

# York County Stream Team Data Interpretation Workbook

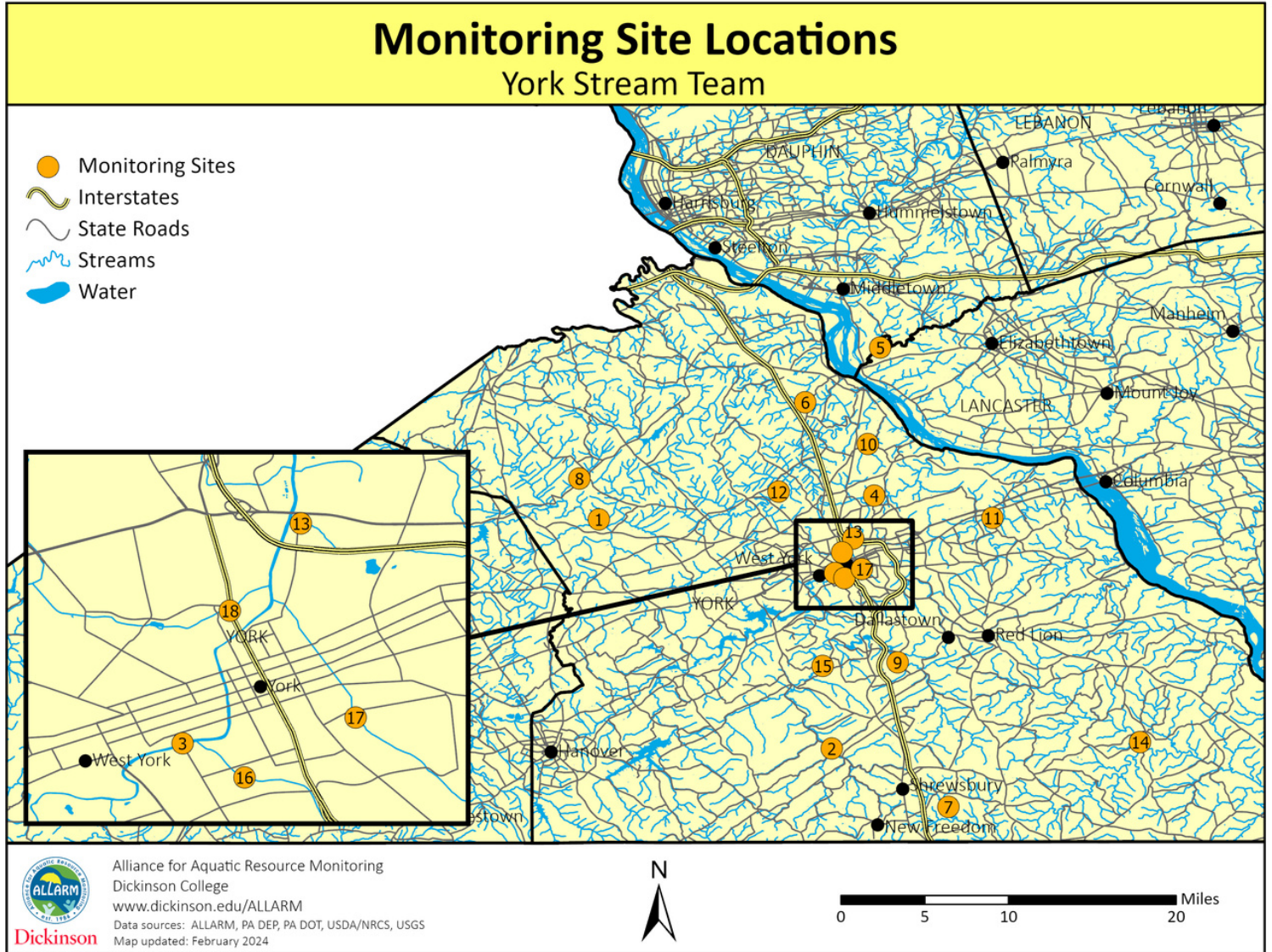


Dickinson

Stream Team | [streamteam@dickinson.edu](mailto:streamteam@dickinson.edu)  
Alliance for Aquatic Resource Monitoring (ALLARM)  
[dickinson.edu/ALLARM](http://dickinson.edu/ALLARM) | [@ALLARMwater](https://www.instagram.com/ALLARMwater) | 717.245.1565



# Monitoring Site Locations



Alliance for Aquatic Resource Monitoring  
 Dickinson College  
[www.dickinson.edu/ALLARM](http://www.dickinson.edu/ALLARM)  
 Data sources: ALLARM, PA DEP, PA DOT, USDA/NRCS, USGS  
 Map updated: February 2024



0 5 10 20 Miles

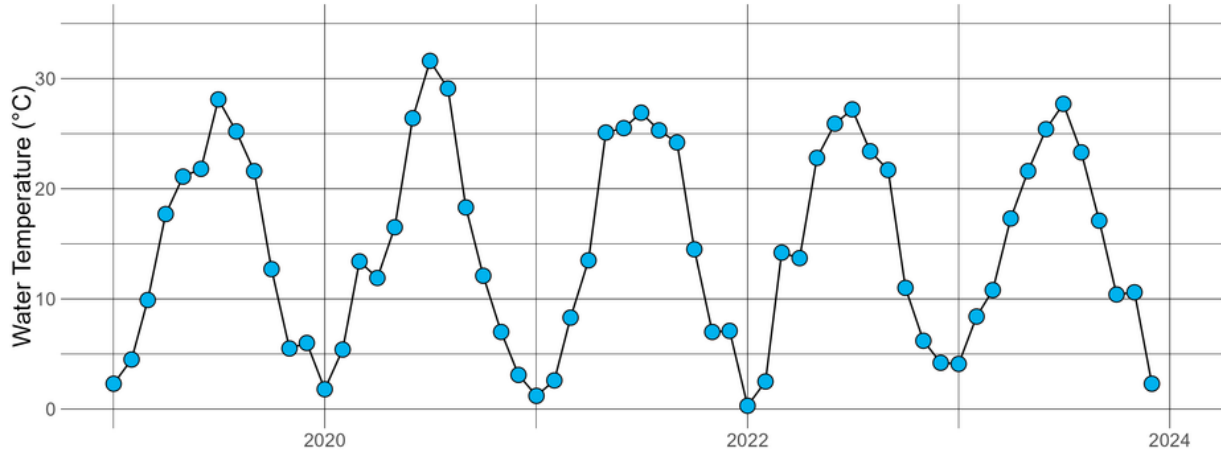
Dickinson

Site Number	Name	Site ID
1	Bermudian Creek	BERCRE1.22
2	Centerville Creek	CENCRE0.07
3	Codorus Creek 1	CODCRE12.39
4	Codorus Creek	CODCRE5.77
5	Conewago Creek E	CONCRE2.81
6	Conewago Creek W	CONCRE7.04
7	Deer Creek	DEECRE38.64
8	Doe Run	DOERUN1.77
9	East Branch Codorus Creek	EASBRACODCRE24.60

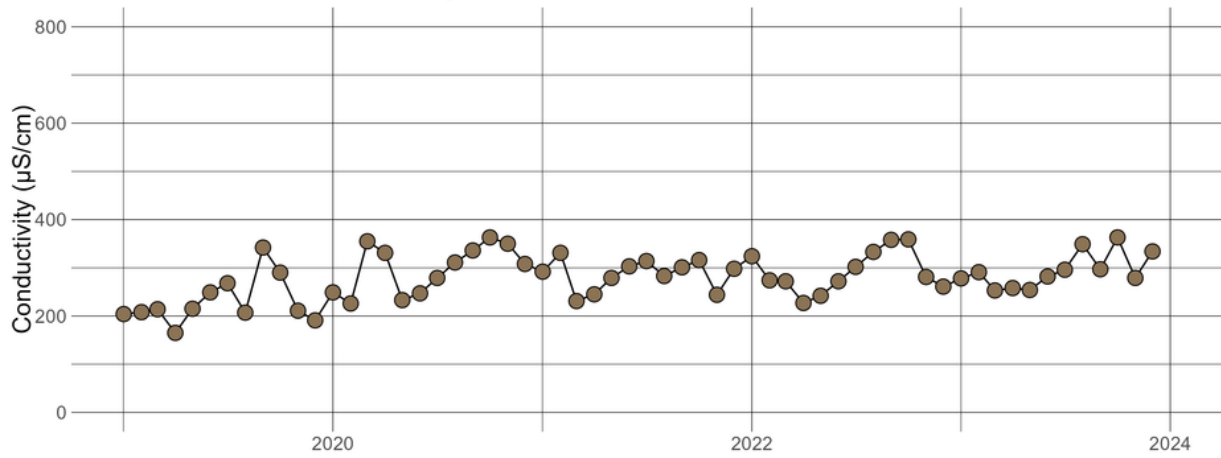
Site Number	Name	Site ID
10	Hartman Run	HARRUN8.92
11	Kreutz Creek	KRECRE8.67
12	Little Conewago Creek	LITCONCRE12.56
13	Mill Creek	MILCRE0.09
14	Muddy Creek	MUDCRE17.55
15	South Branch Codorus Creek	SOUBRACODCRE23.11
16	Tyler Run 2	TYLRUN0.50
17	Poorhouse Run	UNTCODCRE1.28
18	Willis Run	WILRUN0.37



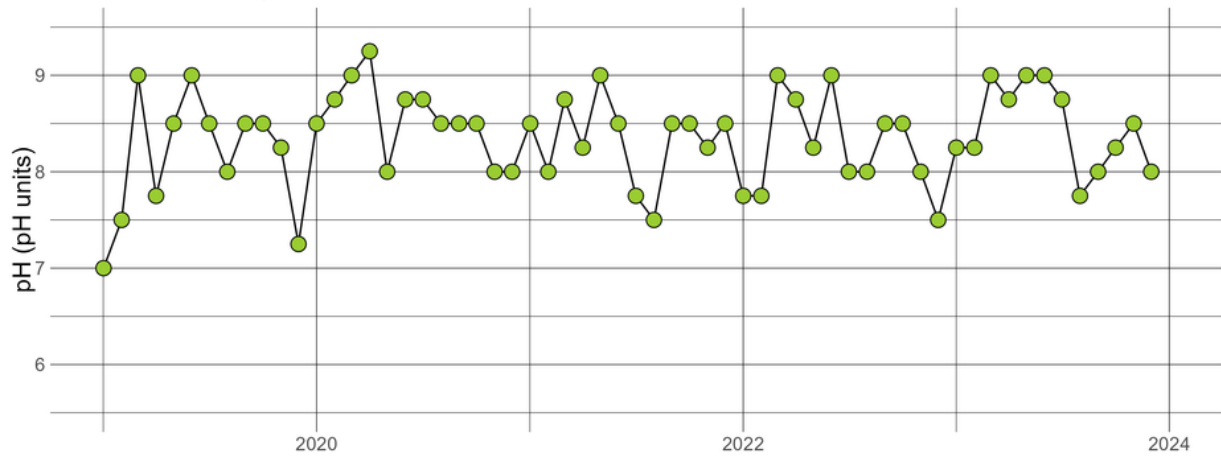
**BERCRE1.22 - Water Temperature**



**BERCRE1.22 - Conductivity**



**BERCRE1.22 - pH**





# Raw Data and Summary Statistics

date	con	nitrate	ph	stage	clarity	watemp
Jan-19	204	2	7			2.3
Feb-19	208	2	7.5			4.5
Mar-19	214	1.5	9			9.9
Apr-19	165	1	7.75			17.7
May-19	215	3	8.5			21.1
Jun-19	249	1	9			21.8
Jul-19	268	1.5	8.5			28.1
Aug-19	207	1	8			25.2
Sep-19	342	0.5	8.5			21.6
Oct-19	290	0	8.5			12.7
Nov-19	211	0.5	8.25			5.5
Dec-19	191	2	7.25			6
Jan-20	249	3	8.5			1.8
Feb-20	226	1.5	8.75			5.4
Mar-20	355	1	9			13.4
Apr-20	331	1	9.25			11.9
May-20	233	1	8			16.5
Jun-20	247	0.5	8.75			26.4
Jul-20	279	0.5	8.75			31.6
Aug-20	311	0	8.5			29.1
Sep-20	336	0	8.5	0.9		18.3
Oct-20	363	0	8.5	1		12.1
Nov-20	350	0	8	1		7
Dec-20	308	1	8	1.2		3.1
Jan-21	292	1.5	8.5	1.4		1.2
Feb-21	331	2	8	1.5		2.6
Mar-21	231	1.5	8.75	1.9		8.3
Apr-21	245	1	8.25	2.1		13.5
May-21	279	0	9	1.2		25.1
Jun-21	303	0	8.5	0.9		25.5
Jul-21	314	0	7.75	0.9		26.9
Aug-21	283	1	7.5	1.3		25.3
Sep-21	301	1.5	8.5	1.4		24.2
Oct-21	316	0.5	8.5	1.3		14.5
Nov-21	244	0	8.25	2.1		7
Dec-21	298	0	8.5	1.3		7.1

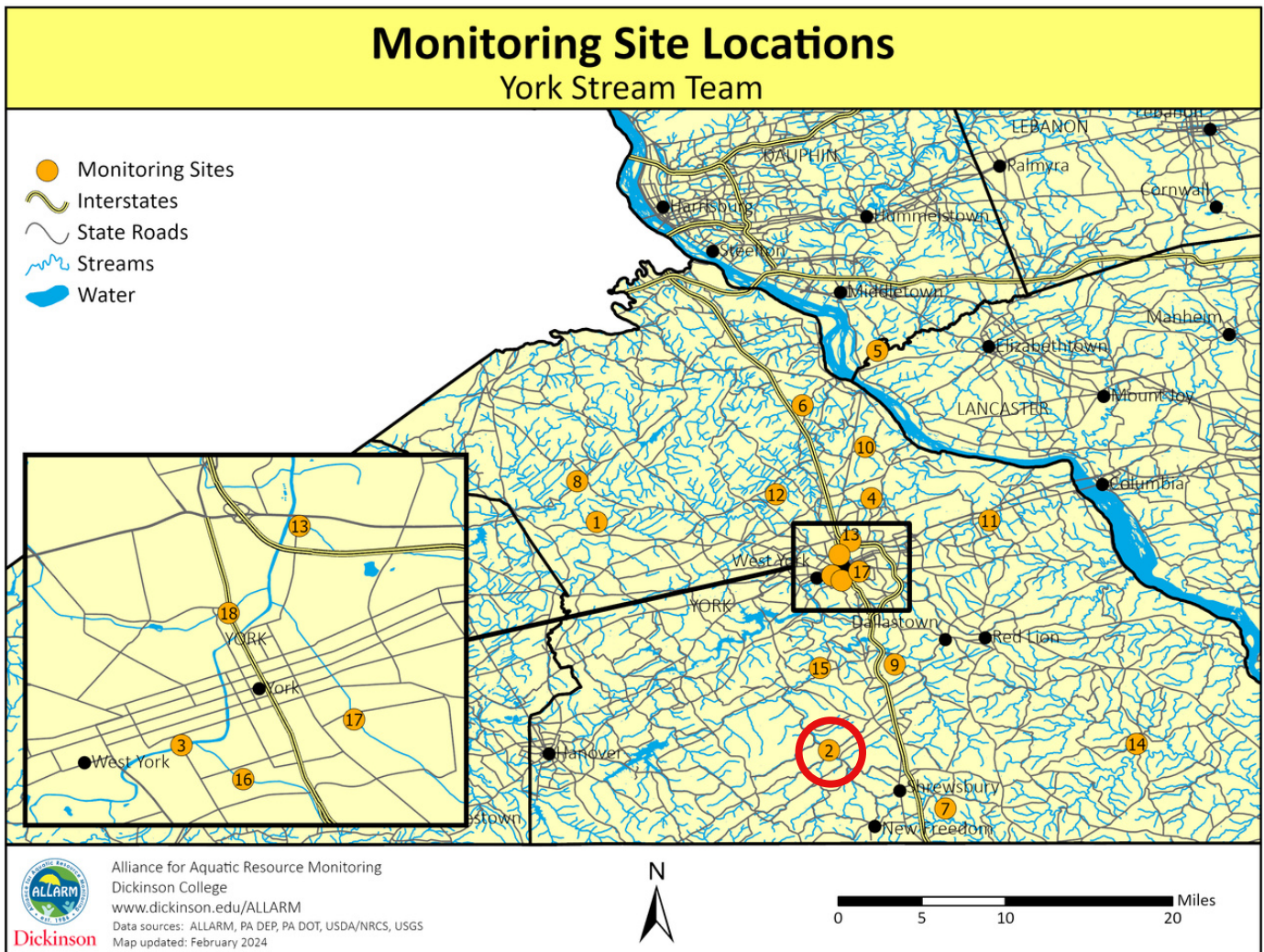
# Raw Data and Summary Statistics

date	con	nitrate	ph	stage	clarity	watemp
Jan-22	324	1.5	7.75	1.5		0.3
Feb-22	274	3	7.75	1.8		2.5
Mar-22	272	0.5	9	2		14.2
Apr-22	227	0.5	8.75	1.7		13.7
May-22	242	1.5	8.25	2.2		22.8
Jun-22	272	0	9	1.1		25.9
Jul-22	302	0	8	0.9		27.2
Aug-22	333	0	8	0.8	60	23.4
Sep-22	358	0	8.5	0.9	60	21.7
Oct-22	359	0	8.5	0.9	60	11
Nov-22	281	0	8	1.8	60	6.2
Dec-22	261	2	7.5	2.8	60	4.2
Jan-23	278	1	8.25	2	60	4.1
Feb-23	291	0.5	8.25	1.8	60	8.4
Mar-23	253	1	9	1.7	60	10.8
Apr-23	258	0	8.75	1.7	60	17.3
May-23	254	0	9	1.3	60	21.6
Jun-23	282	0	9	1	60	25.4
Jul-23	296	0	8.75	1.1	60	27.7
Aug-23	349	0	7.75	0.5	60	23.3
Sep-23	297	0.5	8	1.6	60	17.1
Oct-23	363	0	8.25	0.9	60	10.4
Nov-23	279	0	8.5	1.8	60	10.6
Dec-23	334	4	8	1.3	60	2.3

Variable	Min	Max	Range	Average	Median
Conductivity	165	363	198	280	280
Nitrate-Nitrogen	0	4	4	0.84	0.5
pH	7	9.2	2.2	8.3	8.5
Stage	0.5	2.8	2.3	1.4	1.3
Water Clarity	60	60	0	60	60
Water Temp.	0.3	32	31	15	14

# Centerville Creek (CENCRE0.07)

Monitor(s): Mark Noll



## Land Use

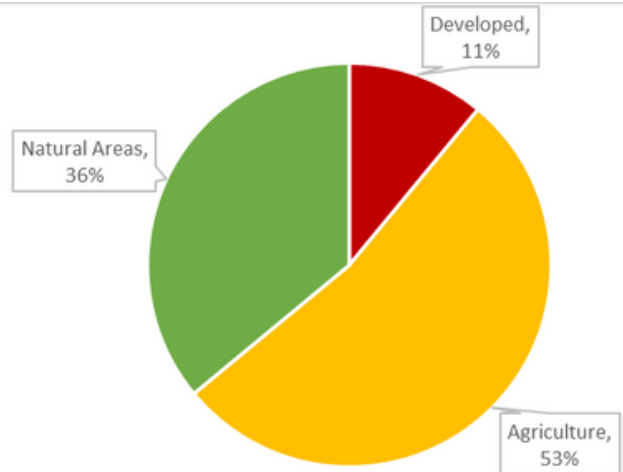
### Site information:

Drains: 15 mi<sup>2</sup>

Impaired: Yes, recreational - pathogens

Designation: Warm Water Fishes (WWF)

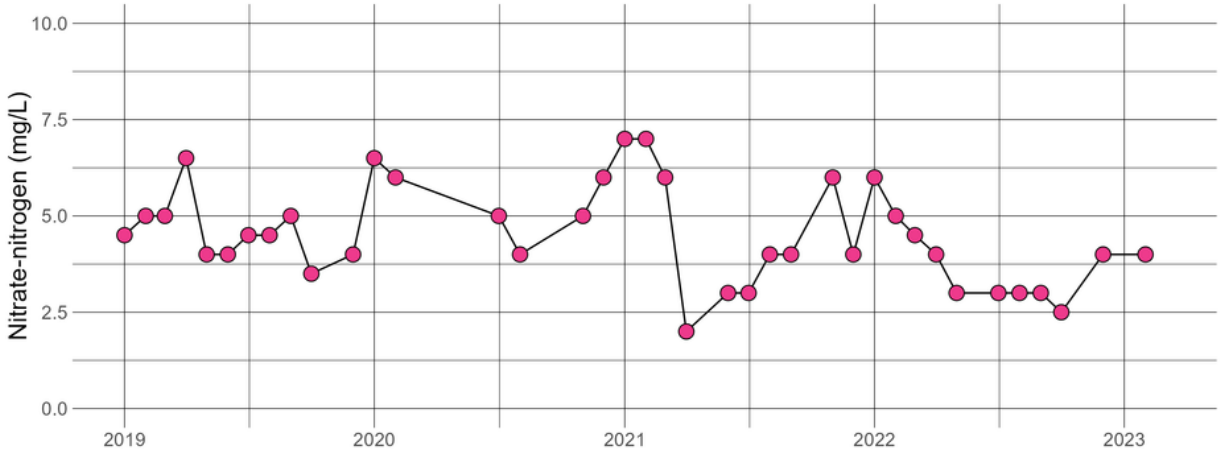
Geology: 100% Non-calcareous



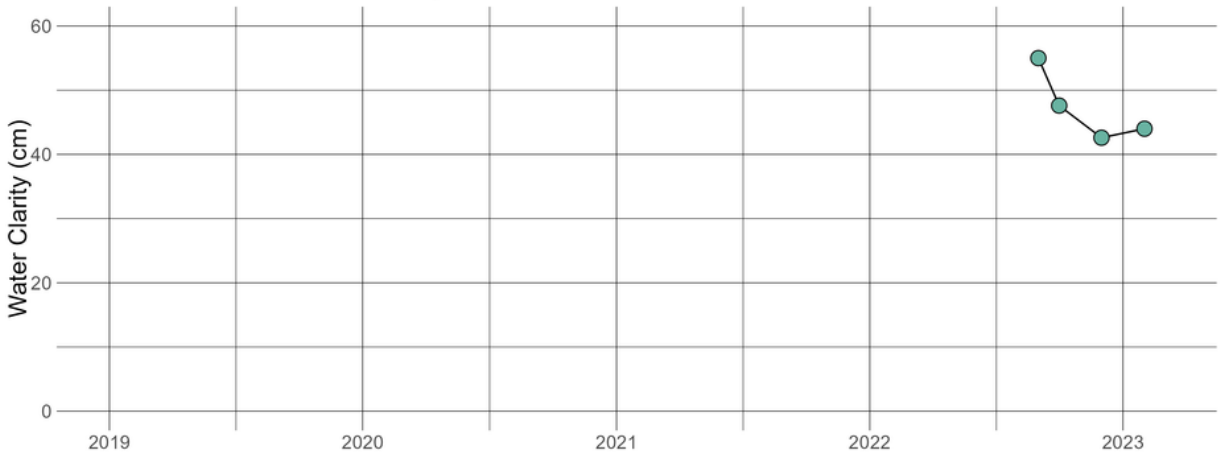




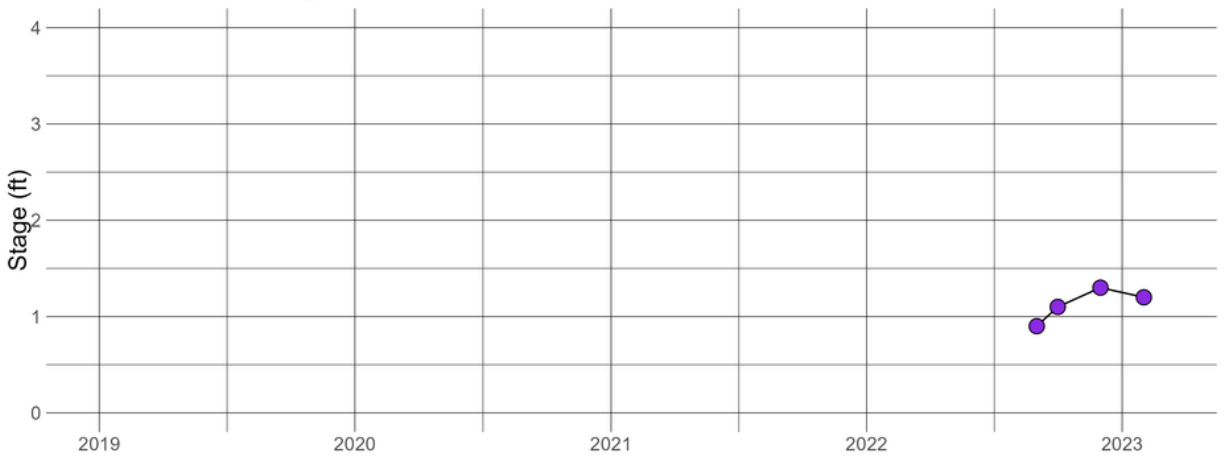
**CENCRE0.07 - Nitrate-nitrogen**



**CENCRE0.07 - Water Clarity**



**CENCRE0.07 - Stage**



# Raw Data and Summary Statistics

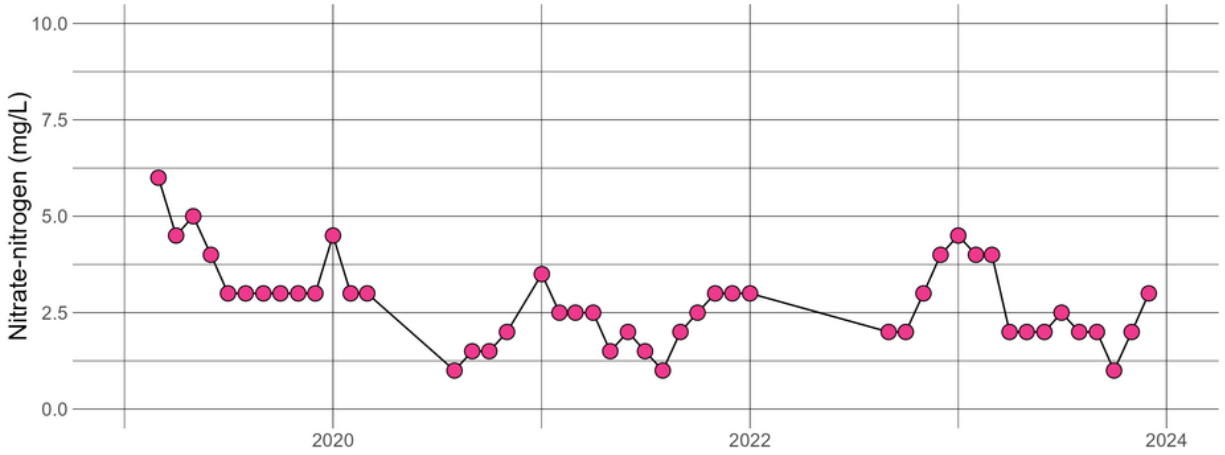
date	con	nitrate	ph	stage	clarity	watemp
Jan-19	159.2	4.5	6.75			5
Feb-19	169.4	5	7			3.4
Mar-19	157.4	5	7			8.4
Apr-19	158.6	6.5	7			13
May-19	157.2	4	7			18
Jun-19	158.4	4	7			18.4
Jul-19	174	4.5	7			22.5
Aug-19	165.2	4.5	7			22.5
Sep-19	156.5	5	7			18.5
Oct-19	177.3	3.5	7			13.3
Dec-19	158.6	4	7			6.8
Jan-20	167.1	6.5	7			26
Feb-20	148.1	6	7.25			7.1
Jul-20	155.7	5	7.25			25
Aug-20	158.9	4	7			24.9
Nov-20	172	5	7			9.7
Dec-20	175.6	6	7			2.9
Jan-21	162.3	7	7			2.7
Feb-21	206	7	7			2.3
Mar-21	167.5	6	7			9.7
Apr-21	159	2	7			14.3
Jun-21	171.4	3	7			20.9
Jul-21	177.2	3	7			20.9
Aug-21	206	4	7			22.5
Sep-21	183.1	4	7			24
Nov-21	175.4	6	7			7.4
Dec-21	168.5	4	7			1.7
Jan-22	195.9	6	7			0.1
Feb-22	188.6	5	7			0.6
Mar-22	177.4	4.5	7			8
Apr-22	171.7	4	7			12.8
May-22	172.4	3	7			20.2
Jul-22	172.1	3	7			12.8
Aug-22	181.8	3	7			20.7
Sep-22	181.7	3	7	0.9	55	14.8
Oct-22	185.7	2.5	7	1.1	47.6	15.3
Dec-22	215	4	7	1.3	42.6	6.3
Feb-23	241	4	7	1.2	44	9.5

