Little Green Lake Water Quality Monitoring Data Sheet

Station Info

Station Name: Inlet A	**Date:** 10/11/2020	**Start Time:** 11:20
SWIMS Station ID: 10060853	**WBIC:** 5027630	**End Time:** 12:08
GPS Coordinates in the Field: 43.739914, -88.973824		
Team Member Name(s): R. Schultz		

Weather & Site Observations

Staff Gage Level Staff Gage ID: Gage Level (ft.):	**Weather (circle or highlight one):** 1 = Sunny (2= Rain) 3 = Partly Cloudy 4 = Cloudy 5= Snow 6 = Thunderstorm	**Weather over the past two days:** overcast / rain
Water Depth at Site (ft.): 0.03 *Device used:* Stadia rod	**Water Column Appearance (circle or highlight one):** (1 = Clear) 2= Murky 3 = Other:	**Water Color (circle or highlight one):** **use the white portion of the secchi disk to determine color* 1 = Blue 2= Green (3 = Brown) 4 = Red 5 = Yellow little to no tint

Algae Perception - *Represents the amount of observed blue-green algae in the water at your sample location*

Circle or highlight one:

- low water depths
- (1) Beautiful, could not be nicer
- 2= Very minor aesthetic problems; excellent for swimming and boating enjoyment
- 3 = Swimming and aestetic enjoyment of the lake slightly impaired because of high algae levels
- 4 = Desire to swim and enjoyment of the lake is substantially reduced because of algae; would not swim, but boating is OK
- 5 = Poor aesthetics due to algae prevents swimming and boating

Other Observations: rapid flow in shallow stream channel

Transparency

Secchi Depth **Deep Hole monitoring only* *Record as a decimal. Round to the nearest 1/4 ft.*	**Trial #1 (ft.)**	**Trial #2 (ft.)**	**Average (ft.)**	**Notes:**

Transparency Tube **Inlet and Outlet monitoring only*	**Trial #1 (cm)**	**Trial #2 (cm)**	**Average (cm)**	**Notes:**
	>120	>120	120	very clear

Water Samples

Parameter:	**Collected?**		**Preserved?**		**On Ice?**		**Labeled?**	
TP	(Y)	N	Y	N	(Y)	N	(Y)	N
TN	(Y)	N	Y	N	(Y)	N	(Y)	N
Orthophosphate	(Y)	N	Y	N	(Y)	N	(Y)	N
NO2 +NO3 as Nitrogen	(Y)	N	Y	N	(Y)	N	(Y)	N
Chlorophyll a	Y	N	Y	N	Y	N	Y	N

For Deep Hole site only: Has 0-6 foot integrated sample AND < 1 meter from bottom sample been collected? Y N

Has lab "Test Request Form" been completed and photograph taken? *(circle one)* Ye (Y) N

Will samples be shipped or dropped off? *(Circle one)* Shipped (Dropped off) RS

Additional Metrics

YSI Probe Parameters: HANNA

Temperature: 13.89	**Turbidity:** T Hbt
Dissolved Oxygen (DO): 88.8% | 8.84 ppm	**pH:** 7.73

★ H2O samples collected | odor on banks / mud ★ "bird poo" / ammonia smell

Little Green Lake - Stream Flow Field Data Sheet

Station Info

Station Name: Inlet A	**Date:** 10/1/2020	**Start Time:** 11:20
SWIMS Station ID: 10060853	**WBIC:** 5027630	**End Time:** 12:08
Team Member Name(s): R. Schultz		

Stream Width & Depth

Waterway Width (ft.): 5.0

# of Intervals: 5

Length Assessed (ft.) 20

Width of Intervals: 1.0 ft

Other Observations: very low water, flow around large cobble

Interval	Water Depth (ft.)	Interval	Water Depth (ft.)
1	0.0	11	
2	0.02	12	
3	0.04	13	
4	0.02	14	
5	0.0	15	
6		16	
7		17	
8		18	
9		19	
10		20	

Total Sum of Depths: 0.08

Average Depth (Total Sum of Depths/ # of Intervals):
0.08 / 5 = 0.016

Cross-Sectional Area (Average Depth x Stream Width):
0.016 x 5 = 0.08

Stream Depth Measurement Reminders:
- Measure water depth at equal intervals across the stream.
- The first depth is always zero to represent the stream edges.
- Only measure in decimal feet (not feet and inches)

Velocity Measurement

Float Trials	Time (Seconds)
1	42.72
2	51.20
3	47.31
4	41.95
SUM	183.18

Average Float Time (Sum of Trials/ # of Trials):
183.18 / 4 = 45.795

Average Surface Velocity (Length Assessed/ Average Float Time):
20 / 45.795 = 0.4367

