

# Lebanon County Stream Team Data Interpretation Workbook

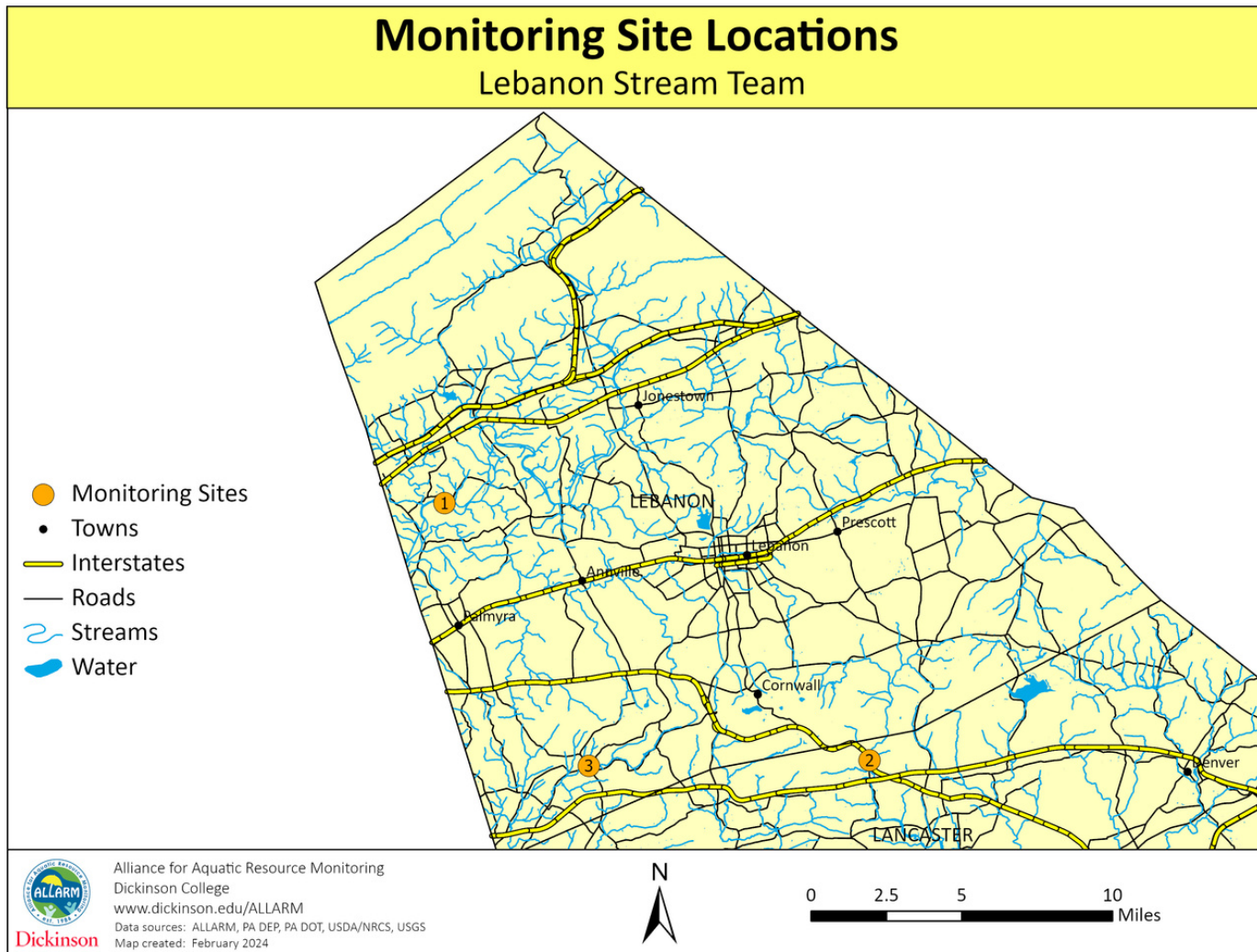


Dickinson

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[dickinson.edu/ALLARM](http://dickinson.edu/ALLARM) | [@ALLARMwater](https://www.instagram.com/ALLARMwater) | 717.245.1565



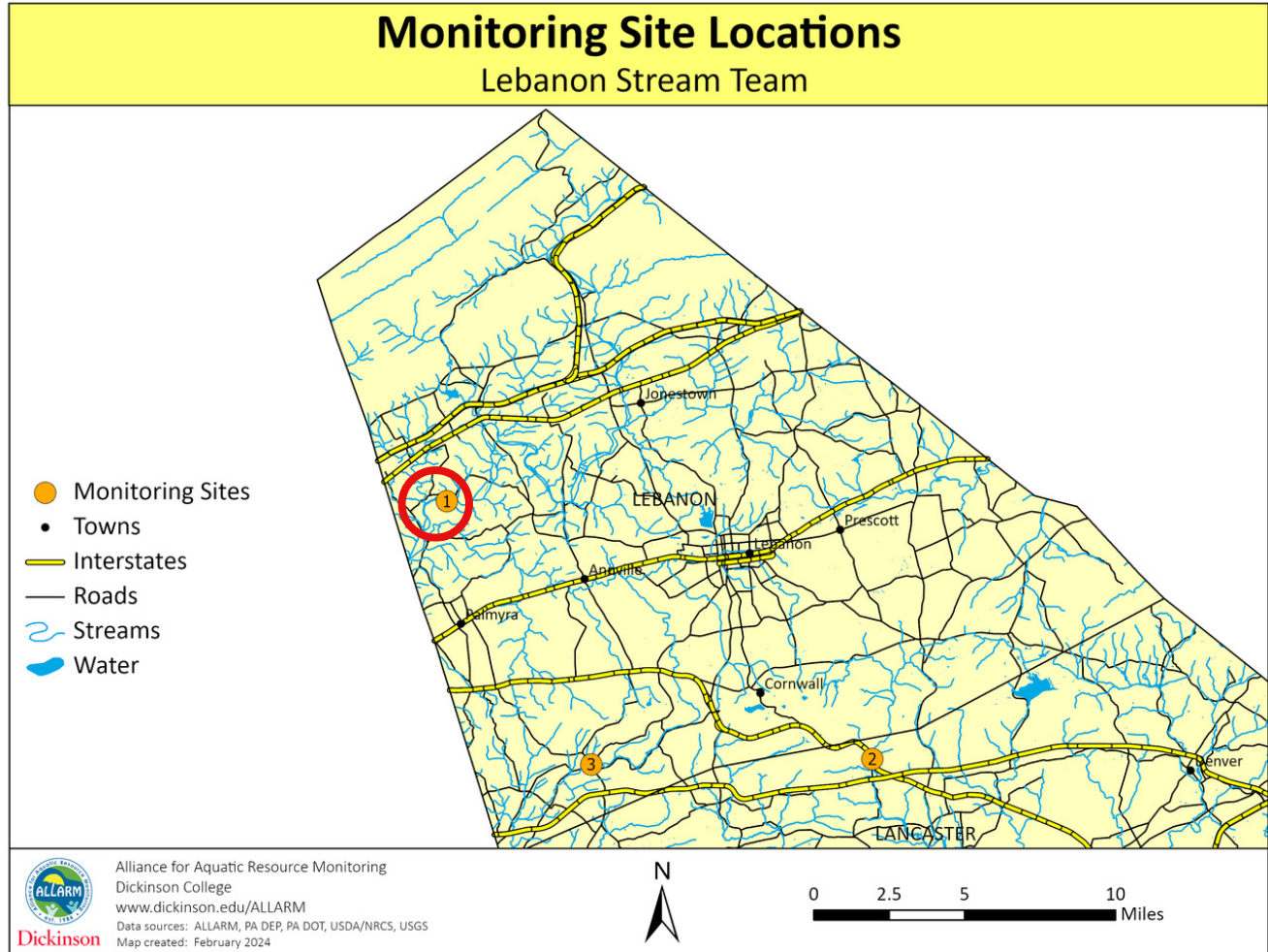
# Monitoring Site Locations



Site Number	Name	Site ID
1	Swatera Creek	SWACRE24.85
2	Hammer Creek	HAMCRE11.61
3	Conewago Creek	CONCRE18.74

