTTOM-12395-SURFACE	-5.1016	-8.5263	-1.6770	<0.0001
00300	Dissolved Oxygen (mg/L)	PecanBayou	12398-BOTTOM-12396-SURFACE	-4.8799	-8.3046	-1.4552	1e-04
00300	Dissolved Oxygen (mg/L)	PecanBayou	12398-BOTTOM-12397-BOTTOM	-3.8668	-7.2915	-0.4422	0.0107
00300	Dissolved Oxygen (mg/L)	PecanBayou	12398-BOTTOM-12397-SURFACE	-5.2495	-8.6741	-1.8248	<0.0001
00300	Dissolved Oxygen (mg/L)	PecanBayou	12398-SURFACE-12398-BOTTOM	5.1417	1.7464	8.5369	<0.0001
00300	Dissolved Oxygen (mg/L)	PecanBayou	12400-SURFACE-12398-BOTTOM	3.8602	0.7795	6.9408	0.0019
00300	Dissolved Oxygen (mg/L)	PecanBayou	12504-SURFACE-12398-BOTTOM	3.6489	0.5777	6.7200	0.0049
00300	Dissolved Oxygen (mg/L)	PecanBayou	12507-SURFACE-12398-BOTTOM	5.6779	2.5547	8.8011	<0.0001
00300	Dissolved Oxygen (mg/L)	PecanBayou	12508-SURFACE-12398-BOTTOM	3.4080	0.3368	6.4791	0.0137
00300	Dissolved Oxygen (mg/L)	PecanBayou	21134-SURFACE-12398-BOTTOM	4.2343	1.1111	7.3575	4e-04
00400	pH (Standard Units)	PecanBayou	12395-BOTTOM-12177-SURFACE	-0.3657	-0.6976	-0.0339	0.0151
00400	pH (Standard Units)	PecanBayou	12398-BOTTOM-12177-SURFACE	-0.4026	-0.7547	-0.0504	0.0089
00400	pH (Standard Units)	PecanBayou	12504-SURFACE-12177-SURFACE	-0.4480	-0.7089	-0.1872	<0.0001
00400	pH (Standard Units)	PecanBayou	12507-SURFACE-12177-SURFACE	0.3333	0.0647	0.6019	0.0023
00400	pH (Standard Units)	PecanBayou	21134-SURFACE-12177-SURFACE	-0.2769	-0.5455	-0.0083	0.0354
00400	pH (Standard Units)	PecanBayou	12178-SURFACE-12178-BOTTOM	0.5636	0.0579	1.0694	0.0129
00400	pH (Standard Units)	PecanBayou	12394-SURFACE-12178-BOTTOM	0.4561	0.0698	0.8423	0.0054
00400	pH (Standard Units)	PecanBayou	12395-SURFACE-12178-BOTTOM	0.5391	0.1043	0.9739	0.0023
00400	pH (Standard Units)	PecanBayou	12396-SURFACE-12178-BOTTOM	0.5174	0.0826	0.9522	0.0047
00400	pH (Standard Units)	PecanBayou	12397-SURFACE-12178-BOTTOM	0.5609	0.1261	0.9957	0.0011

00400	pH (Standard Units)	PecanBayou	12398-SURFACE-12178-BOTTOM	0.5542	0.1223	0.9860	0.0012
00400	pH (Standard Units)	PecanBayou	12507-SURFACE-12178-BOTTOM	0.6359	0.2310	1.0408	<0.0001
00400	pH (Standard Units)	PecanBayou	12395-BOTTOM-12178-SURFACE	-0.6268	-1.0762	-0.1774	2e-04
00400	pH (Standard Units)	PecanBayou	12398-BOTTOM-12178-SURFACE	-0.6636	-1.1282	-0.1991	1e-04
00400	pH (Standard Units)	PecanBayou	12504-SURFACE-12178-SURFACE	-0.7091	-1.1089	-0.3093	<0.0001
00400	pH (Standard Units)	PecanBayou	12508-SURFACE-12178-SURFACE	-0.4545	-0.8544	-0.0547	0.0097
00400	pH (Standard Units)	PecanBayou	21134-SURFACE-12178-SURFACE	-0.5380	-0.9429	-0.1331	6e-04