Variable	Min	Max	Range	Average	Median
Conductivity	148	241	93	174	172
Nitrate-Nitrogen	2	7	5	4.5	4.2
pH	6.8	7.2	0.5	7	7
Stage	0.9	1.3	0.4	1.1	1.1
Water Clarity	43	55	12	47	46
Water Temp.	0.1	26	26	13	13





**CODCRE12.39 - Nitrate-nitrogen**



**CODCRE12.39 - Water Clarity**



# Raw Data and Summary Statistics

date	con	nitrate	ph	clarity	watemp
Mar-19	354	6	7.5		7.4
Apr-19	281	4.5	7		12
May-19	276	5	7.5		14.5
Jun-19	429	4	8		22.5
Jul-19	599	3	8		27.4
Aug-19	599	3	8		25.6
Sep-19	732	3	8		21.9
Oct-19	395	3	7.75		
Nov-19	679	3	7.5		4.4
Dec-19	496	3	7.75		3.9
Jan-20	357	4.5	8		7.8
Feb-20	342	3	8		5.6
Mar-20	425	3	8		8
Aug-20	546	1	8		25.3
Sep-20	534	1.5	8		13.2
Oct-20	773	1.5	8.25		15.4
Nov-20	594	2	8		11.9
Jan-21	480	3.5	7.75		4.1
Feb-21	490	2.5	8.25		7
Mar-21	425	2.5	8		8
Apr-21	541	2.5	7.75		17.3
May-21	628	1.5	8		20
Jun-21	660	2	8.25		21.4
Jul-21	514	1.5	8		20.1
Aug-21	422	1	8.25		23.8
Sep-21	606	2	8.5		27.3
Oct-21	612	2.5	8		18.1
Nov-21	544	3	7.75		9.4
Dec-21	634	3	8.5		13.5
Jan-22	476	3	8		5.5
Sep-22	629	2	8	60	23.5
Oct-22	584	2	8	60	15
Nov-22	423	3	8	44	7.5
Dec-22	390	4	8	55	6.1

# Raw Data and Summary Statistics

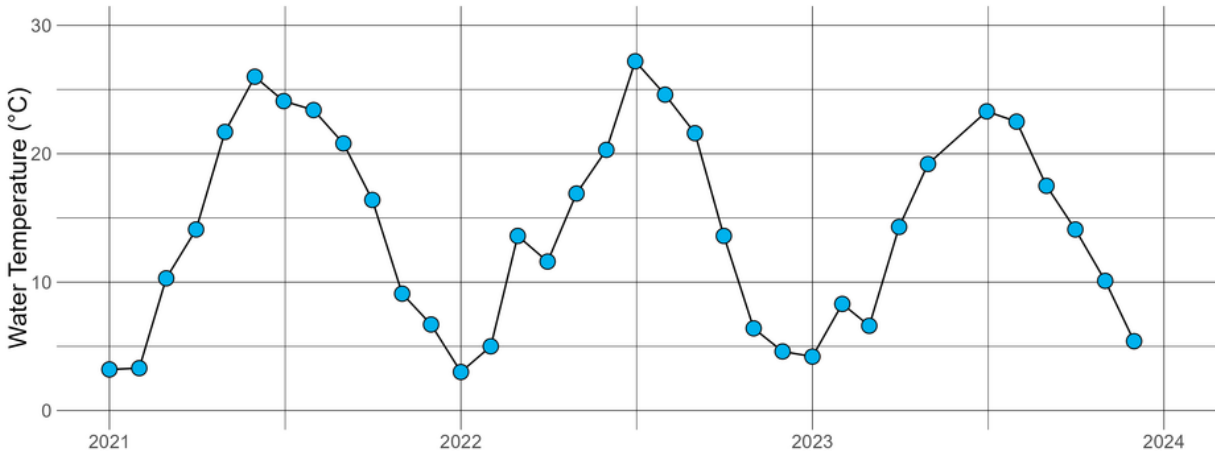
date	con	nitrate	ph	clarity	watemp
Jan-23	358	4.5	8	60	6.4
Feb-23		4	8.5	60	10.2
Mar-23		4	8.5	60	13.5
Apr-23	500	2	8.25	60	19.2
May-23	676	2	7	52.4	19.2
Jun-23	687	2	8	32.4	25
Jul-23	553	2.5	8	45.8	24.9
Aug-23	760	2	8.5	50.6	25.9
Sep-23	890	2	8.5	60	21.8
Oct-23	838	1	8.5	60	15.8
Nov-23	695	2	8.5	60	13.2
Dec-23	347	3	8	60	5.8

Variable	Min	Max	Range	Average	Median
Conductivity	276	890	614	540	542
Nitrate-Nitrogen	1	6	5	2.8	2.8
pH	7	8.5	1.5	8	8
Stage	32	60	28	55	60
Water Clarity	3.9	27	24	15	14
Water Temp.	276	890	614	540	542

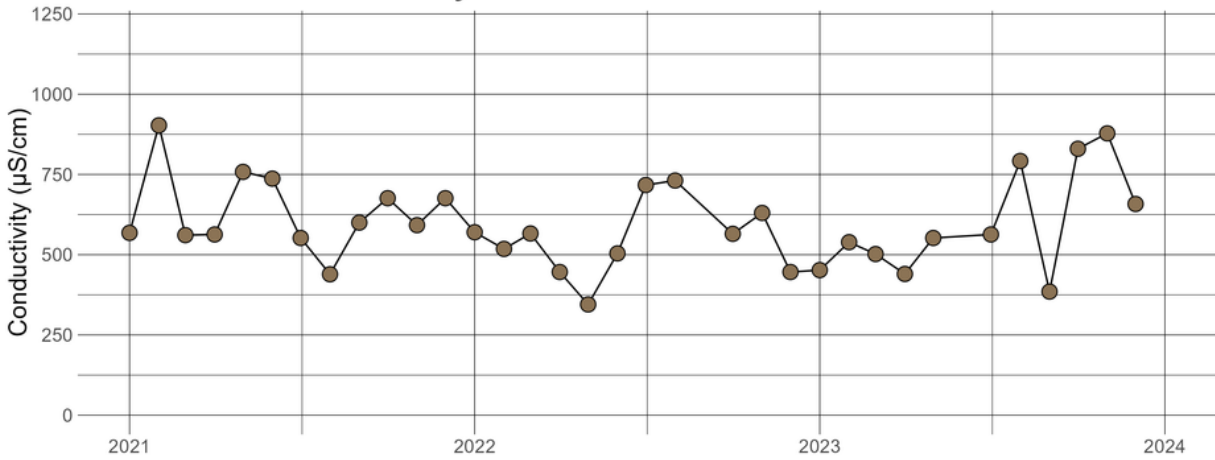




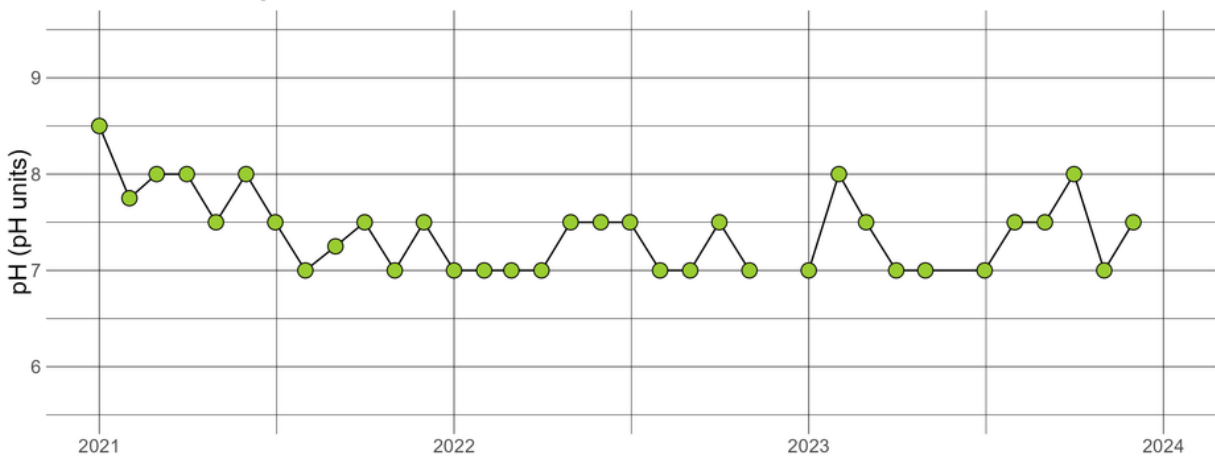
**CODCRE5.77 - Water Temperature**



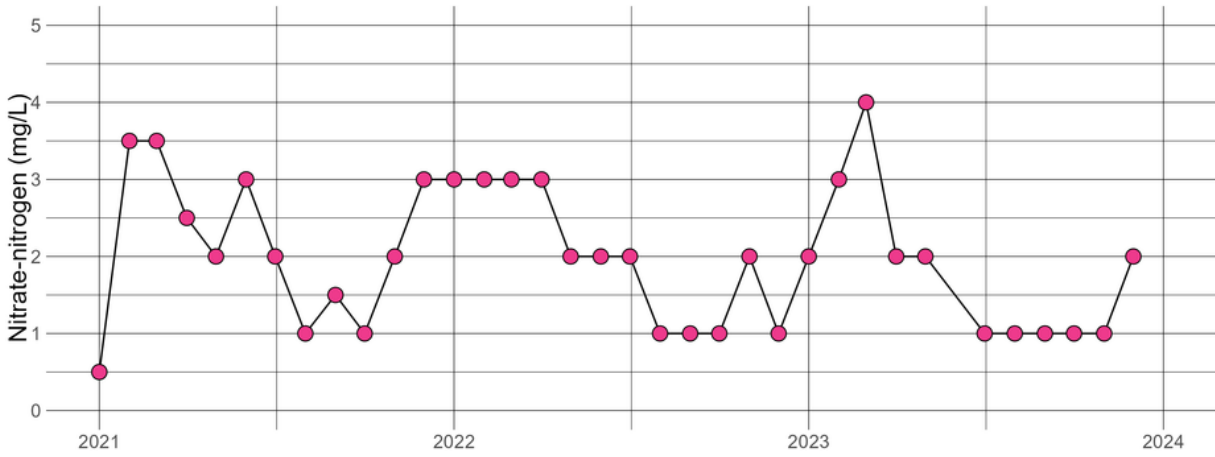
**CODCRE5.77 - Conductivity**



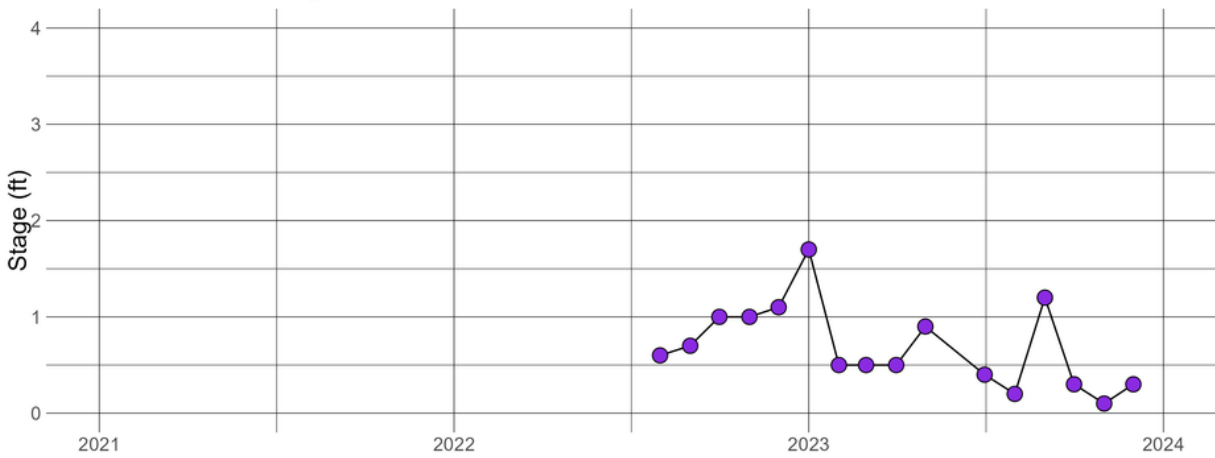
**CODCRE5.77 - pH**



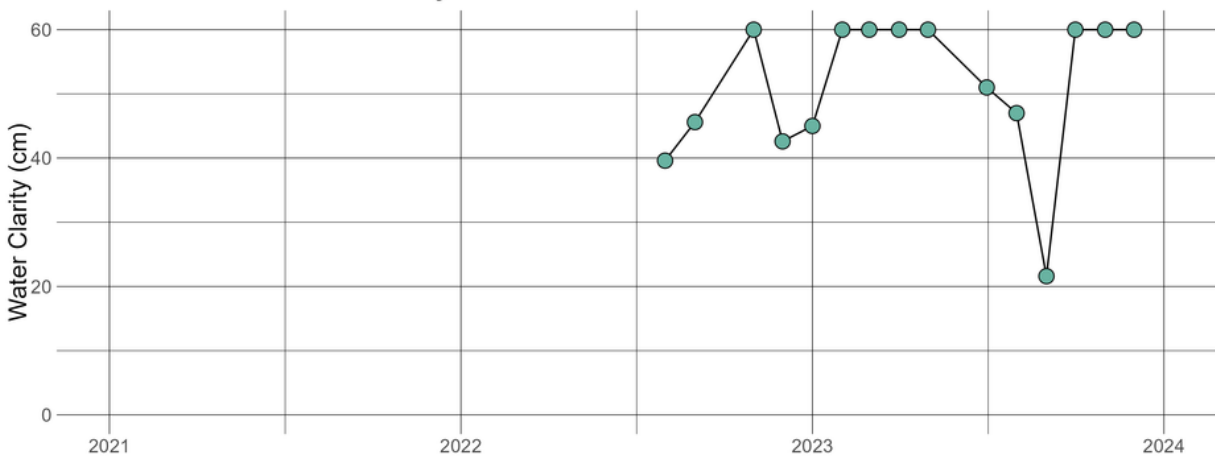
**CODCRE5.77 - Nitrate-nitrogen**



**CODCRE5.77 - Stage**



**CODCRE5.77 - Water Clarity**



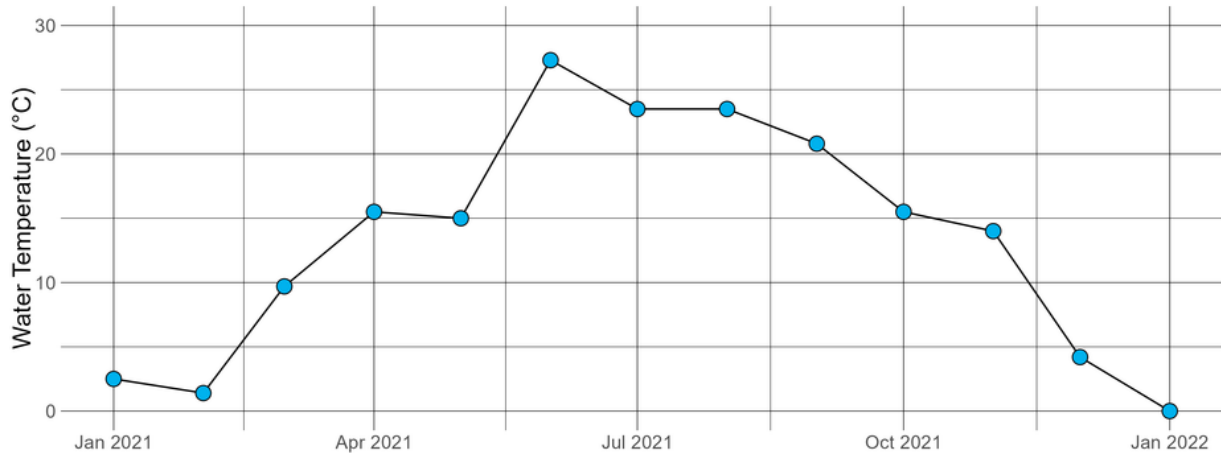
# Raw Data and Summary Statistics

date	con	nitrate	ph	stage	clarity	watemp
Jan-21	568	0.5	8.5			3.2
Feb-21	903	3.5	7.75			3.3
Mar-21	561	3.5	8			10.3
Apr-21	563	2.5	8			14.1
May-21	758	2	7.5			21.7
Jun-21	737	3	8			26
Jul-21	552	2	7.5			24.1
Aug-21	439	1	7			23.4
Sep-21	600	1.5	7.25			20.8
Oct-21	676	1	7.5			16.4
Nov-21	592	2	7			9.1
Dec-21	676	3	7.5			6.7
Jan-22	570	3	7			3
Feb-22	518	3	7			5
Mar-22	566	3	7			13.6
Apr-22	446	3	7			11.6
May-22	345	2	7.5			16.9
Jun-22	504	2	7.5			20.3
Jul-22	717	2	7.5			27.2
Aug-22	731	1	7	0.6	39.6	24.6
Sep-22		1	7	0.7	45.6	21.6
Oct-22	565	1	7.5	1		13.6
Nov-22	630	2	7	1	60	6.4
Dec-22	446	1	3.5	1.1	42.6	4.6
Jan-23	452	2	7	1.7	45	4.2
Feb-23	539	3	8	0.5	60	8.3
Mar-23	502	4	7.5	0.5	60	6.6
Apr-23	440	2	7	0.5	60	14.3
May-23	552	2	7	0.9	60	19.2
Jul-23	563	1	7	0.4	51	23.3
Aug-23	792	1	7.5	0.2	47	22.5
Sep-23	385	1	7.5	1.2	21.6	17.5
Oct-23	830	1	8	0.3	60	14.1
Nov-23	878	1	7	0.1	60	10.1
Dec-23	658	2	7.5	0.3	60	5.4

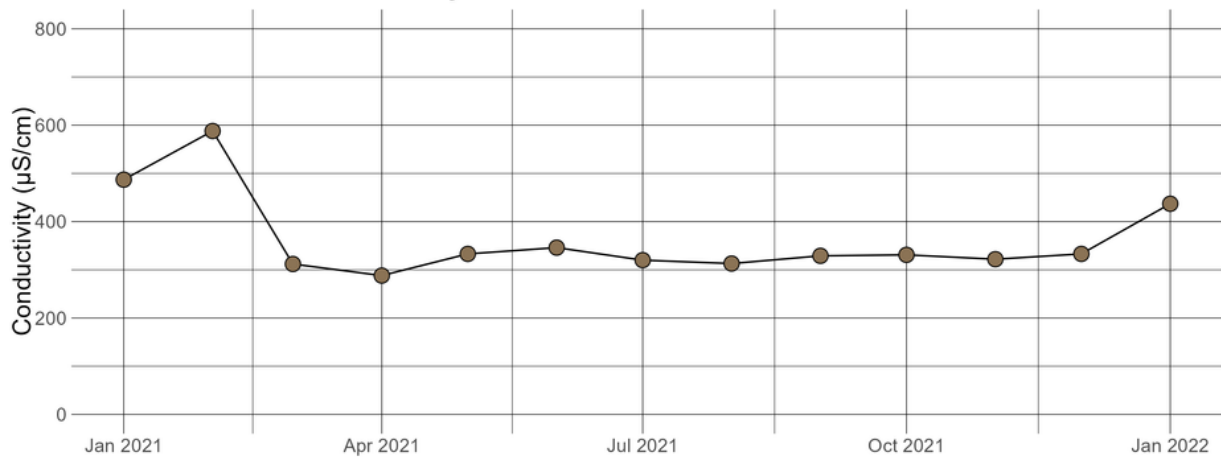
Variable	Min	Max	Range	Average	Median
Conductivity	345	903	558	596	566
Nitrate-Nitrogen	0.5	4	3.5	2	2
pH	3.5	8.5	5	7.3	7.5
Stage	0.1	1.7	1.6	0.69	0.55
Water Clarity	22	60	38	51	60
Water Temp.	3	27	24	14	14



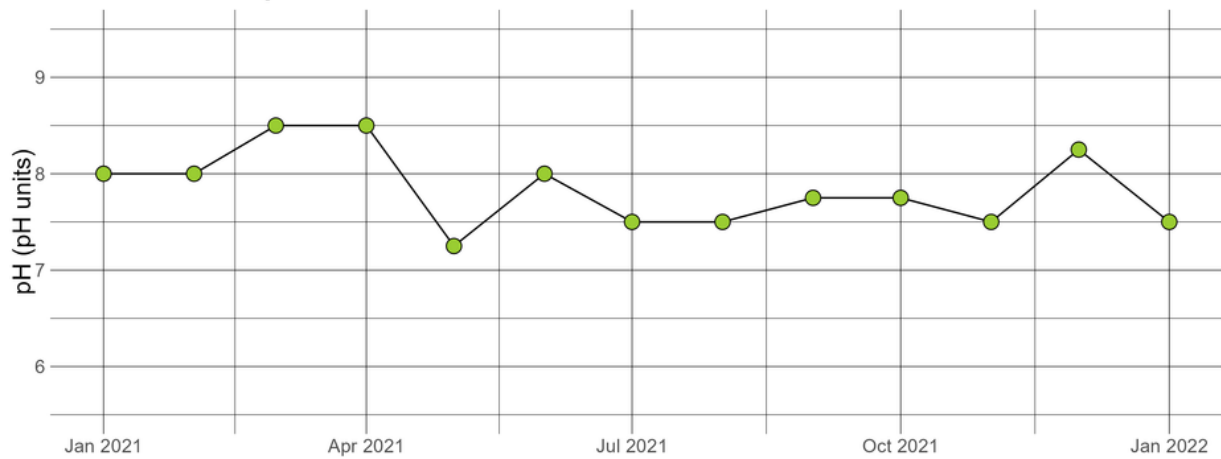
**CONCRE2.81 - Water Temperature**



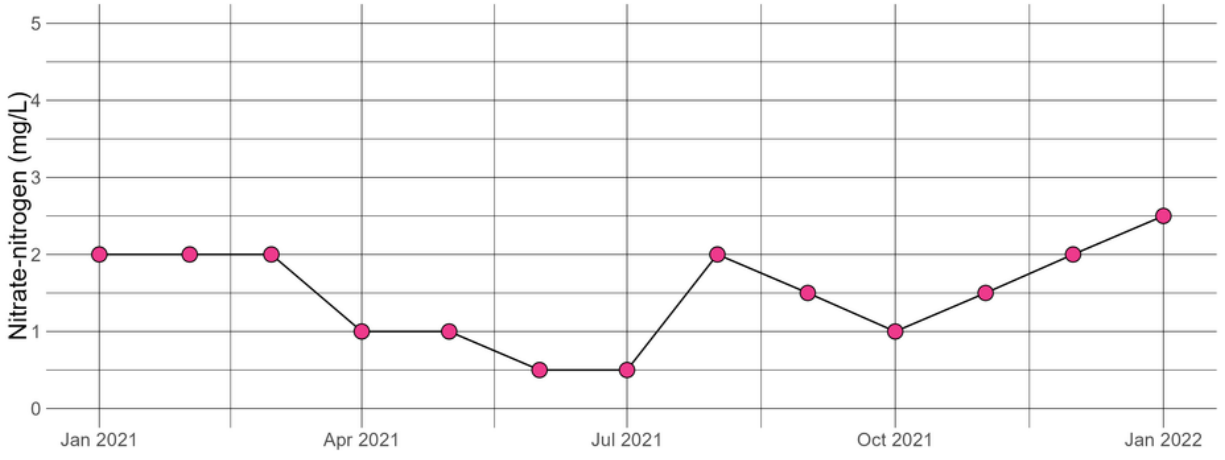
**CONCRE2.81 - Conductivity**



**CONCRE2.81 - pH**



### CONCRE2.81 - Nitrate-nitrogen



# Raw Data and Summary Statistics

date	con	nitrate	ph	watemp
Jan-21	487	2	8	2.5
Feb-21	588	2	8	1.4
Mar-21	312	2	8.5	9.7
Apr-21	288	1	8.5	15.5
May-21	333	1	7.25	15
Jun-21	346	0.5	8	27.3
Jul-21	320	0.5	7.5	23.5
Aug-21	313	2	7.5	23.5
Sep-21	329	1.5	7.75	20.8
Oct-21	331	1	7.75	15.5
Nov-21	322	1.5	7.5	14
Dec-21	333	2	8.25	4.2
Jan-22	437	2.5	7.5	0