# Swatara Creek (SWACRE24.85)

Monitor(s): Bethany Canner



## Site information:

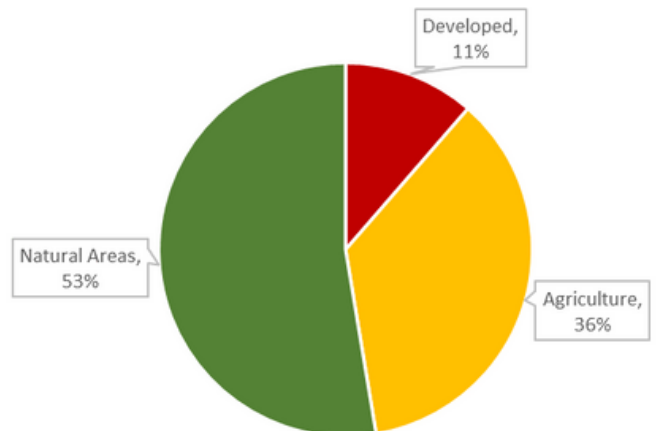
Drains: 345 mi<sup>2</sup>

Impaired: No

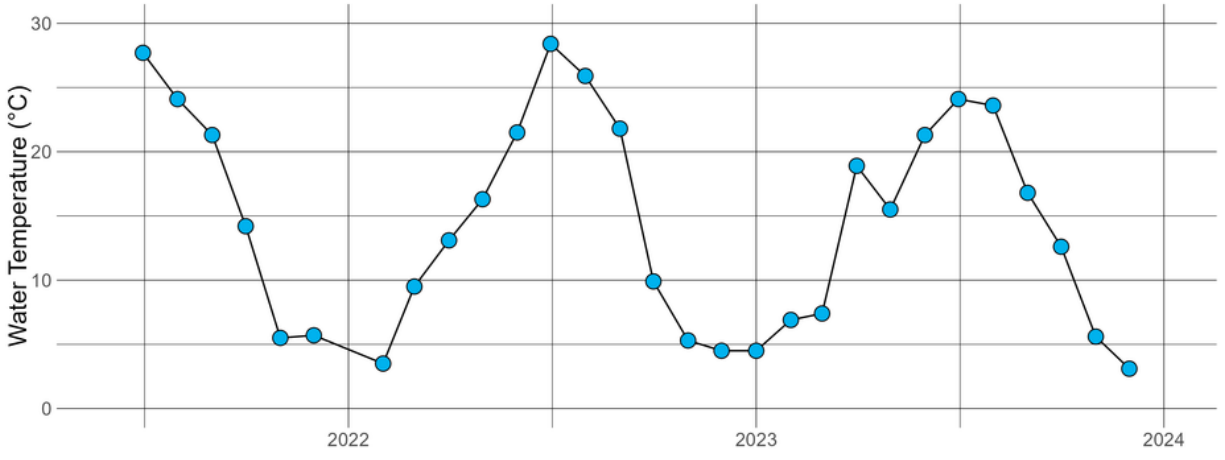
Designation: Warm water fishes (WWF)