* float test abridged using extrapolated 10 foot runs
* too shallow with cobble for successful 20 ft float

10 feet time x 2 used

Calculating Stream Flow

Correction Values
For rough, loose, coarse, weedy bottom: 0.8
For smooth bottom: 0.9

Corrected Surface Velocity (Correction Value x Average Surface Velocity):
0.8 x 0.4367 = 0.3493

Final Corrected Stream Flow (Cross-Secitonal Area x Corrected Surface Velocity x 0.76):
0.08 x 0.3493 x 0.76 = 0.02123

Measuring stream flow with the surface float test method overestimates flow by 24%. This is why we must* ***multiply our stream flow by 0.76* *for a final corrected stream flow discharge.*

Little Green Lake Water Quality Monitoring Data Sheet

Station Info

Station Name: Inlet C	**Date:** 10/1/2020	**Start Time:** 1:10
SWIMS Station ID: 10061190	**WBIC:** N/A	**End Time:** 1:27
GPS Coordinates in the Field: 43.729135, -88.986925		
Team Member Name(s): RSchultz		

Weather & Site Observations

Staff Gage Level Staff Gage ID: Gage Level (ft.):	**Weather (circle or highlight one):** 1 = Sunny (2= Rain) 3 = Partly Cloudy 4 = Cloudy 5= Snow 6 = Thunderstorm	**Weather over the past two days:** Overcast / rain
Water Depth at Site (ft.): *Device used:*	**Water Column Appearance (circle or highlight one):** (1 = Clear) 2= Murky 3 = Other:	**Water Color (circle or highlight one):** **use the white portion of the secchi disk to determine color* 1 = Blue (2= Green) 3 = Brown 4 = Red 5 = Yellow · Clear tho w/ grass clippings

Algae Perception - *Represents the amount of observed blue-green algae in the water at your sample location*

Circle or highlight one:

1 = Beautiful, could not be nicer

2= Very minor aesthetic problems; excellent for swimming and boating enjoyment

3 = Swimming and aestetic enjoyment of the lake slightly impaired because of high algae levels

4 = Desire to swim and enjoyment of the lake is substantially reduced because of algae; would not swim, but boating is OK

5 = Poor aesthetics due to algae prevents swimming and boating

· no algae, small puddle in culvert

Other Observations: no connected flow or "stream", small pool

Transparency

Secchi Depth **Deep Hole monitoring only* *Record as a decimal. Round to the nearest 1/4 ft.*	**Trial #1 (ft.)**	**Trial #2 (ft.)**	**Average (ft.)**	**Notes:**
Transparency Tube **Inlet and Outlet monitoring only*	**Trial #1 (cm)**	**Trial #2 (cm)**	**Average (cm)**	**Notes:**

Water Samples

Parameter:	**Collected?**		**Preserved?**		**On Ice?**		**Labeled?**	
TP	(Y)	N	Y	N	(Y)	N	(Y)	N
TN	(Y)	N	Y	N	(Y)	N	(Y)	N
Orthophosphate	(Y)	N	Y	N	(Y)	N	(Y)	N
NO2 +NO3 as Nitrogen	(Y)	N	Y	N	(Y)	N	(Y)	N
Chlorophyll a	Y	N	Y	N	Y	N	Y	N

For Deep Hole site only: Has 0-6 foot integrated sample AND < 1 meter from bottom sample been collected? Y N

Has lab "Test Request Form" been completed and photograph taken? *(circle one)* Yes (Y) N

Will samples be shipped or dropped off? *(Circle one)* Shipped (Dropped off)

Additional Metrics

YSI Probe Parameters:

Temperature: 17.45	**Turbidity:**
Dissolved Oxygen (DO): 70.1 % | 6.46 mg/L	**pH:** 6.94

& Sample collected

Little Green Lake Water Quality Monitoring Data Sheet

Station Info

Station Name: Outlet	**Date:** 10/1/2026	**Start Time:** 12:15
SWIMS Station ID: 10060855	**WBIC:** 162400	**End Time:** 1:00
GPS Coordinates in the Field: 43.734527, -88.972258		
Team Member Name(s): R. Schultz		

