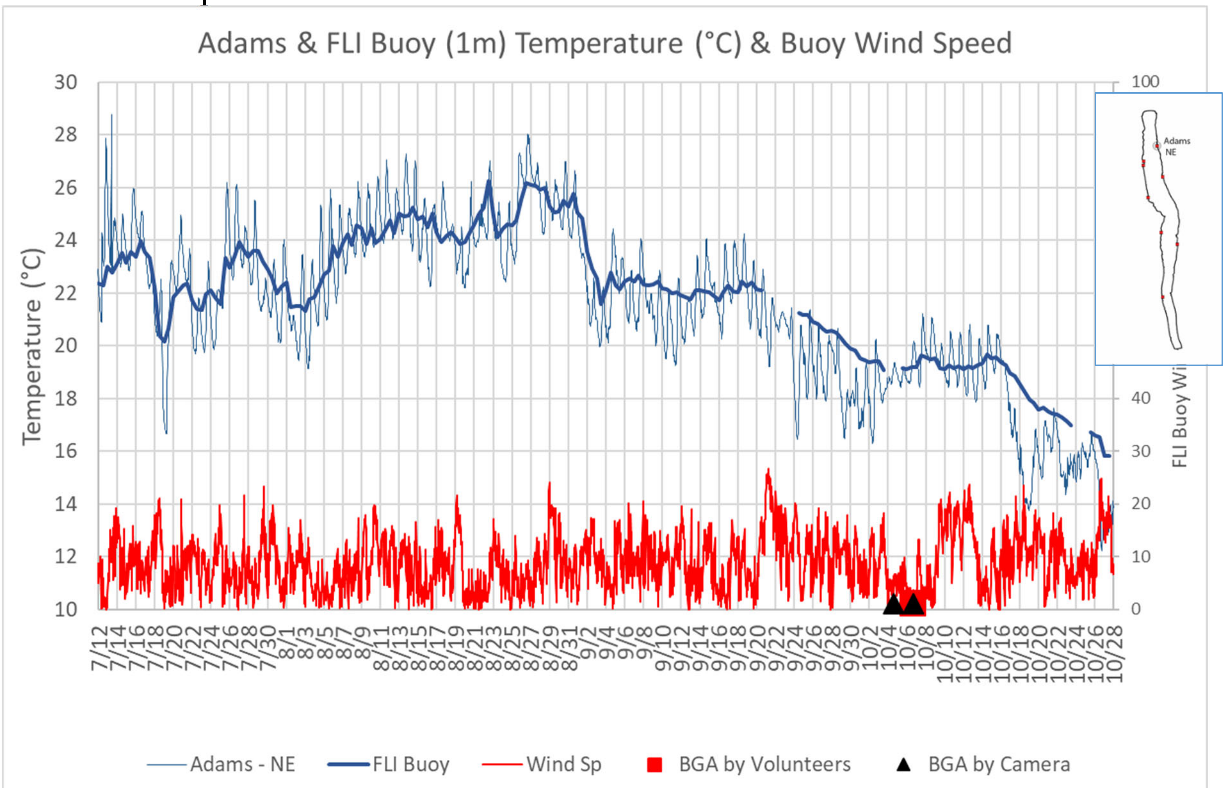
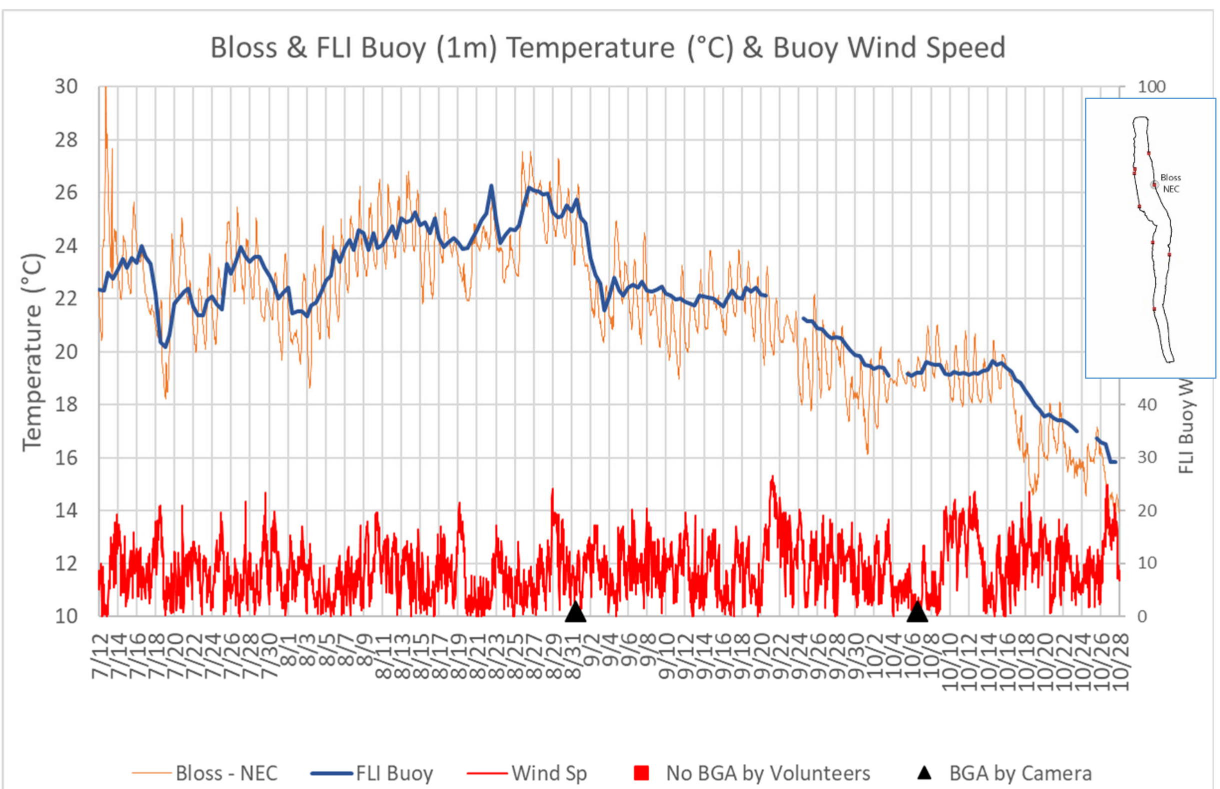
2021 NEARSHORE MONITORING OF CYANOBACTERIA (BLUE-GREEN ALGAE) IN SENECA & OWASCO LAKES

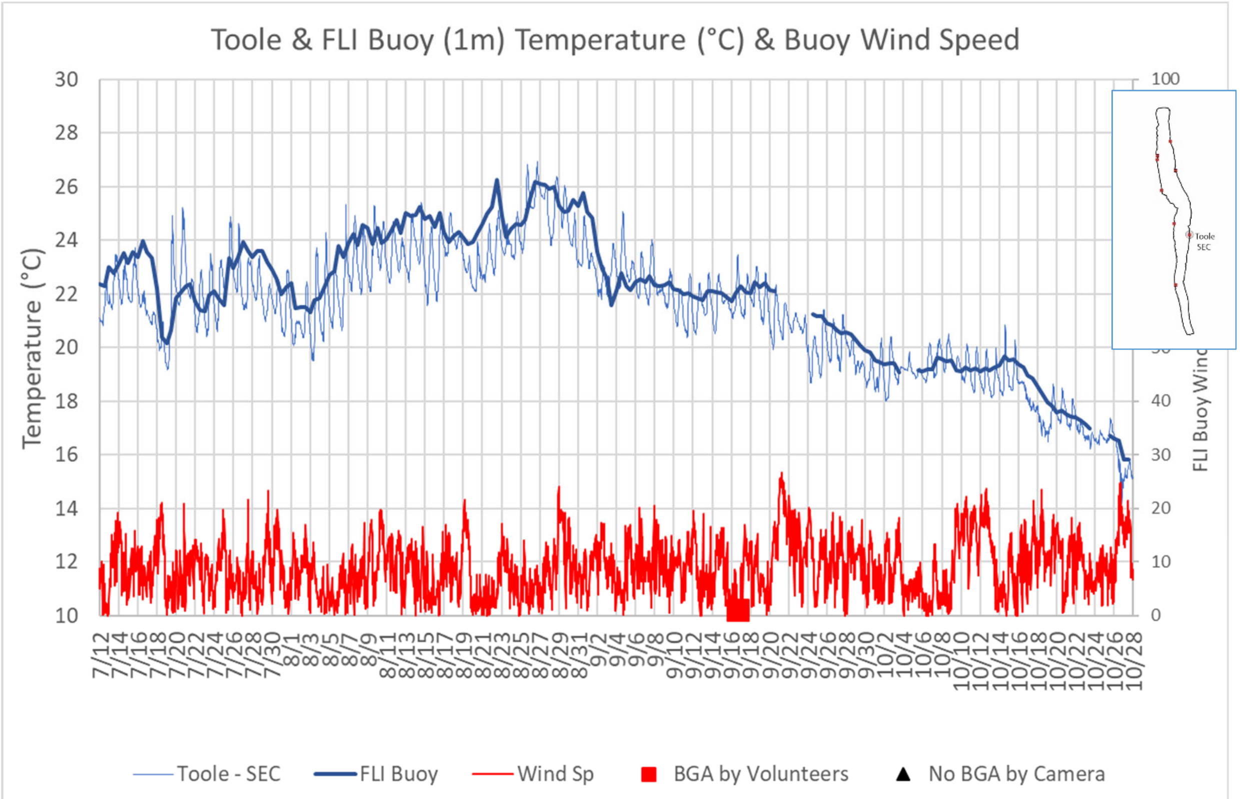
THE 2021 FLI REPORT TO THE SENECA LAKE PURE WATERS ASSOCIATION, FRED L. EMERSON FOUNDATION AND CAYUGA COUNTY