00400	pH (Standard Units)	PecanBayou	12395-BOTTOM-12394-SURFACE	-0.5192	-0.8280	-0.2104	<0.0001
00400	pH (Standard Units)	PecanBayou	12398-BOTTOM-12394-SURFACE	-0.5561	-0.8866	-0.2255	<0.0001
00400	pH (Standard Units)	PecanBayou	12400-SURFACE-12394-SURFACE	-0.2421	-0.4746	-0.0097	0.0313
00400	pH (Standard Units)	PecanBayou	12504-SURFACE-12394-SURFACE	-0.6015	-0.8324	-0.3707	<0.0001
00400	pH (Standard Units)	PecanBayou	12508-SURFACE-12394-SURFACE	-0.3470	-0.5778	-0.1161	<0.0001
00400	pH (Standard Units)	PecanBayou	21134-SURFACE-12394-SURFACE	-0.4304	-0.6700	-0.1909	<0.0001
00400	pH (Standard Units)	PecanBayou	12395-SURFACE-12395-BOTTOM	0.6023	0.2346	0.9700	<0.0001
00400	pH (Standard Units)	PecanBayou	12396-BOTTOM-12395-BOTTOM	0.4257	0.0232	0.8281	0.0259
00400	pH (Standard Units)	PecanBayou	12396-SURFACE-12395-BOTTOM	0.5805	0.2128	0.9483	<0.0001
00400	pH (Standard Units)	PecanBayou	12397-BOTTOM-12395-BOTTOM	0.4936	0.1259	0.8613	5e-04
00400	pH (Standard Units)	PecanBayou	12397-SURFACE-12395-BOTTOM	0.6240	0.2563	0.9917	<0.0001
00400	pH (Standard Units)	PecanBayou	12398-SURFACE-12395-BOTTOM	0.6173	0.2531	0.9815	<0.0001
00400	pH (Standard Units)	PecanBayou	12507-SURFACE-12395-BOTTOM	0.6991	0.3672	1.0309	<0.0001
00400	pH (Standard Units)	PecanBayou	12398-BOTTOM-12395-SURFACE	-0.6391	-1.0253	-0.2530	<0.0001
00400	pH (Standard Units)	PecanBayou	12400-SURFACE-12395-SURFACE	-0.3252	-0.6316	-0.0188	0.0248
00400	pH (Standard Units)	PecanBayou	12504-SURFACE-12395-SURFACE	-0.6846	-0.9898	-0.3794	<0.0001
00400	pH (Standard Units)	PecanBayou	12508-SURFACE-12395-SURFACE	-0.4300	-0.7352	-0.1249	2e-04
00400	pH (Standard Units)	PecanBayou	21134-SURFACE-12395-SURFACE	-0.5135	-0.8253	-0.2017	<0.0001
00400	pH (Standard Units)	PecanBayou	12398-BOTTOM-12396-BOTTOM	-0.4625	-0.8818	-0.0432	0.0149
00400	pH (Standard Units)	PecanBayou	12504-SURFACE-12396-BOTTOM	-0.5080	-0.8542	-0.1617	1e-04
00400	pH (Standard Units)	PecanBayou	12398-BOTTOM-12396-SURFACE	-0.6174	-1.0035	-0.2313	<0.0001
00400	pH (Standard Units)	PecanBayou	12504-SURFACE-12396-SURFACE	-0.6628	-0.9680	-0.3577	<0.0001
00400	pH (Standard Units)	PecanBayou	12508-SURFACE-12396-SURFACE	-0.4083	-0.7135	-0.1031	5e-04
00400	pH (Standard Units)	PecanBayou	21134-SURFACE-12396-SURFACE	-0.4918	-0.8036	-0.1799	<0.0001
00400	pH (Standard Units)	PecanBayou	12398-BOTTOM-12397-BOTTOM	-0.5304	-0.9166	-0.1443	3e-04

00400	pH (Standard Units)	PecanBayou	12504-SURFACE-12397-BOTTOM	-0.5759	-0.8811	-0.2707	<0.0001