Weather & Site Observations

Staff Gage Level Staff Gage ID: Gage Level (ft.):	**Weather (circle or highlight one):** 1 = Sunny (2= Rain) 3 = Partly Cloudy 4 = Cloudy 5= Snow 6 = Thunderstorm	**Weather over the past two days:** overcast / rain
Water Depth at Site (ft.): 1.4 *Device used:* statia rod	**Water Column Appearance (circle or highlight one):** 1 = Clear (2= Murky) 3 = Other:	**Water Color (circle or highlight one):** **use the white portion of the secchi disk to determine color* 1 = Blue (2= Green) 3 = Brown 4 = Red 5 = Yellow

Algae Perception - *Represents the amount of observed blue-green algae in the water at your sample location*

Circle or highlight one:

1 = Beautiful, could not be nicer

2= Very minor aesthetic problems; excellent for swimming and boating enjoyment

3 = Swimming and aestetic enjoyment of the lake slightly impaired because of high algae levels

4 = Desire to swim and enjoyment of the lake is substantially reduced because of algae; would not swim, but boating is OK

(5) = Poor aesthetics due to algae prevents swimming and boating

Other Observations: bubbles / foam on surface of H2O

Transparency

Secchi Depth **Deep Hole monitoring only* *Record as a decimal. Round to the nearest 1/4 ft.*	**Trial #1 (ft.)**	**Trial #2 (ft.)**	**Average (ft.)**	**Notes:**
Transparency Tube **Inlet and Outlet monitoring only*	**Trial #1 (cm)** 53	**Trial #2 (cm)** 48	**Average (cm)**	**Notes:** suspended granules of algae

Water Samples

Parameter:	**Collected?**		**Preserved?**		**On Ice?**		**Labeled?**	
TP	(Y)	N	Y	N	(Y)	N	(Y)	N
TN	(Y)	N	Y	N	(Y)	N	(Y)	N
Orthophosphate	(Y)	N	Y	N	(Y)	N	(Y)	N
NO2 +NO3 as Nitrogen	(Y)	N	Y	N	(Y)	N	(Y)	N
Chlorophyll a	Y	N	Y	N	Y	N	Y	N

For Deep Hole site only: Has 0-6 foot integrated sample AND < 1 meter from bottom sample been collected? Y N

Has lab "Test Request Form" been completed and photograph taken? *(circle one)* Ye (Y) N

Will samples be shipped or dropped off? *(Circle one)* Shipped (Dropped off) RS

Additional Metrics

YSI Probe Parameters: HANNA

Temperature: 19.01 °C	**Turbidity:** T tube
Dissolved Oxygen (DO): 96.6 % | 8.63 ppm	**pH:** 9.27

* H2O sample collected

Little Green Lake - Stream Flow Field Data Sheet

Station Info

Station Name: Outlet	**Date:** 10/1/2026	**Start Time:** 12:15
SWIMS Station ID: 10060855	**WBIC:** 162400	**End Time:** 1:00
Team Member Name(s): R. Schultz.		

Stream Width & Depth

Waterway Width (ft.): 7.0 **# of Intervals:** 7 **Other Observations:** highest water level observed by RS in 2026

Length Assessed (ft.) 20 **Width of Intervals:** 1.0

Interval	Water Depth (ft.)	Interval	Water Depth (ft.)
1	0	11	
2	1.23	12	
3	1.46	13	
4	1.43	14	
5	1.31	15	
6	1.28	16	
7	0	17	
8	|	18	
9	|	19	
10	|	20	

Total Sum of Depths: 6.71

Average Depth (Total Sum of Depths/ # of Intervals):
6.71 / 7 = 0.95857

Cross-Sectional Area (Average Depth x Stream Width):
0.9585 x 7.0 = 6.71

Stream Depth Measurement Reminders:
- Measure water depth at equal intervals across the stream.
- The first depth is always zero to represent the stream edges.
- Only measure in decimal feet (not feet and inches)

measurements on steel not concrete wings

Velocity Measurement

Float Trials	Time (Seconds)
1	37.08
2	36.76
3	34.82
4	37.15
SUM	145.81

Average Float Time (Sum of Trials/ # of Trials):
145.81 / 4 = 36.452

Average Surface Velocity (Length Assessed/ Average Float Time):
20 / 36.452 = 0.5486

Calculating Stream Flow

Correction Values
For rough, loose, coarse, weedy bottom: 0.8
For smooth bottom: 0.9

Corrected Surface Velocity (Correction Value x Average Surface Velocity):
0.8 x 0.5486 = 0.4389

Final Corrected Stream Flow (Cross-Secitonal Area x Corrected Surface Velocity x 0.76):
6.71 x 0.4389 x 0.76 = 2.2382