Data Repository

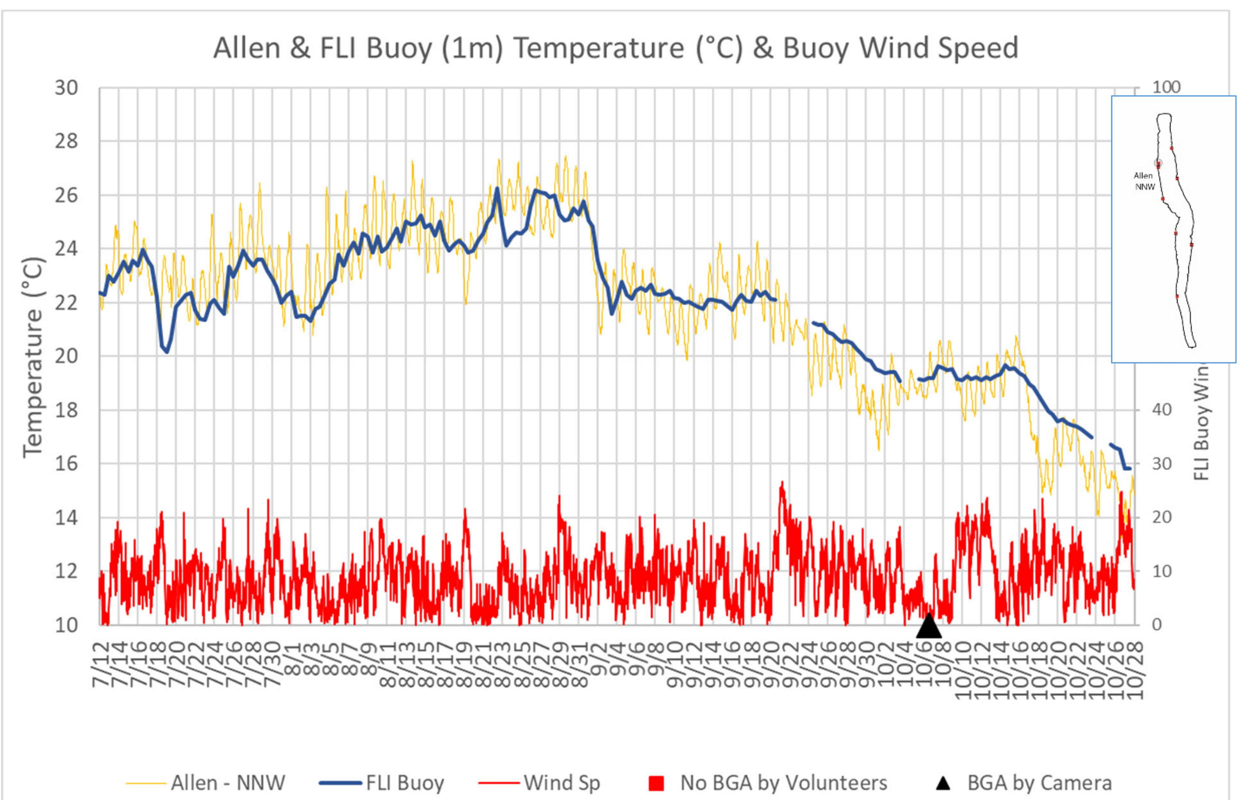
Seneca Lake Water Temperature Data



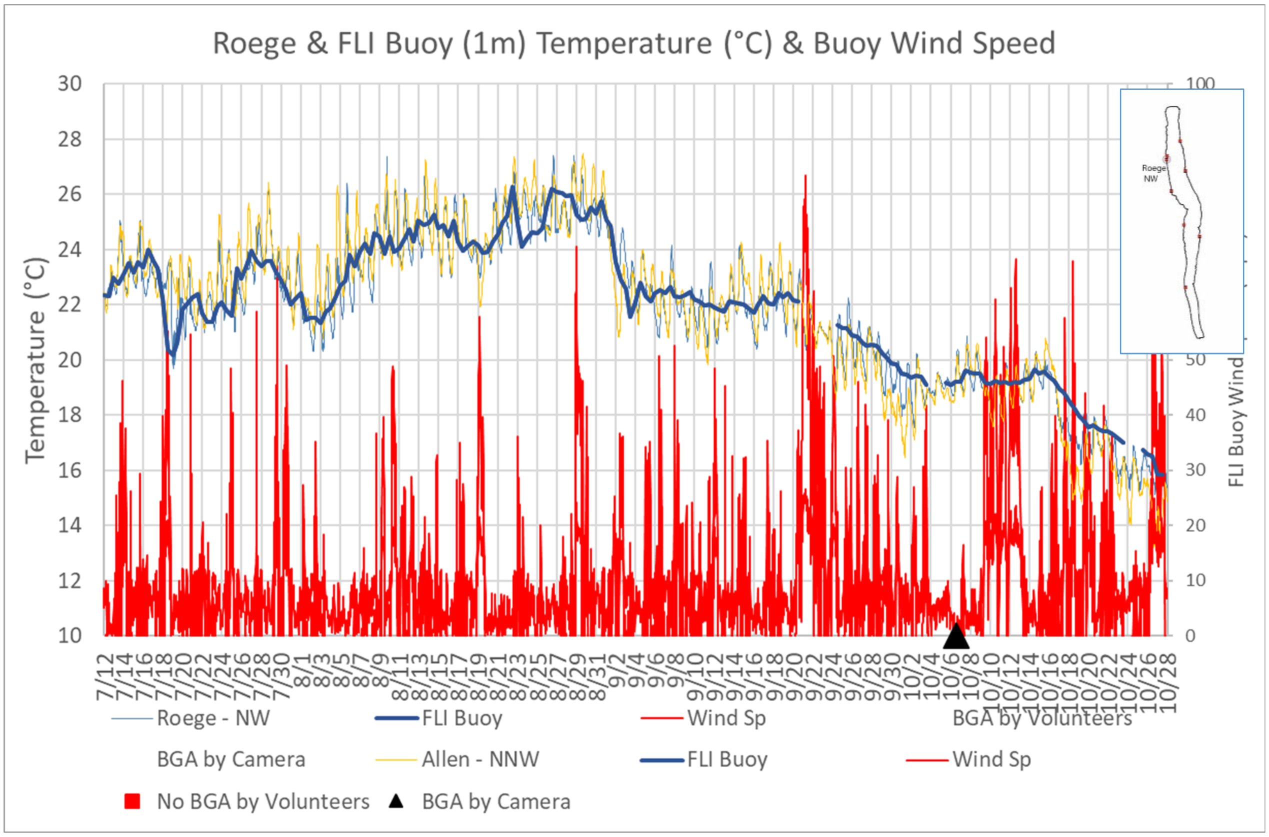


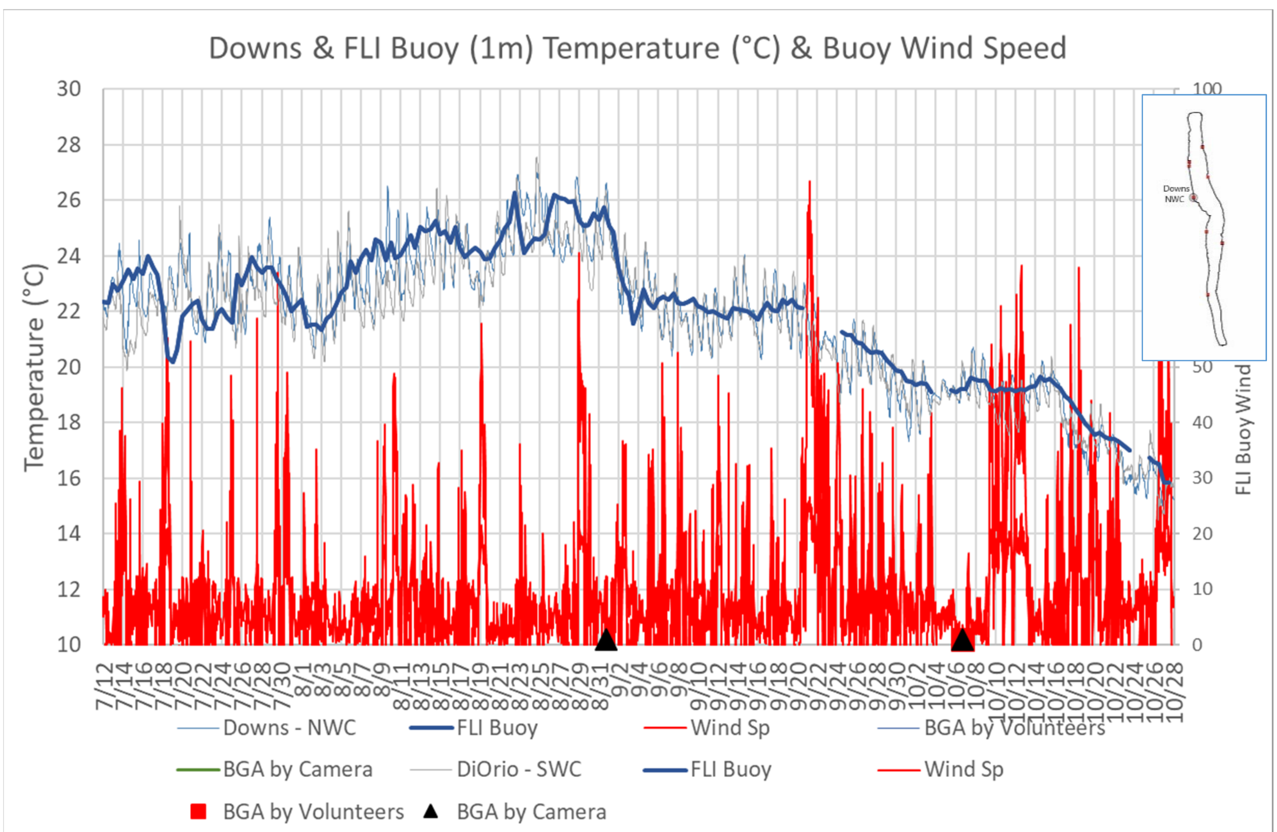


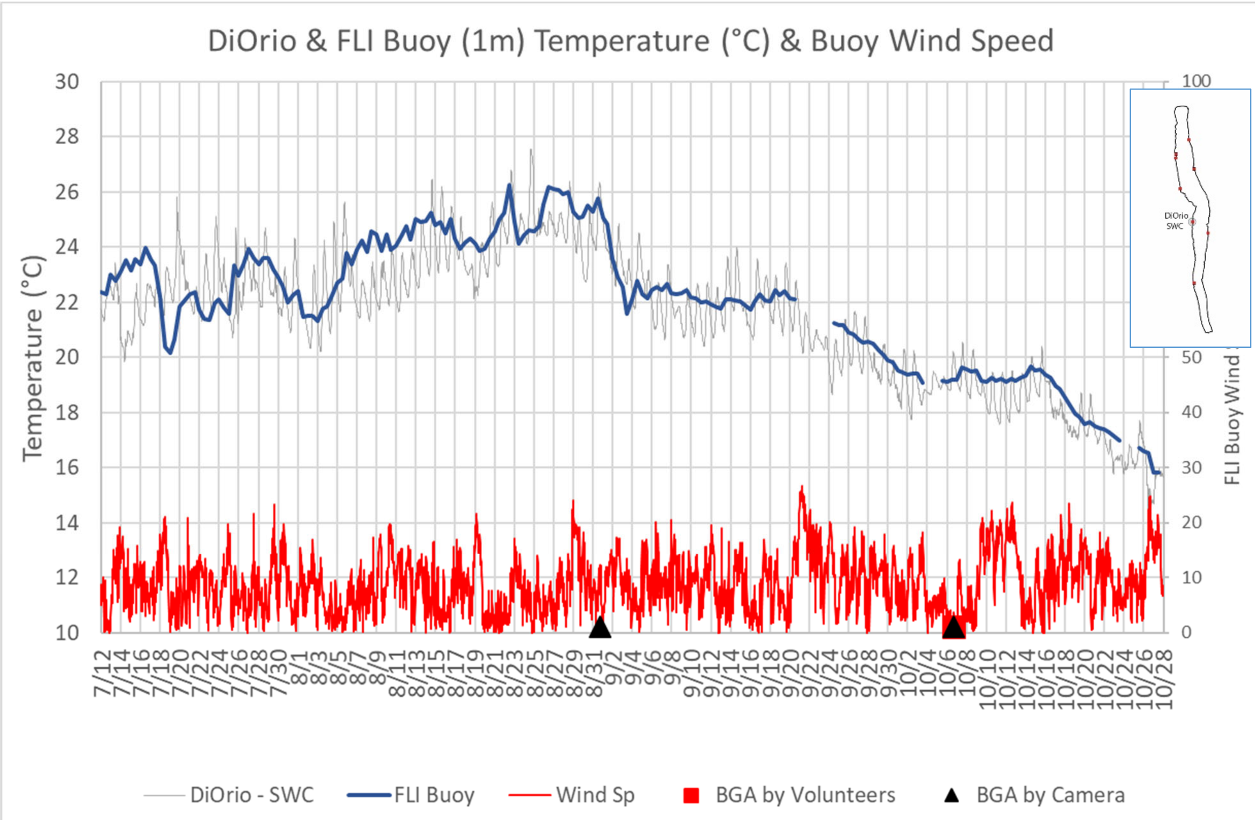
Toole & FLI Buoy (1m) Temperature (°C) & Buoy Wind Speed
Temperature (°C)
FLI Buoy Wind
Toole SEC
Toole - SEC
FLI Buoy
Wind Sp
BGA by Volunteers
No BGA by Camera



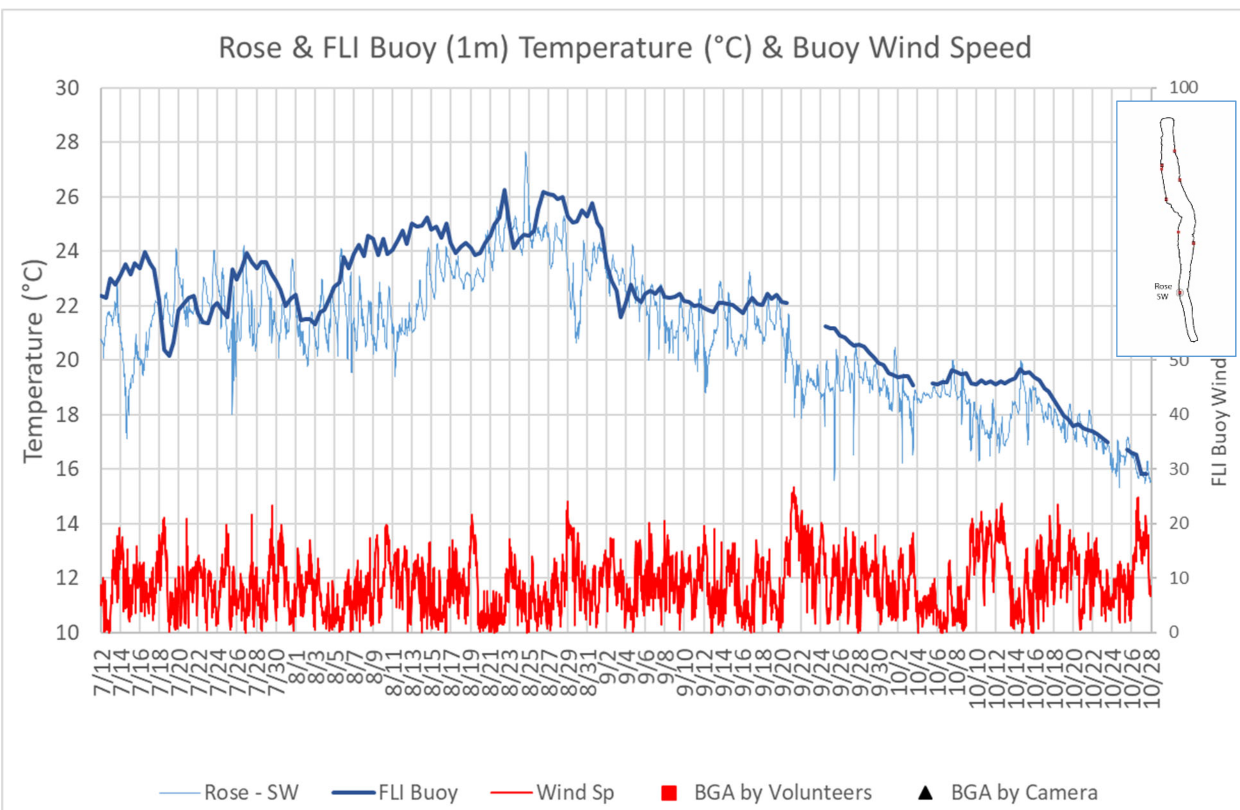
Allen & FLI Buoy (1m) Temperature (°C) & Buoy Wind Speed
Temperature (°C)
FLI Buoy Win
Allen NNW
Allen - NNW
FLI Buoy
Wind Sp
No BGA by Volunteers
BGA by Camera


Roege & FLI Buoy (1m) Temperature (°C) & Buoy Wind Speed
Temperature (°C)
FLI Buoy Wind
Roege NW
Roege - NW
FLI Buoy
Wind Sp
BGA by Volunteers
BGA by Camera
Allen - NNW
FLI Buoy
Wind Sp
No BGA by Volunteers
BGA by Camera


Downs & FLI Buoy (1m) Temperature (°C) & Buoy Wind Speed
Temperature (°C)
FLI Buoy Wind
Downs NWC
Downs - NWC
FLI Buoy
Wind Sp
BGA by Volunteers
BGA by Camera
DiOrio - SWC
FLI Buoy
Wind Sp
BGA by Volunteers
BGA by Camera