00400	pH (Standard Units)	PecanBayou	12508-SURFACE-12397-BOTTOM	-0.3213	-0.6265	-0.0162	0.0274
00400	pH (Standard Units)	PecanBayou	21134-SURFACE-12397-BOTTOM	-0.4048	-0.7166	-0.0930	0.001
00400	pH (Standard Units)	PecanBayou	12398-BOTTOM-12397-SURFACE	-0.6609	-1.0470	-0.2747	<0.0001
00400	pH (Standard Units)	PecanBayou	12400-SURFACE-12397-SURFACE	-0.3469	-0.6533	-0.0405	0.0103
00400	pH (Standard Units)	PecanBayou	12504-SURFACE-12397-SURFACE	-0.7063	-1.0115	-0.4011	<0.0001
00400	pH (Standard Units)	PecanBayou	12508-SURFACE-12397-SURFACE	-0.4518	-0.7570	-0.1466	1e-04
00400	pH (Standard Units)	PecanBayou	21134-SURFACE-12397-SURFACE	-0.5352	-0.8471	-0.2234	<0.0001
00400	pH (Standard Units)	PecanBayou	12398-SURFACE-12398-BOTTOM	0.6542	0.2714	1.0370	<0.0001
00400	pH (Standard Units)	PecanBayou	12507-SURFACE-12398-BOTTOM	0.7359	0.3838	1.0880	<0.0001
00400	pH (Standard Units)	PecanBayou	12400-SURFACE-12398-SURFACE	-0.3402	-0.6424	-0.0380	0.0112
00400	pH (Standard Units)	PecanBayou	12504-SURFACE-12398-SURFACE	-0.6996	-1.0006	-0.3986	<0.0001
00400	pH (Standard Units)	PecanBayou	12508-SURFACE-12398-SURFACE	-0.4451	-0.7461	-0.1441	1e-04
00400	pH (Standard Units)	PecanBayou	21134-SURFACE-12398-SURFACE	-0.5285	-0.8362	-0.2208	<0.0001
00400	pH (Standard Units)	PecanBayou	12504-SURFACE-12400-SURFACE	-0.3594	-0.6137	-0.1051	2e-04
00400	pH (Standard Units)	PecanBayou	12507-SURFACE-12400-SURFACE	0.4219	0.1597	0.6842	<0.0001
00400	pH (Standard Units)	PecanBayou	12507-SURFACE-12504-SURFACE	0.7814	0.5205	1.0422	<0.0001
00400	pH (Standard Units)	PecanBayou	12508-SURFACE-12504-SURFACE	0.2545	0.0017	0.5074	0.0465
00400	pH (Standard Units)	PecanBayou	12508-SURFACE-12507-SURFACE	-0.5268	-0.7877	-0.2660	<0.0001
00400	pH (Standard Units)	PecanBayou	21134-SURFACE-12507-SURFACE	-0.6103	-0.8789	-0.3417	<0.0001
00530	Total Suspended Solids (mg/L)	PecanBayou	12394-SURFACE-12177-SURFACE	30.5637	6.3457	54.7817	0.0026
00530	Total Suspended Solids (mg/L)	PecanBayou	12394-SURFACE-12178-SURFACE	43.5197	5.2450	81.7945	0.0118
00530	Total Suspended Solids (mg/L)	PecanBayou	12395-SURFACE-12394-SURFACE	-41.2730	-70.7632	-11.7828	4e-04
00530	Total Suspended Solids (mg/L)	PecanBayou	12397-SURFACE-12394-SURFACE	-31.2301	-60.7203	-1.7399	0.0277
00530	Total Suspended Solids (mg/L)	PecanBayou	12508-SURFACE-12394-SURFACE	-29.3992	-52.6858	-6.1126	0.0026
00530	Total Suspended Solids (mg/L)	PecanBayou	21134-SURFACE-12394-SURFACE	-38.4216	-62.6395	-14.2036	<0.0001
00530	Total Suspended Solids (mg/L)	PecanBayou	21134-SURFACE-12507-SURFACE	-28.8146	-56.0781	-1.5511	0.0283