Geology: 2% Calcareous, 98% Non-calcareous

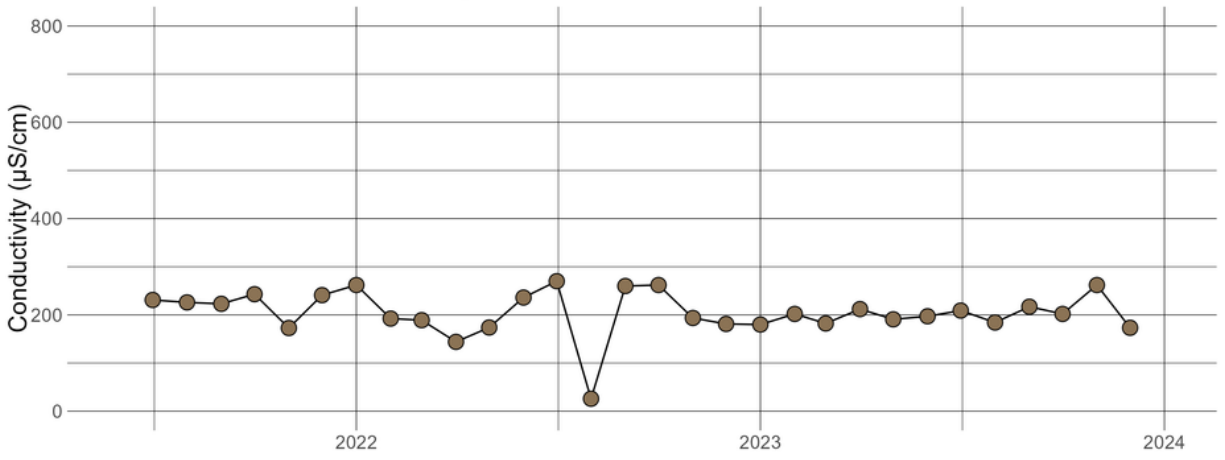
## Land Use



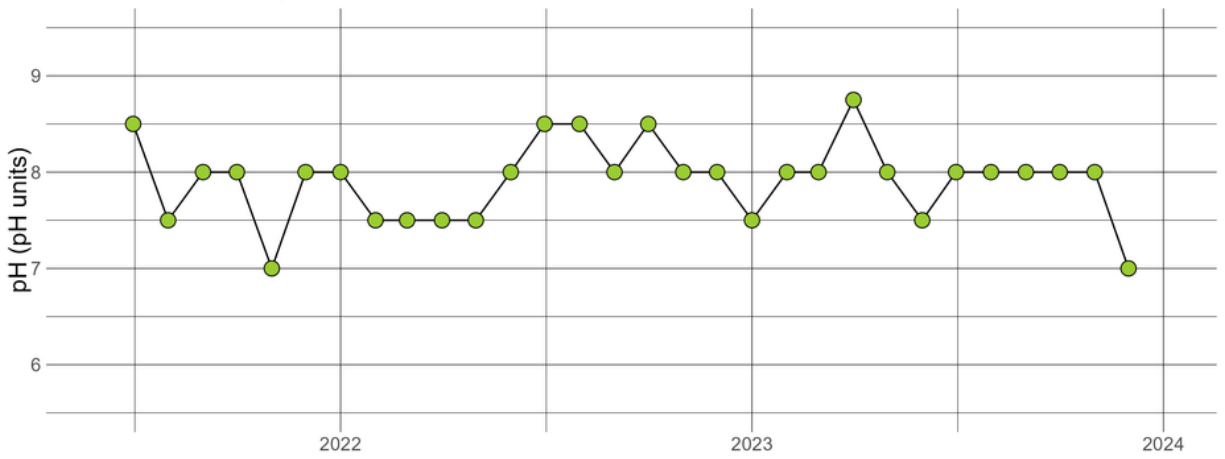
**SWACRE24.85 - Water Temperature**



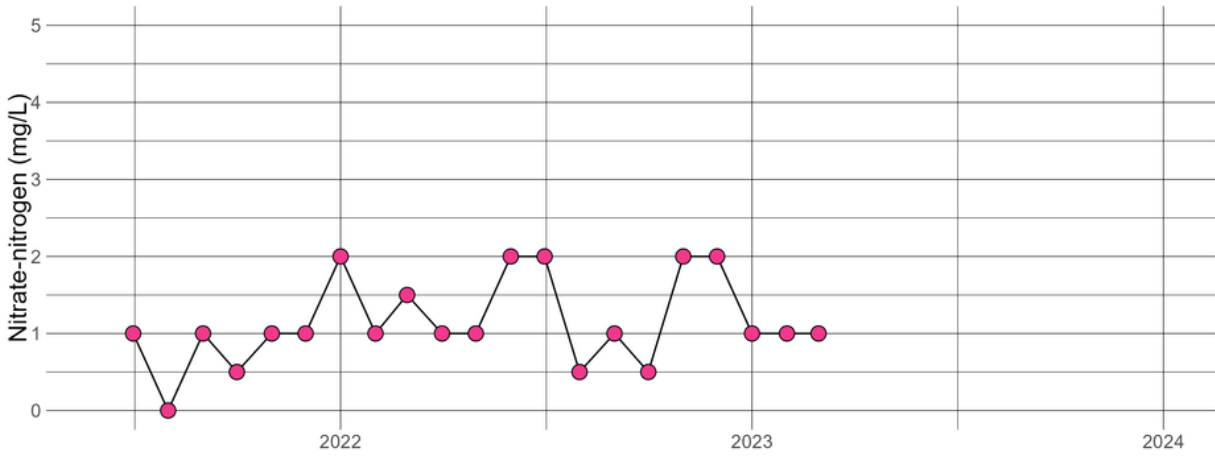
**SWACRE24.85 - Conductivity**



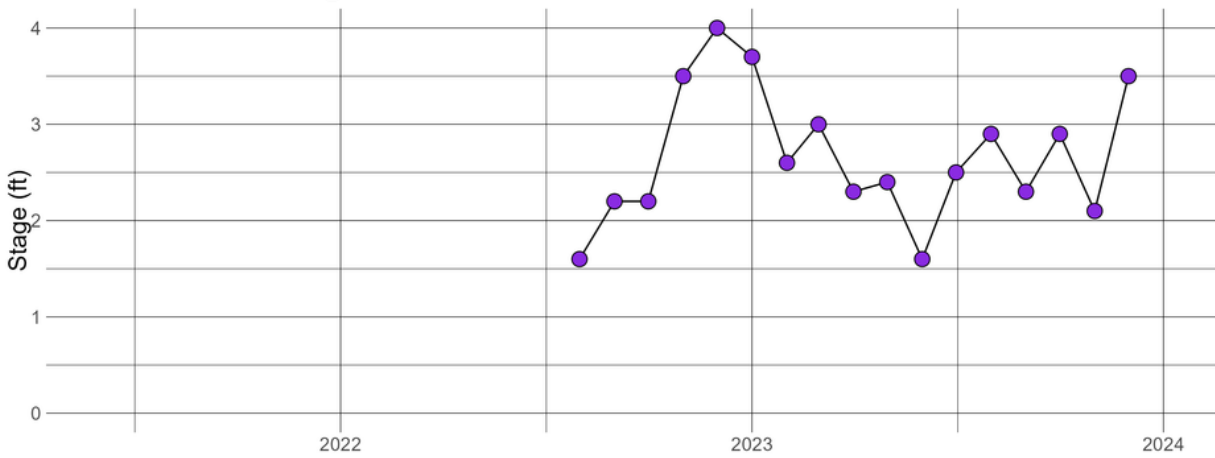
**SWACRE24.85 - pH**



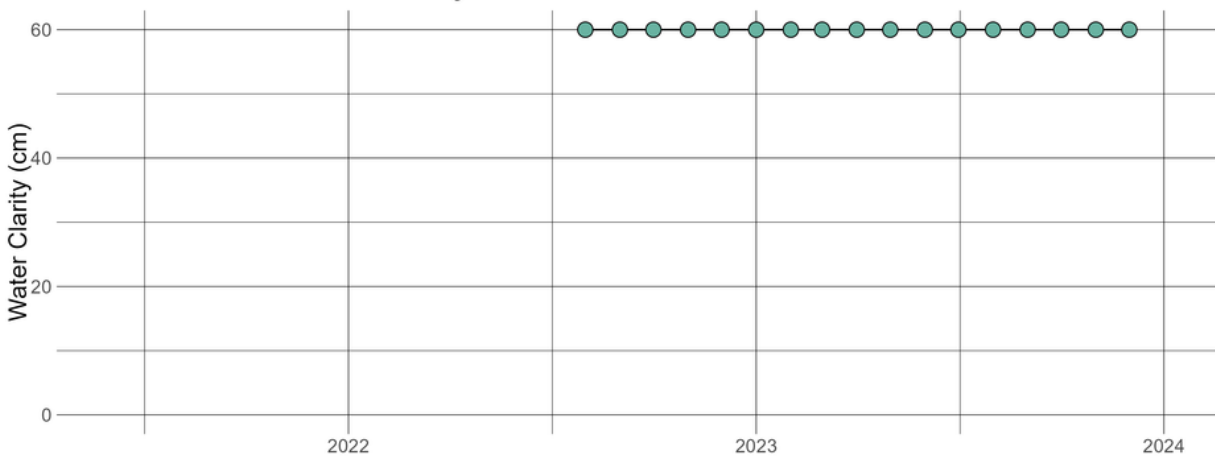
**SWACRE24.85 - Nitrate-nitrogen**



**SWACRE24.85 - Stage**



**SWACRE24.85 - Water Clarity**



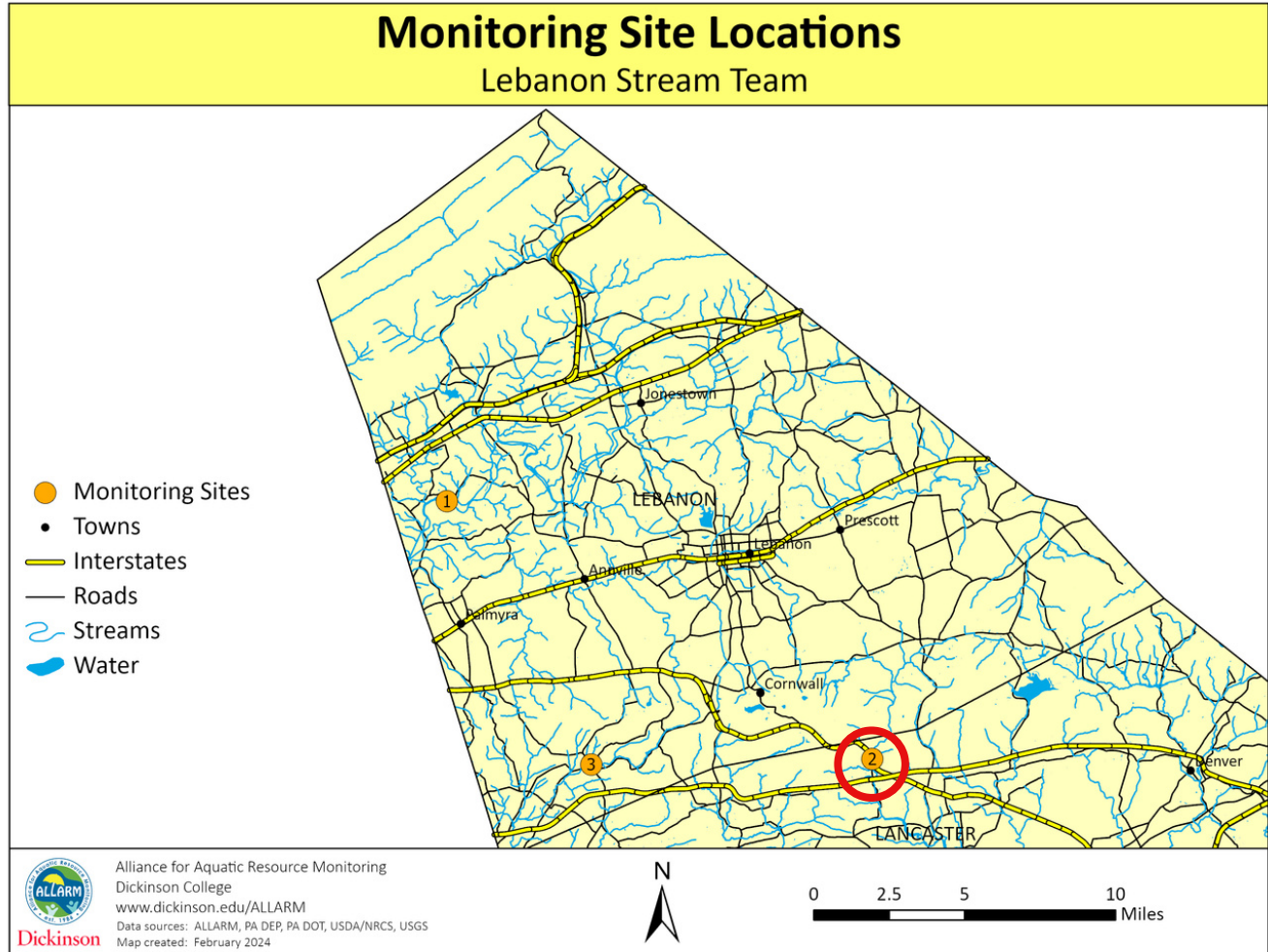
# Raw Data and Summary Statistics

date	con	nitrate	ph	stage	clarity	watemp
Jul-21	231	1	8.5			27.7
Aug-21	226	0	7.5			24.1
Sep-21	223	1	8			21.3
Oct-21	243	0.5	8			14.2
Nov-21	172.7	1	7			5.5
Dec-21	241	1	8			5.7
Jan-22	262	2	8			
Feb-22	192.4	1	7.5			3.5
Mar-22	189	1.5	7.5			9.5
Apr-22	144	1	7.5			13.1
May-22	173.8	1	7.5			16.3
Jun-22	236	2	8			21.5
Jul-22	270	2	8.5			28.4
Aug-22	25.9	0.5	8.5	1.6	60	25.9