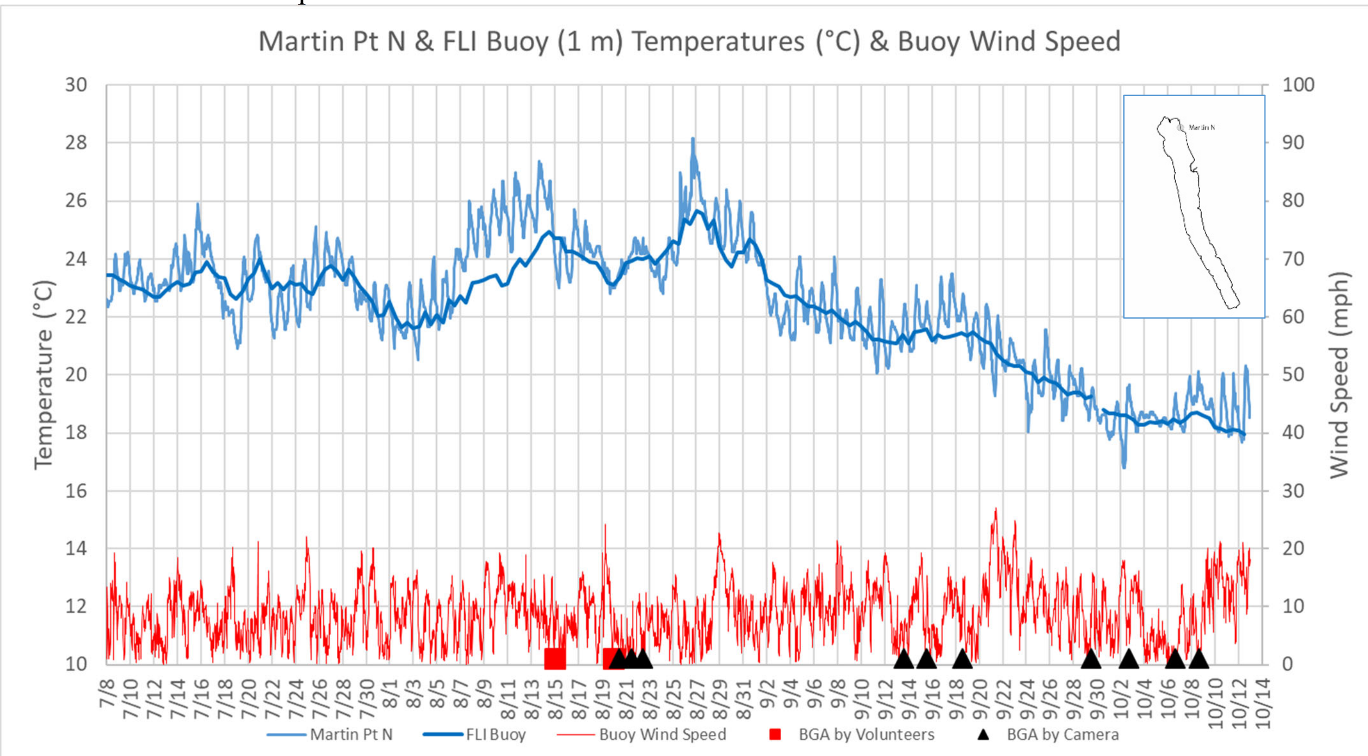


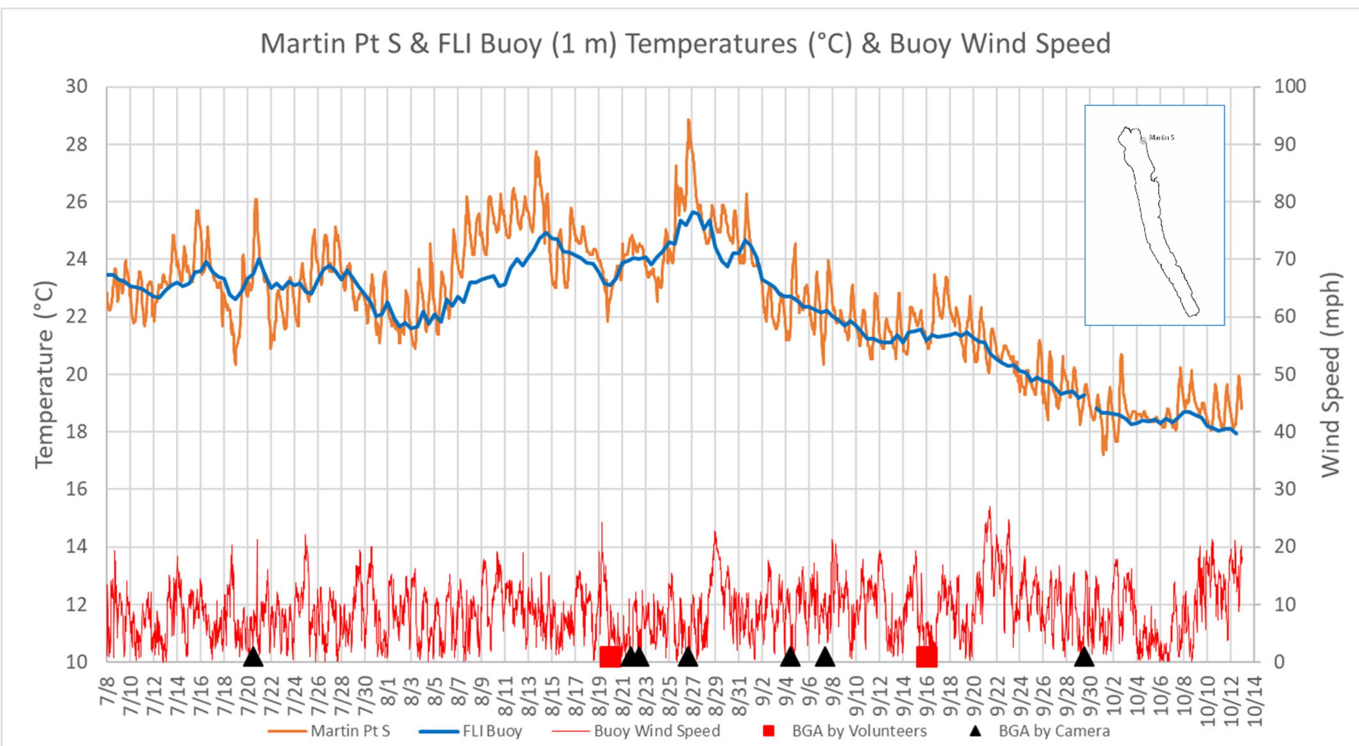
DiOrio & FLI Buoy (1m) Temperature (°C) & Buoy Wind Speed
Temperature (°C)
FLI Buoy Wind
DiOrio SWC
DiOrio - SWC
FLI Buoy
Wind Sp
BGA by Volunteers
BGA by Camera

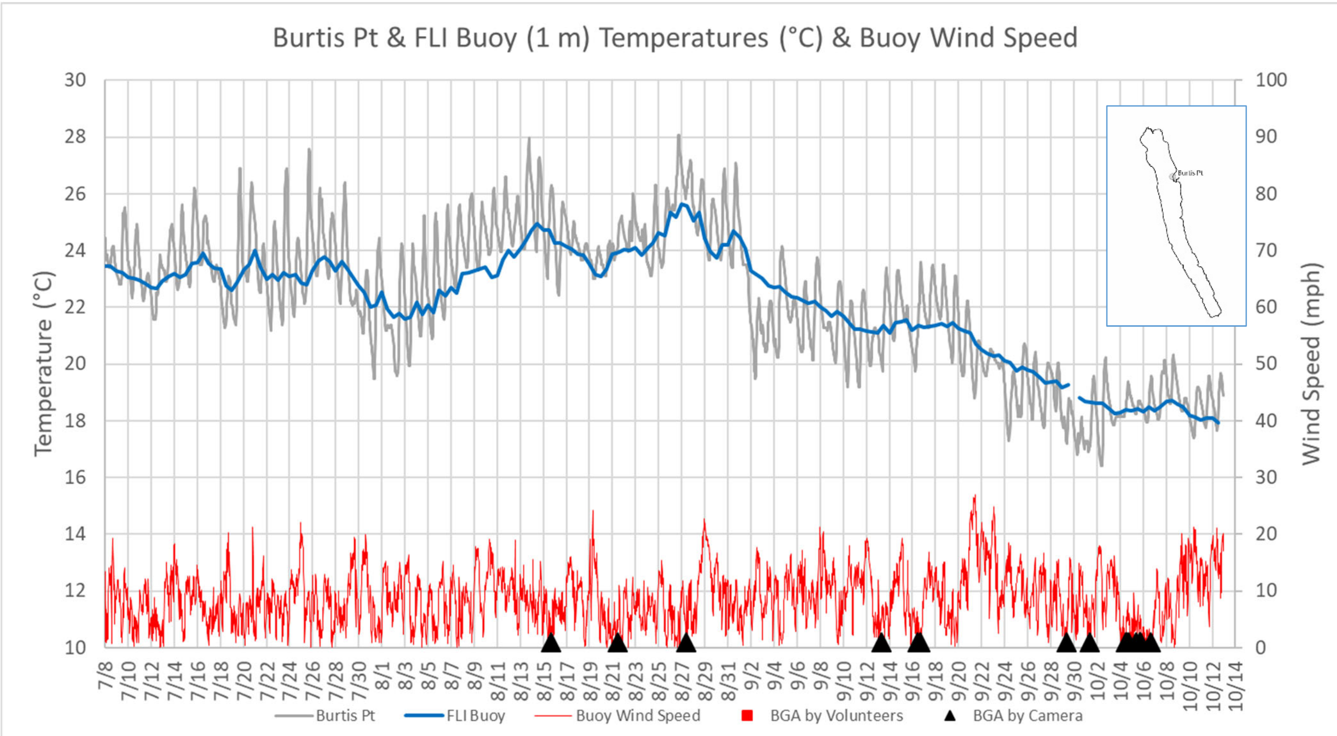


Rose & FLI Buoy (1m) Temperature (°C) & Buoy Wind Speed
Temperature (°C)
FLI Buoy Wind
Rose SW
Rose - SW
FLI Buoy
Wind Sp
BGA by Volunteers
BGA by Camera