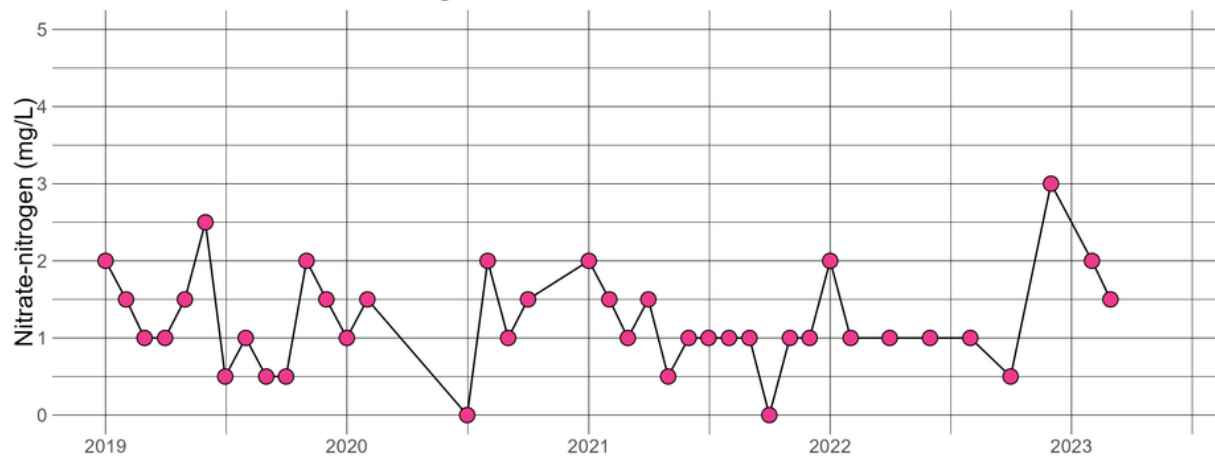
Variable	Min	Max	Range	Average	Median
Conductivity	288	588	300	365	331
Nitrate-Nitrogen	0.5	2.5	2	1.5	1.5
pH	7.2	8.5	1.2	7.8	7.8
Water Temp.	0	27	27	13	15







### CONCRE7.04 - Nitrate-nitrogen



# Raw Data and Summary Statistics

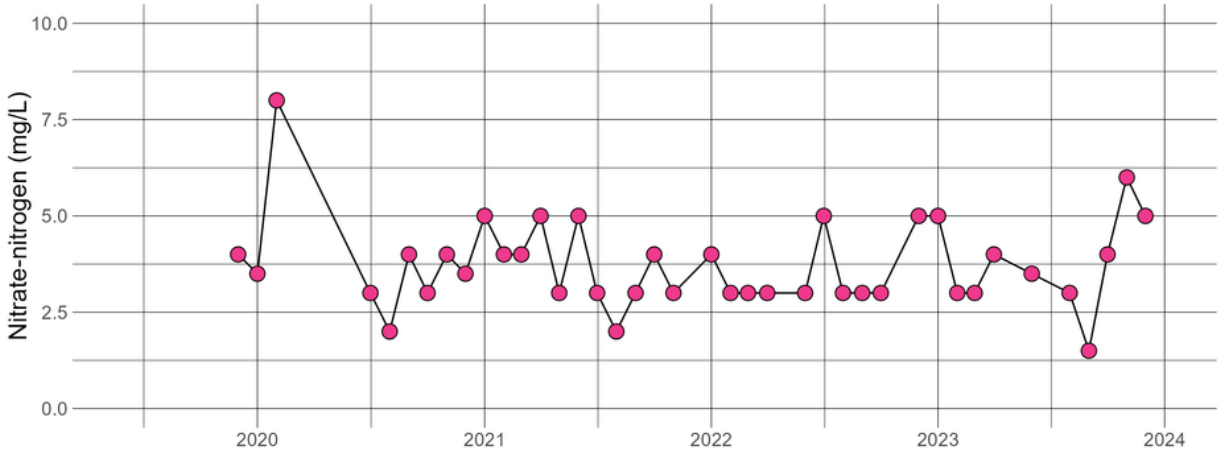
date	con	nitrate	ph	watemp
Jan-19	179.5	2	7	2.1
Feb-19	249	1.5	8	4.7
Mar-19	220	1	8.25	9.4
Apr-19	172.2	1	8	17.5
May-19	208	1.5	8	18.9
Jun-19	269	2.5	8	20.2
Jul-19	290	0.5	8.25	29.9
Aug-19	290	1	8.5	26.9
Sep-19	348	0.5	8.5	21.9
Oct-19	380	0.5	8.5	12.7
Nov-19	306	2	8	5.1
Dec-19	234	1.5	7.75	4.3
Jan-20	267	1	8	2.4
Feb-20	247	1.5	8	3.6
Jul-20	307	0	8.5	30
Aug-20	286	2	8.5	26
Sep-20	396	1	8.5	17.9
Oct-20	445	1.5	8.25	11.8
Jan-21	313	2	8	1.4
Feb-21	281	1.5	6.5	1.1
Mar-21	281	1	7	8.1
Apr-21	234	1.5	6.75	12.4
May-21	318	0.5	8.25	17.2
Jun-21	324	1	8	25.9
Jul-21	346	1	8	29.5
Aug-21	206	1	8	25.9
Sep-21	304	1	8	24.3
Oct-21	356	0	7	15.1
Nov-21	377	1	7.5	6.7
Dec-21	427	1	7.5	6
Jan-22	396	2		0.5
Feb-22	298	1		5
Apr-22	323	1	8.5	16.3
Jun-22	342	1		22
Aug-22	413	1	8.25	27
Oct-22	397	0.5	8.25	15.5
Dec-22	328	3	7.25	4.2
Feb-23	348	2	7.25	12.7
Mar-23	330	1.5	7.5	7.2

Variable	Min	Max	Range	Average	Median
Conductivity	172	445	273	309	307
Nitrate-Nitrogen	0	3	3	1.2	1
pH	6.5	8.5	2	7.9	8
Water Temp.	0.5	30	30	14	13

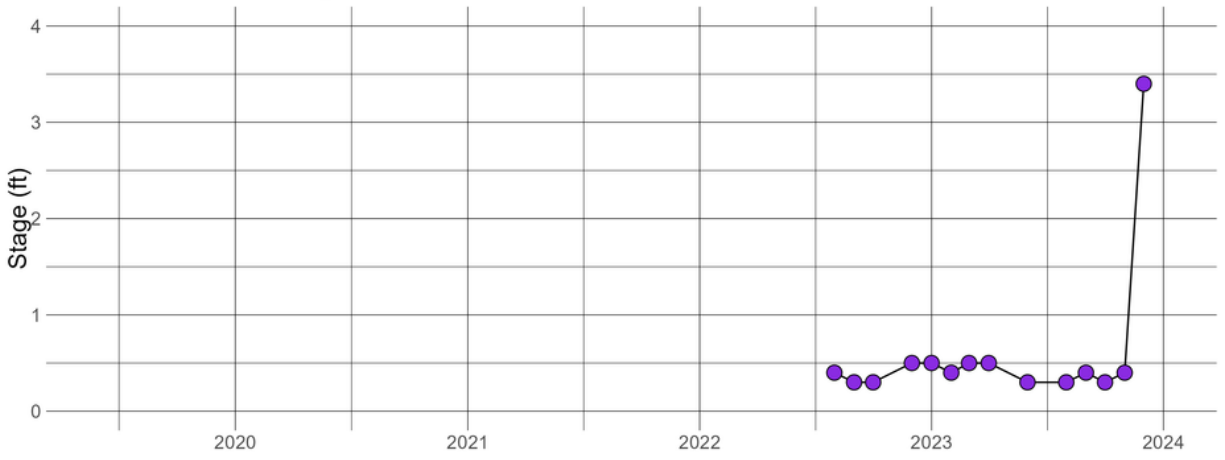




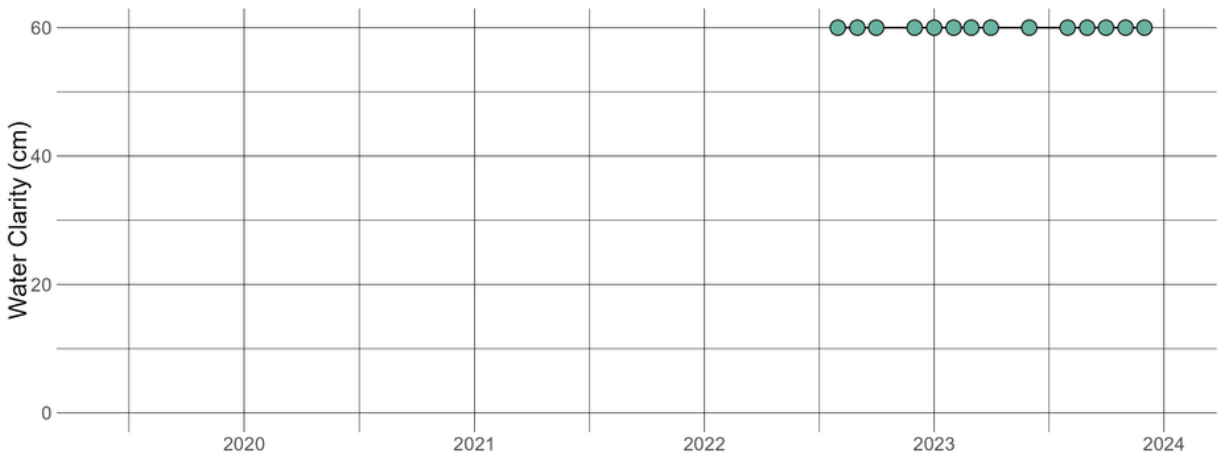
**DEECRE38.64 - Nitrate-nitrogen**



**DEECRE38.64 - Stage**



**DEECRE38.64 - Water Clarity**



# Raw Data and Summary Statistics

date	con	nitrate	ph	stage	clarity	watemp
Dec-19	458	4	7.5			7
Jan-20	822	3.5	8			5.6
Feb-20	321	8	8			5.9
Jul-20	371	3	7.75			18.6
Aug-20	382	2	8			19.5
Sep-20	372	4	8			11.7
Oct-20	406	3	7.5			12.4
Nov-20	411	4	8.25			9.7
Dec-20	291	3.5	7.25			6.5
Jan-21	332	5	7.75			4.9
Feb-21	558	4	7.25			5.2
Mar-21	374	4	7.75			12
Apr-21	381	5	7.5			11.2
May-21	388	3	7.5			17
Jun-21	378	5	7.25			18.2
Jul-21	412	3	7.75			20.6
Aug-21	424	2	7.5			19.9
Sep-21	380	3	8.25			20.7
Oct-21	371	4	8			14.4
Nov-21	358	3	8			6.6
Jan-22	450	4	7.25			2.7
Feb-22	406	3	7.75			8.8
Mar-22	399	3	7.25			10
Apr-22	355	3	7.5			15.1
Jun-22	389	3	7.5			16.2
Jul-22	380	5	8			21.1
Aug-22	391	3	7.75	0.4	60	19.4
Sep-22	409	3	8.25	0.3	60	19.1
Oct-22	465	3	7.75	0.3	60	11.1
Dec-22	308	5	7.75	0.5	60	6.1



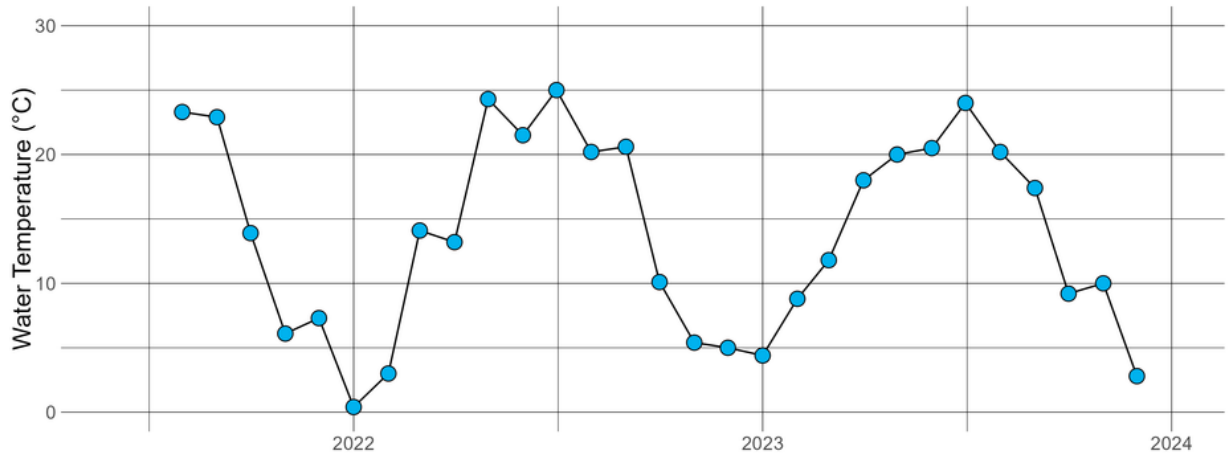
# Raw Data and Summary Statistics

date	con	nitrate	ph	stage	clarity	watemp
Jan-23	355	5	7.5	0.5	60	4.6
Feb-23	322	3	7.5	0.4	60	9.5
Mar-23	317	3	7.75	0.5	60	9.5
Apr-23	336	4	8	0.5	60	16
Jun-23	342	3.5	7.75	0.3	60	17
Aug-23	392	3	8.25	0.3	60	22.3
Sep-23	351	1.5	7.5	0.4	60	15.8
Oct-23	402	4	8	0.3	60	12.5
Nov-23	465	6	8.25	0.4	60	9.7
Dec-23	345	5	7.75	3.4	60	7.1

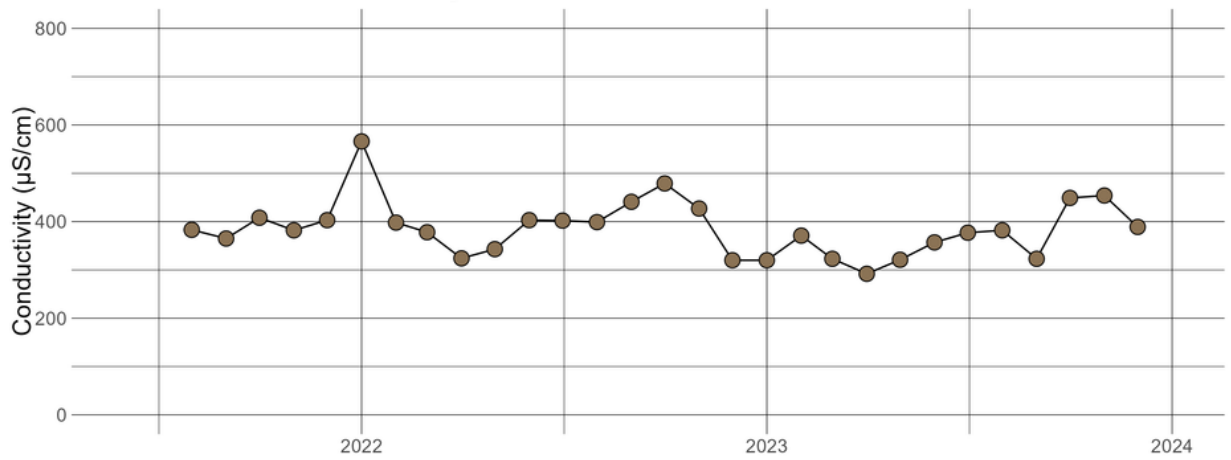
Variable	Min	Max	Range	Average	Median
Conductivity	291	822	531	394	380
Nitrate-Nitrogen	1.5	8	6.5	3.7	3.5
pH	7.2	8.2	1	7.7	7.8
Stage	0.3	3.4	3.1	0.61	0.4
Water Clarity	60	60	0	60	60
Water Temp.	2.7	22	20	13	12



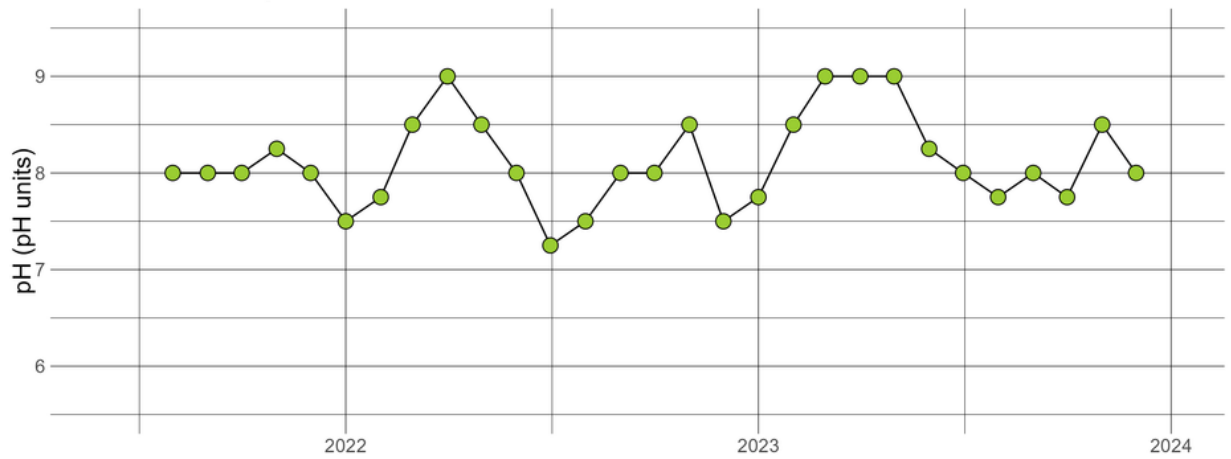
**DOERUN1.77 - Water Temperature**



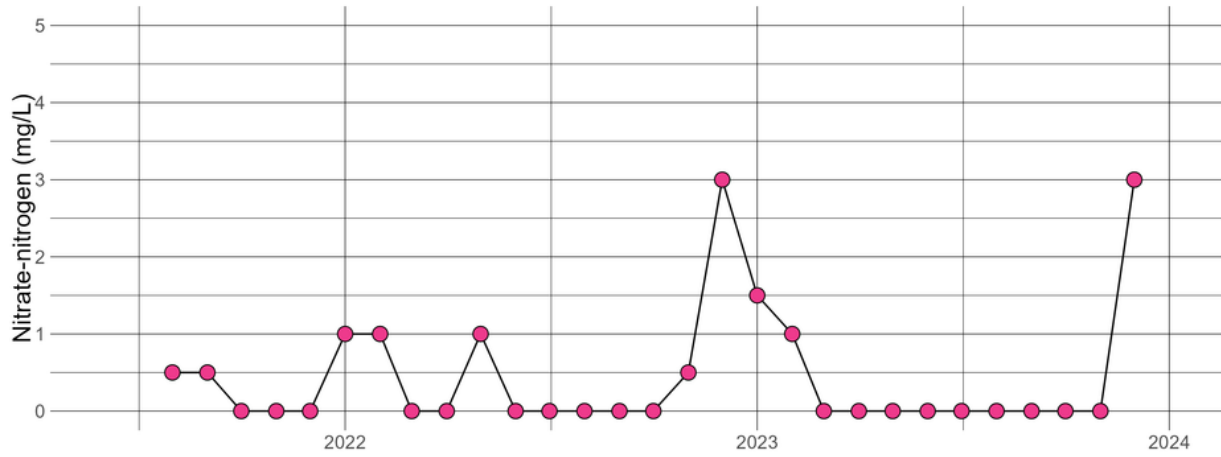
**DOERUN1.77 - Conductivity**



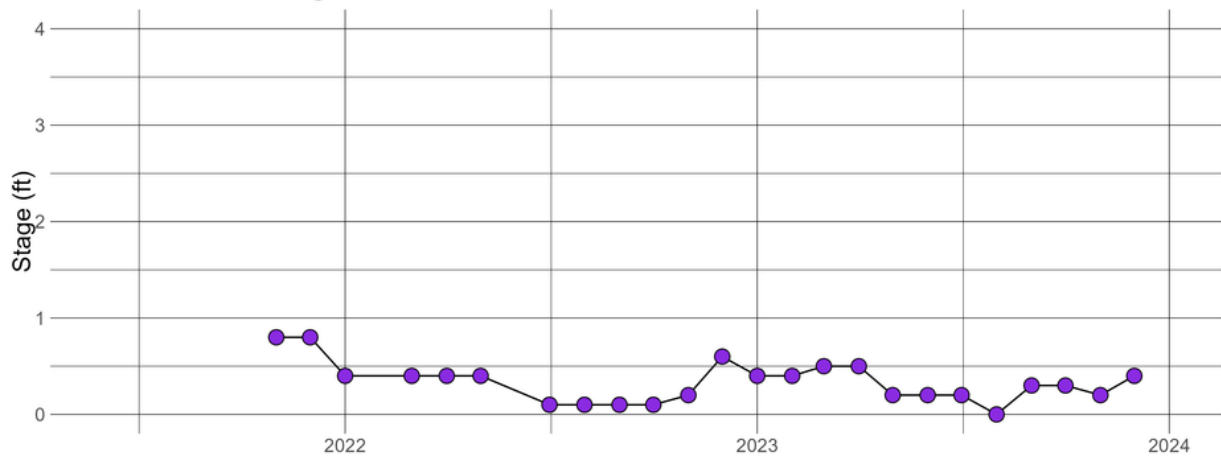
**DOERUN1.77 - pH**



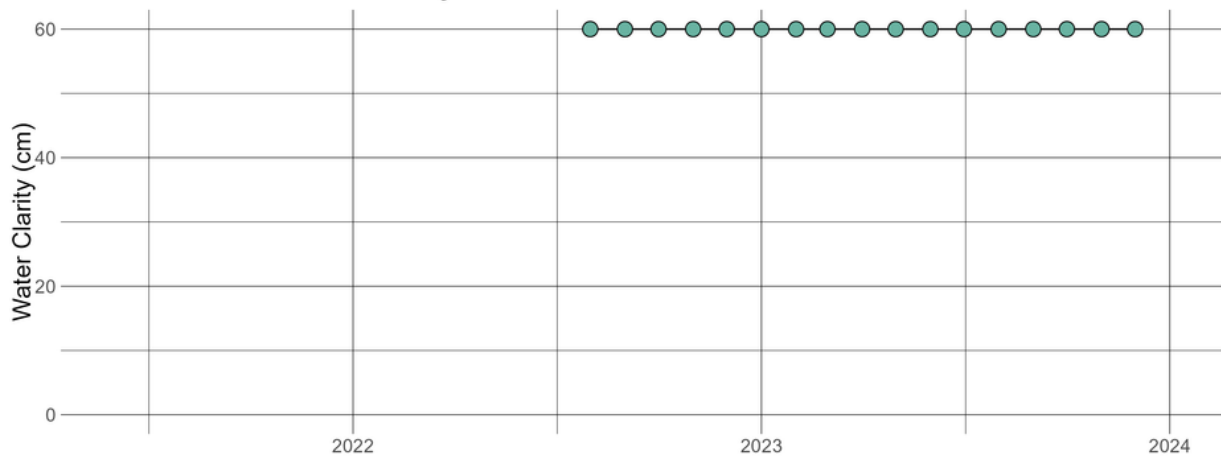
### DOERUN1.77 - Nitrate-nitrogen



### DOERUN1.77 - Stage



### DOERUN1.77 - Water Clarity



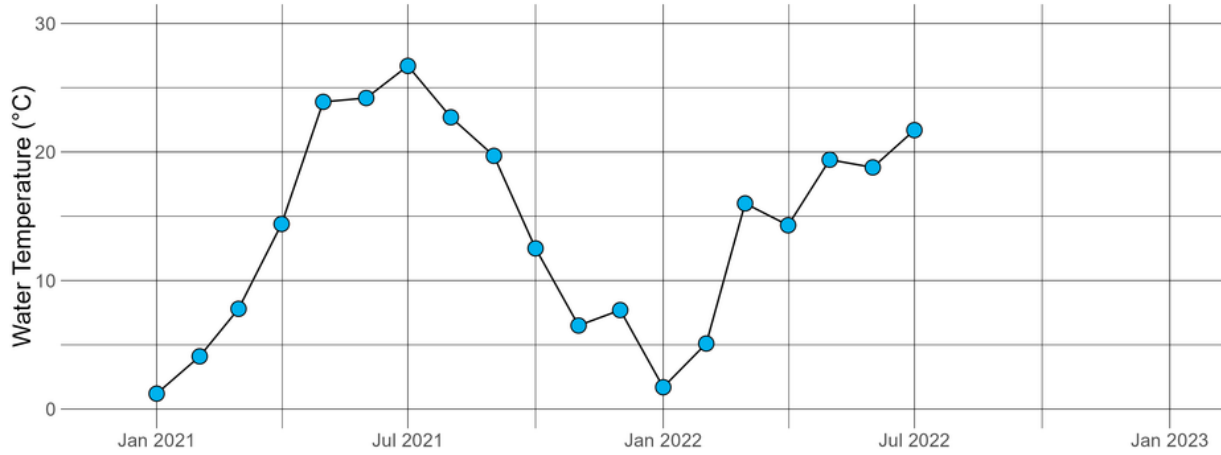
# Raw Data and Summary Statistics

date	con	nitrate	ph	stage	clarity	watemp
Aug-21	383	0.5	8			23.3
Sep-21	365	0.5	8			22.9
Oct-21	408	0	8			13.9
Nov-21	382	0	8.25	0.8		6.1
Dec-21	403	0	8	0.8		7.3
Jan-22	566	1	7.5	0.4		0.4
Feb-22	398	1	7.75			3
Mar-22	378	0	8.5	0.4		14.1
Apr-22	324	0	9	0.4		13.2
May-22	343	1	8.5	0.4		24.3
Jun-22	403	0	8			21.5
Jul-22	402	0	7.25	0.1		25
Aug-22	399	0	7.5	0.1	60	20.2
Sep-22	441	0	8	0.1	60	20.6
Oct-22	479	0	8	0.1	60	10.1
Nov-22	427	0.5	8.5	0.2	60	5.4
Dec-22	320	3	7.5	0.6	60	5
Jan-23	320	1.5	7.75	0.4	60	4.4
Feb-23	371	1	8.5	0.4	60	8.8
Mar-23	323	0	9	0.5	60	11.8
Apr-23	292	0	9	0.5	60	18
May-23	321	0	9	0.2	60	20
Jun-23	357	0	8.25	0.2	60	20.5
Jul-23	377	0	8	0.2	60	24
Aug-23	382	0	7.75	0	60	20.2
Sep-23	323	0	8	0.3	60	17.4
Oct-23	449	0	7.75	0.3	60	9.2
Nov-23	454	0	8.5	0.2	60	10
Dec-23	389	3	8	0.4	60	2.8