Sep-22	260	1	8	2.2	60	21.8
Oct-22	262	0.5	8.5	2.2	60	9.9
Nov-22	193.6	2	8	3.5	60	5.3
Dec-22	181.2	2	8	4	60	4.5
Jan-23	179.9	1	7.5	3.7	60	4.5
Feb-23	202	1	8	2.6	60	6.9
Mar-23	182.2	1	8	3	60	7.4
Apr-23	212		8.75	2.3	60	18.9
May-23	190.8		8	2.4	60	15.5
Jun-23	197.1		7.5	1.6	60	21.3
Jul-23	209		8	2.5	60	24.1
Aug-23	184.2		8	2.9	60	23.6
Sep-23	217		8	2.3	60	16.8
Oct-23	202		8	2.9	60	12.6
Nov-23	262		8	2.1	60	5.6
Dec-23	173.2		7	3.5	60	3.1

Variable	Min	Max	Range	Average	Median
Conductivity	26	270	244	205	202
Nitrate-Nitrogen	0	2	2	1.1	1
pH	7	8.8	1.8	7.9	8
Stage	1.6	4	2.4	2.7	2.5
Water Clarity	60	60	0	60	60
Water Temp.	3.1	28	25	14	14

# Hammer Creek (HAMCRE 11.61)

Monitor(s): Alyssa Doster



## Site information:

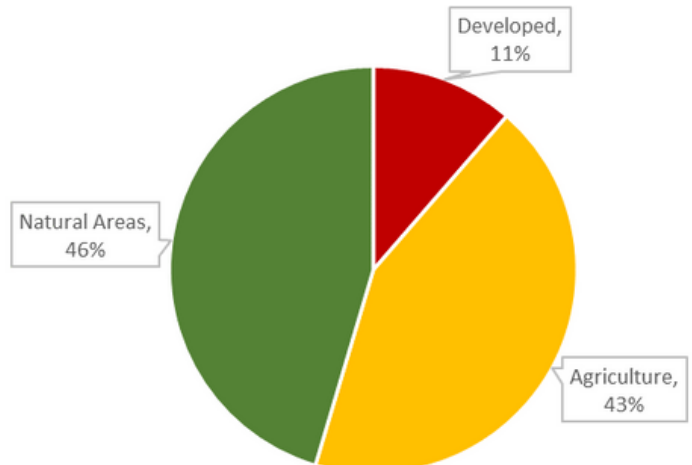
Drains: 18 mi<sup>2</sup>

Impaired: Yes, aquatic life -habitat modification

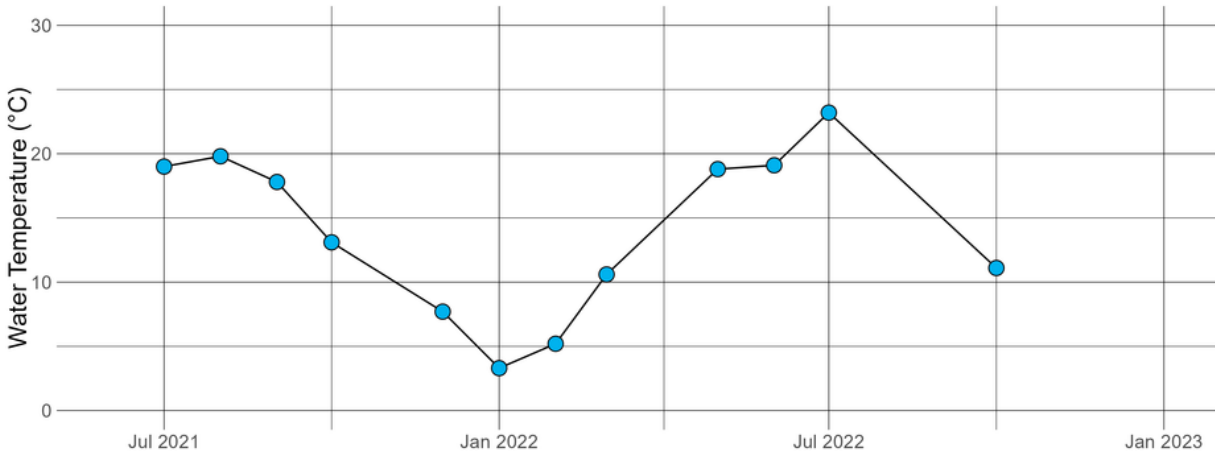
Designation: High-quality cold water fishes (HQ-CWF)