00620	Nitrate (mg/L)	PecanBayou	12504-SURFACE-12177-SURFACE	19.3302	13.3612	25.2993	<0.0001
00620	Nitrate (mg/L)	PecanBayou	12507-SURFACE-12177-SURFACE	7.9056	1.8359	13.9754	0.002

00620	Nitrate (mg/L)	PecanBayou	12504-SURFACE-12394-SURFACE	17.4697	13.5569	21.3826	<0.0001
00620	Nitrate (mg/L)	PecanBayou	12507-SURFACE-12394-SURFACE	6.0451	1.9803	10.1099	2e-04
00620	Nitrate (mg/L)	PecanBayou	12504-SURFACE-12395-SURFACE	19.3183	12.5926	26.0440	<0.0001
00620	Nitrate (mg/L)	PecanBayou	12507-SURFACE-12395-SURFACE	7.8937	1.0785	14.7089	0.0105
00620	Nitrate (mg/L)	PecanBayou	12504-SURFACE-12398-SURFACE	19.3340	13.0338	25.6343	<0.0001
00620	Nitrate (mg/L)	PecanBayou	12507-SURFACE-12398-SURFACE	7.9094	1.5137	14.3052	0.0044
00620	Nitrate (mg/L)	PecanBayou	12504-SURFACE-12400-SURFACE	19.0494	13.4613	24.6375	<0.0001
00620	Nitrate (mg/L)	PecanBayou	12507-SURFACE-12400-SURFACE	7.6247	1.9292	13.3203	0.0013
00620	Nitrate (mg/L)	PecanBayou	12507-SURFACE-12504-SURFACE	-11.4246	-15.8565	-6.9928	<0.0001
00620	Nitrate (mg/L)	PecanBayou	12508-SURFACE-12504-SURFACE	-19.2191	-24.1642	-14.2741	<0.0001
00620	Nitrate (mg/L)	PecanBayou	21134-SURFACE-12504-SURFACE	-19.3728	-25.2019	-13.5437	<0.0001
00620	Nitrate (mg/L)	PecanBayou	12508-SURFACE-12507-SURFACE	-7.7945	-12.8607	-2.7283	1e-04
00620	Nitrate (mg/L)	PecanBayou	21134-SURFACE-12507-SURFACE	-7.9482	-13.8804	-2.0160	0.0013
00625	Total Kjeldahl Nitrogen (mg/L)	PecanBayou	12394-SURFACE-12177-SURFACE	0.4914	0.0345	0.9483	0.0228
00625	Total Kjeldahl Nitrogen (mg/L)	PecanBayou	12507-SURFACE-12177-SURFACE	0.6906	0.1816	1.1995	7e-04
00625	Total Kjeldahl Nitrogen (mg/L)	PecanBayou	12395-SURFACE-12394-SURFACE	-0.7253	-1.2568	-0.1939	6e-04
00625	Total Kjeldahl Nitrogen (mg/L)	PecanBayou	12396-SURFACE-12394-SURFACE	-0.6053	-1.1367	-0.0738	0.0111
00625	Total Kjeldahl Nitrogen (mg/L)	PecanBayou	12397-SURFACE-12394-SURFACE	-0.6739	-1.2053	-0.1425	0.0022
00625	Total Kjeldahl Nitrogen (mg/L)	PecanBayou	12398-SURFACE-12394-SURFACE	-0.5748	-1.0970	-0.0526	0.0172
00625	Total Kjeldahl Nitrogen (mg/L)	PecanBayou	12508-SURFACE-12394-SURFACE	-0.5738	-0.9988	-0.1488	7e-04
00625	Total Kjeldahl Nitrogen (mg/L)	PecanBayou	12507-SURFACE-12395-SURFACE	0.9245	0.3477	1.5012	<0.0001
00625	Total Kjeldahl Nitrogen (mg/L)	PecanBayou	12507-SURFACE-12396-SURFACE	0.8044	0.2277	1.3812	4e-04
00625	Total Kjeldahl Nitrogen (mg/L)	PecanBayou	12507-SURFACE-12397-SURFACE	0.8731	0.2963	1.4498	1e-04