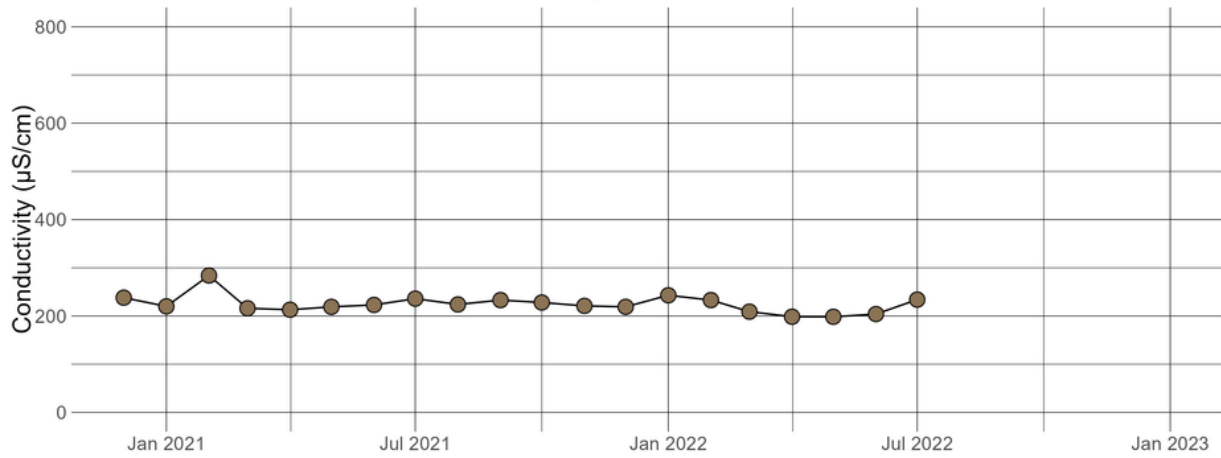
Variable	Min	Max	Range	Average	Median
Conductivity	292	566	274	385	382
Nitrate-Nitrogen	0	3	3	0.45	0
pH	7.2	9	1.8	8.1	8
Stage	0	0.8	0.8	0.33	0.35
Water Clarity	60	60	0	60	60
Water Temp.	0.4	25	25	14	14



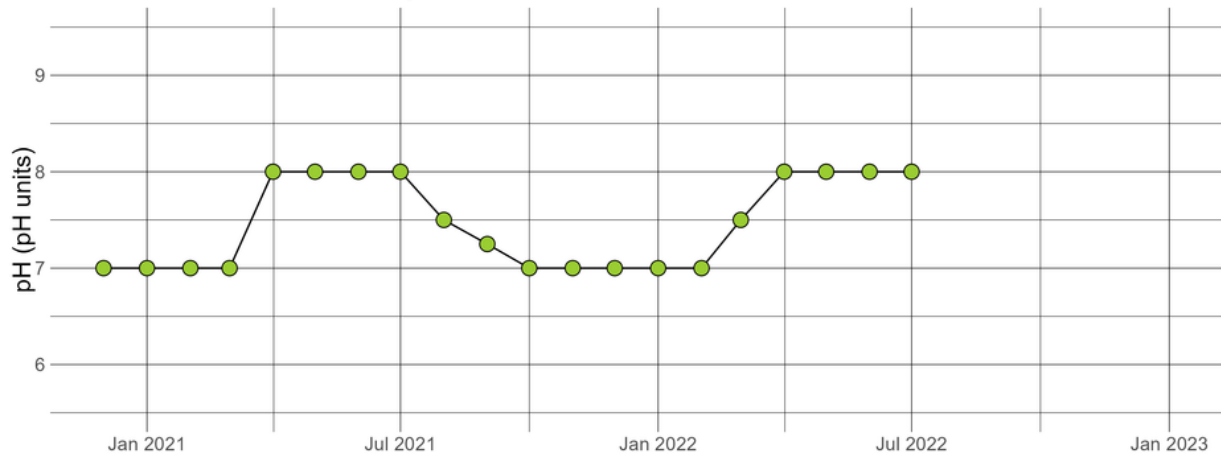
**EASBRACODCRE24.60 - Water Temperature**



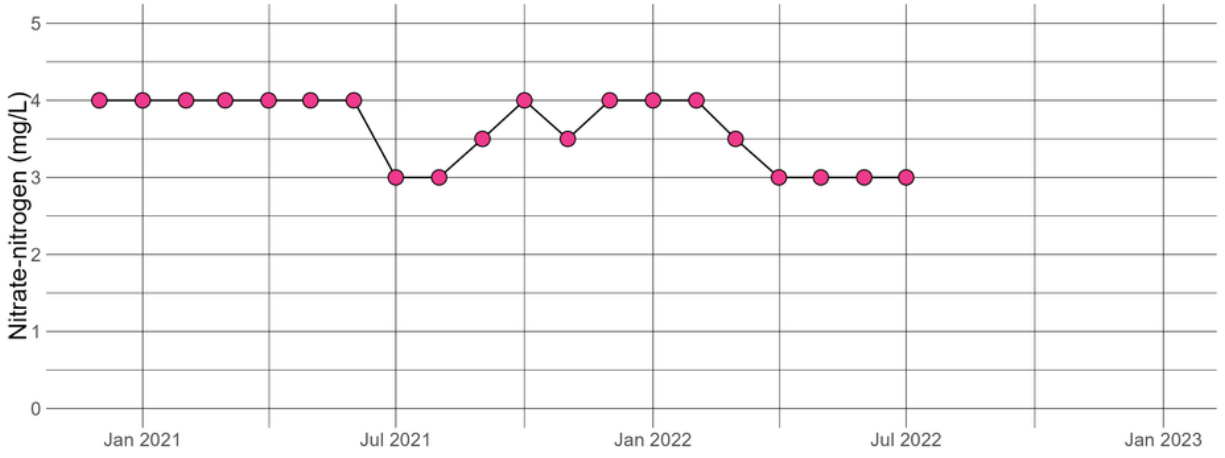
**EASBRACODCRE24.60 - Conductivity**



**EASBRACODCRE24.60 - pH**



### EASBRACODCRE24.60 - Nitrate-nitrogen





# Raw Data and Summary Statistics

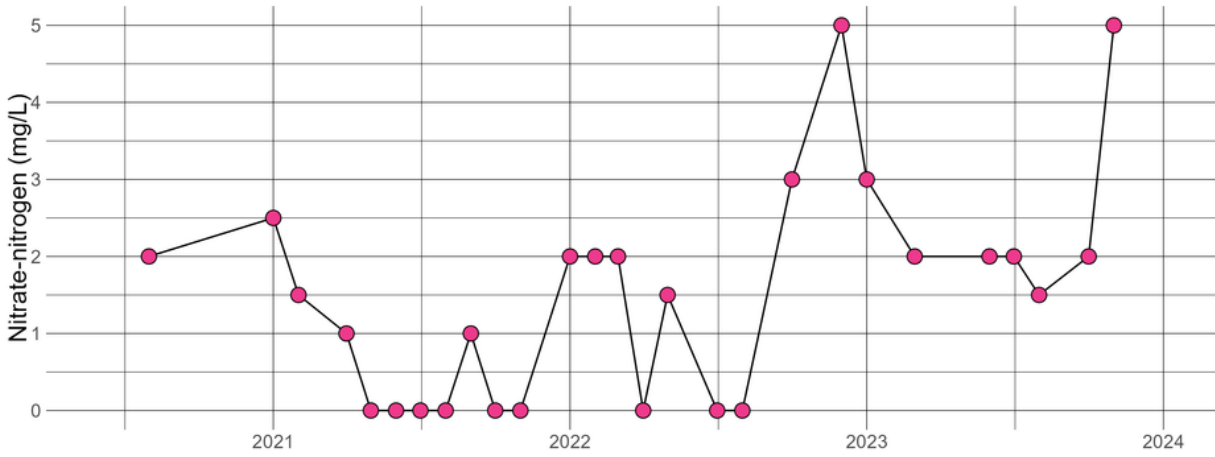
date	con	nitrate	ph	watemp
Dec-20	238	4	7	
Jan-21	220	4	7	1.2
Feb-21	284	4	7	4.1
Mar-21	216	4	7	7.8
Apr-21	213	4	8	14.4
May-21	219	4	8	23.9
Jun-21	223	4	8	24.2
Jul-21	236	3	8	26.7
Aug-21	224	3	7.5	22.7
Sep-21	233	3.5	7.25	19.7
Oct-21	228	4	7	12.5
Nov-21	221	3.5	7	6.5
Dec-21	219	4	7	7.7
Jan-22	243	4	7	1.7
Feb-22	233	4	7	5.1
Mar-22	209	3.5	7.5	16
Apr-22	198.5	3	8	14.3
May-22	198.4	3	8	19.4
Jun-22	204	3	8	18.8
Jul-22	234	3	8	21.7

Variable	Min	Max	Range	Average	Median
Conductivity	198	284	86	225	222
Nitrate-Nitrogen	3	4	1	3.6	4
pH	7	8	1	7.5	7.4
Water Temp.	1.2	27	26	14	14

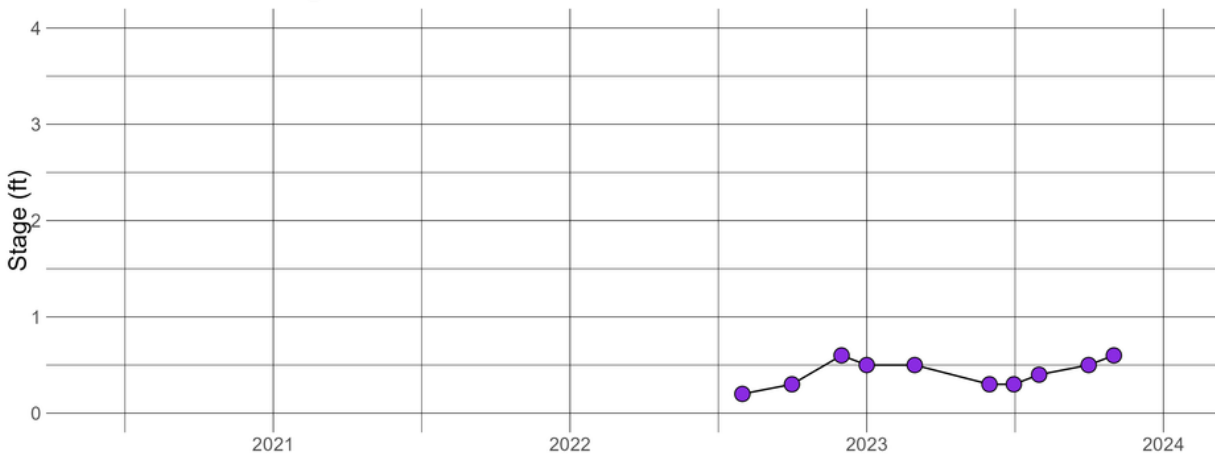




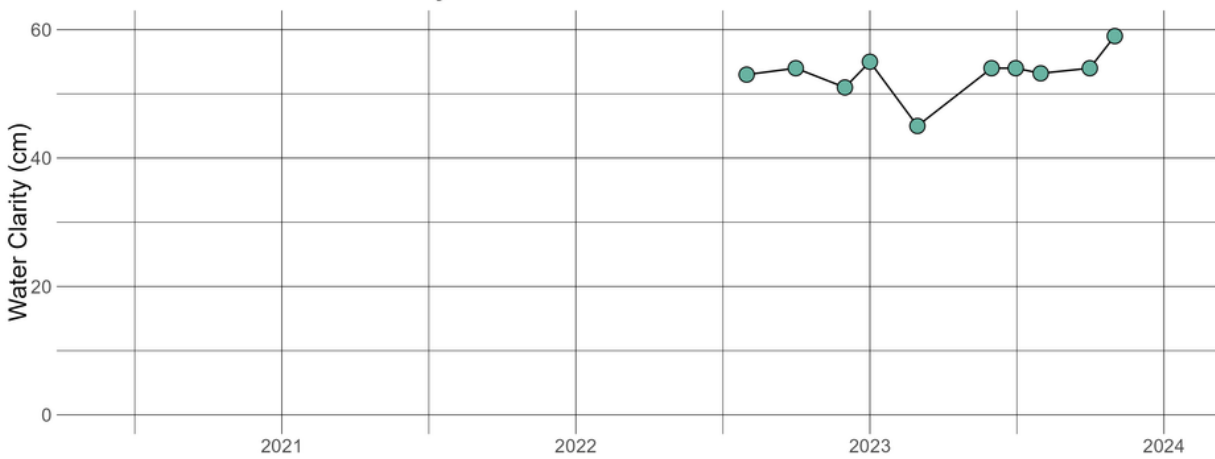
### HARRUN8.92 - Nitrate-nitrogen



### HARRUN8.92 - Stage



### HARRUN8.92 - Water Clarity



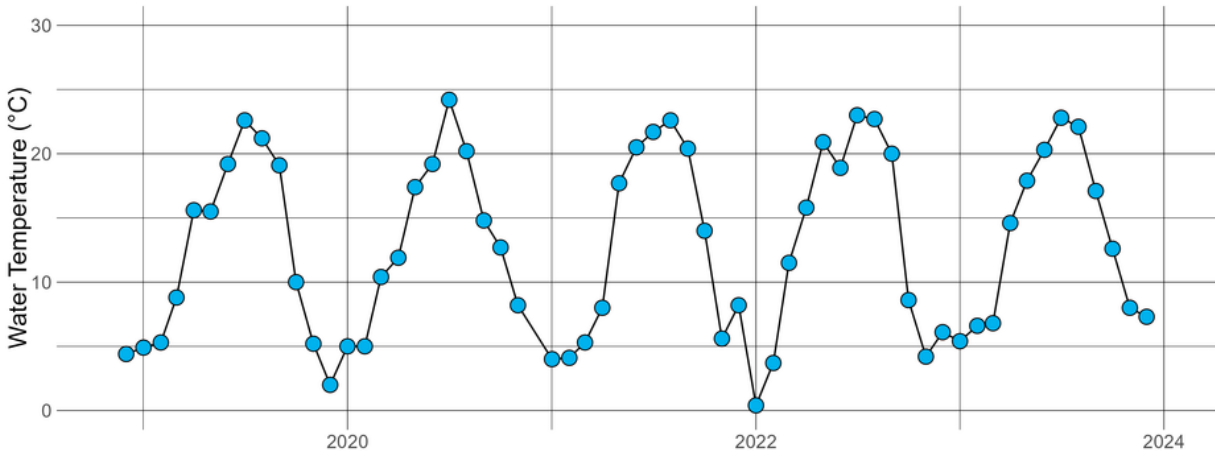
# Raw Data and Summary Statistics

date	con	nitrate	ph	stage	clarity	watemp
Aug-20	263	2	7.25			21.7
Jan-21	266	2.5	8			3.4
Feb-21	522	1.5	7.5			0
Apr-21	253	1	8			20
May-21	294	0	7			13.5
Jun-21	332	0	7			24
Jul-21	277	0	8			21.8
Aug-21	296	0	7			21.7
Sep-21	276	1	7.5			20.3
Oct-21	282	0	8			14.3
Nov-21	283	0	8			14.3
Jan-22	374	2	8			0.5
Feb-22	326	2	7			4.8
Mar-22	284	2	8			4.1
Apr-22	235	0	7			13.7
May-22	287	1.5	7.25			15.4
Jun-22	281		7.5			18.7
Jul-22	338	0	7			24.2
Aug-22	320	0	8	0.2	53	23.3
Oct-22	358	3	8	0.3	54	11.4
Dec-22	288	5	7	0.6	51	5.4
Jan-23	311	3	8	0.5	55	4
Mar-23	269	2	8	0.5	45	10
Jun-23	274	2	8	0.3	54	19.7
Jul-23	318	2	7.75	0.3	54	20.6
Aug-23	340	1.5	8	0.4	53.2	23.4
Oct-23	356	2	8	0.5	54	14.6
Nov-23	314	5	7.75	0.6	59	4.3

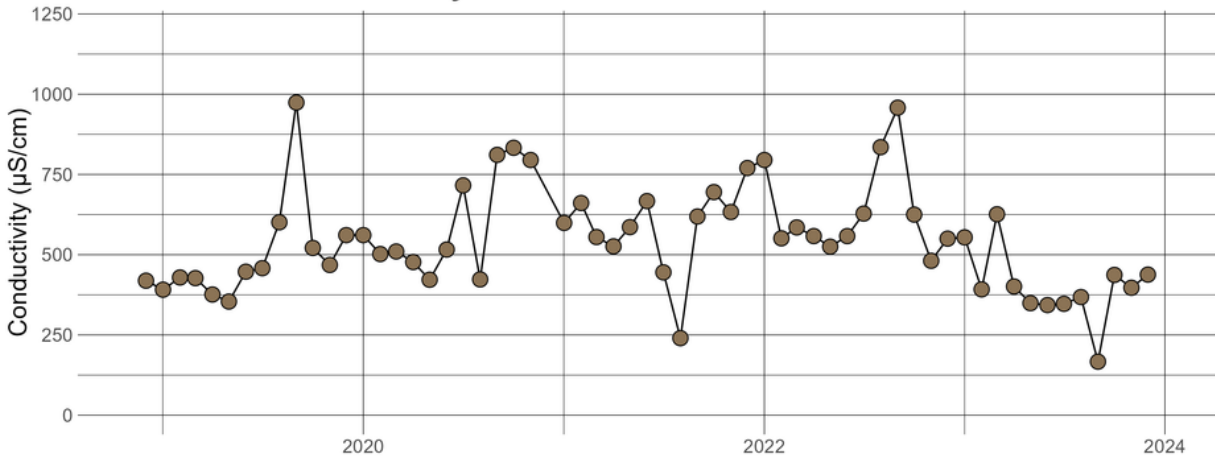
Variable	Min	Max	Range	Average	Median
Conductivity	235	522	287	308	291
Nitrate-Nitrogen	0	5	5	1.5	1.5
pH	7	8	1	7.6	7.9
Stage	0.2	0.6	0.4	0.42	0.45
Water Clarity	45	59	14	53	54
Water Temp.	0	24	24	14	14



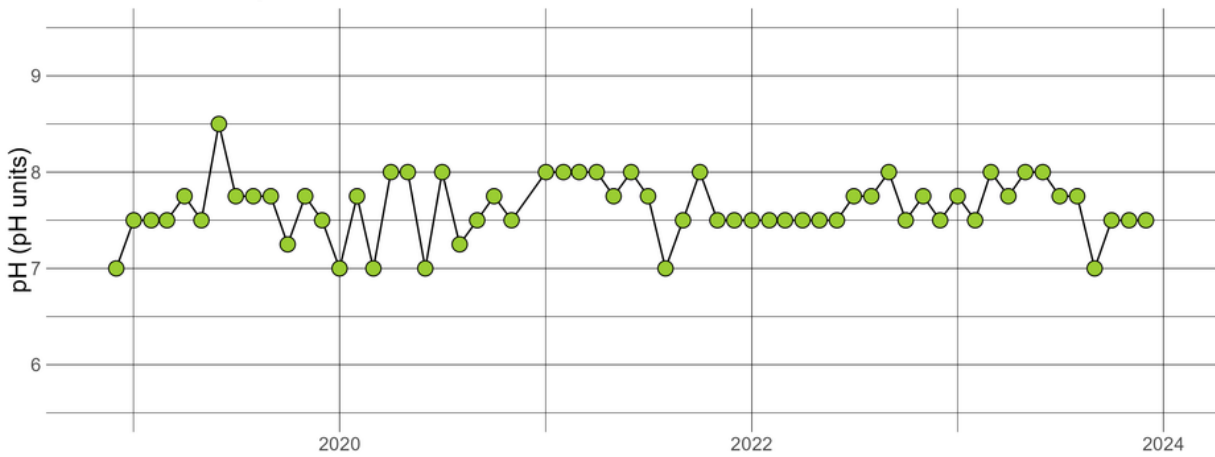
**KRECRE8.67 - Water Temperature**



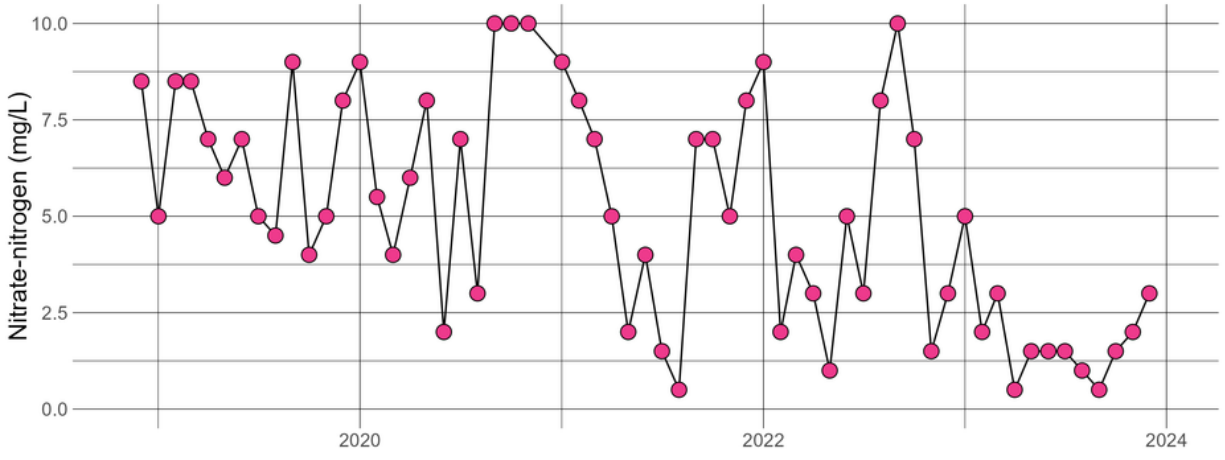
**KRECRE8.67 - Conductivity**



**KRECRE8.67 - pH**



**KRECRE8.67 - Nitrate-nitrogen**



**KRECRE8.67 - Stage**



**KRECRE8.67 - Water Clarity**





# Raw Data and Summary Statistics

date	con	nitrate	ph	stage	clarity	watemp
Dec-18	419	8.5	7			4.4
Jan-19	391	5	7.5			4.9
Feb-19	429	8.5	7.5			5.3
Mar-19	427	8.5	7.5			8.8
Apr-19	376	7	7.75			15.6
May-19	354	6	7.5			15.5
Jun-19	447	7	8.5			19.2
Jul-19	458	5	7.75			22.6
Aug-19	601	4.5	7.75			21.2
Sep-19	974	9	7.75			19.1
Oct-19	521	4	7.25			10
Nov-19	468	5	7.75			5.2
Dec-19	561	8	7.5			2
Jan-20	561	9	7			5
Feb-20	502	5.5	7.75			5
Mar-20	510	4	7			10.4
Apr-20	477	6	8			11.9
May-20	422	8	8			17.4
Jun-20	516	2	7			19.2
Jul-20	716	7	8			24.2
Aug-20	423	3	7.25			20.2
Sep-20	811	10	7.5			14.8
Oct-20	833	10	7.75			12.7
Nov-20	795	10	7.5			8.2
Jan-21	599	9	8			4
Feb-21	661	8	8			4.1
Mar-21	555	7	8			5.3
Apr-21	526	5	8			8
May-21	586	2	7.75			17.7
Jun-21	667	4	8			20.5
Jul-21	445	1.5	7.75			21.7
Aug-21	240	0.5	7			22.6
Sep-21	619	7	7.5			20.4
Oct-21	695	7	8			14
Nov-21	633	5	7.5			5.6
Dec-21	770	8	7.5			8.2