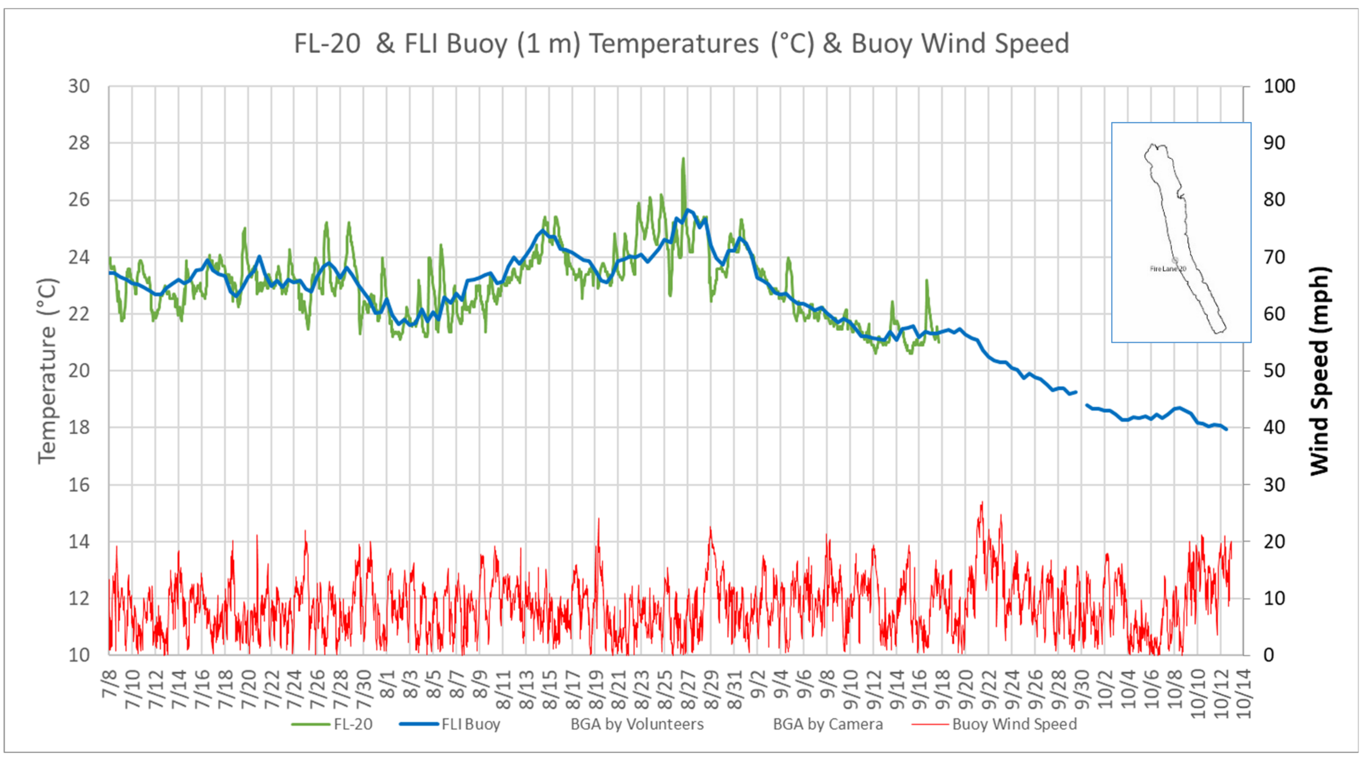
Owasco Lake Water Temperature Data





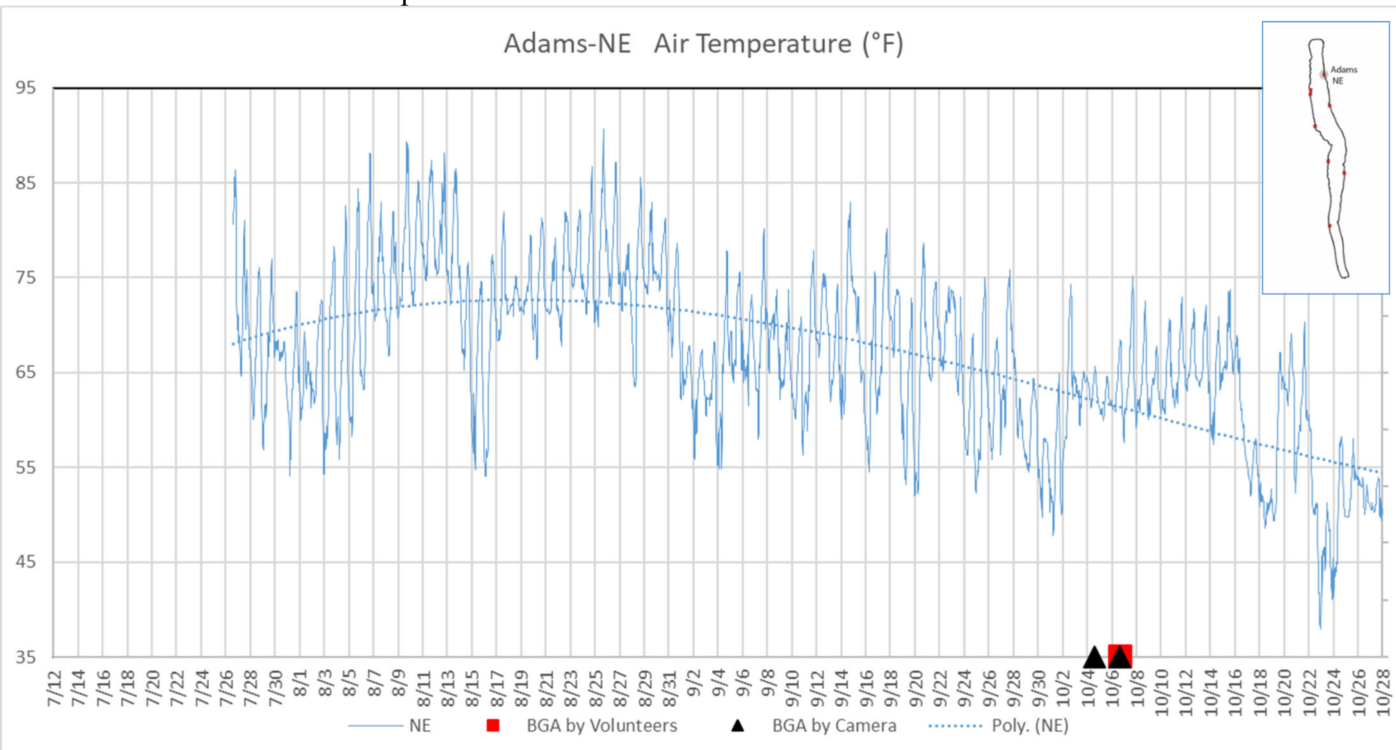


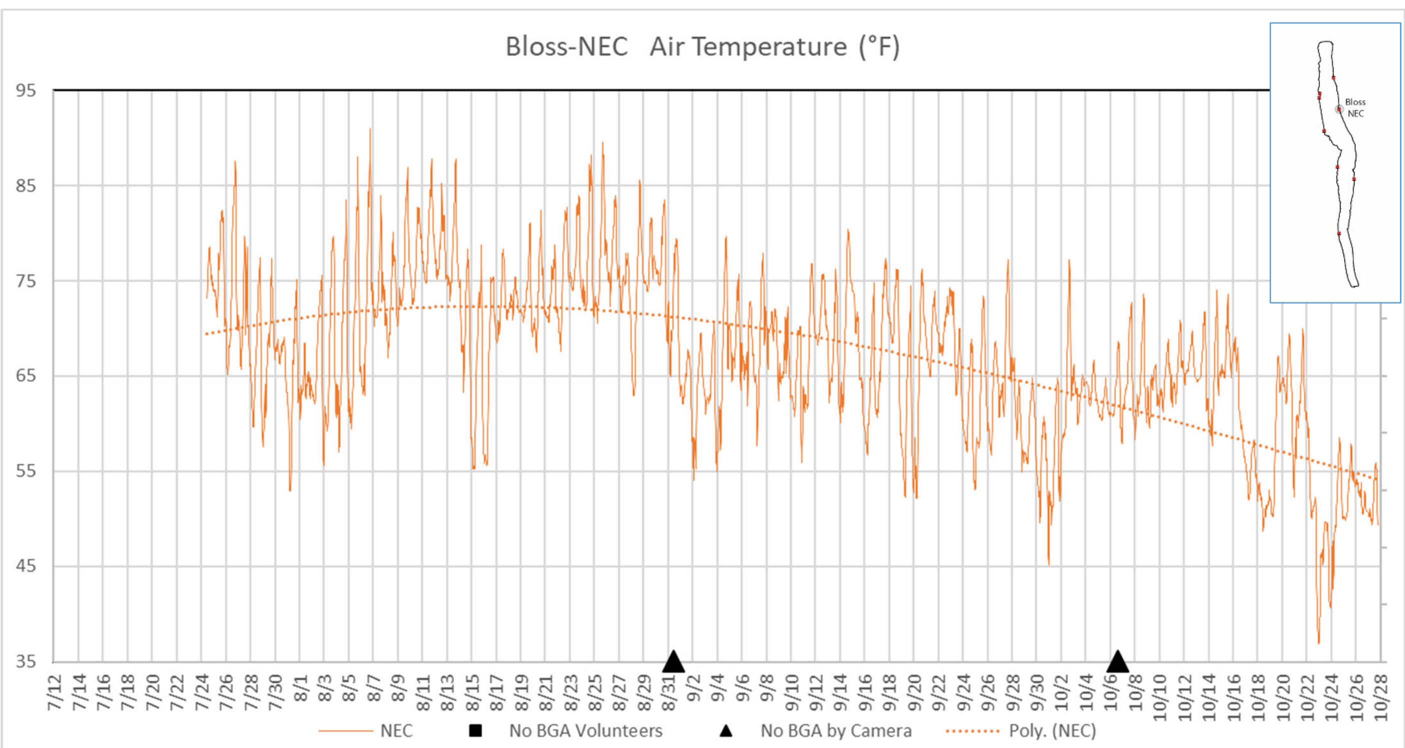
Burtis Pt & FLI Buoy (1 m) Temperatures (°C) & Buoy Wind Speed
Temperature (°C)
Wind Speed (mph)
Burtis Pt
FLI Buoy
Buoy Wind Speed
BGA by Volunteers
BGA by Camera

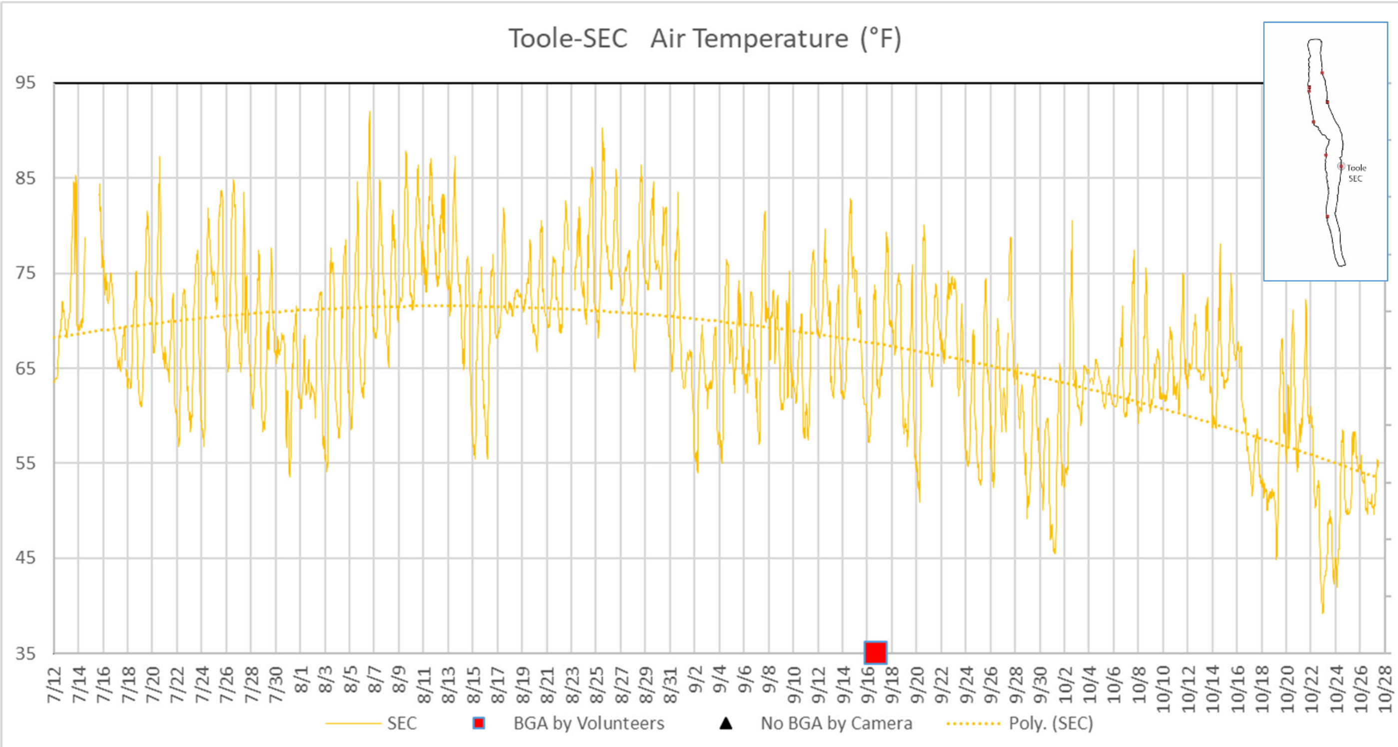


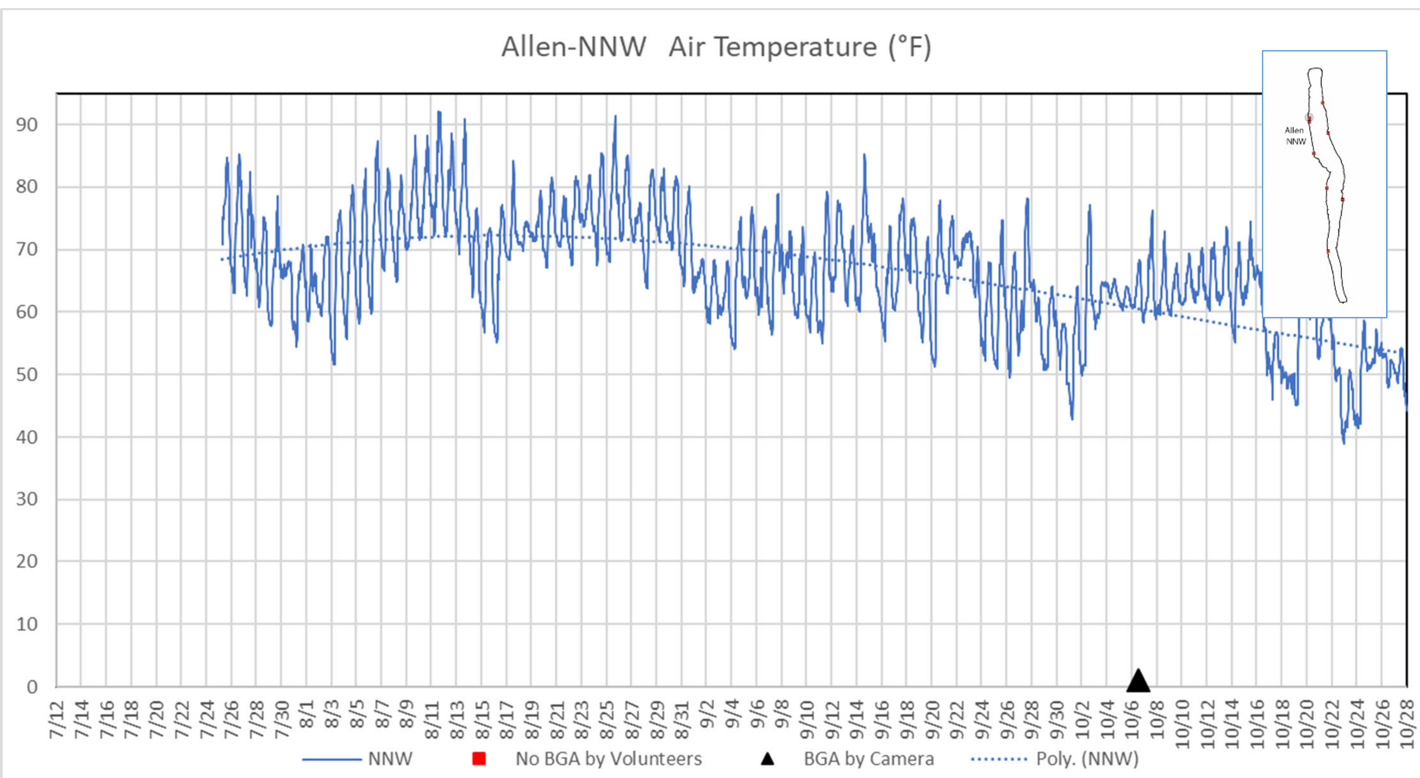
FL-20 & FLI Buoy (1 m) Temperatures (°C) & Buoy Wind Speed
Temperature (°C)
Wind Speed (mph)
FL-20
FLI Buoy
BGA by Volunteers
BGA by Camera
Buoy Wind Speed

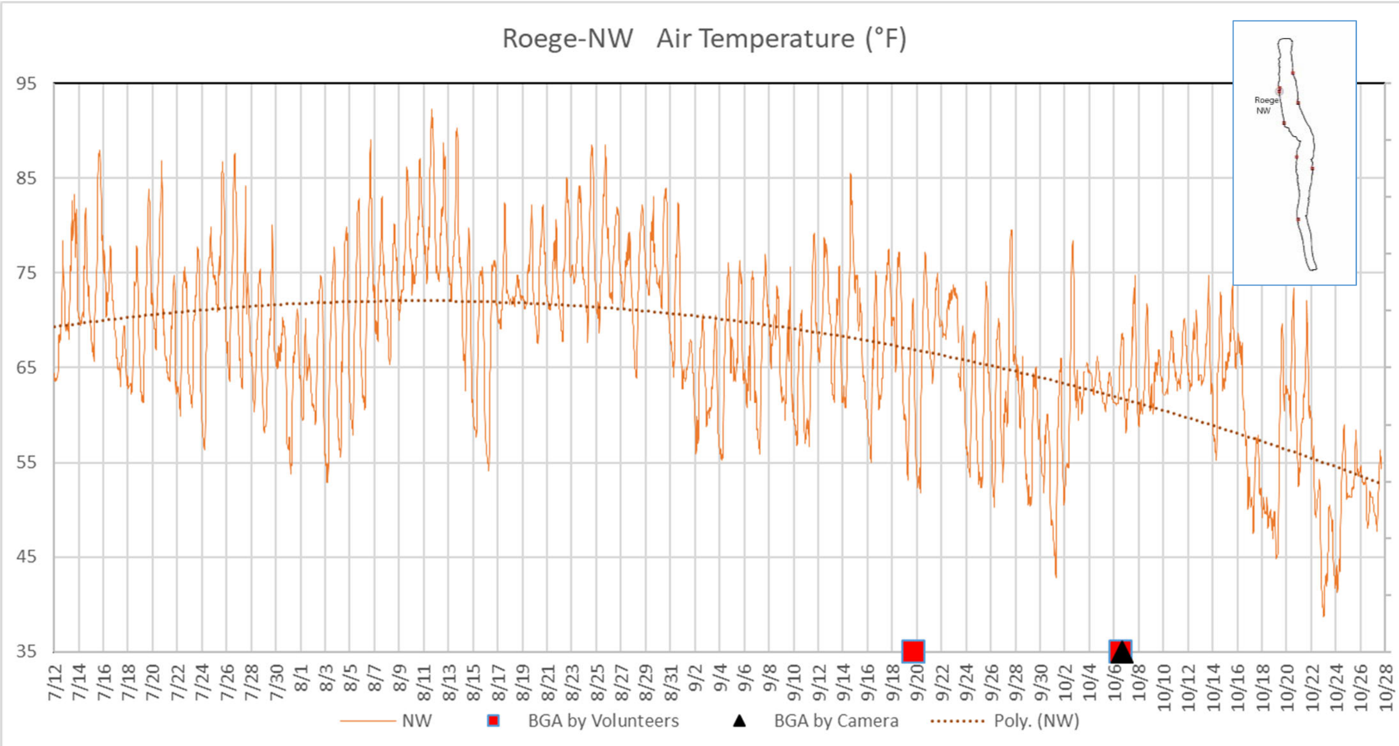
Seneca Weather Data – Air Temperatures



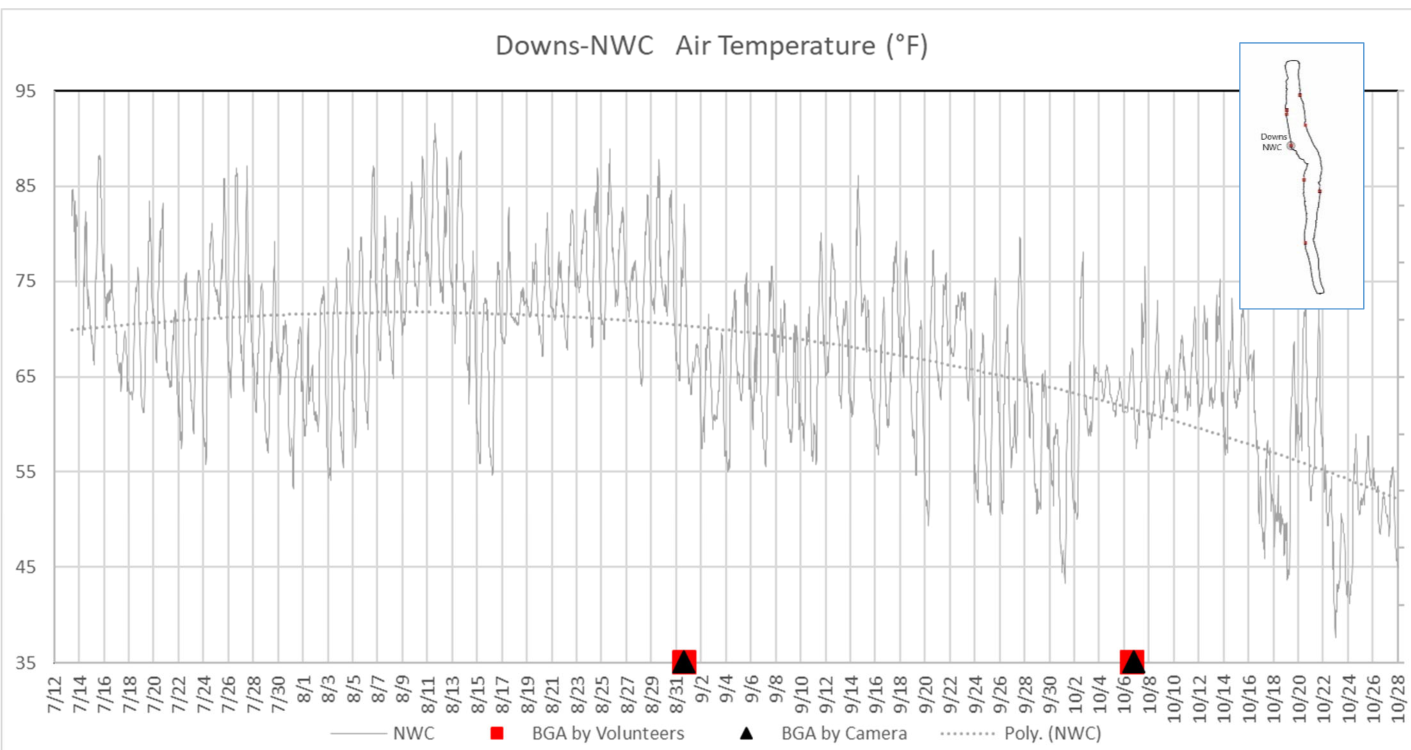



Toole-SEC Air Temperature (°F)
Toole SEC
SEC
BGA by Volunteers
No BGA by Camera
Poly. (SEC)