Geology: 43% Calcareous, 57% Non-calcareous

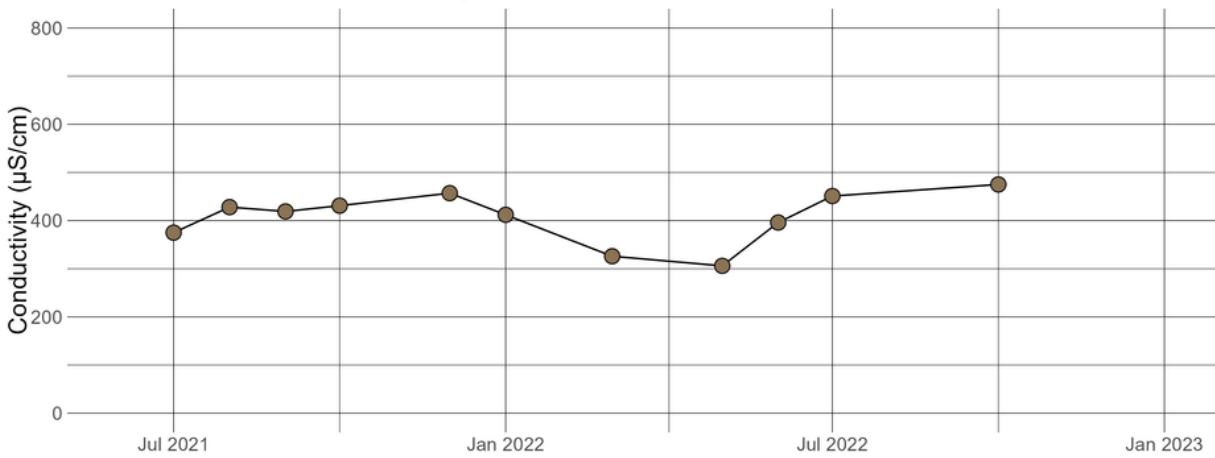
## Land Use



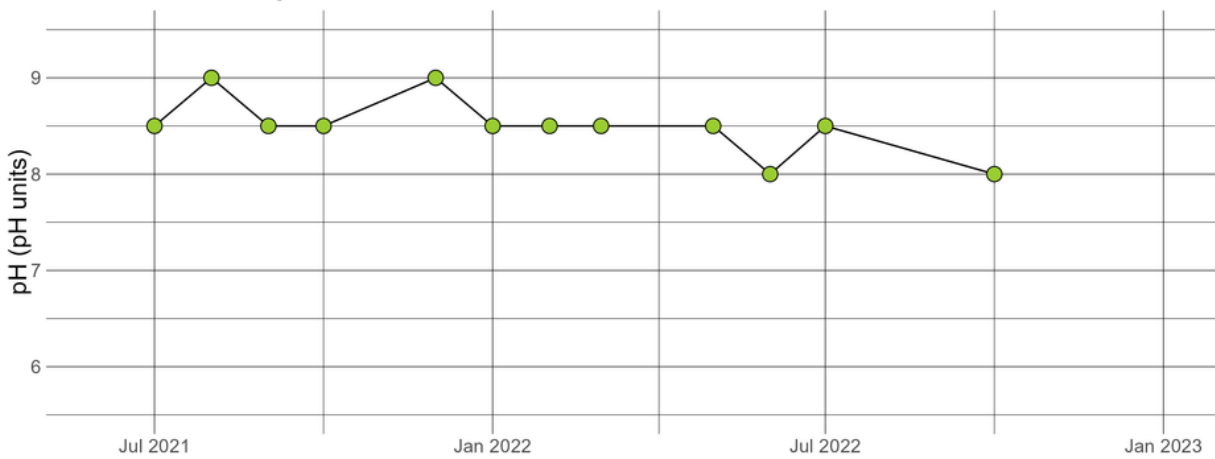
**HAMCRE11.61 - Water Temperature**



**HAMCRE11.61 - Conductivity**

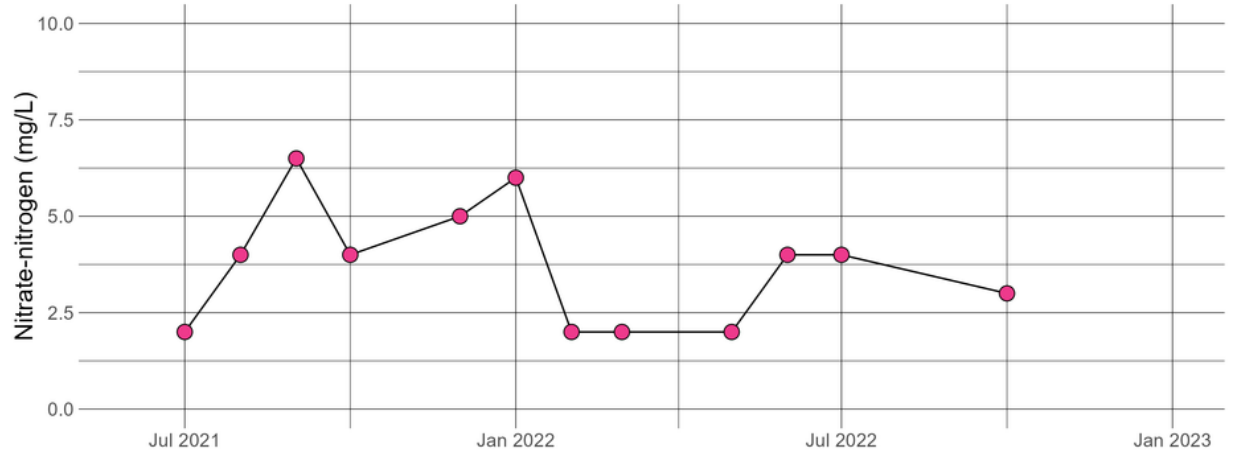


**HAMCRE11.61 - pH**





### HAMCRE11.61 - Nitrate-nitrogen



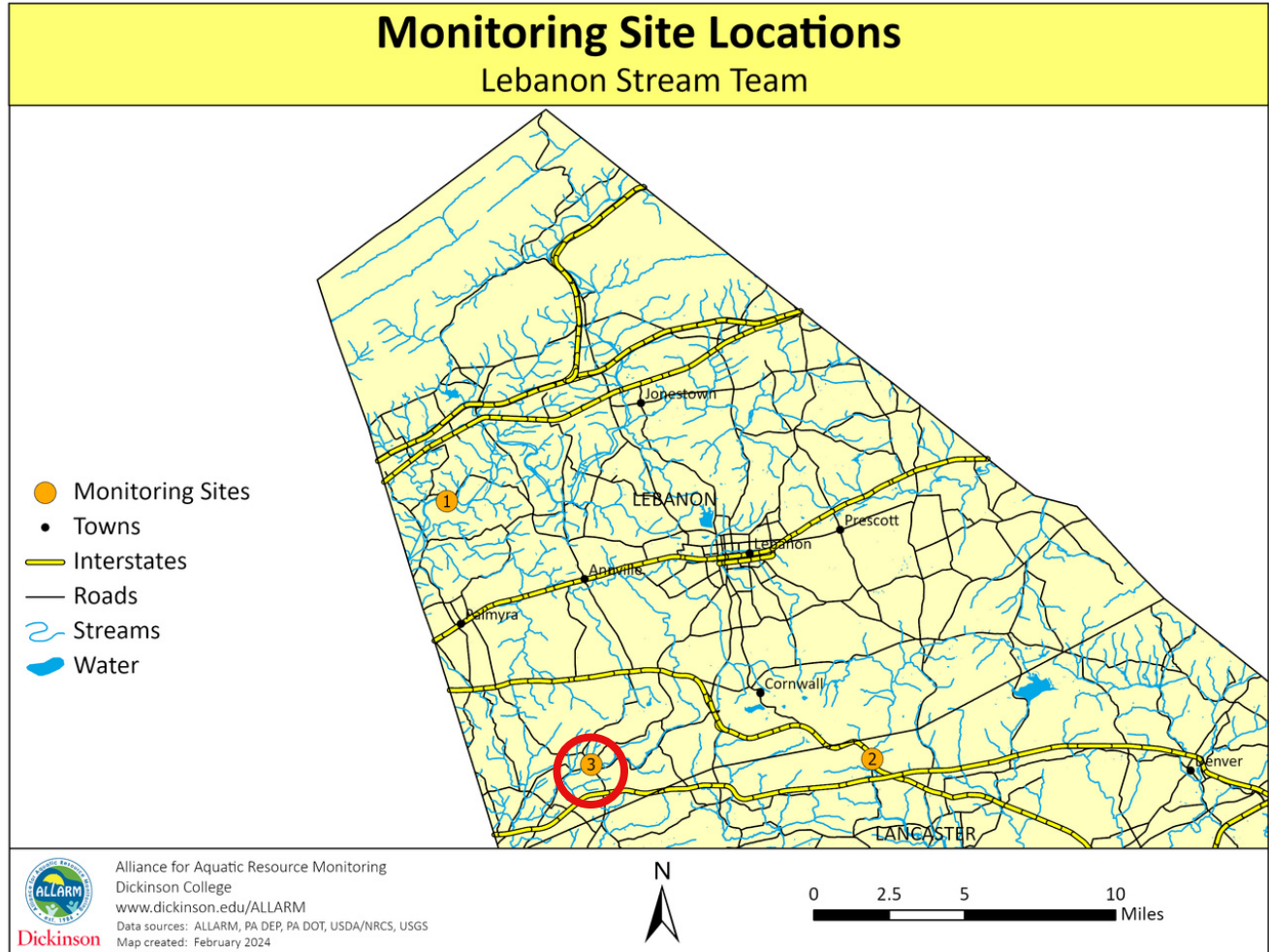
# Raw Data and Summary Statistics

date	con	nitrate	ph	watemp
Jul-21	375	2	8.5	19
Aug-21	428	4	9	19.8
Sep-21	419	6.5	8.5	17.8
Oct-21	431	4	8.5	13.1
Dec-21	457	5	9	7.7
Jan-22	412	6	8.5	3.3
Feb-22		2	8.5	5.2
Mar-22	326	2	8.5	10.6
May-22	306	2	8.5	18.8
Jun-22	396	4	8	19.1
Jul-22	451	4	8.5	23.2
Oct-22	475	3	8	11.1
Feb-23	368	1	8.5	7.3