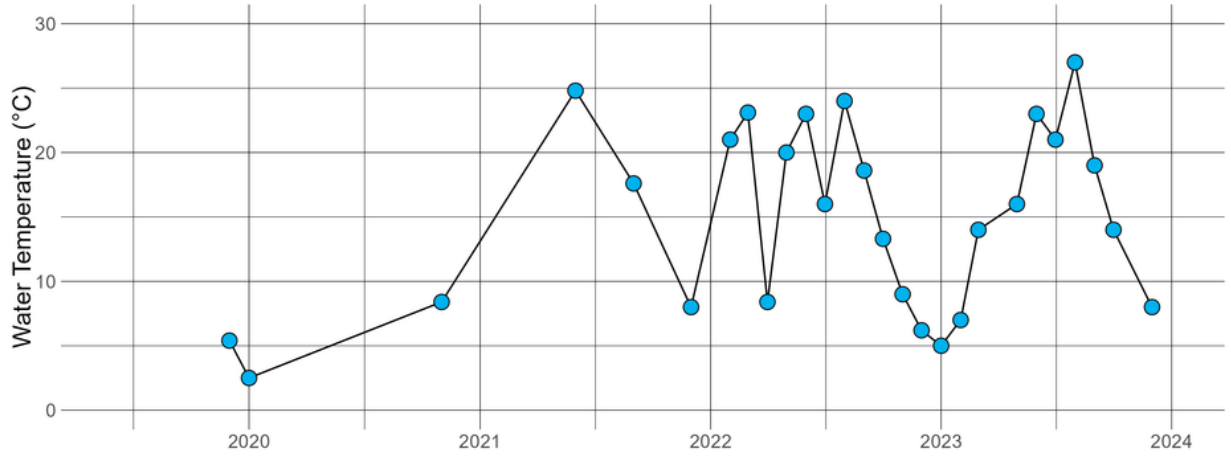
# Raw Data and Summary Statistics

date	con	nitrate	ph	stage	clarity	watemp
Jan-22	795	9	7.5			0.4
Feb-22	551	2	7.5			3.7
Mar-22	585	4	7.5			11.5
Apr-22	558	3	7.5			15.8
May-22	525	1	7.5			20.9
Jun-22	558	5	7.5			18.9
Jul-22	628	3	7.75		60	23
Aug-22	835	8	7.75	0.8	60	22.7
Sep-22	958	10	8	1	60	20
Oct-22	625	7	7.5	1.2	60	8.6
Nov-22	481	1.5	7.75	1.2	60	4.2
Dec-22	550	3	7.5	1.5	60	6.1
Jan-23	554	5	7.75	1.2	60	5.4
Feb-23	392	2	7.5	1.1	60	6.6
Mar-23	626	3	8	1	60	6.8
Apr-23	401	0.5	7.75	0.8	60	14.6
May-23	349	1.5	8	0.9	60	17.9
Jun-23	343	1.5	8	0.7	60	20.3
Jul-23	347	1.5	7.75	0.8	60	22.8
Aug-23	368	1	7.75	0.5	60	22.1
Sep-23	166.8	0.5	7	2.1	21	17.1
Oct-23	437	1.5	7.5	0.6	60	12.6
Nov-23	397	2	7.5	0.9	60	8
Dec-23	438	3	7.5	1	60	7.3

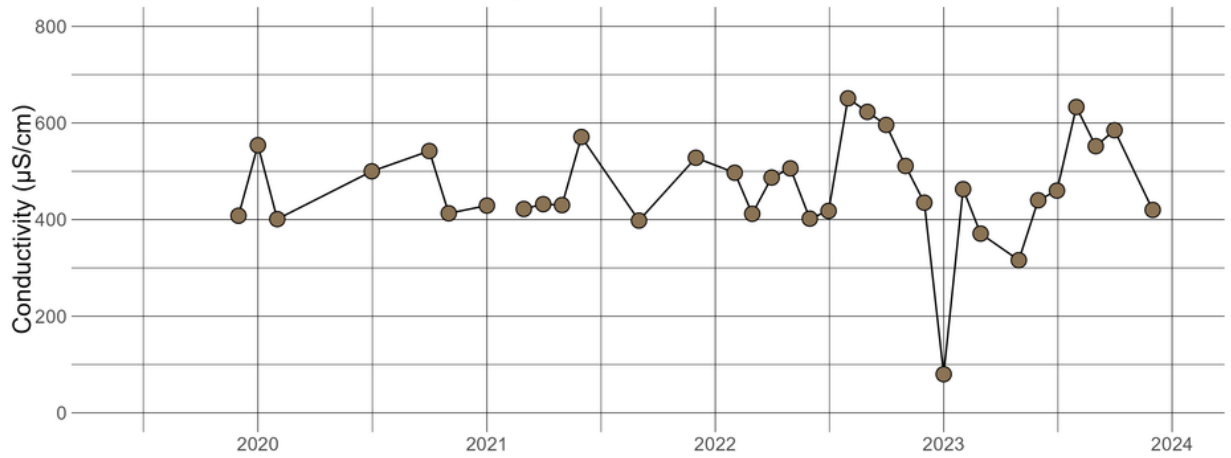
Variable	Min	Max	Range	Average	Median
Conductivity	167	974	807	541	526
Nitrate-Nitrogen	0.5	10	9.5	5.1	5
pH	7	8.5	1.5	7.6	7.6
Stage	0.5	2.1	1.6	1	1
Water Clarity	21	60	39	58	60
Water Temp.	0.4	24	24	13	13



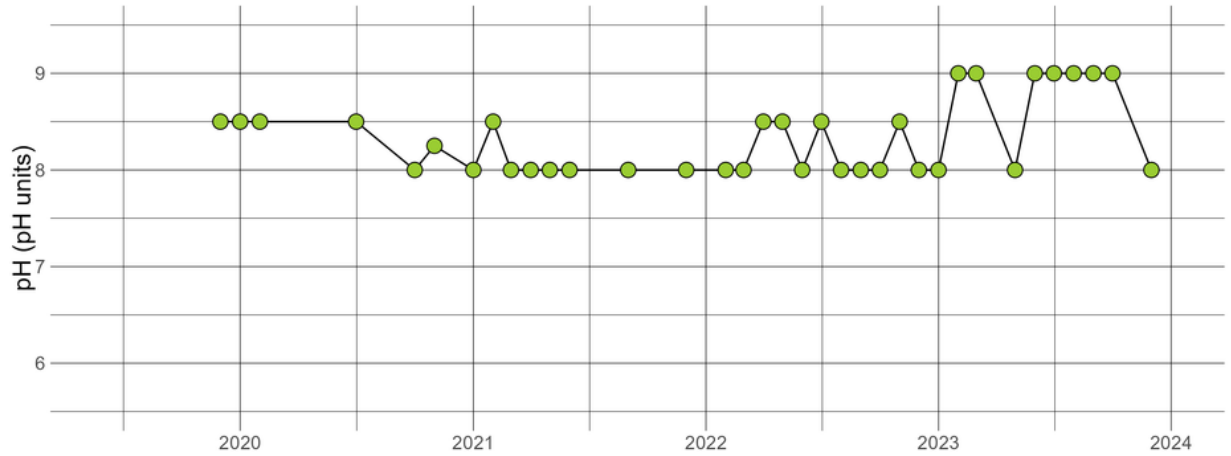
LITCONCRE12.56 - Water Temperature



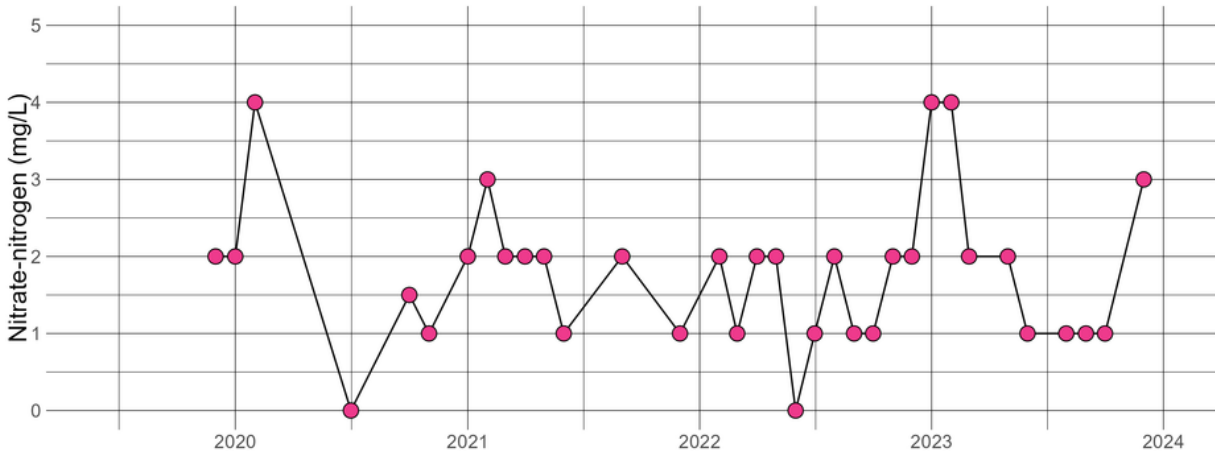
LITCONCRE12.56 - Conductivity



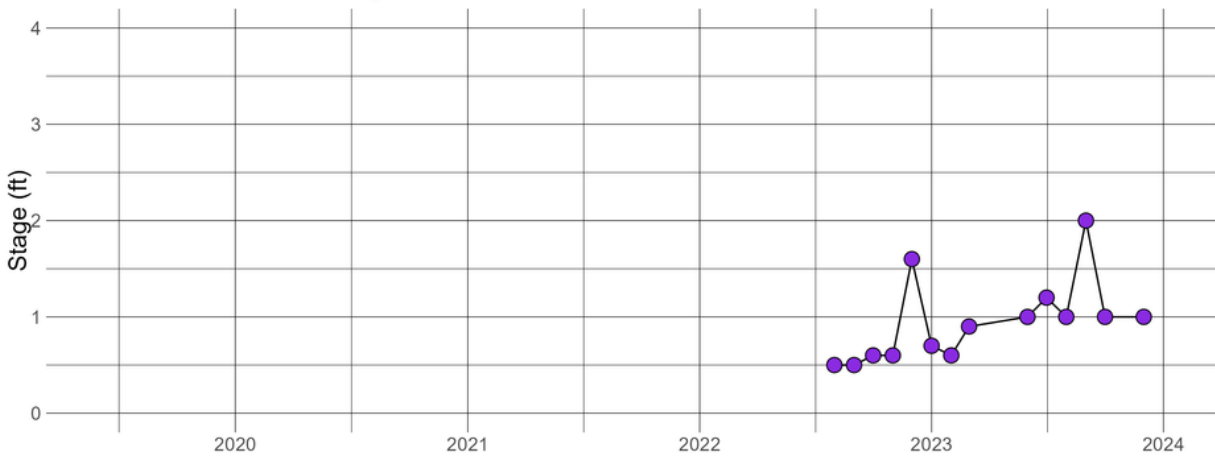
LITCONCRE12.56 - pH



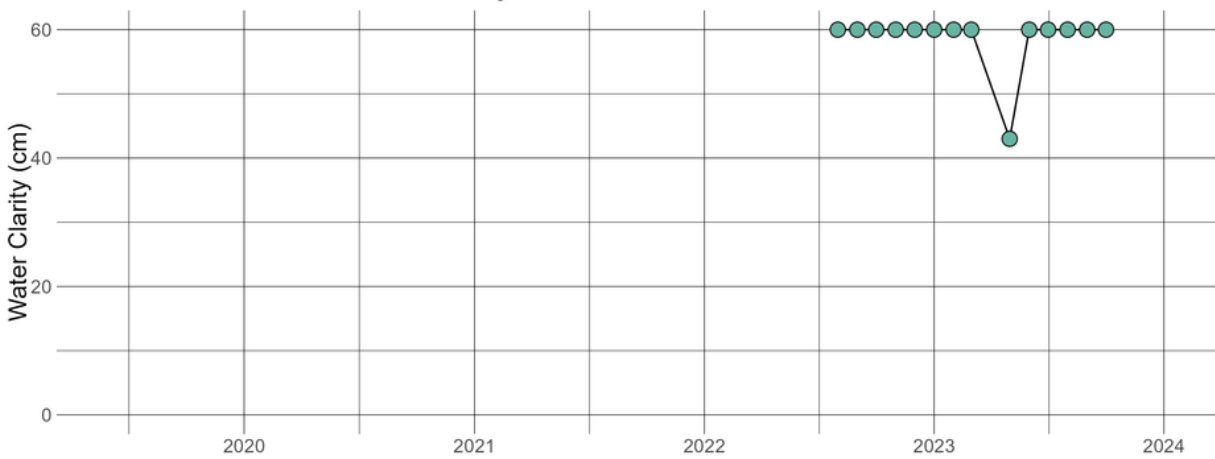
**LITCONCRE12.56 - Nitrate-nitrogen**



**LITCONCRE12.56 - Stage**



**LITCONCRE12.56 - Water Clarity**



# Raw Data and Summary Statistics

date	con	nitrate	ph	stage	clarity	watemp
Dec-19	408	2	8.5			5.4
Jan-20	554	2	8.5			2.5
Feb-20	401	4	8.5			
Jul-20	500	0	8.5			
Oct-20	542	1.5	8			
Nov-20	413	1	8.25			8.4
Jan-21	429	2	8			
Feb-21	852	3	8.5			
Mar-21	422	2	8			
Apr-21	432	2	8			
May-21	430	2	8			
Jun-21	571	1	8			24.8
Sep-21	398	2	8			17.6
Dec-21	528	1	8			8
Feb-22	497	2	8			21
Mar-22	412	1	8			23.1
Apr-22	487	2	8.5			8.4
May-22	506	2	8.5			20
Jun-22	402	0	8			23
Jul-22	418	1	8.5			16
Aug-22	651	2	8	0.5	60	24
Sep-22	623	1	8	0.5	60	18.6
Oct-22	596	1	8	0.6	60	13.3
Nov-22	511	2	8.5	0.6	60	9
Dec-22	435	2	8	1.6	60	6.2
Jan-23	80	4	8	0.7	60	5
Feb-23	463	4	9	0.6	60	7
Mar-23	371	2	9	0.9	60	14
May-23	316	2	8		43	16
Jun-23	440	1	9	1	60	23
Jul-23	460		9	1.2	60	21
Aug-23	633	1	9	1	60	27
Sep-23	552	1	9	2	60	19
Oct-23	585	1	9	1	60	14
Dec-23	420	3	8	1		8

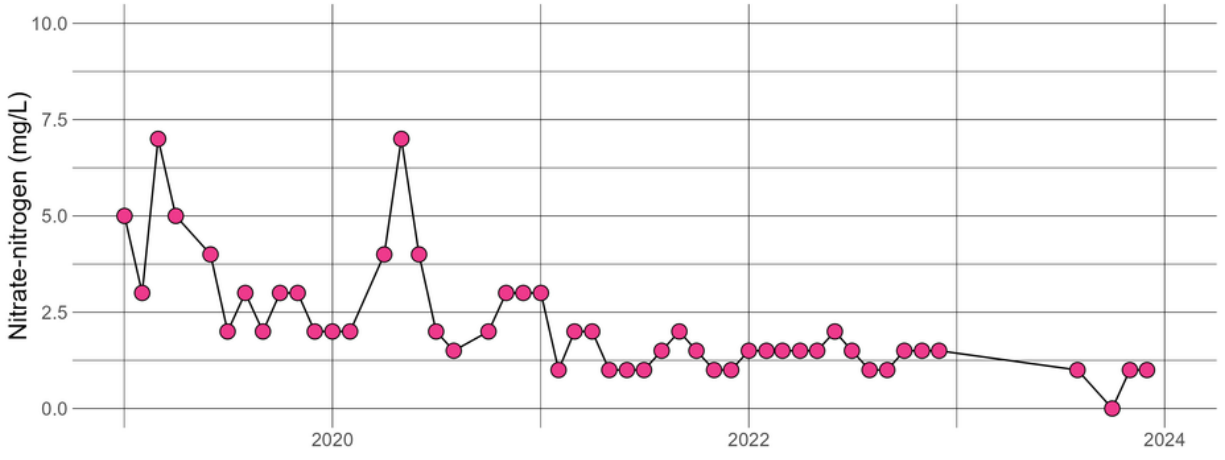
Variable	Min	Max	Range	Average	Median
Conductivity	80	852	772	478	460
Nitrate-Nitrogen	0	4	4	1.8	2
pH	8	9	1	8.3	8
Stage	0.5	2	1.5	0.94	0.95
Water Clarity	43	60	17	59	60
Water Temp.	2.5	27	24	15	16







**MILCRE0.09 - Nitrate-nitrogen**



**MILCRE0.09 - Stage**



**MILCRE0.09 - Water Clarity**



# Raw Data and Summary Statistics

date	con	nitrate	ph	stage	clarity	watemp
Jan-19	479	5	8			4.6
Feb-19	623	3	8.5			7.7
Mar-19	572	7	8			6.1
Apr-19	545	5	8			18.3
Jun-19	554	4	8			22.2
Jul-19	528	2	8.5			24.5
Aug-19	535	3	8			25.5
Sep-19	640	2	8.5			23.3
Oct-19	641	3	8			14.5
Nov-19	352	3	8.5			8.9
Dec-19	581	2	8			8.3
Jan-20	610	2	8			7.2
Feb-20	531	2	8.5			6.2
Apr-20	630	4	8			8.2
May-20	524	7	8			16.9
Jun-20	531	4	8			16.6
Jul-20	588	2	8			24.7
Aug-20	615	1.5	8			24.8
Oct-20	602	2	8			11.4
Nov-20	579	3	8			9.7
Dec-20	757	3	8			3.1
Jan-21	559	3	8			0.6
Feb-21	1211	1	8			1.9
Mar-21	645	2	8			7.7
Apr-21	612	2	8			14
May-21	636	1	8			19.7
Jun-21	645	1	8			19.9
Jul-21	541	1	8			17.1
Aug-21	542	1.5	8			16.6
Sep-21	1007	2	8			19.1
Oct-21	543	1.5	8.5			15.6
Nov-21	561	1	8			4.5
Dec-21	566	1	8.25			5

# Raw Data and Summary Statistics

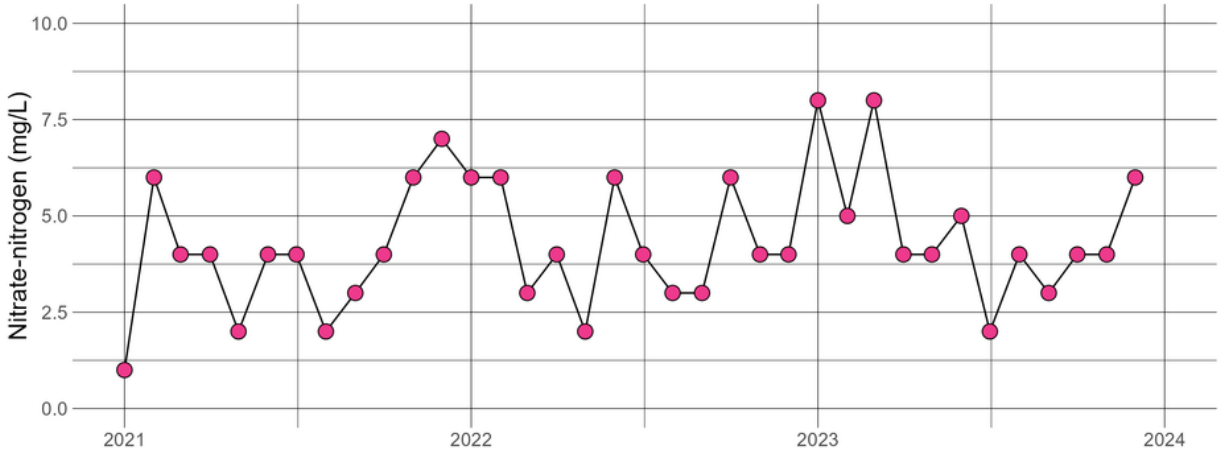
date	con	nitrate	ph	stage	clarity	watemp
Jan-22	767	1.5	8			0.6
Feb-22	661	1.5	8.5			7.5
Mar-22	701	1.5	8			6
Apr-22	687	1.5	8			6.2
May-22	764	1.5	8			14
Jun-22	610	2	8.5			16.4
Jul-22	689	1.5	8.5			15.6
Aug-22	596	1	8	0.7	60	22.5
Sep-22	611	1	8	0.8	60	18.5
Oct-22	572	1.5	8			15.6
Nov-22	591	1.5	8			10
Dec-22	603	1.5	8	1.1	60	5
Aug-23	630	1	8	0.8	60	20.3
Oct-23	618	0	8	0.8	60	11.4
Nov-23	627	1	8	0.6	60	7.2
Dec-23	569	1	8	0.7	60	6.9

Variable	Min	Max	Range	Average	Median
Conductivity	352	1211	859	620	603
Nitrate-Nitrogen	0	7	7	2.2	2
pH	8	8.5	0.5	8.1	8
Stage	0.6	1.1	0.5	0.79	0.8
Water Clarity	60	60	0	60	60
Water Temp.	0.6	26	25	13	11