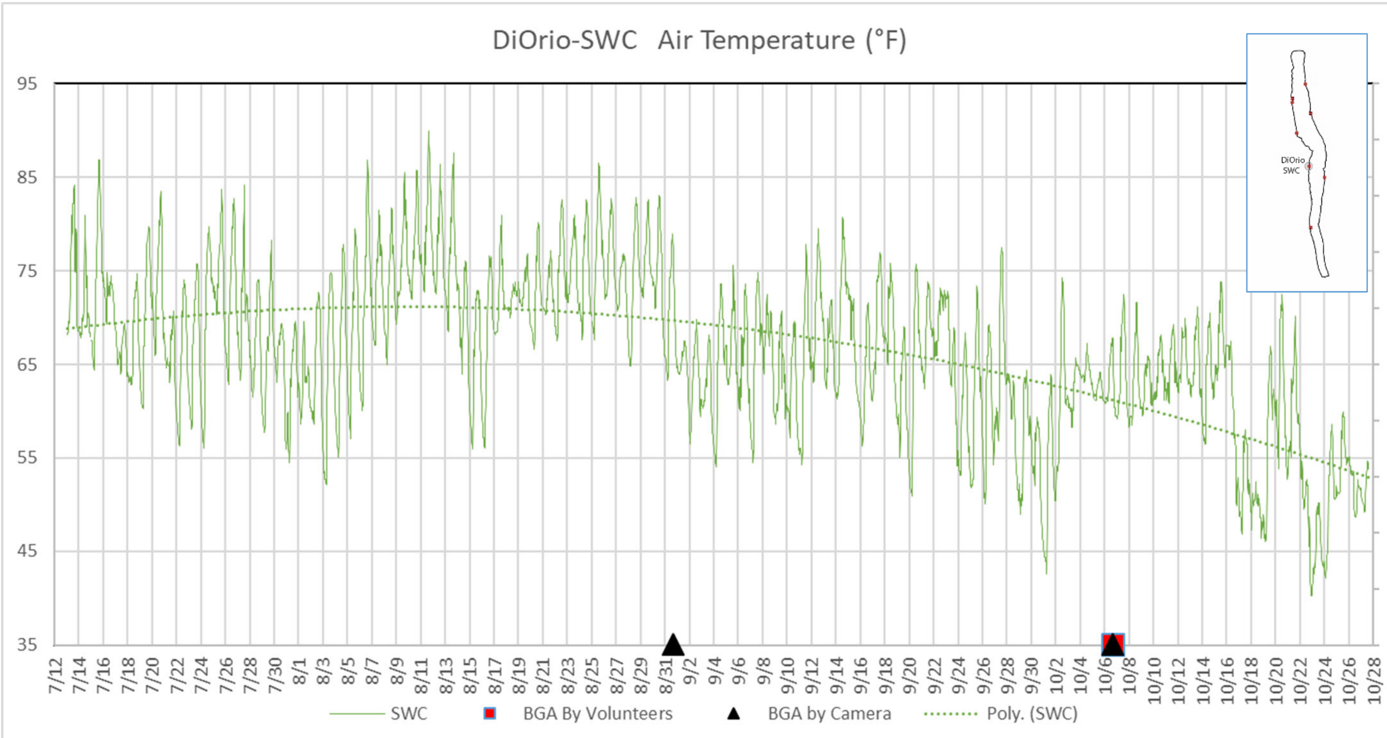

Allen-NNW Air Temperature (°F)
Allen NNW
NNW
No BGA by Volunteers
BGA by Camera
Poly. (NNW)

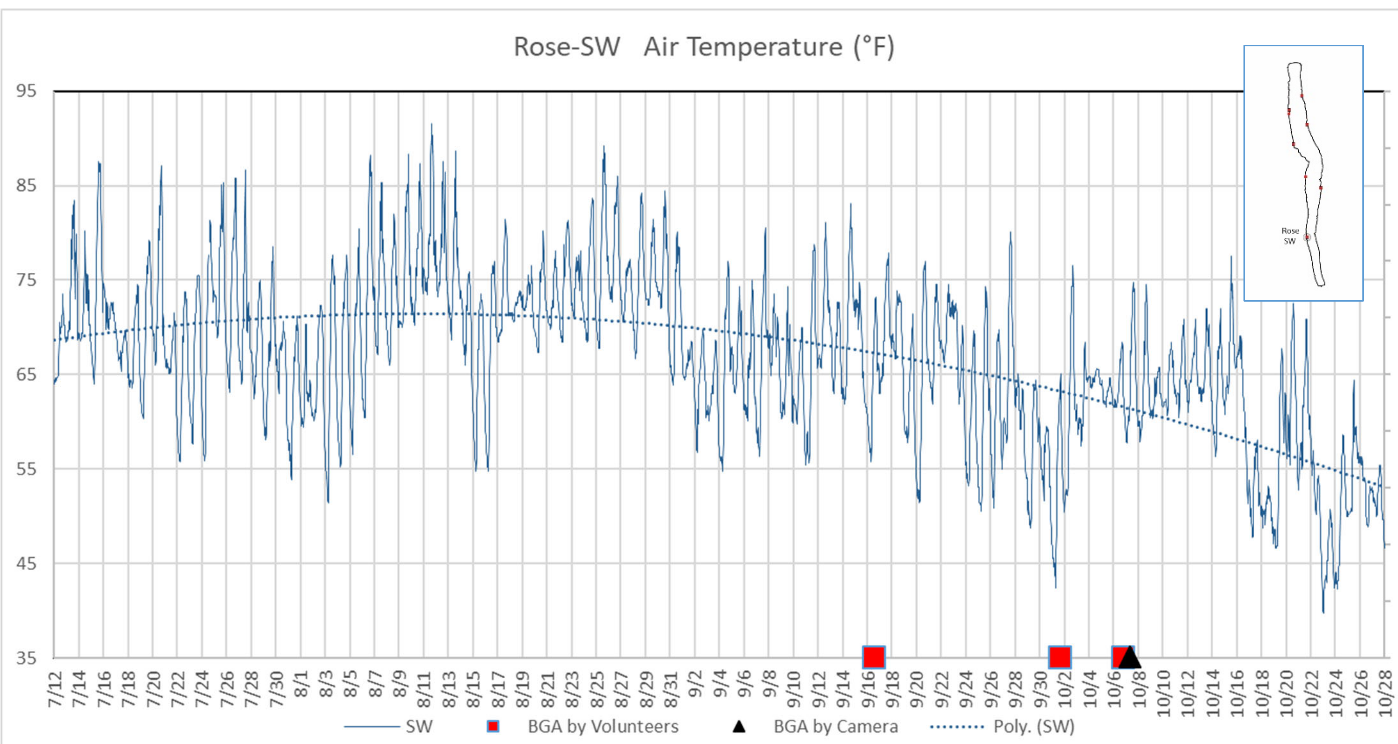


Roege-NW Air Temperature (°F)
95
85
75
65
55
45
35
7/12 7/14 7/16 7/18 7/20 7/22 7/24 7/26 7/28 7/30 8/1 8/3 8/5 8/7 8/9 8/11 8/13 8/15 8/17 8/19 8/21 8/23 8/25 8/27 8/29 8/31 9/2 9/4 9/6 9/8 9/10 9/12 9/14 9/16 9/18 9/20 9/22 9/24 9/26 9/28 9/30 10/2 10/4 10/6 10/8 10/10 10/12 10/14 10/16 10/18 10/20 10/22 10/24 10/26 10/28
NW
BGA by Volunteers
BGA by Camera
Poly. (NW)
Roege NW

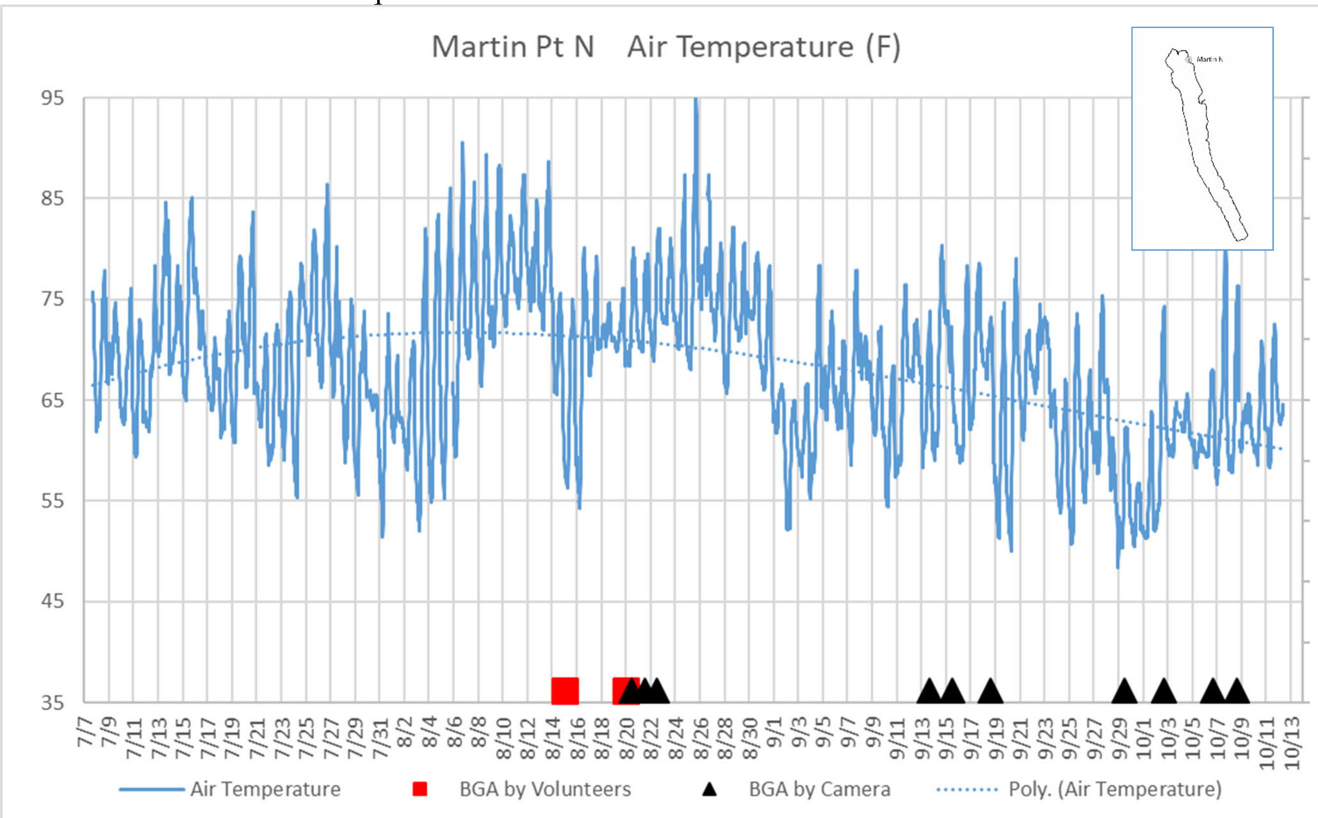


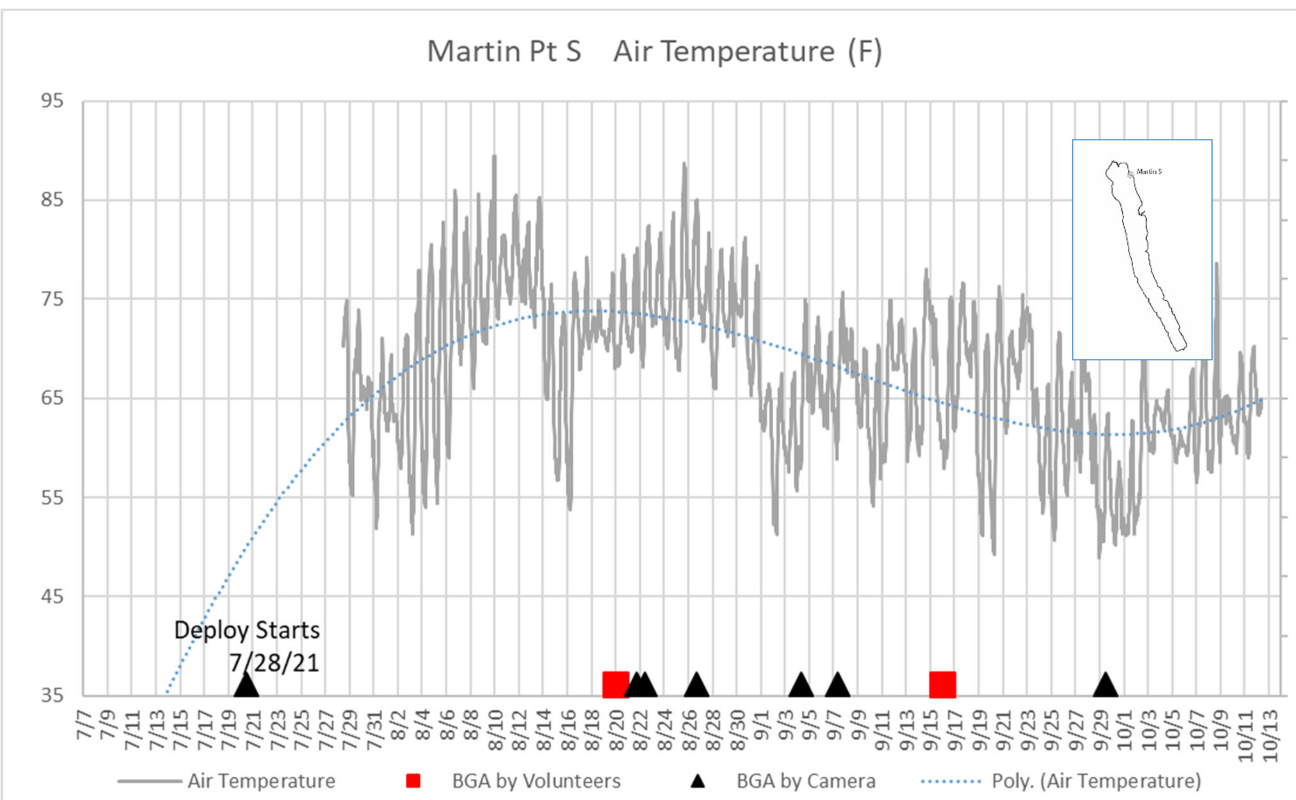
Downs-NWC Air Temperature (°F)
95
85
75
65
55
45
35
7/12 7/14 7/16 7/18 7/20 7/22 7/24 7/26 7/28 7/30 8/1 8/3 8/5 8/7 8/9 8/11 8/13 8/15 8/17 8/19 8/21 8/23 8/25 8/27 8/29 8/31 9/2 9/4 9/6 9/8 9/10 9/12 9/14 9/16 9/18 9/20 9/22 9/24 9/26 9/28 9/30 10/2 10/4 10/6 10/8 10/10 10/12 10/14 10/16 10/18 10/20 10/22 10/24 10/26 10/28
NWC
BGA by Volunteers
BGA by Camera
Poly. (NWC)
Downs NWC