Measuring stream flow with the surface float test method overestimates flow by 24%. This is why we must **multiply our stream flow by 0.76 for a final corrected stream flow discharge.*

Little Green Lake Water Quality Monitoring Data Sheet

Station Info

Station Name: Retention Basin 2 **Inlet**	**Date:** 10/1/2026	**Start Time:** 10:57
SWIMS Station ID: 10060856	**WBIC:** N/A	**End Time:** 11:17
GPS Coordinates in the Field: 43.74311, -88.966774		
Team Member Name(s): R. Schultz		

Weather & Site Observations

Staff Gage Level Staff Gage ID: Gage Level (ft.):	**Weather (circle or highlight one):** 1 = Sunny (2= Rain) 3 = Partly Cloudy 4 = Cloudy 5= Snow 6 = Thunderstorm	**Weather over the past two days:** overcast / rain
Water Depth at Site (ft.): *Device used:*	**Water Column Appearance (circle or highlight one):** (1 = Clear) 2= Murky 3 = Other:	**Water Color (circle or highlight one):** **use the white portion of the secchi disk to determine color* 1 = Blue 2= Green (3 = Brown) 4 = Red 5 = Yellow

Algae Perception - *Represents the amount of observed blue-green algae in the water at your sample location*
Circle or highlight one:

1 = Beautiful, could not be nicer

2= Very minor aesthetic problems; excellent for swimming and boating enjoyment

3 = Swimming and aestetic enjoyment of the lake slightly impaired because of high algae levels

(4) = Desire to swim and enjoyment of the lake is substantially reduced because of algae; would not swim, but boating is OK

5 = Poor aesthetics due to algae prevents swimming and boating

Other Observations: fair clarity visually observed, fine settled sediment on bottom

Transparency

Secchi Depth **Deep Hole monitoring only* *Record as a decimal. Round to the nearest 1/4 ft.*	**Trial #1 (ft.)**	**Trial #2 (ft.)**	**Average (ft.)**	**Notes:**
Transparency Tube **Inlet and Outlet monitoring only*	**Trial #1 (cm)**	**Trial #2 (cm)**	**Average (cm)**	**Notes:**

Water Samples

Parameter:	**Collected?**		**Preserved?**		**On Ice?**		**Labeled?**	
TP	(Y)	N	Y	N	(Y)	N	(Y)	N
TN	(Y)	N	Y	N	(Y)	N	(Y)	N
Orthophosphate	(Y)	N	Y	N	(Y)	N	(Y)	N
NO2 +NO3 as Nitrogen	(Y)	N	Y	N	(Y)	N	(Y)	N
Chlorophyll a	Y	N	Y	N	Y	N	Y	N

For Deep Hole site only: Has 0-6 foot integrated sample AND < 1 meter from bottom sample been collected? Y N

Has lab "Test Request Form" been completed and photograph taken? *(circle one)* Ye (Y) N

Will samples be shipped or dropped off? *(Circle one)* Shipped (Dropped off) RS

Additional Metrics

YSI Probe Parameters:

Temperature: 17.72		**Turbidity:**
Dissolved Oxygen (DO): 59.8 %	5.48 ppm	**pH:** 7.80

Little Green Lake Water Quality Monitoring Data Sheet

Station Info

Station Name: Retention Basin 1 **Outlet**	**Date:** 10/1/2024	**Start Time:** 10:00
SWIMS Station ID: 10060857	**WBIC:** N/A	**End Time:** 10:29
GPS Coordinates in the Field: 43.746309, -88.978026		
Team Member Name(s): R. Schultz		

Weather & Site Observations

Staff Gage Level Staff Gage ID: Gage Level (ft.):	**Weather (circle or highlight one):** 1 = Sunny (2= Rain) 3 = Partly Cloudy 4 = Cloudy 5= Snow 6 = Thunderstorm	**Weather over the past two days:** overcast / rain
Water Depth at Site (ft.): *Device used:*	**Water Column Appearance (circle or highlight one):** (1 = Clear) 2= Murky 3 = Other:	**Water Color (circle or highlight one):** **use the white portion of the secchi disk to determine color* high clarity visual obs. 1 = Blue 2= Green (3= Brown) 4 = Red 5 = Yellow

Algae Perception - *Represents the amount of observed blue-green algae in the water at your sample location*

Circle or highlight one:

1 = Beautiful, could not be nicer

2= Very minor aesthetic problems; excellent for swimming and boating enjoyment

3 = Swimming and aestetic enjoyment of the lake slightly impaired because of high algae levels

(4 = Desire to swim and enjoyment of the lake is substantially reduced because of algae; would not swim, but boating is OK

5 = Poor aesthetics due to algae prevents swimming and boating

- no flow from pipe, standing H2O in pool

Other Observations: duckweed & submerged veg.