Variable	Min	Max	Range	Average	Median
Conductivity	306	475	169	404	416
Nitrate-Nitrogen	1	6.5	5.5	3.5	4
pH	8	9	1	8.5	8.5
Water Temp.	3.3	23	20	14	13

# Conewago Creek (CONCRE18.74)

Monitor(s): Kathy Snavely & Connie Steinke



### Site information:

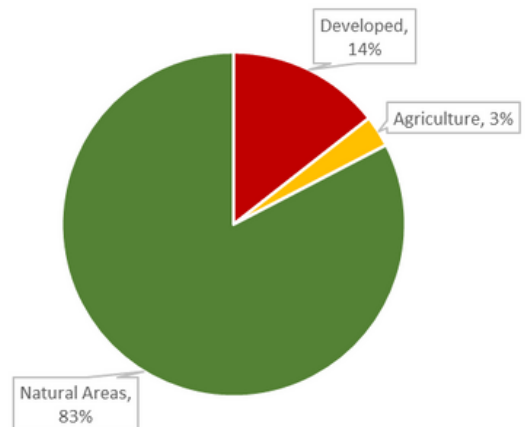
Drains: 5 mi<sup>2</sup>

Impaired: No

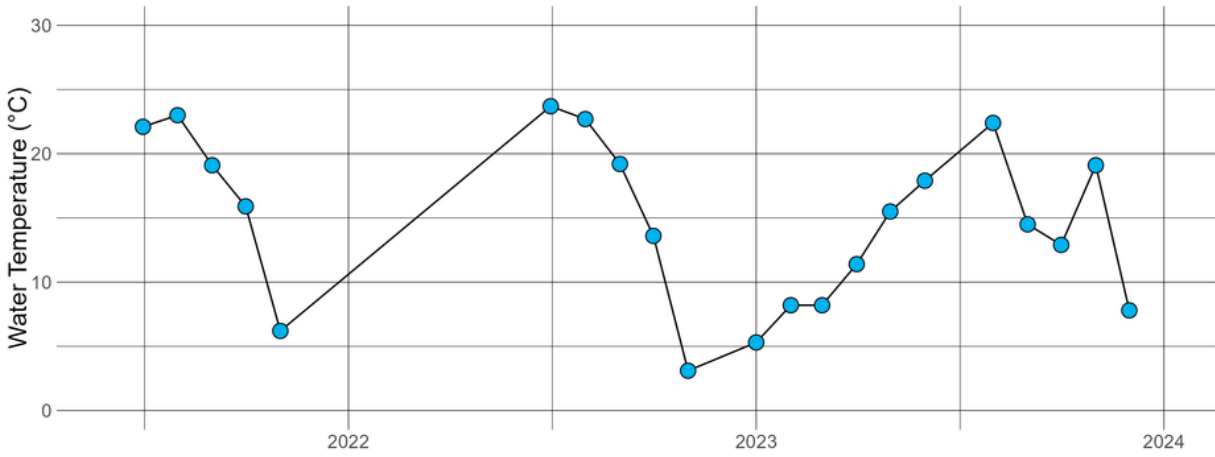
Designation: Trout stocking (TSF)