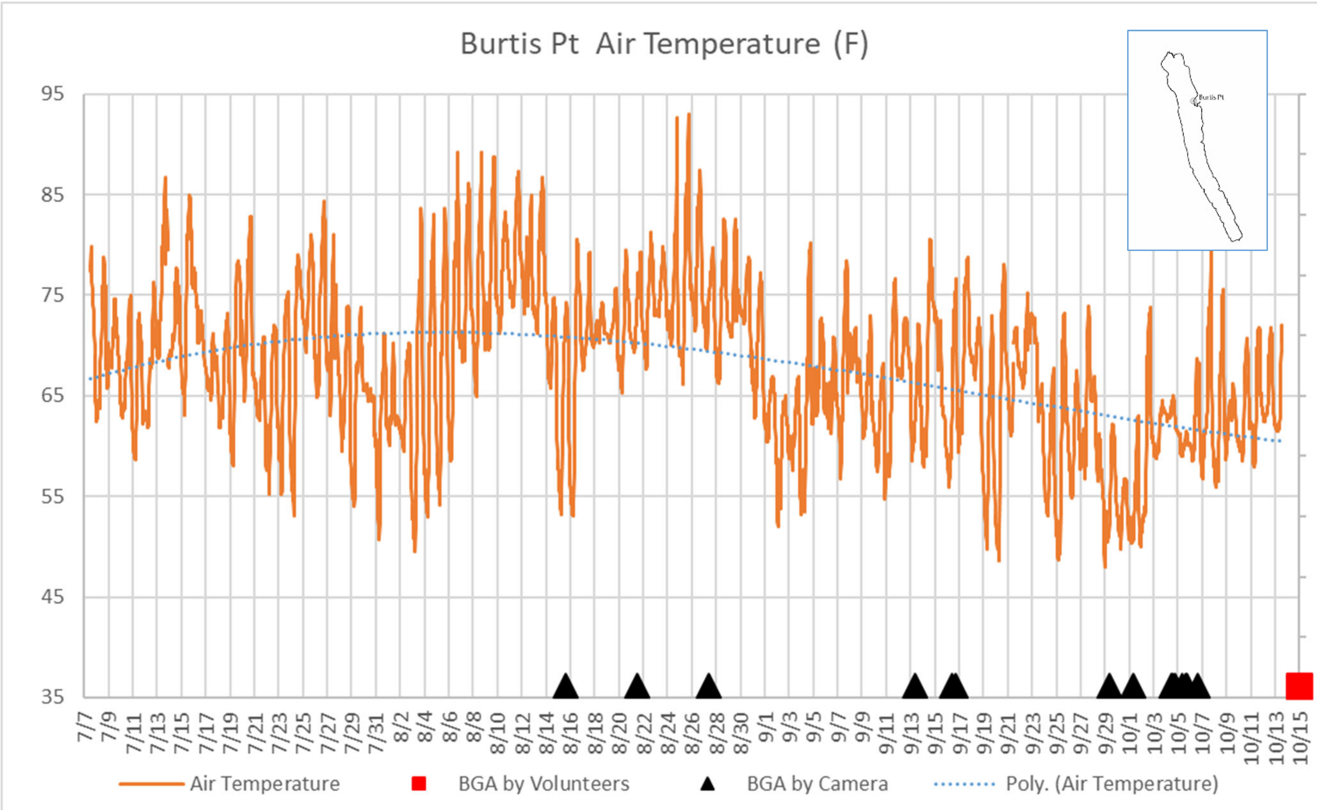

DiOrio-SWC Air Temperature (°F)
DiOrio SWC
SWC
BGA By Volunteers
BGA by Camera
Poly. (SWC)

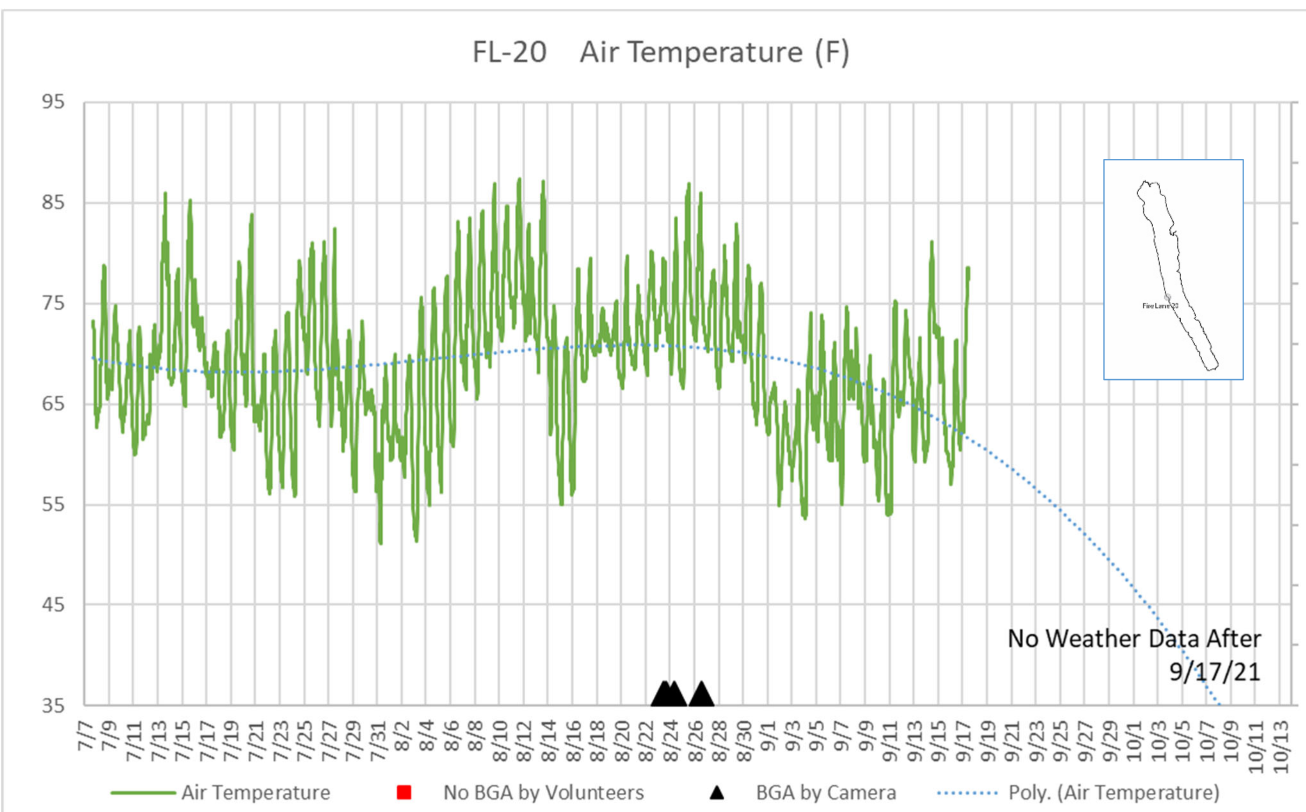

Rose-SW Air Temperature (°F)
Rose SW
SW
BGA by Volunteers
BGA by Camera
Poly. (SW)