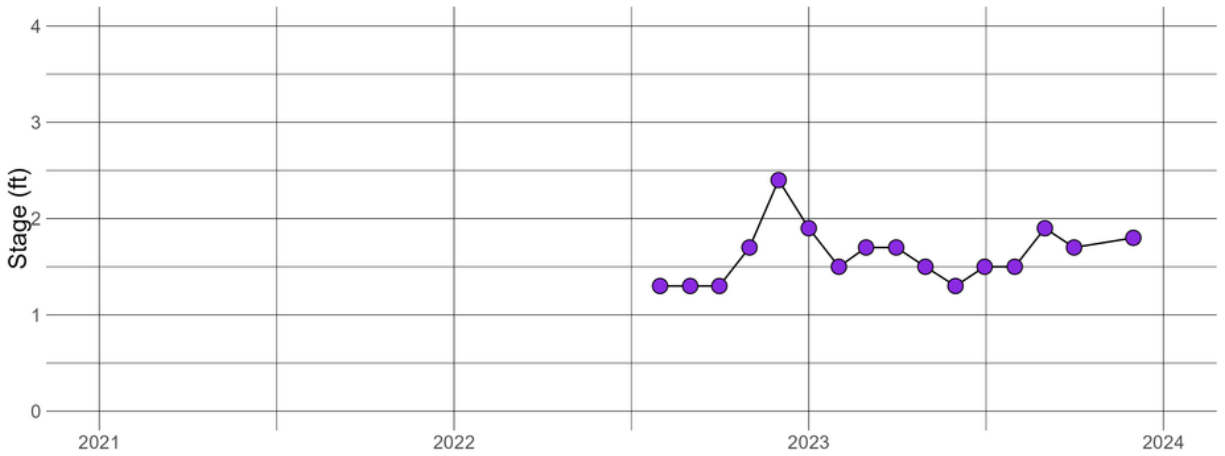




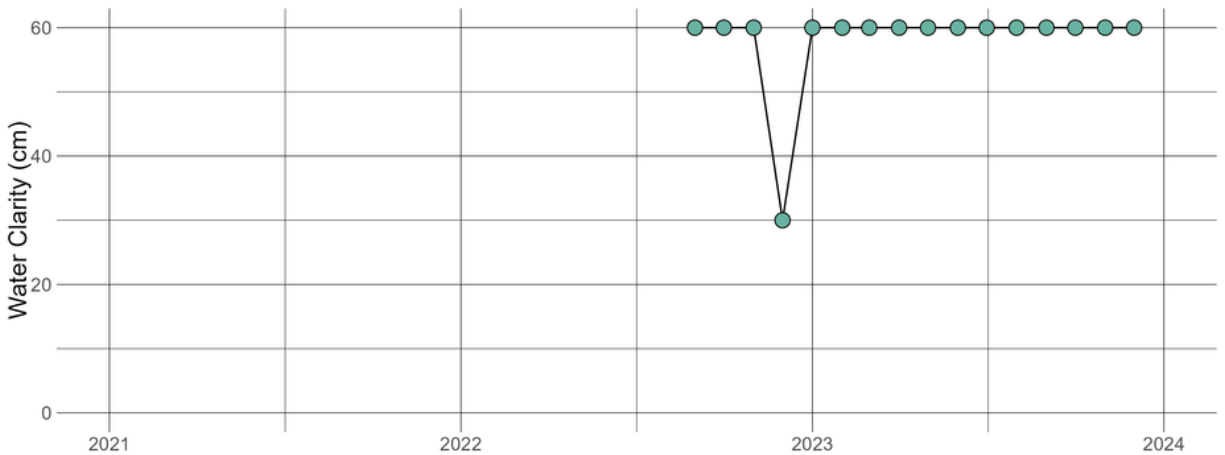
**MUDCRE17.55 - Nitrate-nitrogen**



**MUDCRE17.55 - Stage**



**MUDCRE17.55 - Water Clarity**



# Raw Data and Summary Statistics

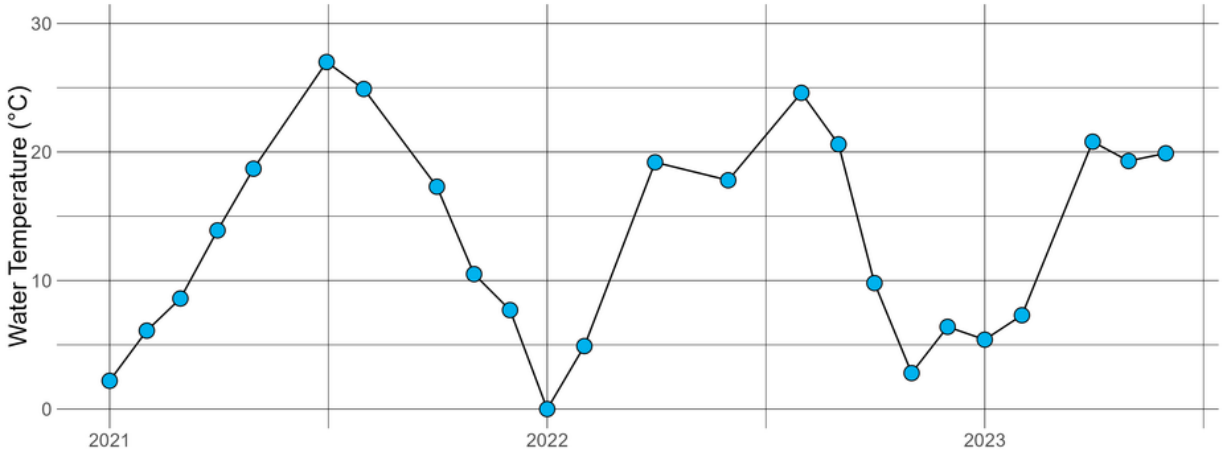
date	con	nitrate	ph	stage	clarity	watemp
Jan-21	183.4	1	7			
Feb-21	186.6	6	7			3
Mar-21	161.7	4	7			11.1
Apr-21	151.3	4	7.5			13.5
May-21	162.9	2	7			20.1
Jun-21	167.1	4	7			22.2
Jul-21	169.6	4	7.5			23.3
Aug-21	149.8	2	7			21.7
Sep-21	179.7	3	7			21.8
Oct-21	177.5	4	7			15.1
Nov-21	179.9	6	7			6.6
Dec-21	171.1	7	7			7
Jan-22	176.6	6	7			1.2
Feb-22	167.7	6	7.5			8.3
Mar-22	156.7	3	7			15.7
Apr-22	137.6	4	7			13.6
May-22	159	2	7			19.3
Jun-22	168	6	7			21.1
Jul-22	169.1	4	7			25.5
Aug-22	175	3	7.5	1.3		24.1
Sep-22	175.7	3	7.5	1.3	60	21
Oct-22	179.5	6	7	1.3	60	10.4
Nov-22	170	4	7	1.7	60	5.8
Dec-22	139.9	4	7	2.4	30	7.5
Jan-23	170.2	8	7.5	1.9	60	5
Feb-23	174.9	5	8	1.5	60	7.6
Mar-23	162.7	8	7	1.7	60	7.6
Apr-23	156.5	4	8	1.7	60	18
May-23	157.7	4	7.5	1.5	60	17
Jun-23	163	5	8	1.3	60	21
Jul-23	176.3	2	8	1.5	60	22.7
Aug-23	174.6	4	7.5	1.5	60	22.9
Sep-23	152.1	3	7	1.9	60	17.2
Oct-23	160.5	4	7.5	1.7	60	12.4
Nov-23	179.5	4	8.25		60	7.6
Dec-23	181.1	6	7	1.8	60	7.1

Variable	Min	Max	Range	Average	Median
Conductivity	138	187	49	167	169
Nitrate-Nitrogen	1	8	7	4.3	4
pH	7	8.2	1.2	7.3	7
Stage	1.3	2.4	1.1	1.6	1.6
Water Clarity	30	60	30	58	60
Water Temp.	1.2	26	24	14	15

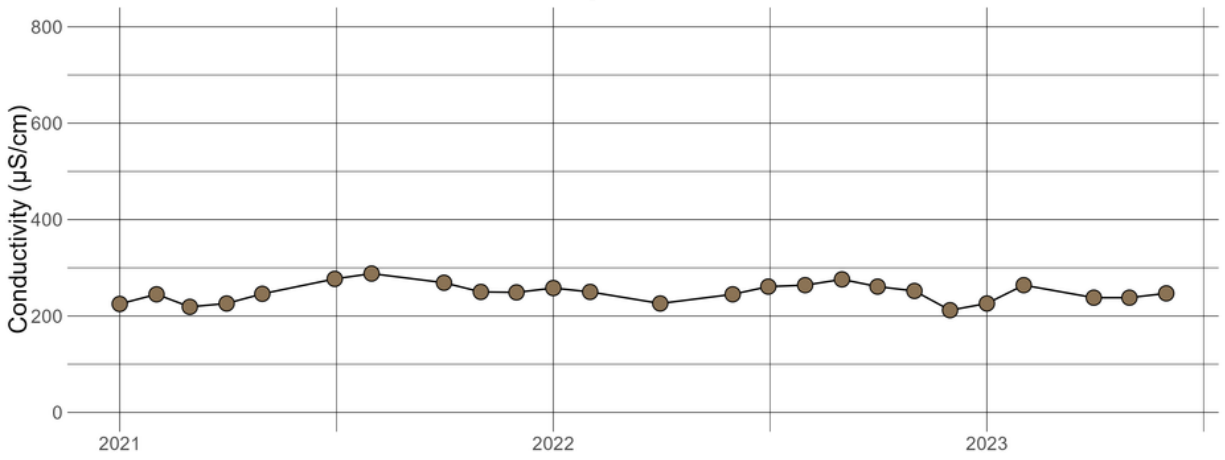




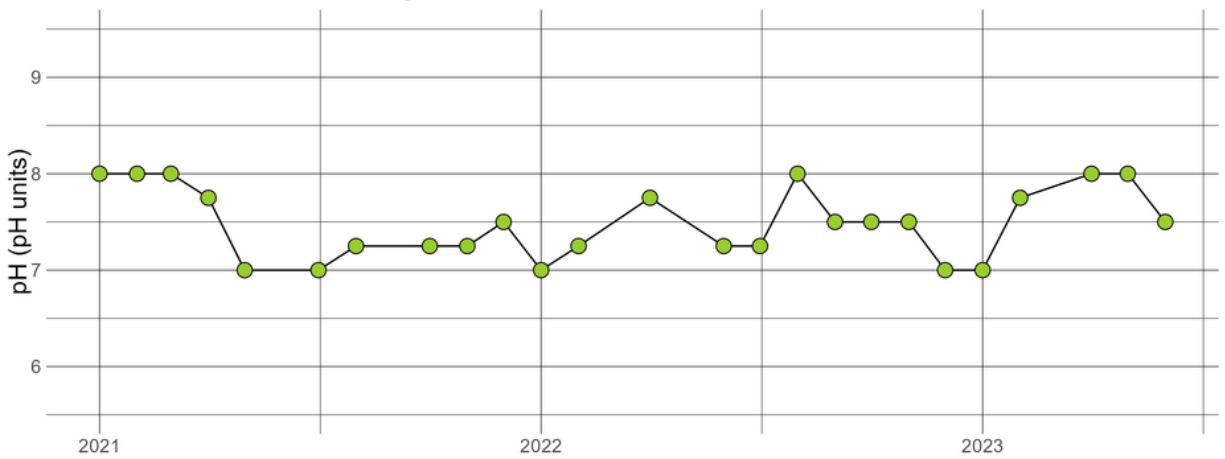
**SOUBRACODCRE23.11 - Water Temperature**



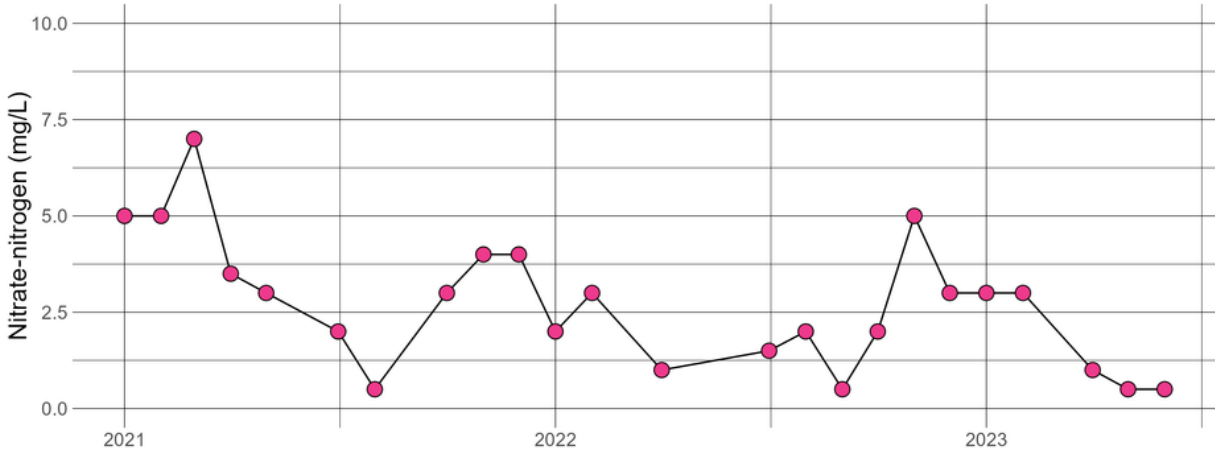
**SOUBRACODCRE23.11 - Conductivity**



**SOUBRACODCRE23.11 - pH**



**SOUBRACODCRE23.11 - Nitrate-nitrogen**



**SOUBRACODCRE23.11 - Stage**



**SOUBRACODCRE23.11 - Water Clarity**



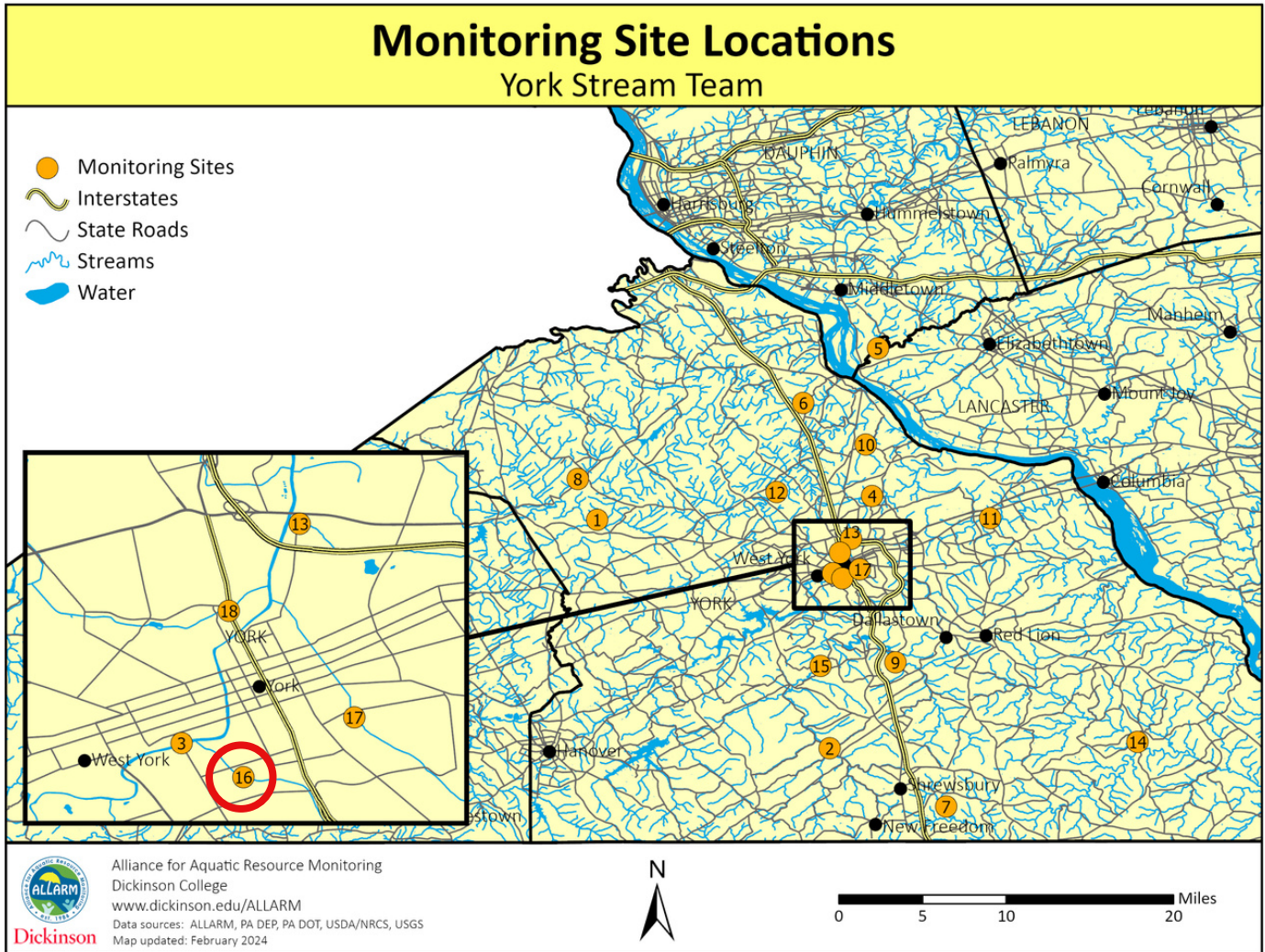
# Raw Data and Summary Statistics

date	con	nitrate	ph	stage	clarity	watemp
Jan-21	225	5	8			2.2
Feb-21	245	5	8			6.1
Mar-21	219	7	8			8.6
Apr-21	226	3.5	7.75			13.9
May-21	246	3	7			18.7
Jul-21	277	2	7			27
Aug-21	288	0.5	7.25			24.9
Oct-21	269	3	7.25			17.3
Nov-21	250	4	7.25			10.5
Dec-21	249	4	7.5			7.7
Jan-22	258	2	7			0
Feb-22	250	3	7.25			4.9
Apr-22	226	1	7.75			19.2
Jun-22	245		7.25			17.8
Jul-22	261	1.5	7.25			
Aug-22	264	2	8			24.6
Sep-22	276	0.5	7.5			20.6
Oct-22	261	2	7.5	1.3	60	9.8
Nov-22	252	5	7.5	2.2	60	2.8
Dec-22	212	3	7	2.4	26	6.4
Jan-23	226	3	7	2.1	34.6	5.4
Feb-23	264	3	7.75	1.8	60	7.3
Apr-23	238	1	8	2	60	20.8
May-23	238	0.5	8	2	60	19.3
Jun-23	247	0.5	7.5	1.9	60	19.9
Jul-23						

Variable	Min	Max	Range	Average	Median
Conductivity	212	288	76	248	249
Nitrate-Nitrogen	0.5	7	6.5	2.7	3
pH	7	8	1	7.5	7.5
Stage	1.3	2.4	1.1	2	2
Water Clarity	26	60	34	53	60
Water Temp.	0	27	27	13	12

# Tyler Run (TYLRUN0.50)

Monitor(s): Bridgette Hagerty & Jess Nolan (YCP)



## Site information:

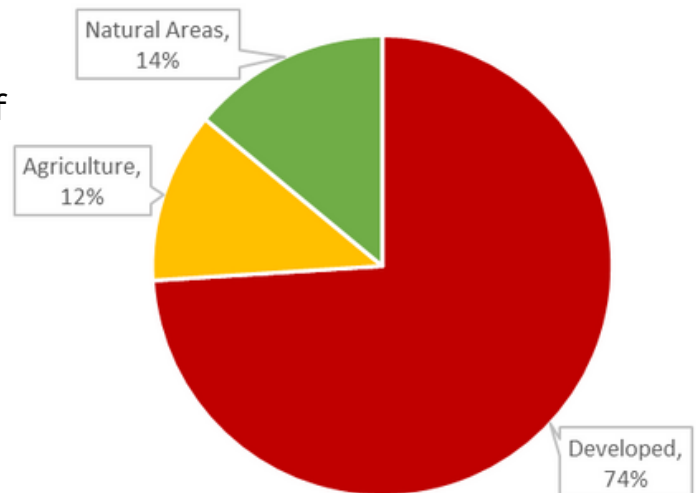
Drains: 5 mi<sup>2</sup>

Impaired: Yes, aquatic life - urban runoff

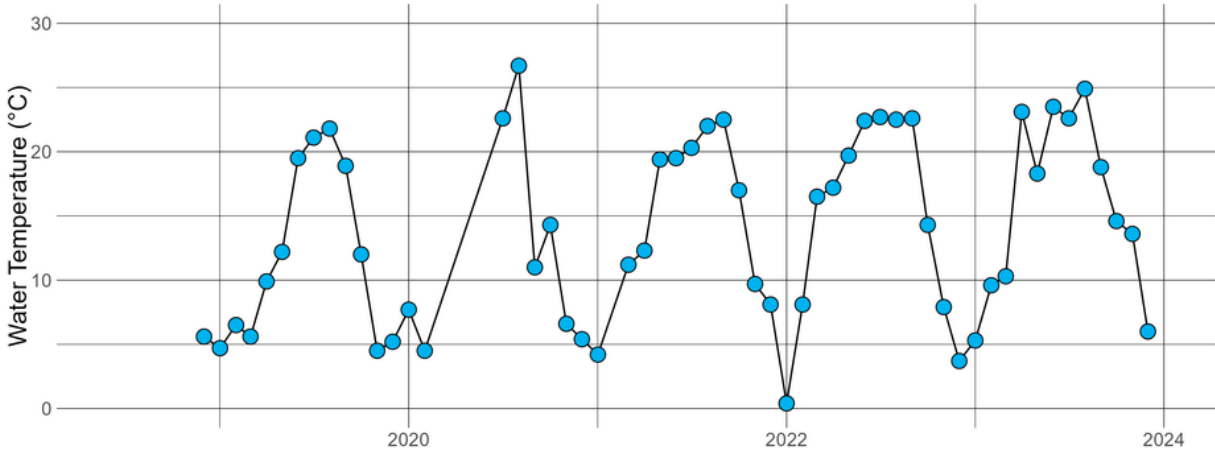
Designation: Warm water fishes (WWF)