Geology: 100% Non-calcareous

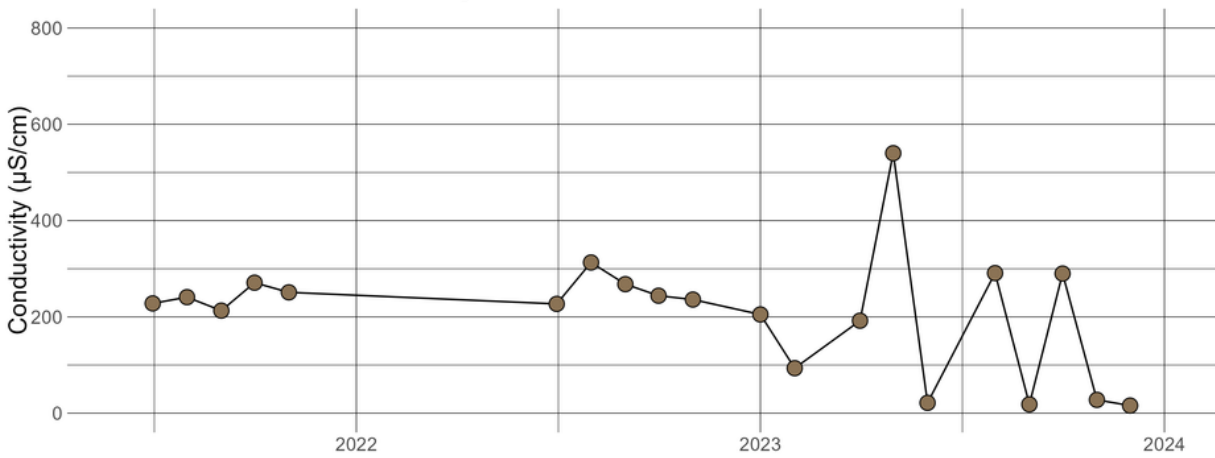
### Land Use



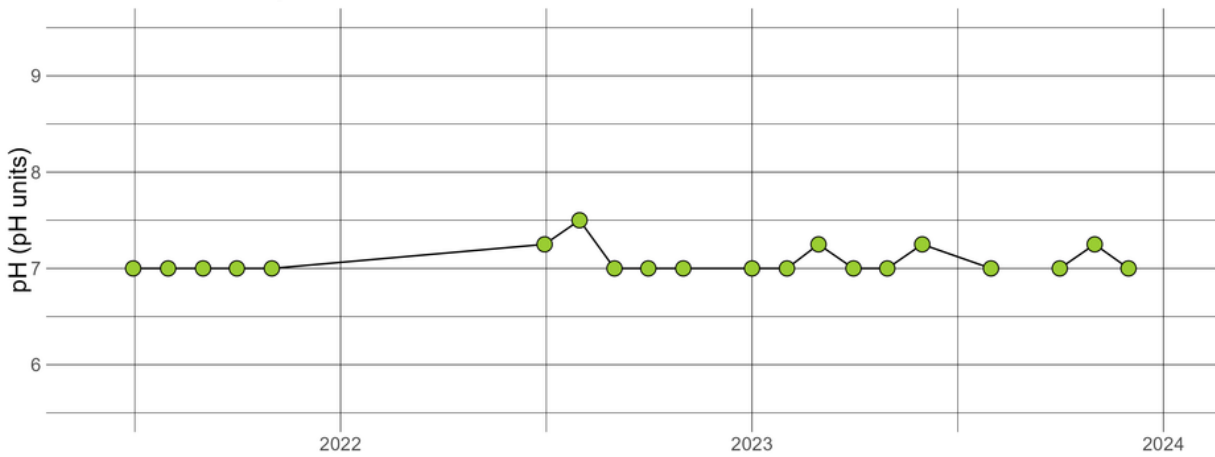
**CONCRE18.74 - Water Temperature**



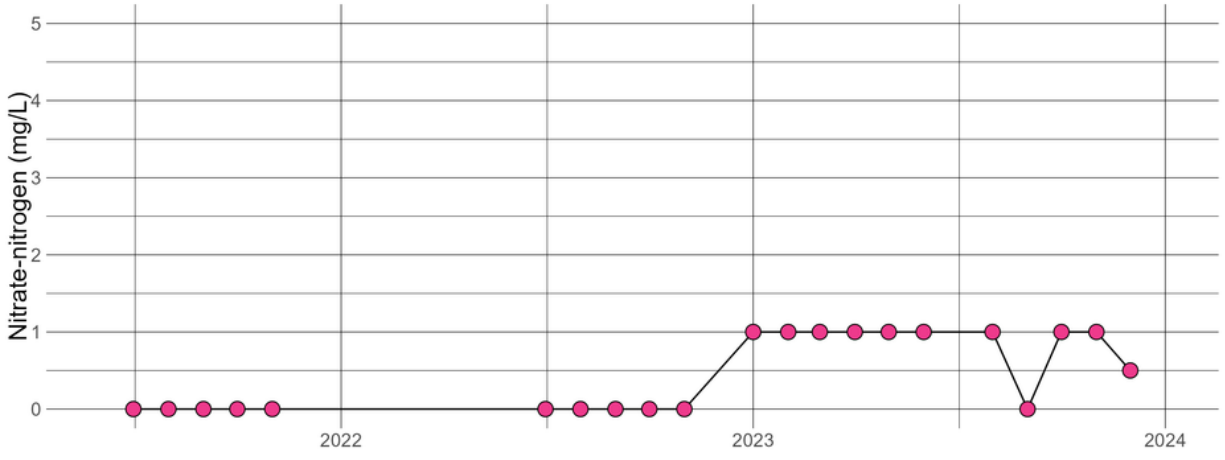
**CONCRE18.74 - Conductivity**



**CONCRE18.74 - pH**



### CONCRE18.74 - Nitrate-nitrogen

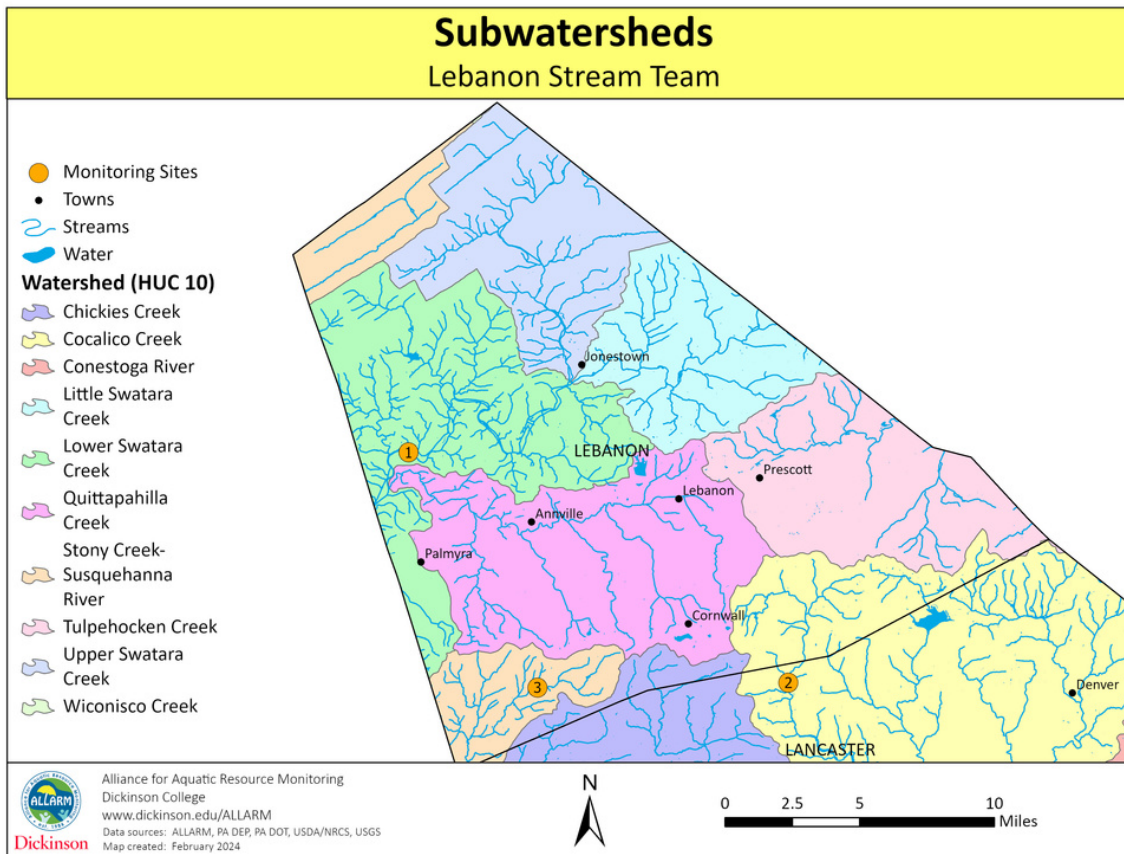
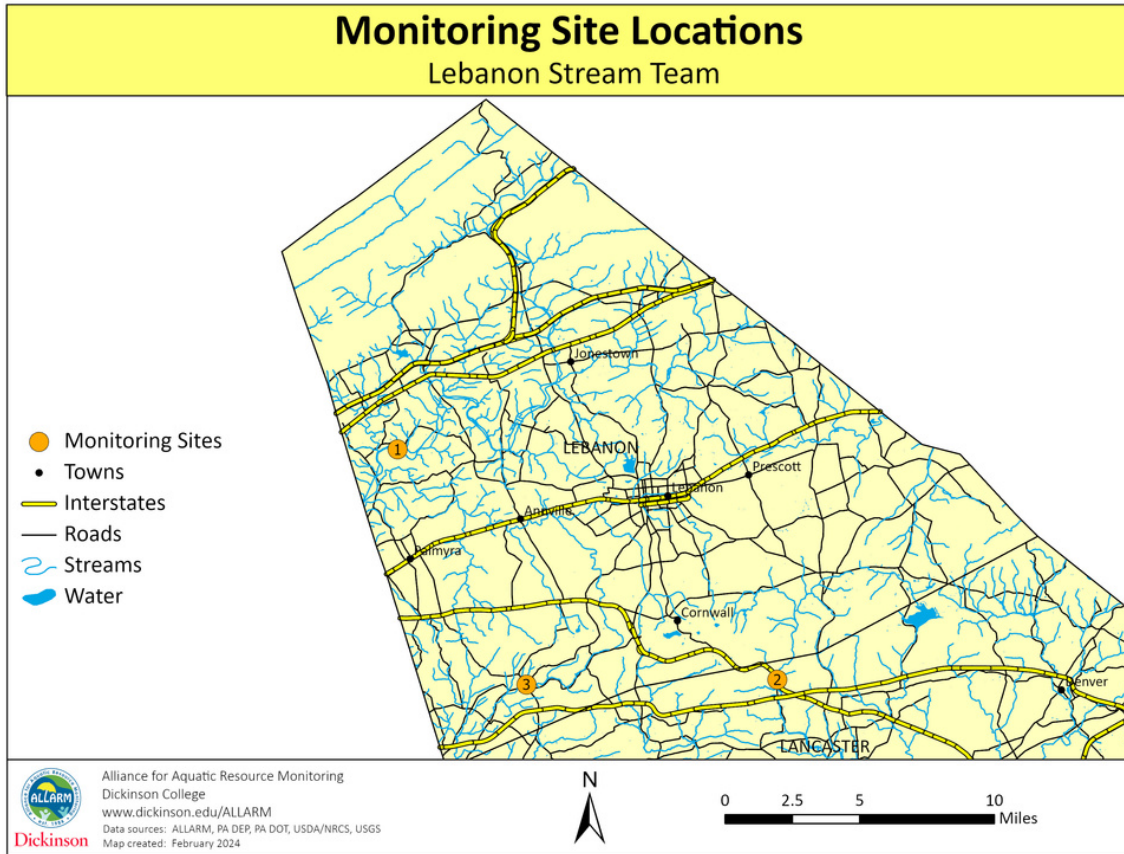