Owasco Weather Data – Air Temperatures

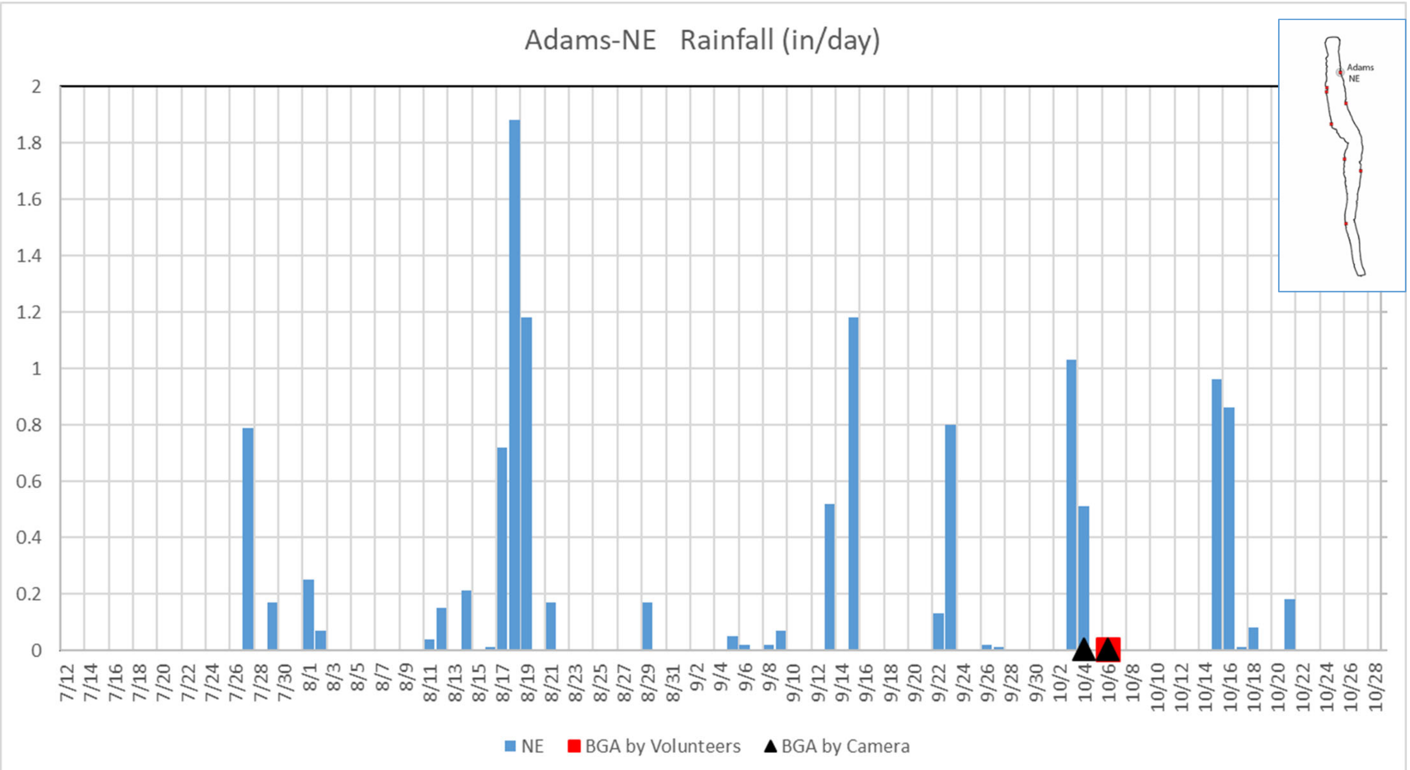


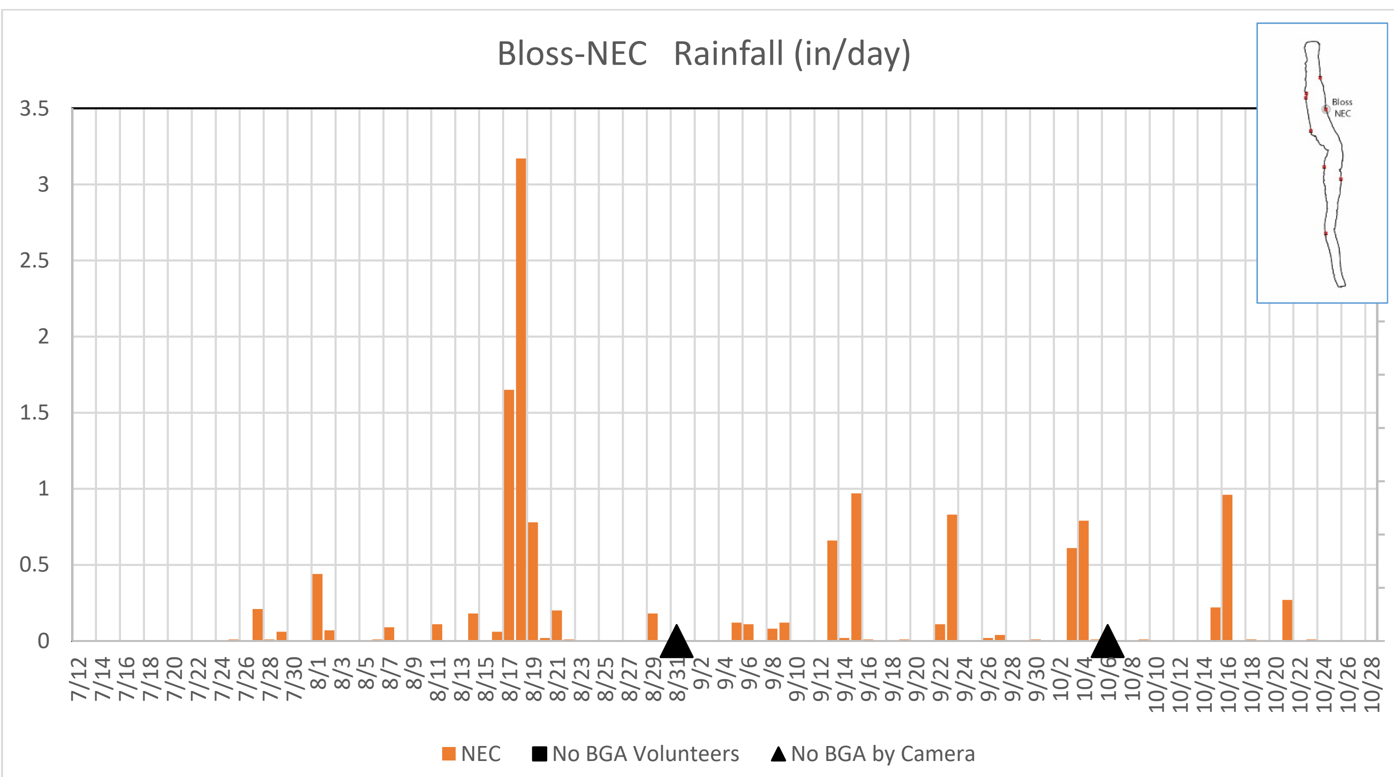


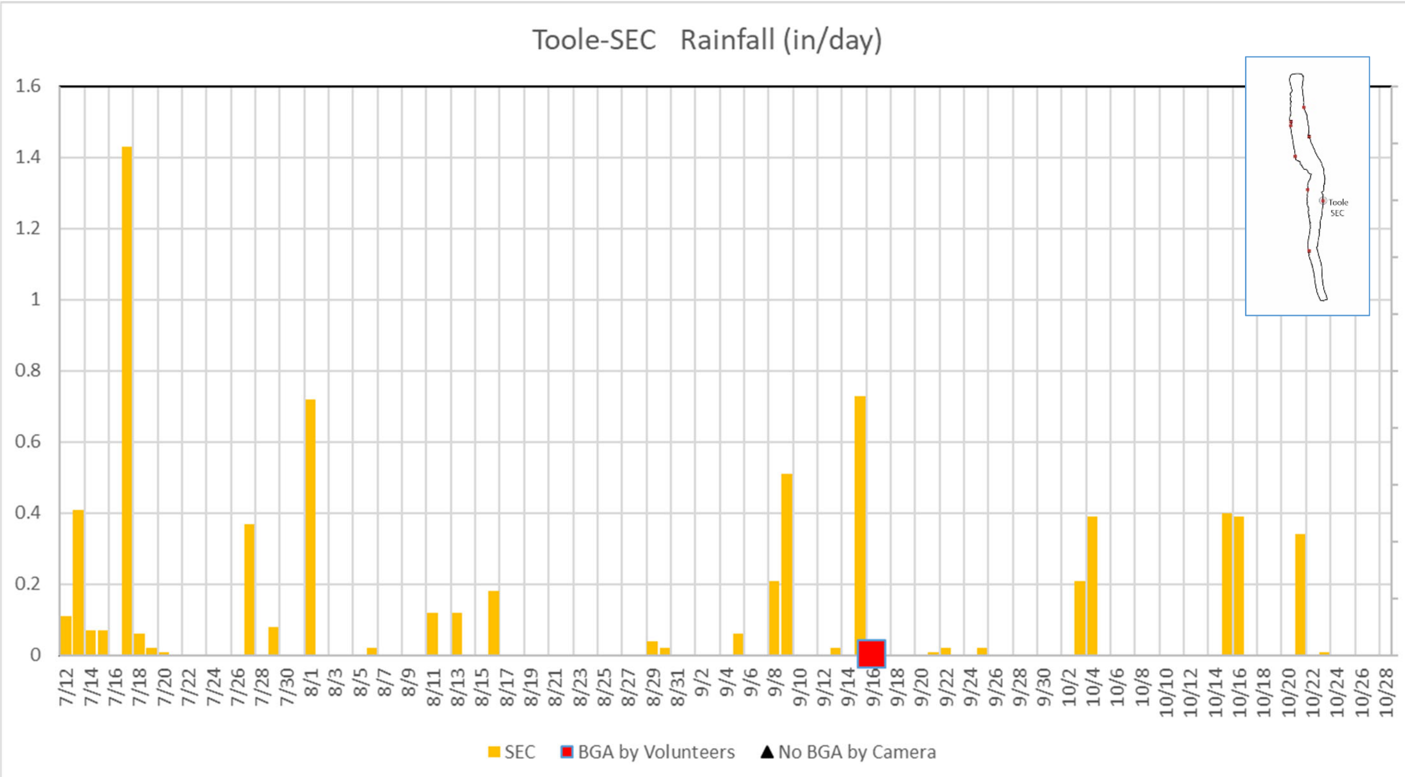

Burtis Pt Air Temperature (F)
Burtis Pt
Air Temperature
BGA by Volunteers
BGA by Camera
Poly. (Air Temperature)

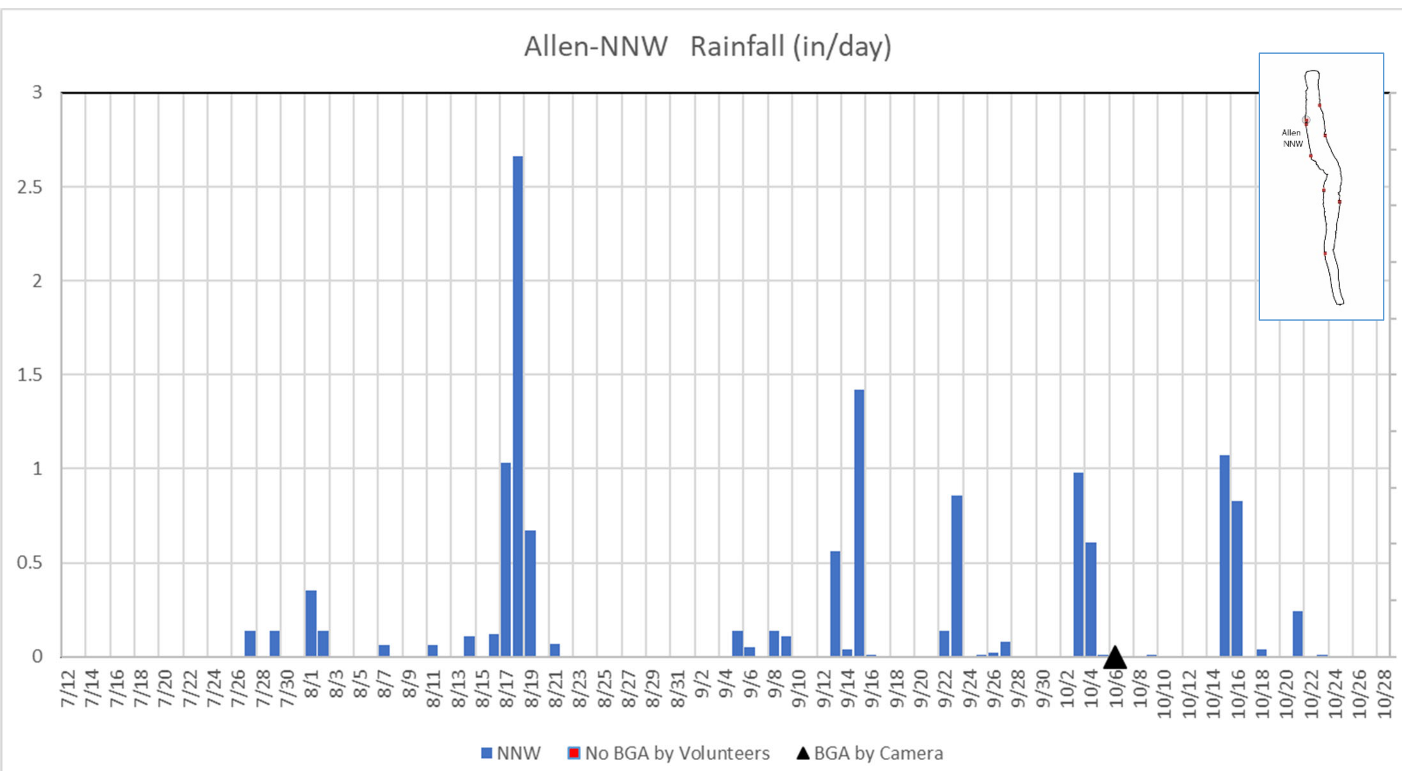

FL-20 Air Temperature (F)
Fire Lane 20
No Weather Data After 9/17/21
Air Temperature
No BGA by Volunteers
BGA by Camera
Poly. (Air Temperature)