Geology: 53% Calcareous, 47% Non-calcareous

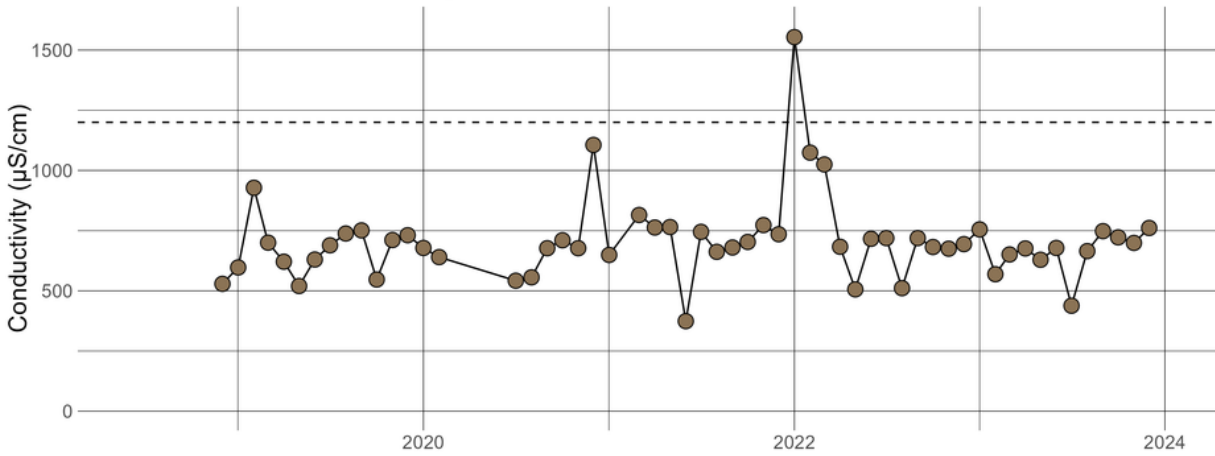
## Land Use



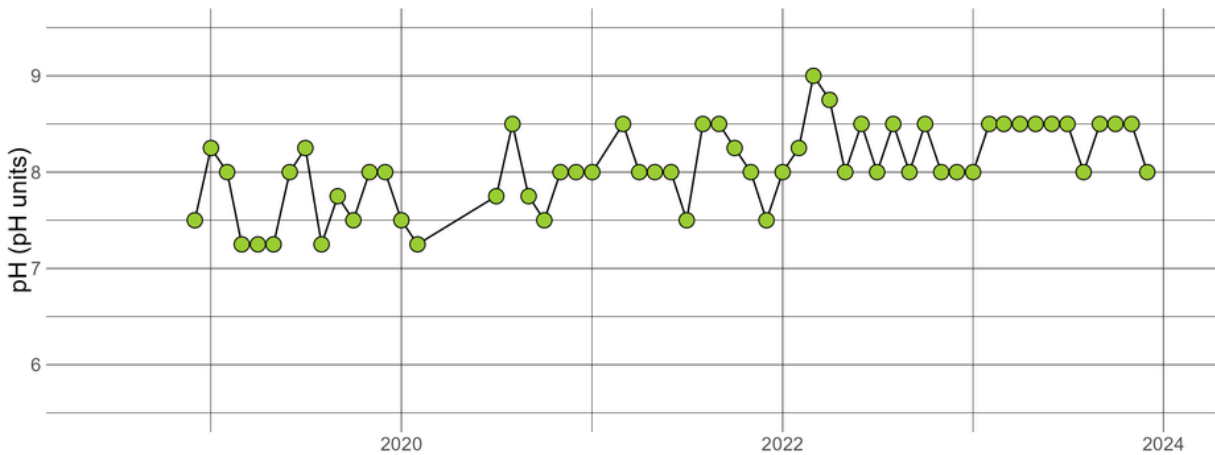
**TYLRUN0.50 - Water Temperature**



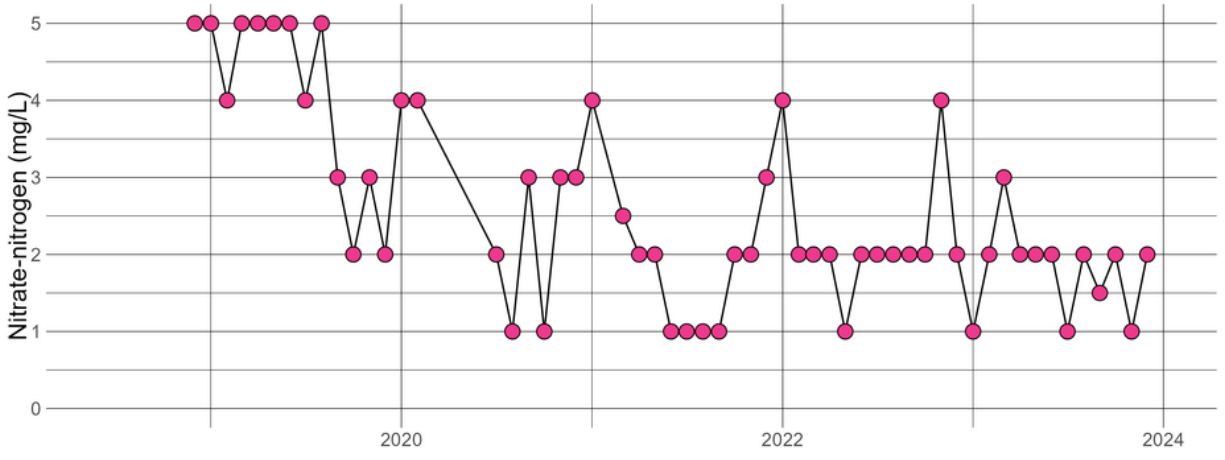
**TYLRUN0.50 - Conductivity**



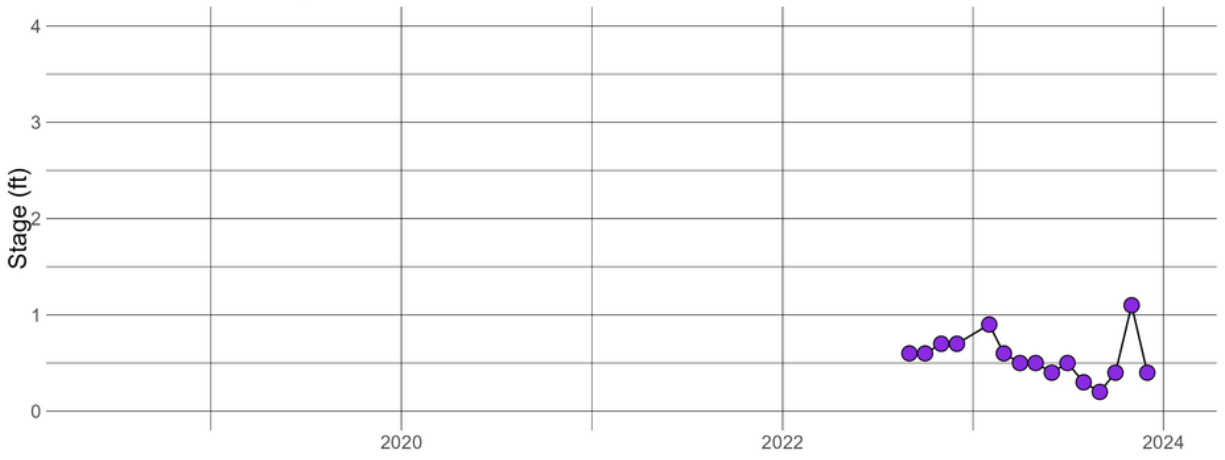
**TYLRUN0.50 - pH**



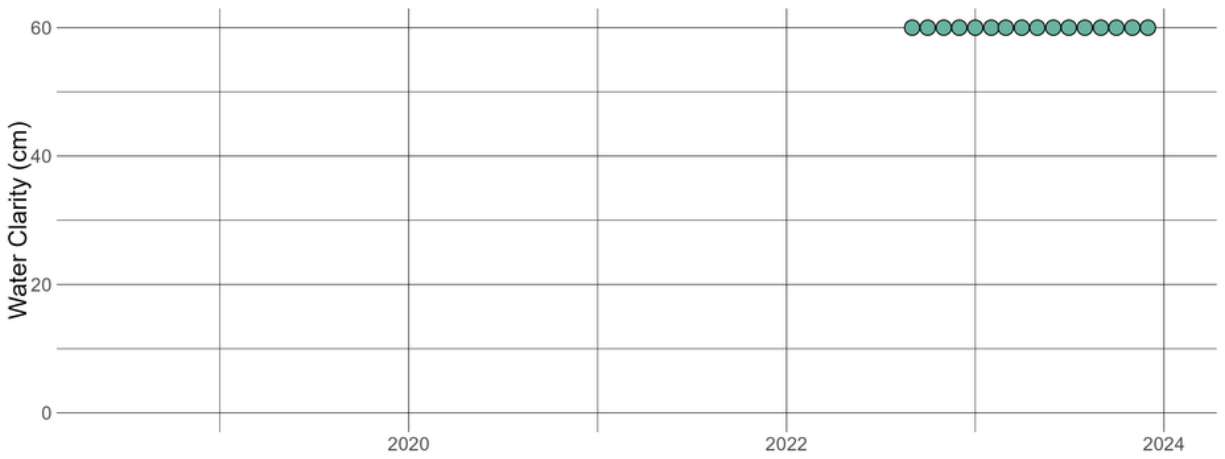
**TYLRUN0.50 - Nitrate-nitrogen**



**TYLRUN0.50 - Stage**



**TYLRUN0.50 - Water Clarity**



# Raw Data and Summary Statistics

date	con	nitrate	ph	stage	clarity	watemp
Dec-18	529	5	7.5			5.6
Jan-19	597	5	8.25			4.7
Feb-19	928	4	8			6.5
Mar-19	700	5	7.25			5.6
Apr-19	621	5	7.25			9.9
May-19	520	5	7.25			12.2
Jun-19	630	5	8			19.5
Jul-19	689	4	8.25			21.1
Aug-19	738	5	7.25			21.8
Sep-19	751	3	7.75			18.9
Oct-19	547	2	7.5			12
Nov-19	711	3	8			4.5
Dec-19	731	2	8			5.2
Jan-20	678	4	7.5			7.7
Feb-20	640	4	7.25			4.5
Jul-20	542	2	7.75			22.6
Aug-20	556	1	8.5			26.7
Sep-20	677	3	7.75			11
Oct-20	710	1	7.5			14.3
Nov-20	677	3	8			6.6
Dec-20	1106	3	8			5.4
Jan-21	649	4	8			4.2
Mar-21	815	2.5	8.5			11.2
Apr-21	763	2	8			12.3
May-21	765	2	8			19.4
Jun-21	374	1	8			19.5
Jul-21	745	1	7.5			20.3
Aug-21	662	1	8.5			22
Sep-21	680	1	8.5			22.5
Oct-21	703	2	8.25			17
Nov-21	773	2	8			9.7
Dec-21	735	3	7.5			8.1

# Raw Data and Summary Statistics

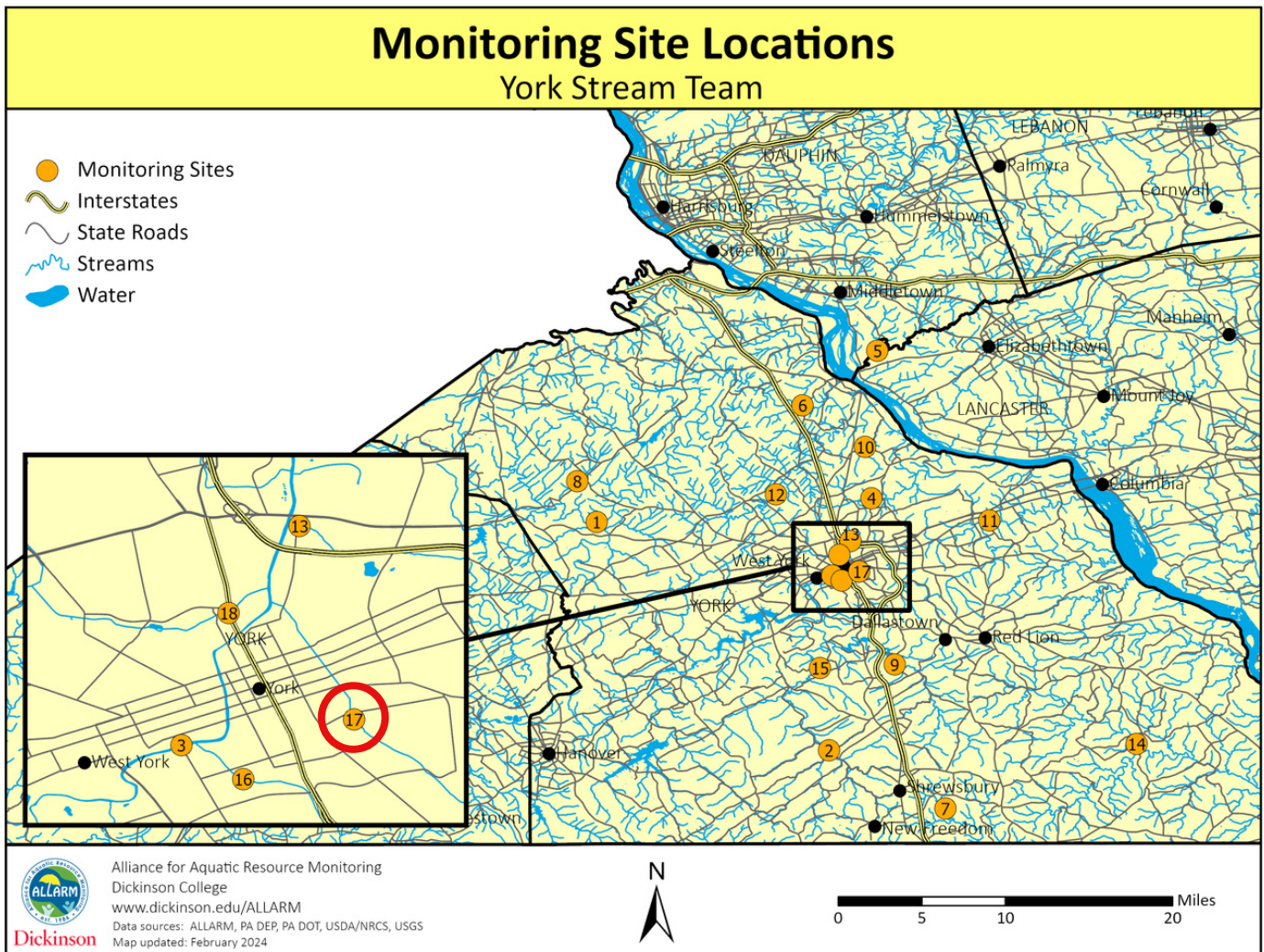
date	con	nitrate	ph	stage	clarity	watemp
Jan-22	1554	4	8			0.4
Feb-22	1074	2	8.25			8.1
Mar-22	1025	2	9			16.5
Apr-22	683	2	8.75			17.2
May-22	506	1	8			19.7
Jun-22	716	2	8.5			22.4
Jul-22	719	2	8			22.7
Aug-22	511	2	8.5			22.5
Sep-22	719	2	8	0.6	60	22.6
Oct-22	682	2	8.5	0.6	60	14.3
Nov-22	675	4	8	0.7	60	7.9
Dec-22	694	2	8	0.7	60	3.7
Jan-23	755	1	8		60	5.3
Feb-23	569	2	8.5	0.9	60	9.6
Mar-23	651	3	8.5	0.6	60	10.3
Apr-23	676	2	8.5	0.5	60	23.1
May-23	629	2	8.5	0.5	60	18.3
Jun-23	678	2	8.5	0.4	60	23.5
Jul-23	438	1	8.5	0.5	60	22.6
Aug-23	665	2	8	0.3	60	24.9
Sep-23	748	1.5	8.5	0.2	60	18.8
Oct-23	722	2	8.5	0.4	60	14.6
Nov-23	699	1	8.5	1.1	60	13.6
Dec-23	761	2	8	0.4	60	6

Variable	Min	Max	Range	Average	Median
Conductivity	374	1554	1180	705	686
Nitrate-Nitrogen	1	5	4	2.6	2
pH	7.2	9	1.8	8.1	8
Stage	0.2	1.1	0.9	0.56	0.5
Water Clarity	60	60	0	60	60
Water Temp.	0.4	27	26	14	14



# Poorhouse Run (UNTCODCRE1.28)

Monitor(s): Mark Lentz



## Site information:

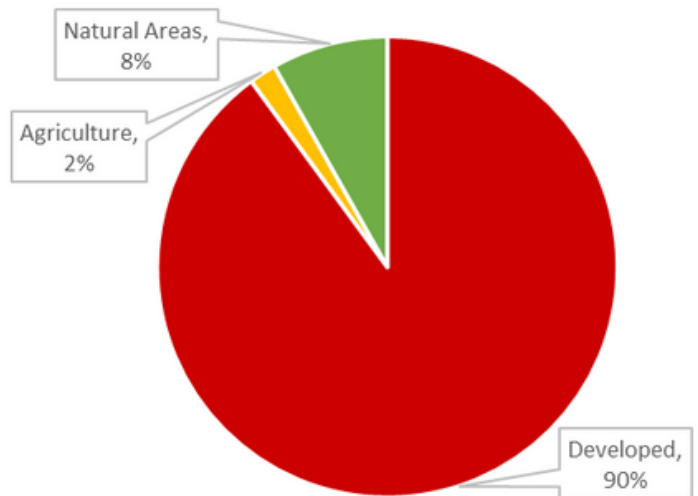
Drains: 1 mi<sup>2</sup>

Impaired: Yes, aquatic life - urban runoff, channelization

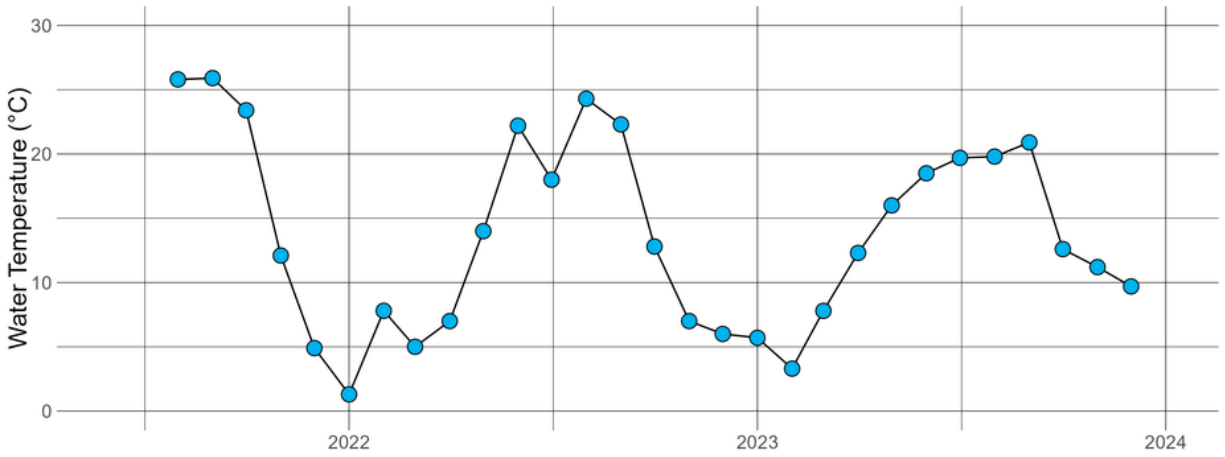
Designation: Warm water fishes (WWF)

Geology: 24% Calcareous, 76% Non-calcareous

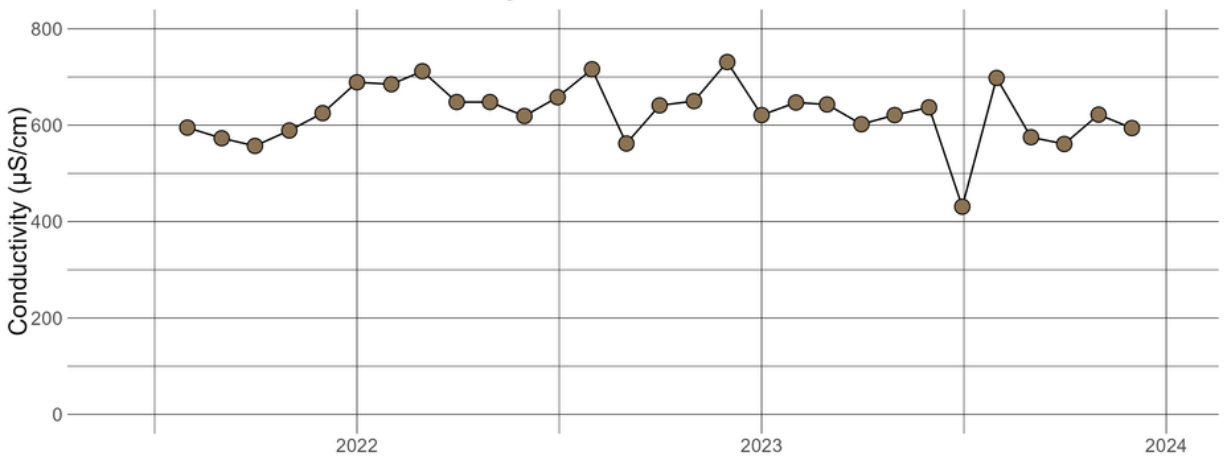
## Land Use



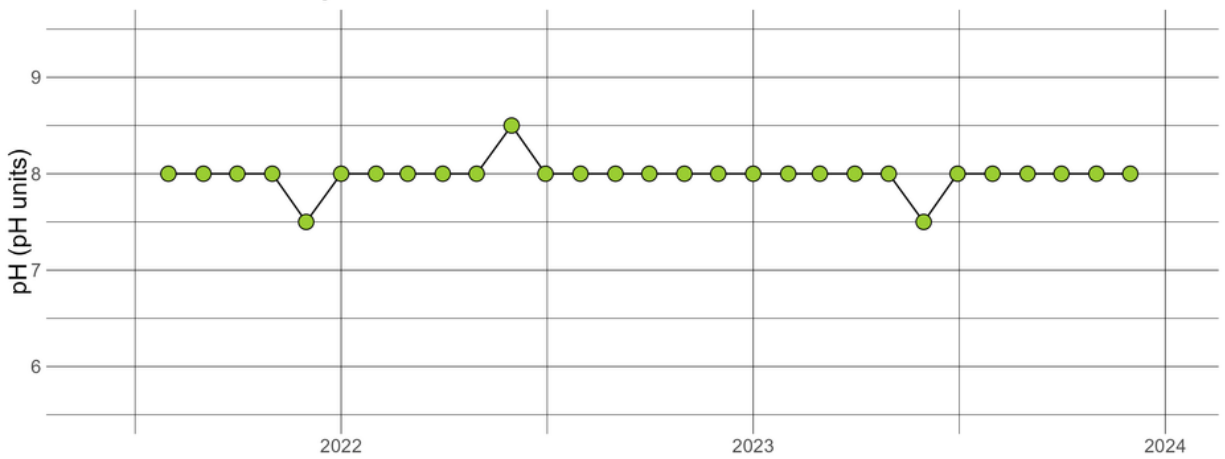
**UNTCODCRE1.28 - Water Temperature**



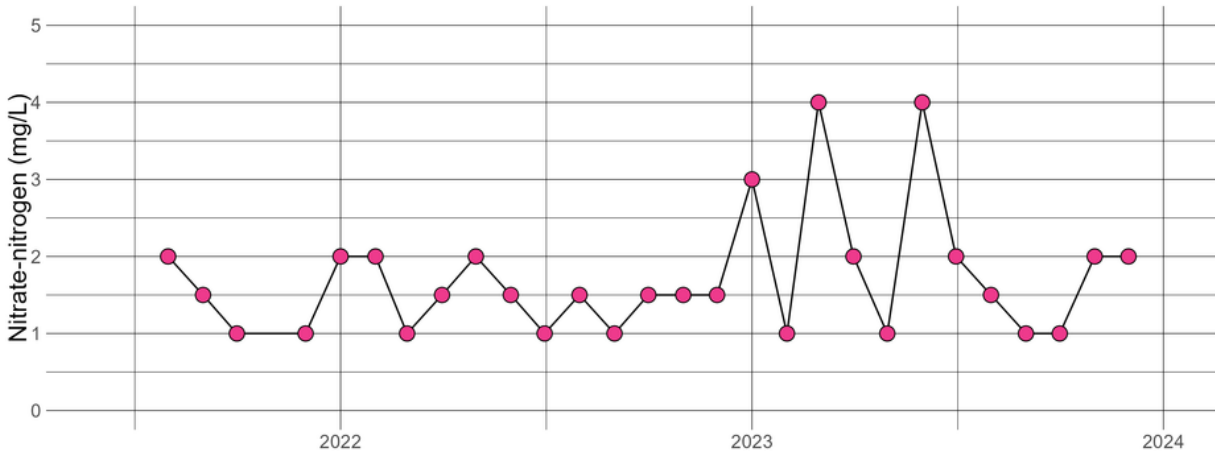
**UNTCODCRE1.28 - Conductivity**



**UNTCODCRE1.28 - pH**



### UNTCODCRE1.28 - Nitrate-nitrogen



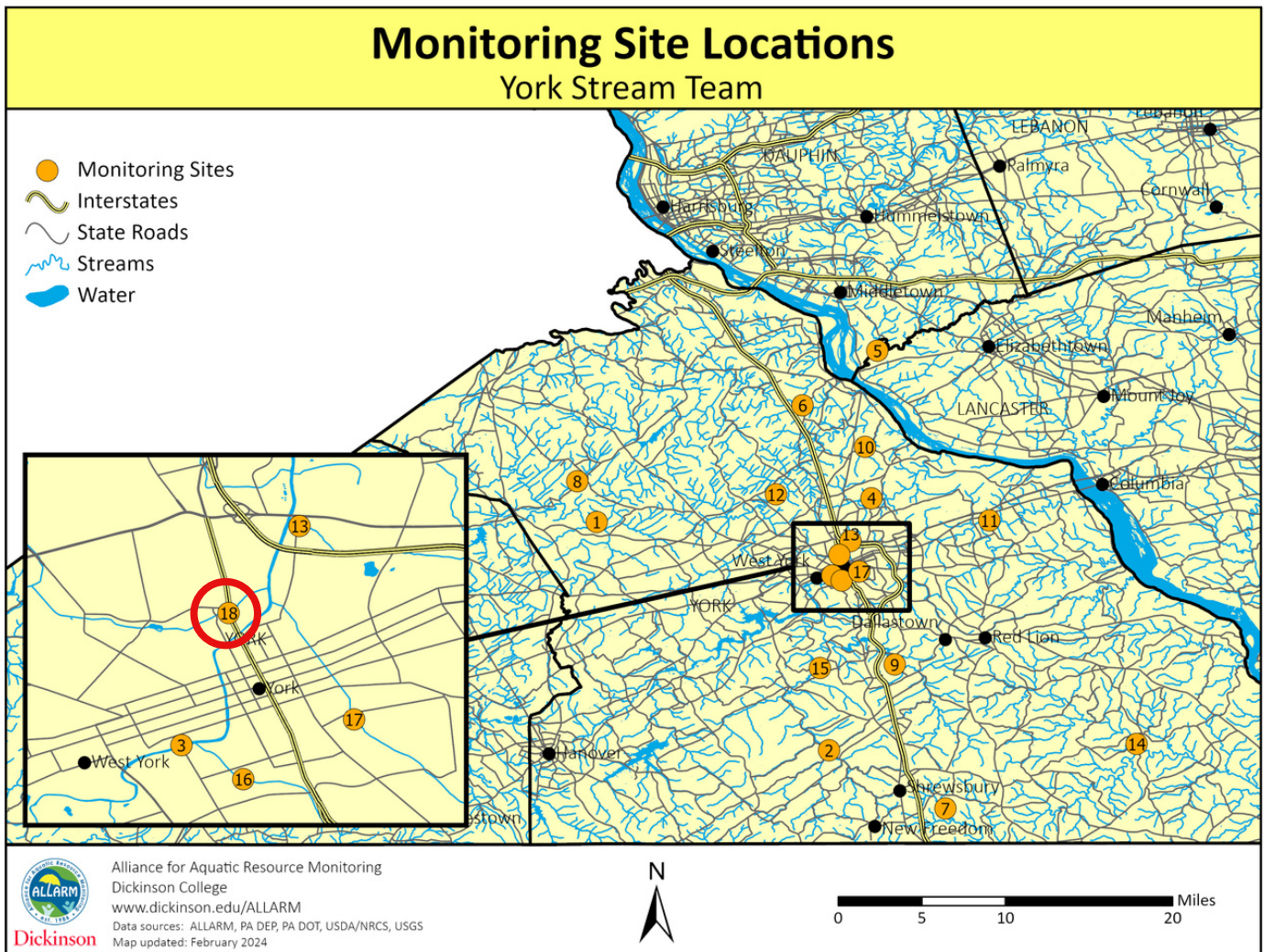
# Raw Data and Summary Statistics

date	con	nitrate	ph	watemp
Aug-21	595	2	8	25.8
Sep-21	573	1.5	8	25.9
Oct-21	557	1	8	23.4
Nov-21	589		8	12.1
Dec-21	625	1	7.5	4.9
Jan-22	689	2	8	1.3
Feb-22	685	2	8	7.8
Mar-22	712	1	8	5
Apr-22	648	1.5	8	7
May-22	648	2	8	14
Jun-22	619	1.5	8.5	22.2
Jul-22	658	1	8	18
Aug-22	716	1.5	8	24.3
Sep-22	562	1	8	22.3
Oct-22	641	1.5	8	12.8
Nov-22	650	1.5	8	7
Dec-22	731	1.5	8	6
Jan-23	621	3	8	5.7
Feb-23	647	1	8	3.3
Mar-23	643	4	8	7.8
Apr-23	602	2	8	12.3
May-23	621	1	8	16
Jun-23	637	4	7.5	18.5
Jul-23	431	2	8	19.7
Aug-23	698	1.5	8	19.8
Sep-23	575	1	8	20.9
Oct-23	561	1	8	12.6
Nov-23	622	2	8	11.2
Dec-23	594	2	8	9.7

Variable	Min	Max	Range	Average	Median
Conductivity	431	731	300	626	625
Nitrate-Nitrogen	1	4	3	1.7	1.5
pH	7.5	8.5	1	8	8
Water Temp.	1.3	26	25	14	13

# Willis Run (WILRUN0.37)

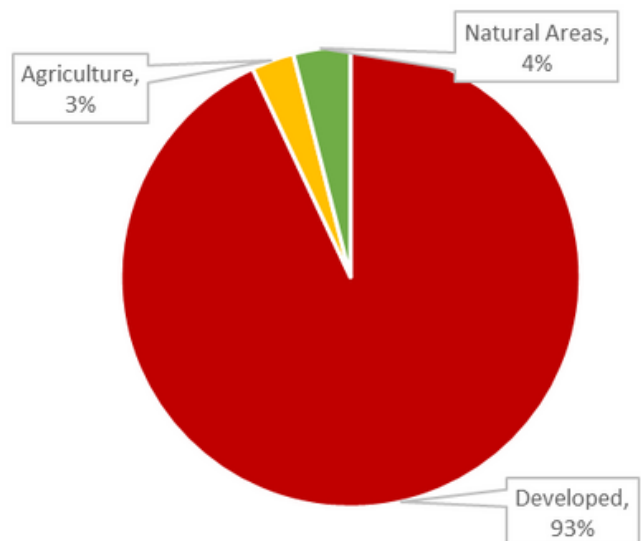
Monitor(s): Inactive, previously Stephanie Myers & Tyler Snelbaker