00625	Total Kjeldahl Nitrogen (mg/L)	PecanBayou	12507-SURFACE-12398-SURFACE	0.7740	0.2057	1.3422	6e-04
00625	Total Kjeldahl Nitrogen (mg/L)	PecanBayou	12507-SURFACE-12400-SURFACE	0.5348	0.0414	1.0281	0.0208
00625	Total Kjeldahl Nitrogen (mg/L)	PecanBayou	12508-SURFACE-12507-SURFACE	-0.7730	-1.2535	-0.2925	<0.0001

00625	Total Kjeldahl Nitrogen (mg/L)	PecanBayou	21134-SURFACE-12507-SURFACE	-0.6053	-1.1100	-0.1005	0.0054
00665	Total Phosphorus (mg/L)	PecanBayou	12504-SURFACE-12177-SURFACE	2.3545	1.9441	2.7650	<0.0001
00665	Total Phosphorus (mg/L)	PecanBayou	12507-SURFACE-12177-SURFACE	0.9184	0.5030	1.3338	<0.0001
00665	Total Phosphorus (mg/L)	PecanBayou	12504-SURFACE-12394-SURFACE	2.1821	1.8295	2.5347	<0.0001
00665	Total Phosphorus (mg/L)	PecanBayou	12507-SURFACE-12394-SURFACE	0.7460	0.3876	1.1043	<0.0001
00665	Total Phosphorus (mg/L)	PecanBayou	12504-SURFACE-12395-SURFACE	2.4071	1.9252	2.8889	<0.0001
00665	Total Phosphorus (mg/L)	PecanBayou	12507-SURFACE-12395-SURFACE	0.9709	0.4848	1.4570	<0.0001
00665	Total Phosphorus (mg/L)	PecanBayou	12504-SURFACE-12396-SURFACE	2.3779	1.9037	2.8520	<0.0001
00665	Total Phosphorus (mg/L)	PecanBayou	12507-SURFACE-12396-SURFACE	0.9417	0.4633	1.4202	<0.0001
00665	Total Phosphorus (mg/L)	PecanBayou	12504-SURFACE-12397-SURFACE	2.3911	1.9093	2.8730	<0.0001
00665	Total Phosphorus (mg/L)	PecanBayou	12507-SURFACE-12397-SURFACE	0.9550	0.4689	1.4411	<0.0001
00665	Total Phosphorus (mg/L)	PecanBayou	12504-SURFACE-12398-SURFACE	2.4106	1.9502	2.8711	<0.0001
00665	Total Phosphorus (mg/L)	PecanBayou	12507-SURFACE-12398-SURFACE	0.9745	0.5097	1.4394	<0.0001
00665	Total Phosphorus (mg/L)	PecanBayou	12504-SURFACE-12400-SURFACE	2.3602	1.9560	2.7644	<0.0001
00665	Total Phosphorus (mg/L)	PecanBayou	12507-SURFACE-12400-SURFACE	0.9241	0.5148	1.3333	<0.0001
00665	Total Phosphorus (mg/L)	PecanBayou	12507-SURFACE-12504-SURFACE	-1.4361	-1.8347	-1.0375	<0.0001
00665	Total Phosphorus (mg/L)	PecanBayou	12508-SURFACE-12504-SURFACE	-2.3852	-2.7865	-1.9838	<0.0001
00665	Total Phosphorus (mg/L)	PecanBayou	21134-SURFACE-12504-SURFACE	-2.3381	-2.7486	-1.9277	<0.0001
00665	Total Phosphorus (mg/L)	PecanBayou	12508-SURFACE-12507-SURFACE	-0.9490	-1.3554	-0.5426	<0.0001
00665	Total Phosphorus (mg/L)	PecanBayou	21134-SURFACE-12507-SURFACE	-0.9020	-1.3174	-0.4866	<0.0001
00940	Chloride (mg/L)	PecanBayou	12395-SURFACE-12177-SURFACE	-54.0116	-92.1837	-15.8395	3e-04
00940	Chloride (mg/L)	PecanBayou	12396-SURFACE-12177-SURFACE	-56.1855	-94.3577	-18.0134	1e-04

00940	Chloride (mg/L)	PecanBayou	12397-SURFACE-12177-SURFACE	-52.4776	-91.1810	-13.7742	7e-04