Transparency

Secchi Depth **Deep Hole monitoring only* *Record as a decimal. Round to the nearest 1/4 ft.*	**Trial #1 (ft.)**	**Trial #2 (ft.)**	**Average (ft.)**	**Notes:**
Transparency Tube **Inlet and Outlet monitoring only*	**Trial #1 (cm)**	**Trial #2 (cm)**	**Average (cm)**	**Notes:**

Water Samples

Parameter:	**Collected?**		**Preserved?**		**On Ice?**		**Labeled?**	
TP	(Y)	N	Y	N	Y	N	(Y)	N
TN	(Y)	N	Y	N	Y	N	(Y)	N
Orthophosphate	(Y)	N	Y	N	Y	N	(Y)	N
NO2 +NO3 as Nitrogen	(Y)	N	Y	N	Y	N	(Y)	N
Chlorophyll a	Y	N	Y	N	Y	N	Y	N

For Deep Hole site only: Has 0-6 foot integrated sample AND < 1 meter from bottom sample been collected? Y N

Has lab "Test Request Form" been completed and photograph taken? *(circle one)* Ye (Y) N

Will samples be shipped or dropped off? *(Circle one)* Shipped (Dropped off) RS

Additional Metrics

YSI Probe Parameters:

Temperature: 17.19	**Turbidity:**
Dissolved Oxygen (DO): 97.7% | 9.07 ppm	**pH:** 7.88

* water sample collected

Little Green Lake Water Quality Monitoring Data Sheet

Station Info

Station Name: Retention Basin 1 **Inlet**	**Date:** 10/1/2024	**Start Time:** 10:24
SWIMS Station ID: 10060857	**WBIC:** N/A	**End Time:** 10:53
GPS Coordinates in the Field: 43.746309, -88.978026		
Team Member Name(s): R. Schultz		

Weather & Site Observations

Staff Gage Level Staff Gage ID: Gage Level (ft.):	**Weather (circle or highlight one):** 1 = Sunny (2= Rain) 3 = Partly Cloudy 4 = Cloudy 5= Snow 6 = Thunderstorm	**Weather over the past two days:** overcast / rain
Water Depth at Site (ft.): *Device used:*	**Water Column Appearance (circle or highlight one):** (1= Clear) 2= Murky 3 = Other:	**Water Color (circle or highlight one):** **use the white portion of the secchi disk to determine color* 1 = Blue 2= Green (3= Brown) 4 = Red 5 = Yellow high clarity visual obs.

Algae Perception - *Represents the amount of observed blue-green algae in the water at your sample location*

Circle or highlight one:

1 = Beautiful, could not be nicer

2= Very minor aesthetic problems; excellent for swimming and boating enjoyment

3 = Swimming and aestetic enjoyment of the lake slightly impaired because of high algae levels

(4) = Desire to swim and enjoyment of the lake is substantially reduced because of algae; would not swim, but boating is OK

5 = Poor aesthetics due to algae prevents swimming and boating

Other Observations: filamentous algae mats

Transparency

	Trial #1	Trial #2	Average	Notes:
Secchi Depth **Deep Hole monitoring only* *Record as a decimal. Round to the nearest 1/4 ft.*				
Transparency Tube **Inlet and Outlet monitoring only*	**Trial #1 (cm)**	**Trial #2 (cm)**	**Average (cm)**	**Notes:**

Water Samples

Parameter:	Collected?		Preserved?		On Ice?		Labeled?	
TP	(Y)	N	Y	N	(Y)	N	(Y)	N
TN	(Y)	N	Y	N	(Y)	N	(Y)	N
Orthophosphate	(Y)	N	Y	N	(Y)	N	(Y)	N
NO2 +NO3 as Nitrogen	(Y)	N	Y	N	(Y)	N	(Y)	N
Chlorophyll a	Y	N	Y	N	Y	N	Y	N

For Deep Hole site only: Has 0-6 foot integrated sample AND < 1 meter from bottom sample been collected? Y N

Has lab "Test Request Form" been completed and photograph taken? *(circle one)* Ye (Y) N

Will samples be shipped or dropped off? *(Circle one)* Shipped (Dropped off) RS

Additional Metrics

YSI Probe Parameters:

Temperature: 18.27	**Turbidity:**
Dissolved Oxygen (DO): 92.1 % | 8.36 mg	**pH:** 8.78

* H2O sample collected