# Raw Data and Summary Statistics

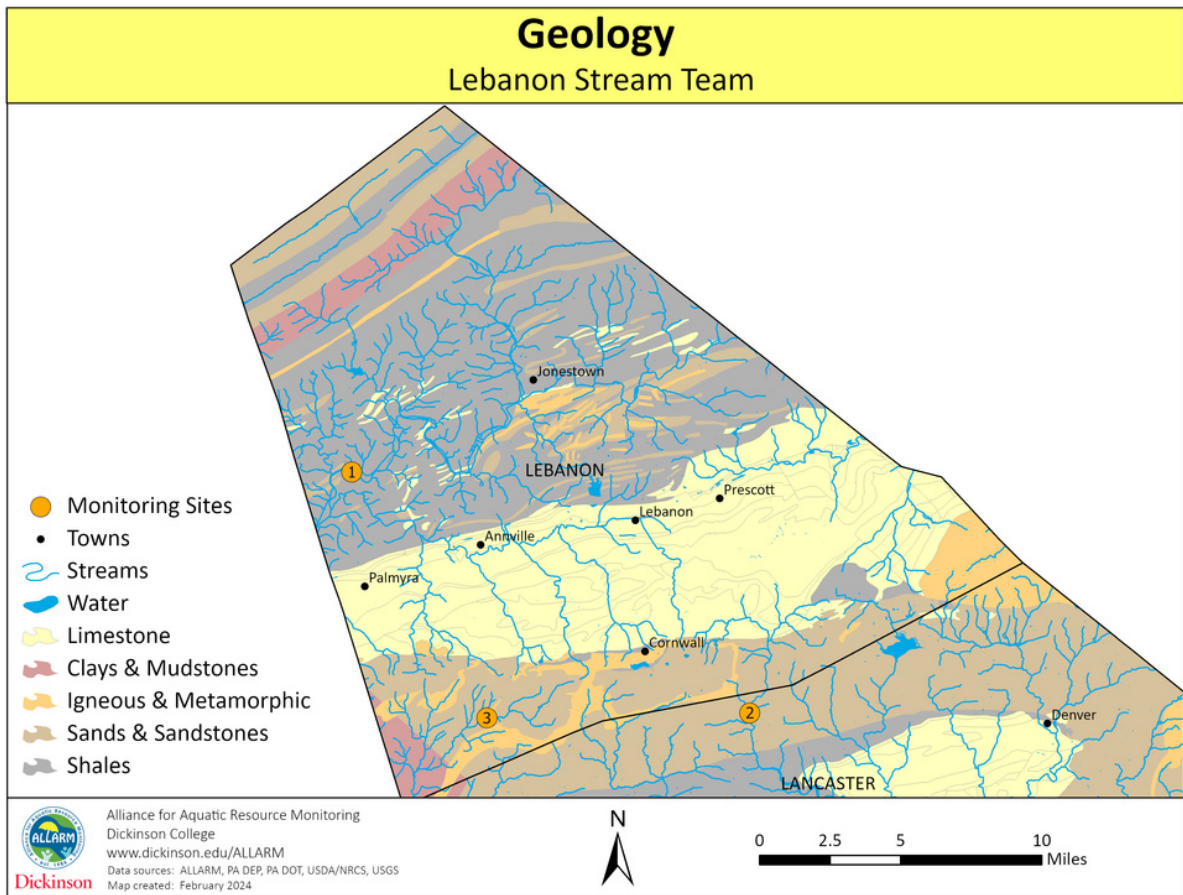
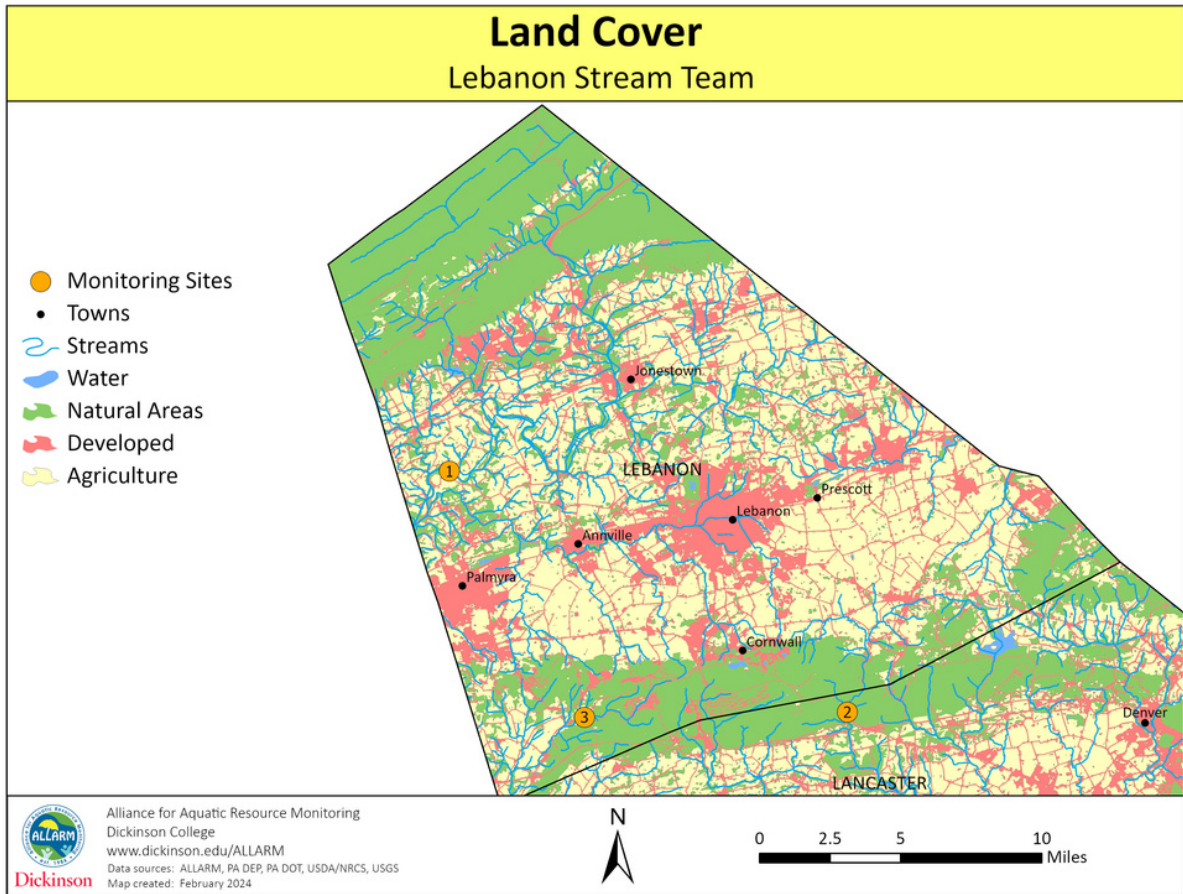
date	con	nitrate	ph	watemp
Jul-21	228	0	7	22.1
Aug-21	241	0	7	23
Sep-21	213	0	7	19.1
Oct-21	271	0	7	15.9
Nov-21	251	0	7	6.2
Jul-22	227	0	7.25	23.7
Aug-22	313	0	7.5	22.7
Sep-22	268	0	7	19.2
Oct-22	244	0	7	13.6
Nov-22	236	0	7	3.1
Jan-23	205	1	7	5.3
Feb-23	93.5	1	7	8.2
Mar-23		1	7.25	8.2
Apr-23	192.1	1	7	11.4
May-23	540	1	7	15.5
Jun-23	21.5	1	7.25	17.9
Aug-23	291	1	7	22.4
Sep-23	18.3	0	4.5	14.5
Oct-23	290	1	7	12.9
Nov-23	27.7	1	7.25	19.1
Dec-23	15.8	0.5	7	7.8

Variable	Min	Max	Range	Average	Median
Conductivity	16	540	524	209	232
Nitrate-Nitrogen	0	1	1	0.45	0
pH	4.5	7.5	3	7	7
Water Temp.	3.1	24	21	15	16

# Supplemental Maps



# Supplemental Maps





# Supplemental Maps