00940	Chloride (mg/L)	PecanBayou	12395-SURFACE-12178-SURFACE	-55.4976	-108.1981	-2.7972	0.029
00940	Chloride (mg/L)	PecanBayou	12396-SURFACE-12178-SURFACE	-57.6715	-110.3720	-4.9711	0.0185
00940	Chloride (mg/L)	PecanBayou	12397-SURFACE-12178-SURFACE	-53.9636	-107.0502	-0.8771	0.0424
00940	Chloride (mg/L)	PecanBayou	12504-SURFACE-12394-SURFACE	36.4266	7.8788	64.9745	0.002
00940	Chloride (mg/L)	PecanBayou	12400-SURFACE-12395-SURFACE	40.6879	3.0685	78.3073	0.0213
00940	Chloride (mg/L)	PecanBayou	12504-SURFACE-12395-SURFACE	64.2069	26.9160	101.4979	<0.0001
00940	Chloride (mg/L)	PecanBayou	12507-SURFACE-12395-SURFACE	56.0790	18.6275	93.5305	1e-04
00940	Chloride (mg/L)	PecanBayou	21134-SURFACE-12395-SURFACE	38.5954	0.4233	76.7675	0.0448
00940	Chloride (mg/L)	PecanBayou	12400-SURFACE-12396-SURFACE	42.8618	5.2425	80.4812	0.011
00940	Chloride (mg/L)	PecanBayou	12504-SURFACE-12396-SURFACE	66.3808	29.0899	103.6718	<0.0001
00940	Chloride (mg/L)	PecanBayou	12507-SURFACE-12396-SURFACE	58.2529	20.8014	95.7044	<0.0001
00940	Chloride (mg/L)	PecanBayou	21134-SURFACE-12396-SURFACE	40.7693	2.5972	78.9414	0.0247
00940	Chloride (mg/L)	PecanBayou	12400-SURFACE-12397-SURFACE	39.1539	0.9956	77.3123	0.0384
00940	Chloride (mg/L)	PecanBayou	12504-SURFACE-12397-SURFACE	62.6729	24.8383	100.5076	<0.0001
00940	Chloride (mg/L)	PecanBayou	12507-SURFACE-12397-SURFACE	54.5450	16.5521	92.5379	2e-04
00940	Chloride (mg/L)	PecanBayou	12504-SURFACE-12398-SURFACE	44.8229	6.9883	82.6576	0.0064
00940	Chloride (mg/L)	PecanBayou	12508-SURFACE-12504-SURFACE	-39.6840	-71.2455	-8.1225	0.0025
00945	Sulfate (mg/L)	PecanBayou	12178-SURFACE-12177-SURFACE	-82.7356	-143.3071	-22.1641	6e-04
00945	Sulfate (mg/L)	PecanBayou	12394-SURFACE-12177-SURFACE	-61.1084	-97.3319	-24.8848	<0.0001
00945	Sulfate (mg/L)	PecanBayou	12395-SURFACE-12177-SURFACE	-78.6811	-125.5145	-31.8477	<0.0001
00945	Sulfate (mg/L)	PecanBayou	12396-SURFACE-12177-SURFACE	-73.7724	-120.6058	-26.9390	<0.0001
00945	Sulfate (mg/L)	PecanBayou	12397-SURFACE-12177-SURFACE	-77.3038	-124.7891	-29.8186	<0.0001
00945	Sulfate (mg/L)	PecanBayou	12398-SURFACE-12177-SURFACE	-67.1811	-114.0145	-20.3477	2e-04
00945	Sulfate (mg/L)	PecanBayou	12504-SURFACE-12177-SURFACE	-42.8644	-82.6323	-3.0965	0.0222
00945	Sulfate (mg/L)	PecanBayou	12508-SURFACE-12177-SURFACE	-60.6763	-100.4443	-20.9084	1e-04
00945	Sulfate (mg/L)	PecanBayou	12400-SURFACE-12178-SURFACE	78.9082	19.0176	138.7988	0.0011
00945	Sulfate (mg/L)	PecanBayou	21134-SURFACE-12178-SURFACE	100.8356	40.2641	161.4071	<0.0001