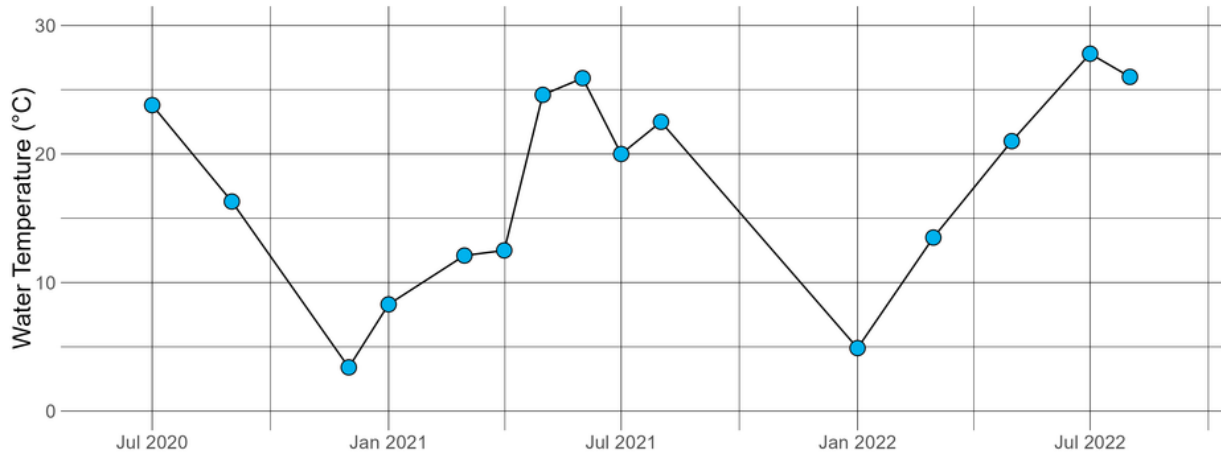
## Site information:

Drains: 3 mi<sup>2</sup>  
 Impaired: Yes, aquatic life - urban runoff, habitat modification  
 Designation: Warm water fishes (WWF)  
 Geology: 80% Calcareous, 20% Non-calcareous

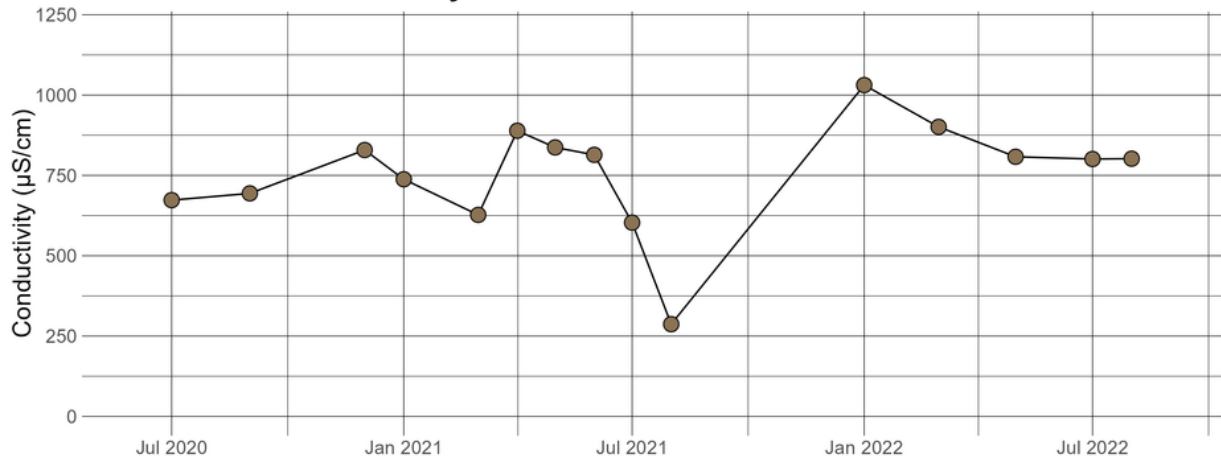
## Land Use



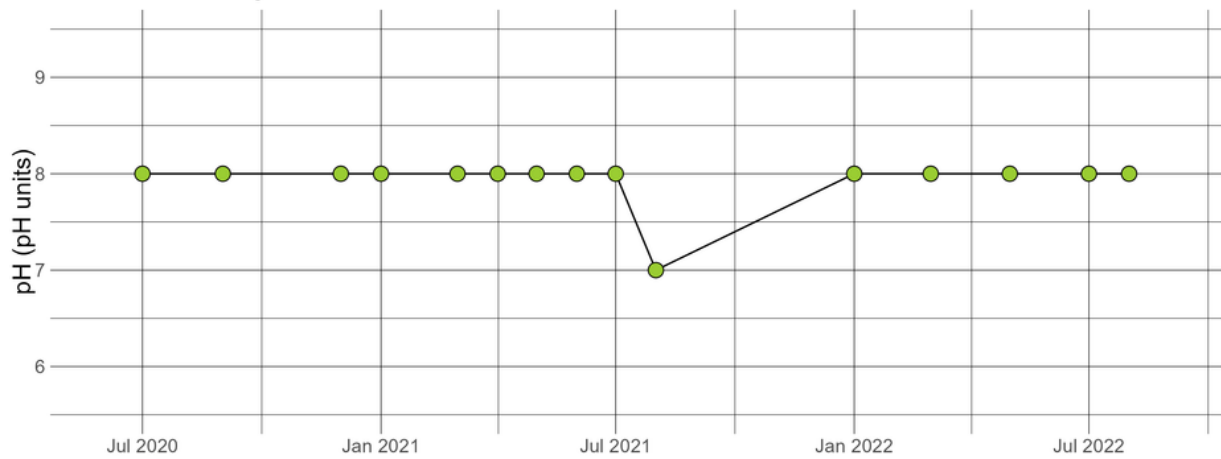
**WILRUN0.37 - Water Temperature**



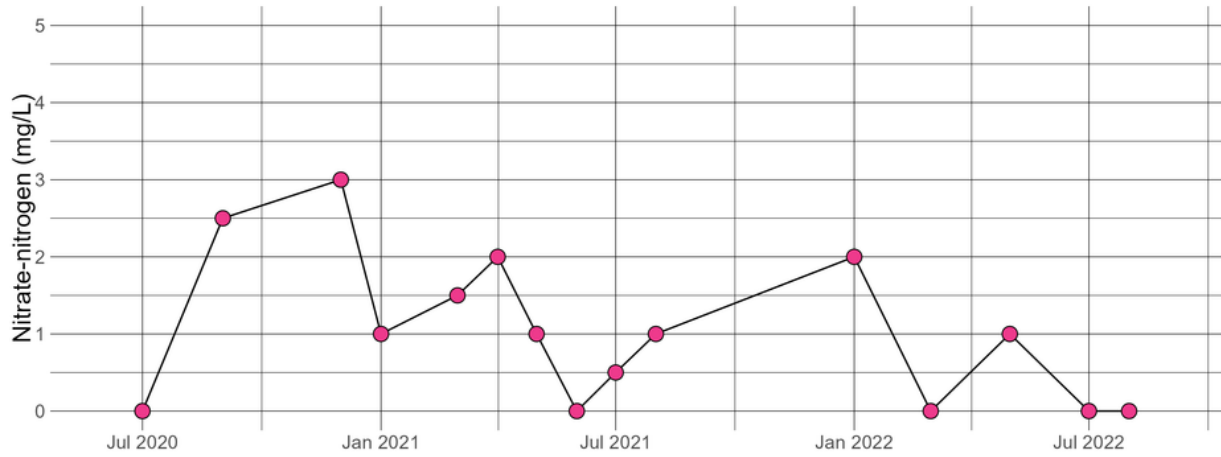
**WILRUN0.37 - Conductivity**



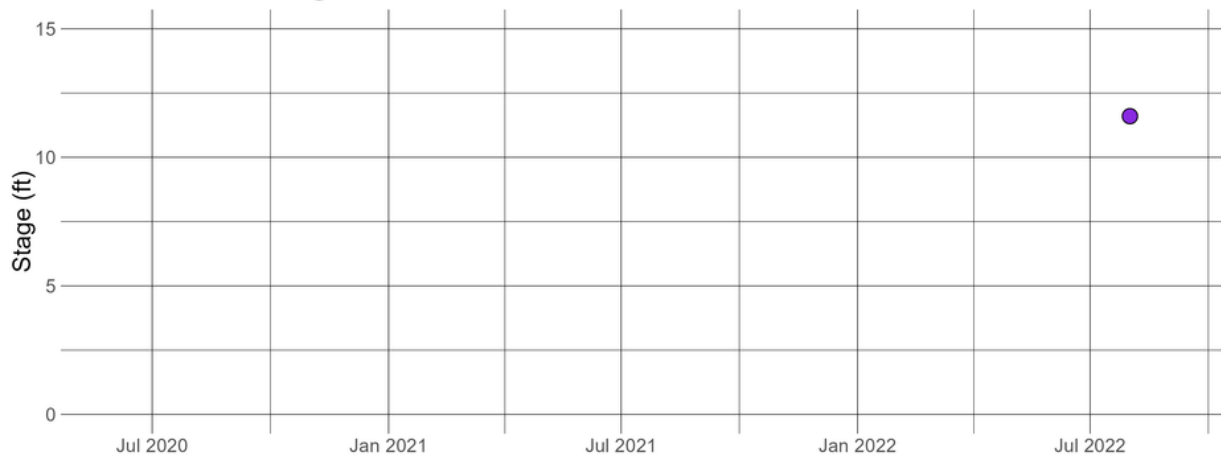
**WILRUN0.37 - pH**



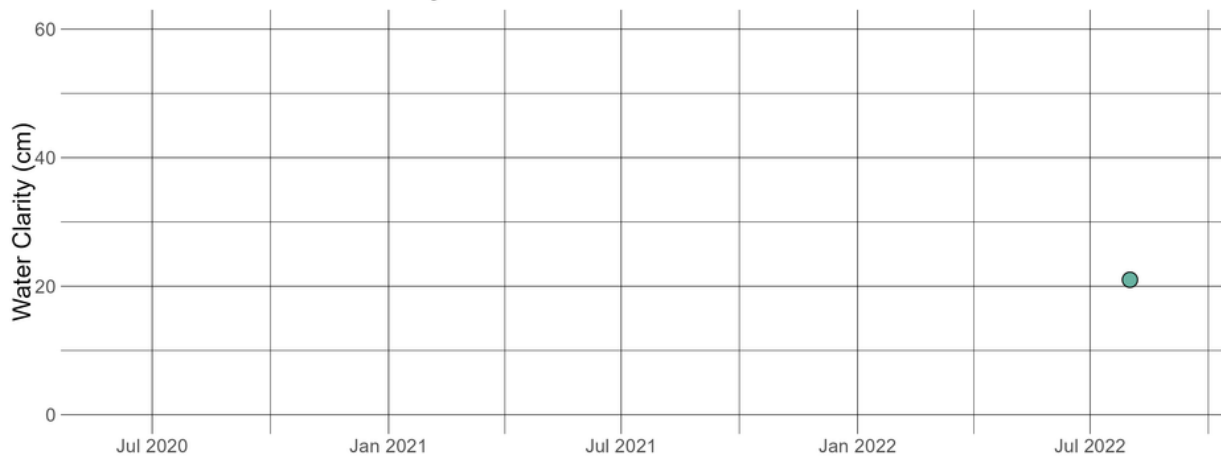
### WILRUN0.37 - Nitrate-nitrogen



### WILRUN0.37 - Stage



### WILRUN0.37 - Water Clarity



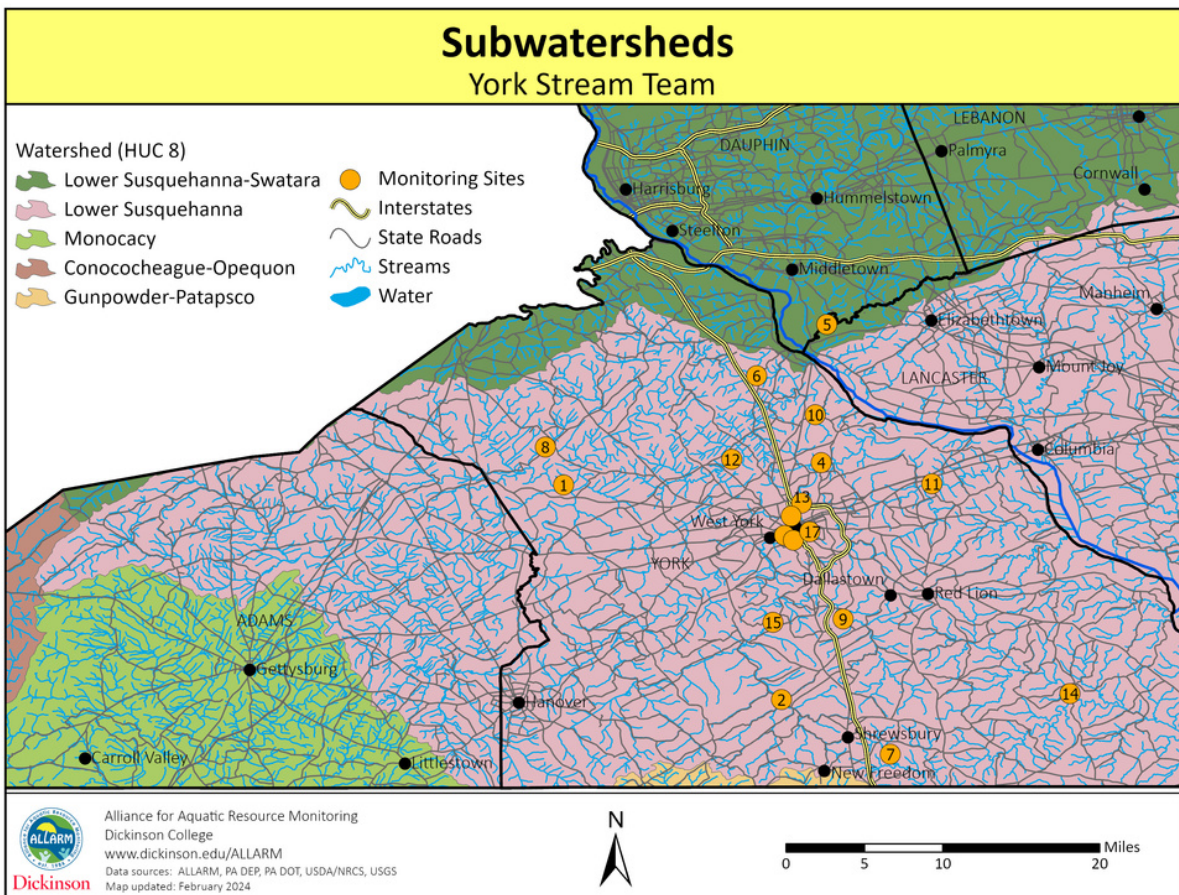
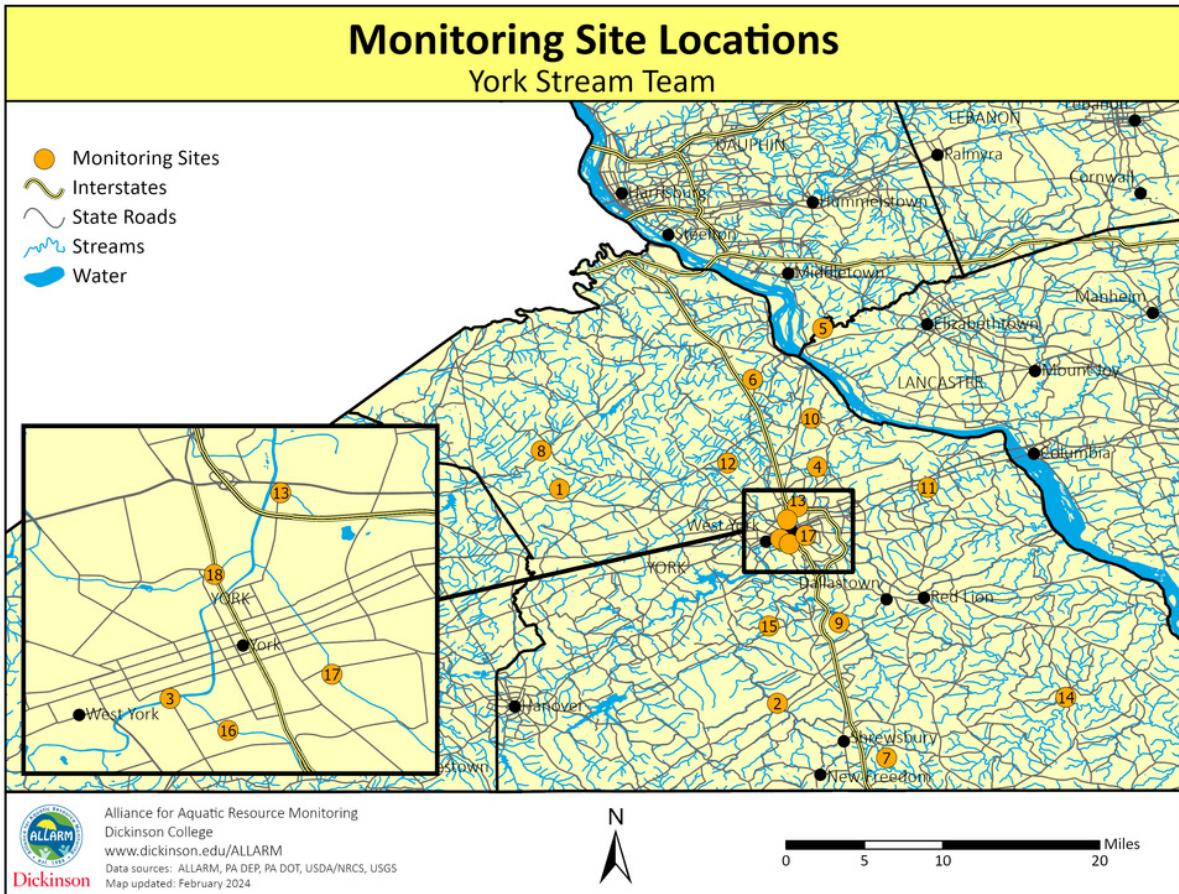
# Raw Data and Summary Statistics

date	con	nitrate	ph	stage	clarity	watemp
Jul-20	673	0	8			23.8
Sep-20	694	2.5	8			16.3
Dec-20	829	3	8			3.4
Jan-21	738	1	8			8.3
Mar-21	627	1.5	8			12.1
Apr-21	889	2	8			12.5
May-21	837	1	8			24.6
Jun-21	814	0	8			25.9
Jul-21	603	0.5	8			20
Aug-21	287	1	7			22.5
Jan-22	1031	2	8			4.9
Mar-22	901	0	8			13.5
May-22	808	1	8			21
Jul-22	801	0	8			27.8
Aug-22	802	0	8	11.6	21	26

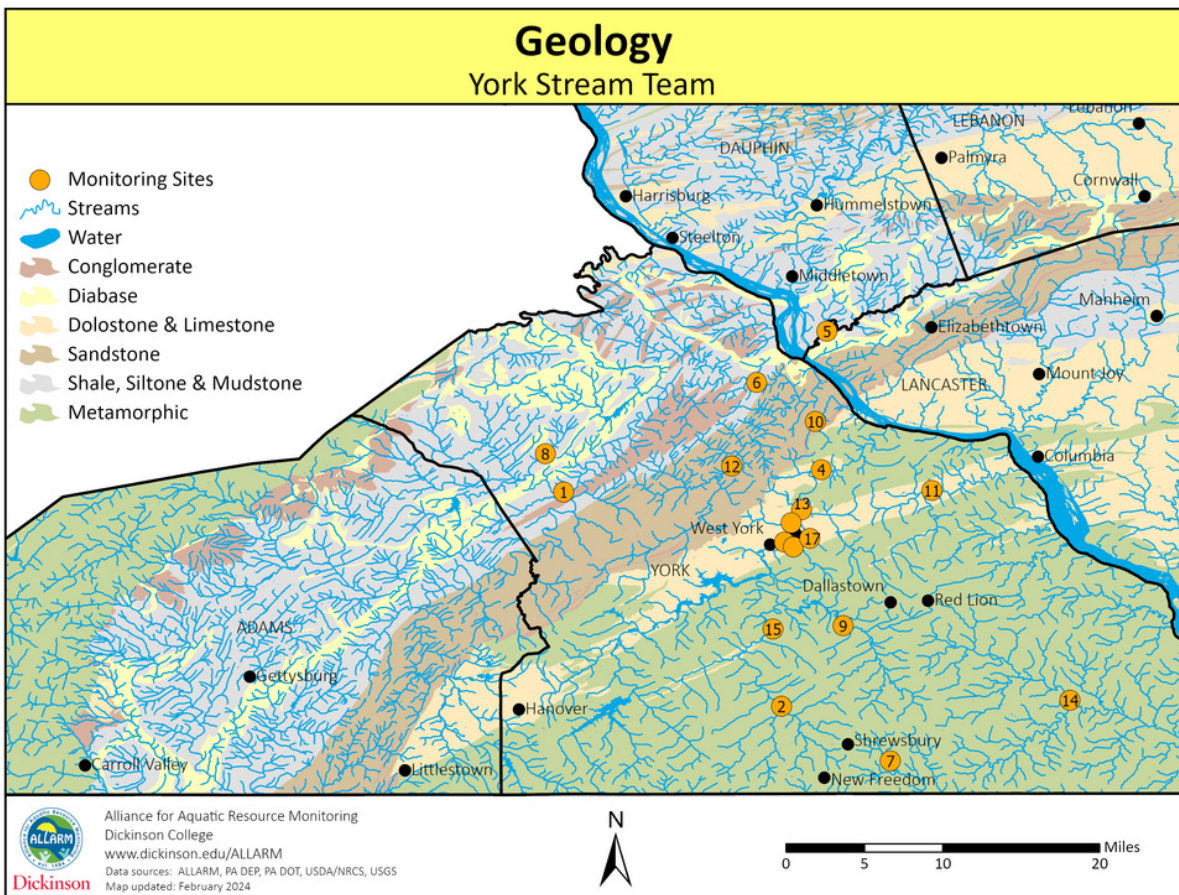
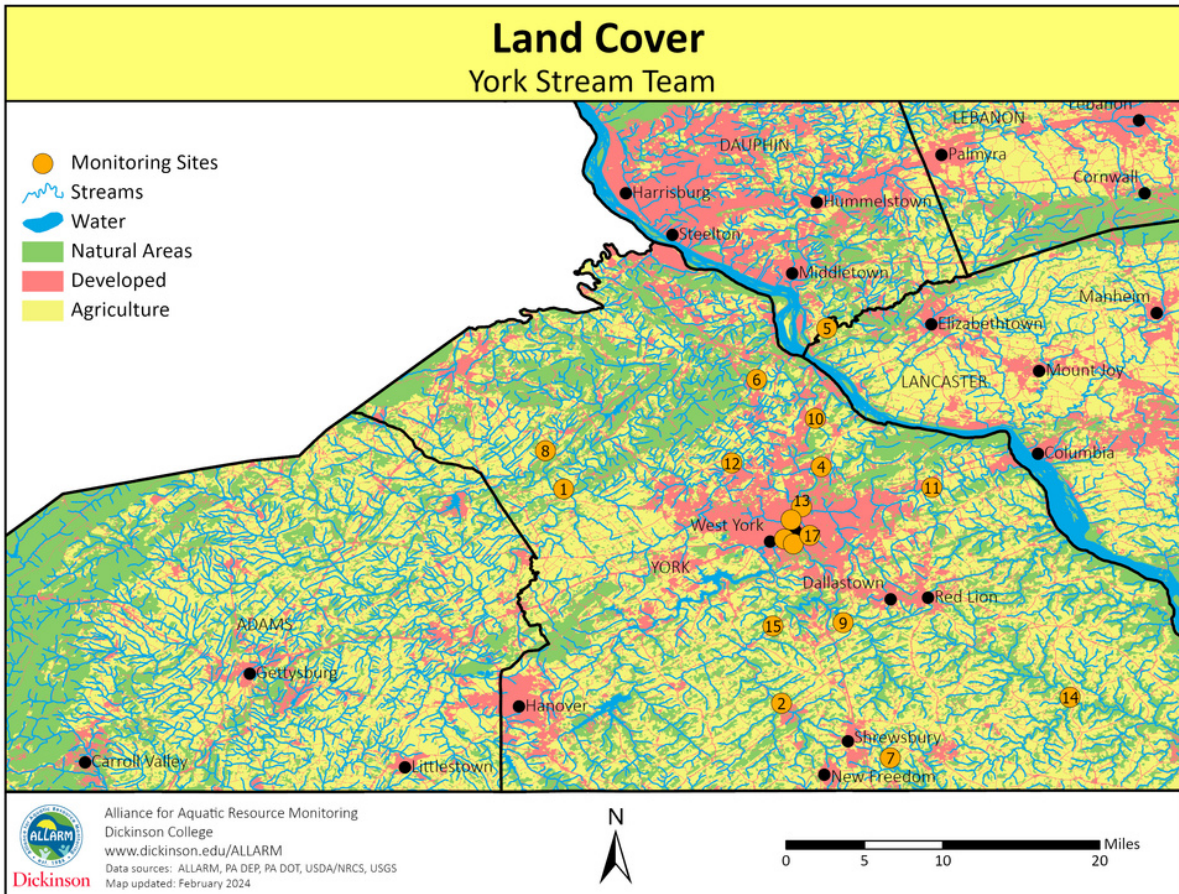
Variable	Min	Max	Range	Average	Median
Conductivity	287	1031	744	756	802
Nitrate-Nitrogen	0	3	3	1	1
pH	7	8	1	7.9	8
Stage	12	12	0	12	12
Water Clarity	21	21	0	21	21
Water Temp.	3.4	28	24	18	20



# Supplemental Maps



# Supplemental Maps



# Supplemental Maps