00945	Sulfate (mg/L)	PecanBayou	12400-SURFACE-12394-SURFACE	57.2809	22.2079	92.3539	<0.0001
00945	Sulfate (mg/L)	PecanBayou	21134-SURFACE-12394-SURFACE	79.2084	42.9848	115.4319	<0.0001
00945	Sulfate (mg/L)	PecanBayou	12400-SURFACE-12395-SURFACE	74.8537	28.9043	120.8030	<0.0001
00945	Sulfate (mg/L)	PecanBayou	21134-SURFACE-12395-SURFACE	96.7811	49.9477	143.6145	<0.0001

00945	Sulfate (mg/L)	PecanBayou	12400-SURFACE-12396-SURFACE	69.9450	23.9956	115.8943	1e-04
00945	Sulfate (mg/L)	PecanBayou	21134-SURFACE-12396-SURFACE	91.8724	45.0390	138.7058	<0.0001
00945	Sulfate (mg/L)	PecanBayou	12400-SURFACE-12397-SURFACE	73.4764	26.8629	120.0899	<0.0001
00945	Sulfate (mg/L)	PecanBayou	21134-SURFACE-12397-SURFACE	95.4038	47.9186	142.8891	<0.0001
00945	Sulfate (mg/L)	PecanBayou	12400-SURFACE-12398-SURFACE	63.3537	17.4043	109.3030	5e-04
00945	Sulfate (mg/L)	PecanBayou	21134-SURFACE-12398-SURFACE	85.2811	38.4477	132.1145	<0.0001
00945	Sulfate (mg/L)	PecanBayou	12504-SURFACE-12400-SURFACE	-39.0370	-77.7599	-0.3141	0.0461
00945	Sulfate (mg/L)	PecanBayou	12508-SURFACE-12400-SURFACE	-56.8489	-95.5718	-18.1260	1e-04
00945	Sulfate (mg/L)	PecanBayou	21134-SURFACE-12504-SURFACE	60.9644	21.1965	100.7323	<0.0001
00945	Sulfate (mg/L)	PecanBayou	21134-SURFACE-12507-SURFACE	54.0811	14.0867	94.0755	7e-04
00945	Sulfate (mg/L)	PecanBayou	21134-SURFACE-12508-SURFACE	78.7763	39.0084	118.5443	<0.0001
31699	E. coli (MPN/100mL)	PecanBayou	12508-SURFACE-12395-SURFACE	388.4637	0.0627	776.8648	0.0499
70953	Chlorophyll-a (µg/L)	PecanBayou	12507-SURFACE-12177-SURFACE	82.0709	38.5312	125.6105	<0.0001
70953	Chlorophyll-a (µg/L)	PecanBayou	12507-SURFACE-12394-SURFACE	52.8252	14.5972	91.0533	5e-04
70953	Chlorophyll-a (µg/L)	PecanBayou	12507-SURFACE-12395-SURFACE	85.8200	34.1046	137.5353	<0.0001
70953	Chlorophyll-a (µg/L)	PecanBayou	12507-SURFACE-12396-SURFACE	72.8400	21.1246	124.5553	4e-04
70953	Chlorophyll-a (µg/L)	PecanBayou	12507-SURFACE-12397-SURFACE	83.8645	32.1491	135.5798	<0.0001
70953	Chlorophyll-a (µg/L)	PecanBayou	12507-SURFACE-12398-SURFACE	87.8608	37.7092	138.0125	<0.0001
70953	Chlorophyll-a (µg/L)	PecanBayou	12507-SURFACE-12400-SURFACE	82.0512	39.6442	124.4583	<0.0001
70953	Chlorophyll-a (µg/L)	PecanBayou	12507-SURFACE-12504-SURFACE	84.5356	42.8555	126.2158	<0.0001
70953	Chlorophyll-a (µg/L)	PecanBayou	12508-SURFACE-12507-SURFACE	-81.0773	-122.9896	-39.1651	<0.0001
70953	Chlorophyll-a (µg/L)	PecanBayou	21134-SURFACE-12507-SURFACE	-86.0959	-129.6355	-42.5562	<0.0001