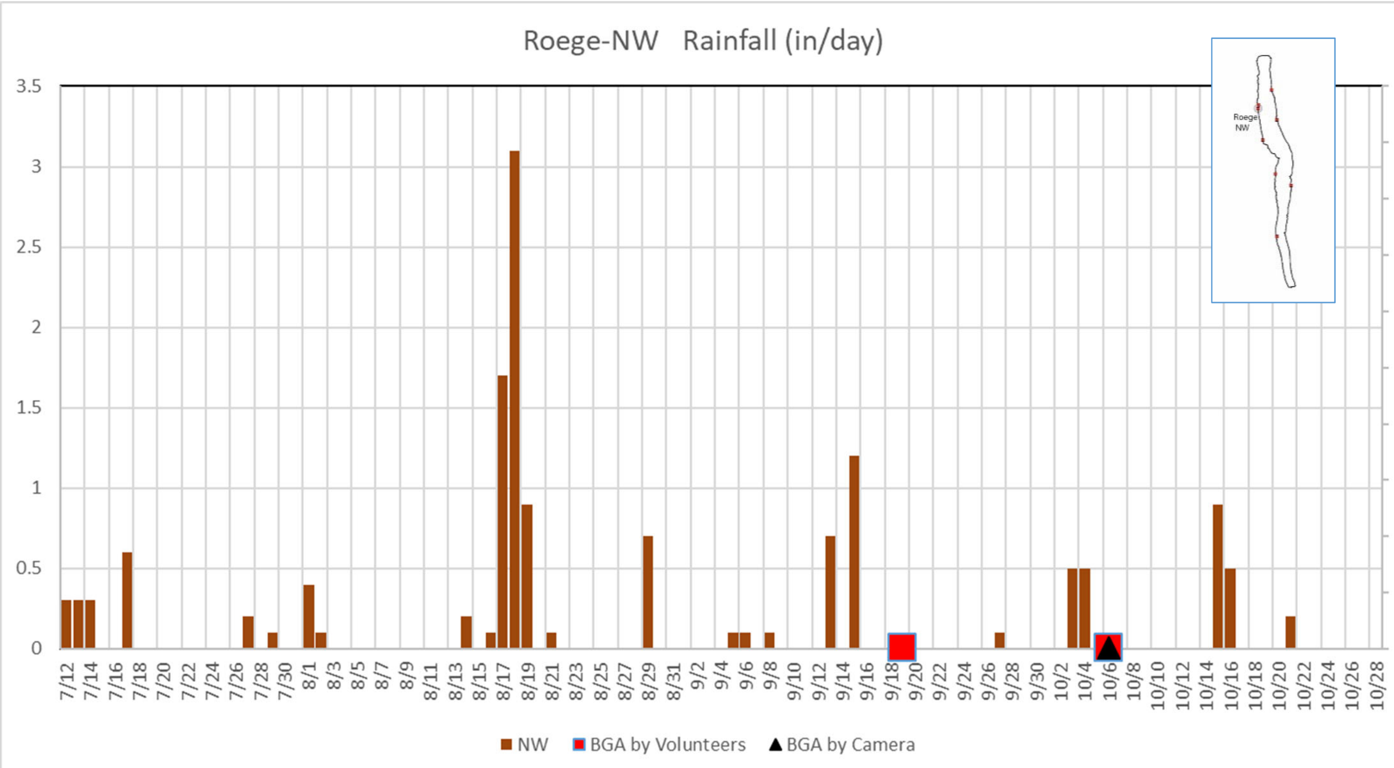
Seneca Lake Rainfall

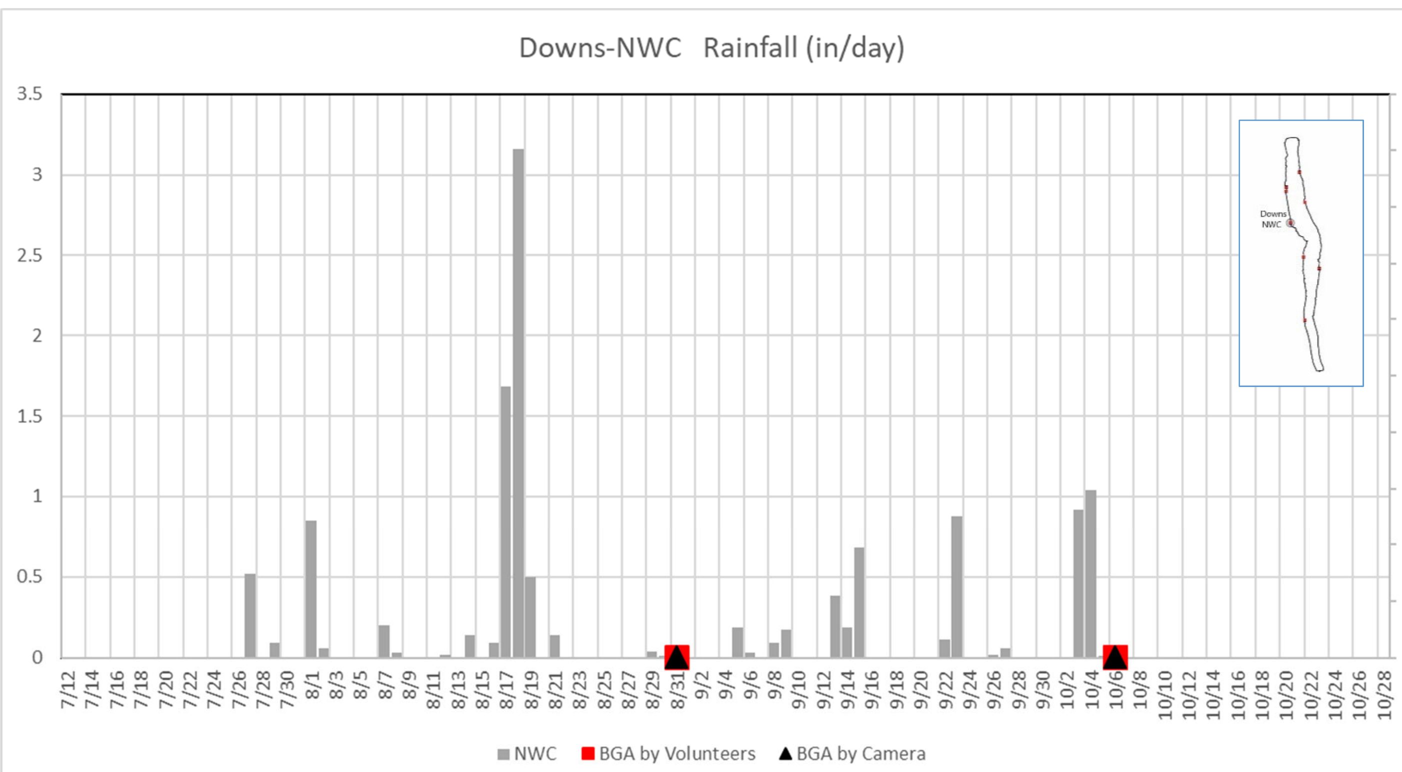


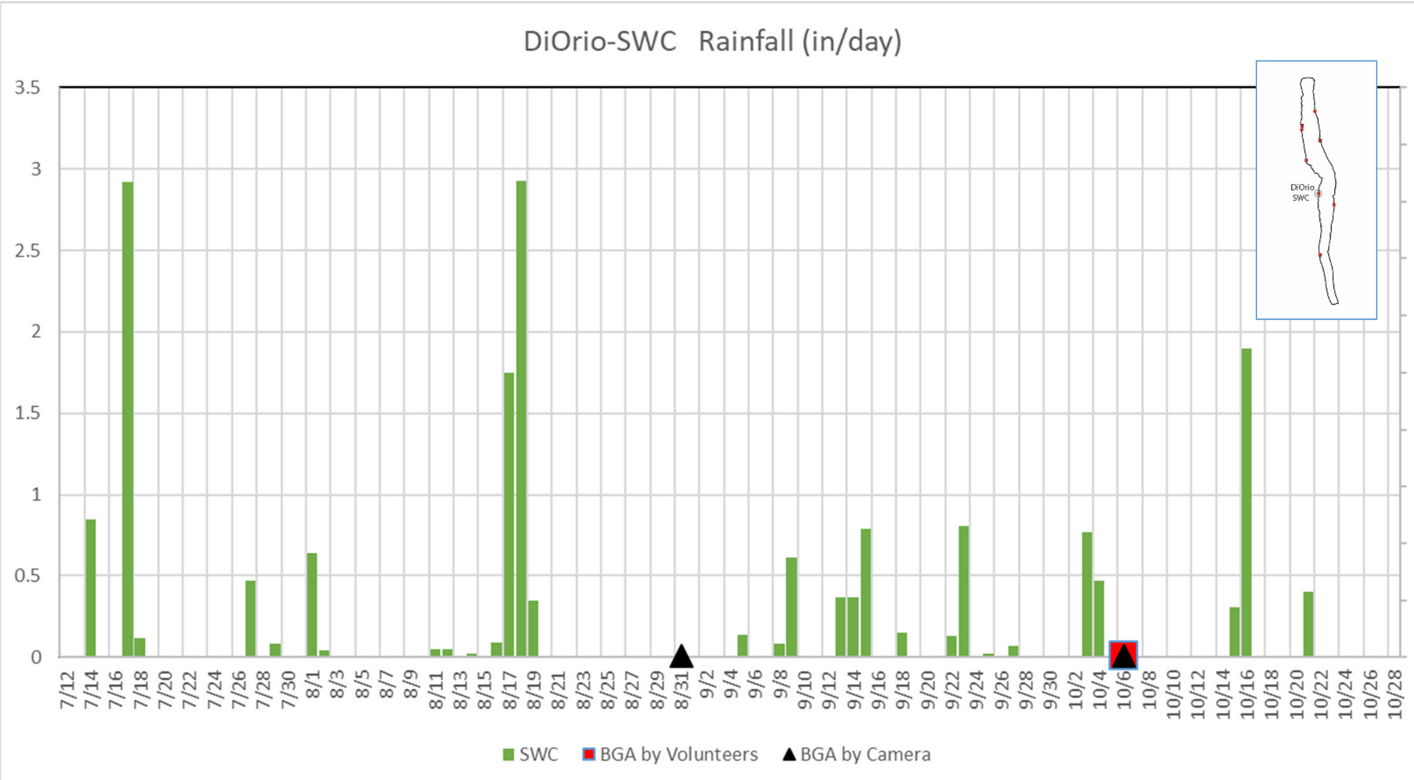


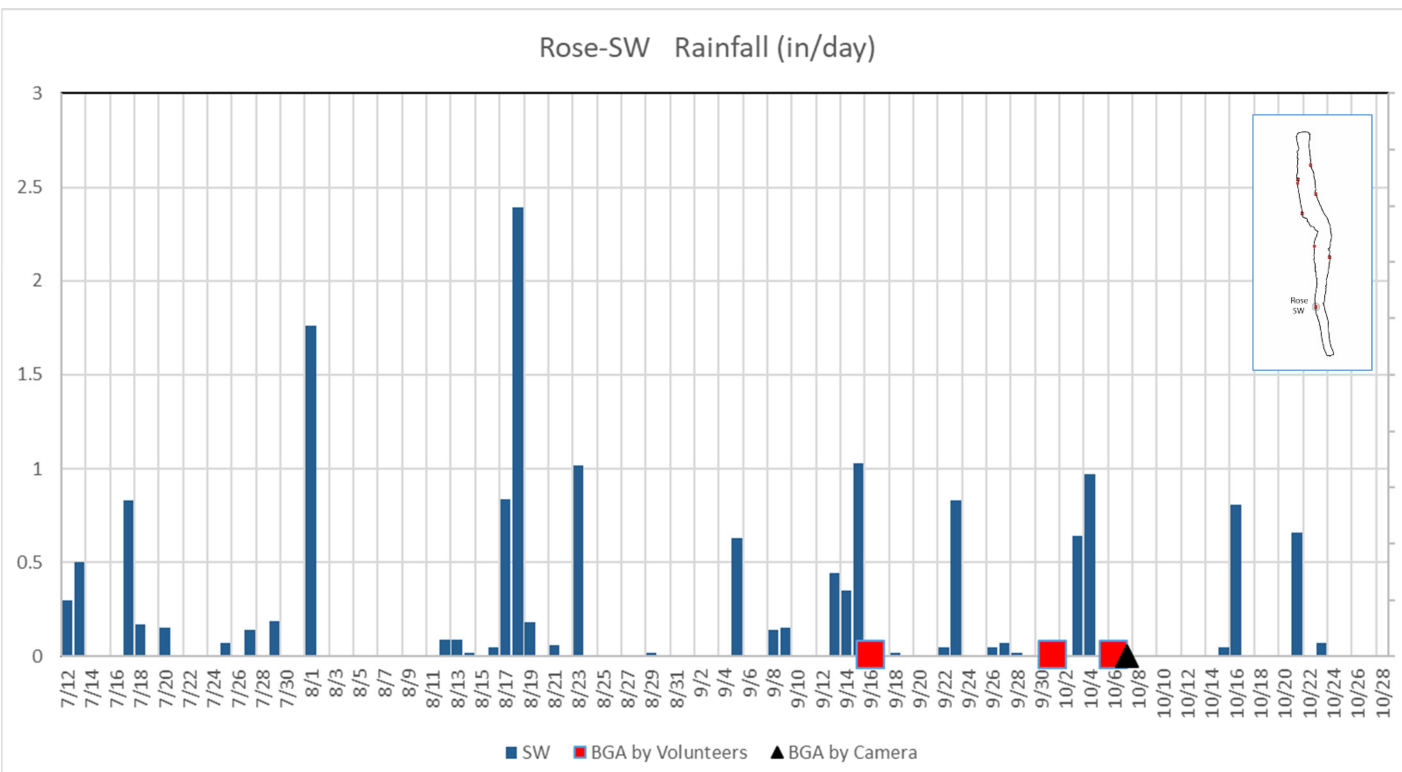

Toole-SEC Rainfall (in/day)
Toole SEC
SEC
BGA by Volunteers
No BGA by Camera


Allen-NNW Rainfall (in/day)
Allen NNW
NNW
No BGA by Volunteers
BGA by Camera

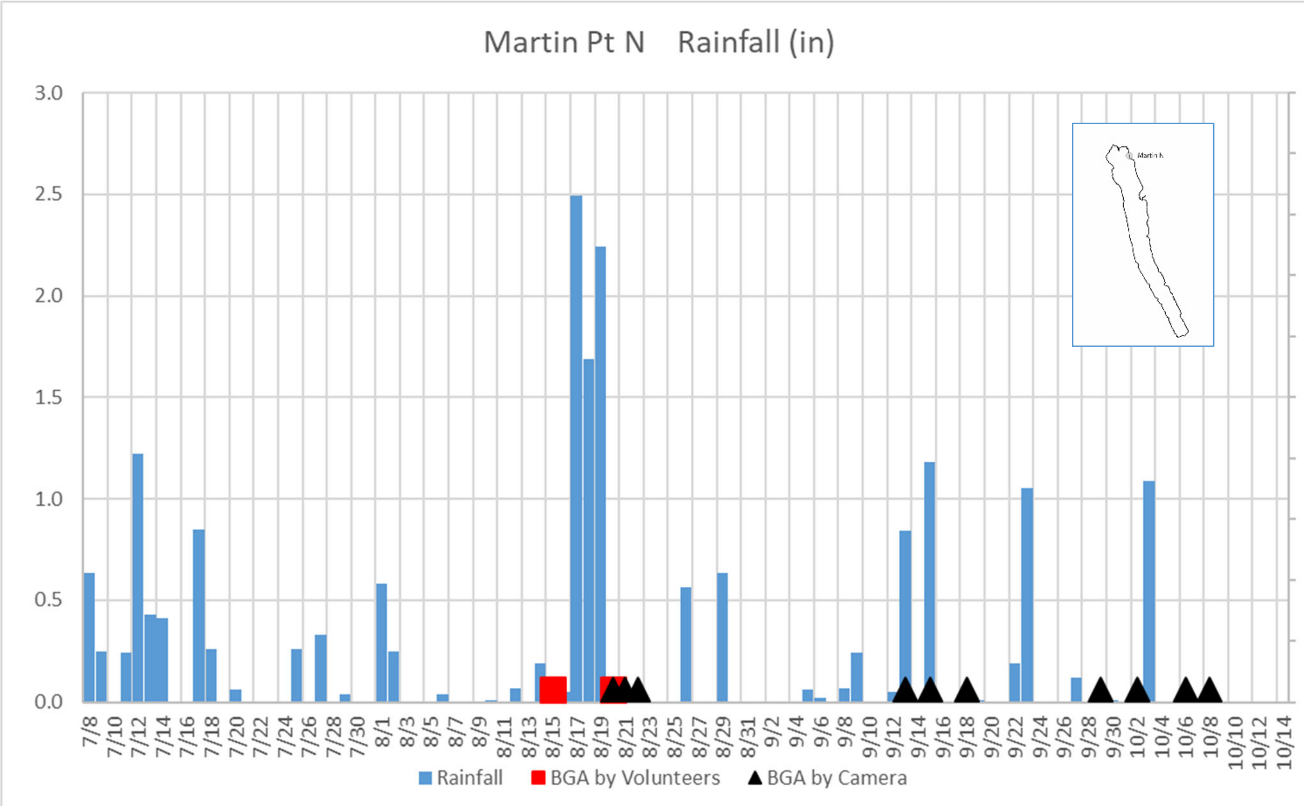

Roege-NW Rainfall (in/day)
3.5
3
2.5
2
1.5
1
0.5
0
7/12 7/14 7/16 7/18 7/20 7/22 7/24 7/26 7/28 7/30 8/1 8/3 8/5 8/7 8/9 8/11 8/13 8/15 8/17 8/19 8/21 8/23 8/25 8/27 8/29 8/31 9/2 9/4 9/6 9/8 9/10 9/12 9/14 9/16 9/18 9/20 9/22 9/24 9/26 9/28 9/30 10/2 10/4 10/6 10/8 10/10 10/12 10/14 10/16 10/18 10/20 10/22 10/24 10/26 10/28
NW
BGA by Volunteers
BGA by Camera

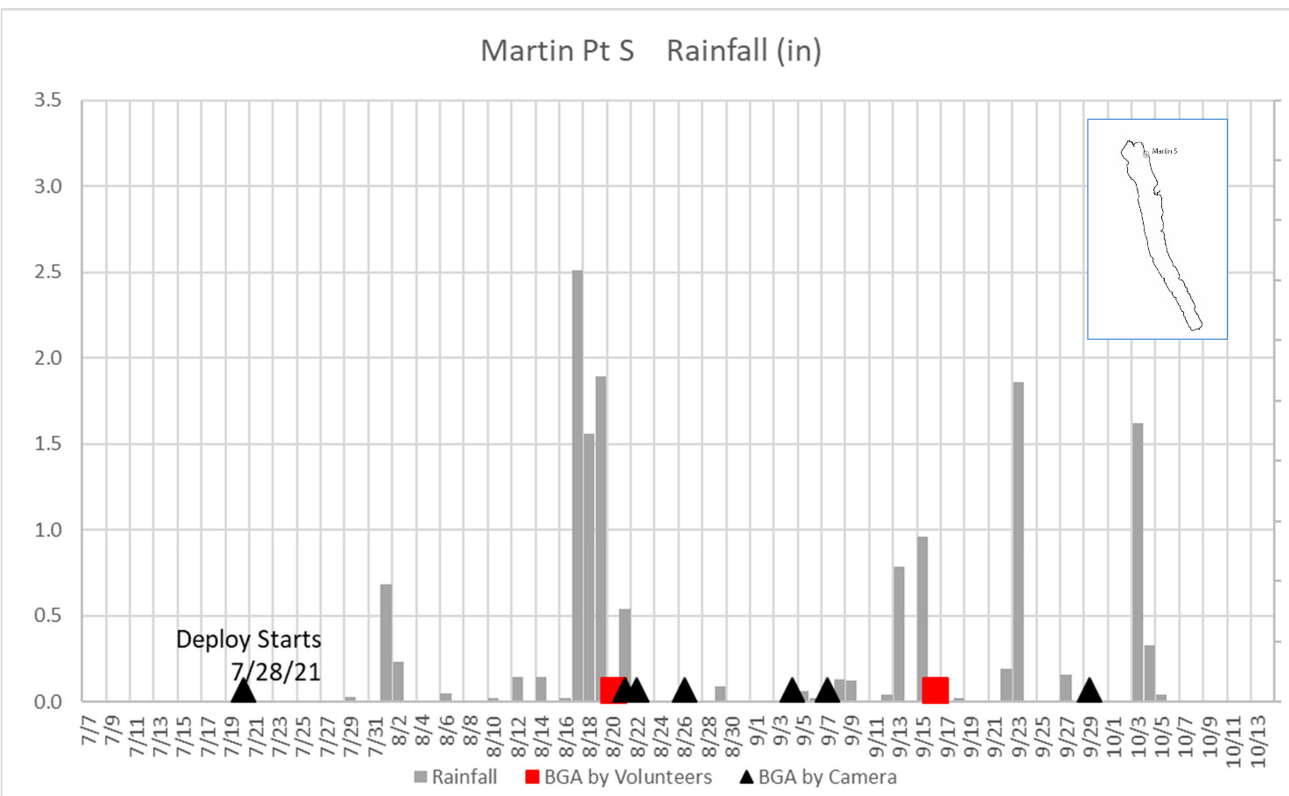

Downs-NWC Rainfall (in/day)
3.5
3
2.5
2
1.5
1
0.5
0
7/12 7/14 7/16 7/18 7/20 7/22 7/24 7/26 7/28 7/30 8/1 8/3 8/5 8/7 8/9 8/11 8/13 8/15 8/17 8/19 8/21 8/23 8/25 8/27 8/29 8/31 9/2 9/4 9/6 9/8 9/10 9/12 9/14 9/16 9/18 9/20 9/22 9/24 9/26 9/28 9/30 10/2 10/4 10/6 10/8 10/10 10/12 10/14 10/16 10/18 10/20 10/22 10/24 10/26 10/28
NWC
BGA by Volunteers
BGA by Camera

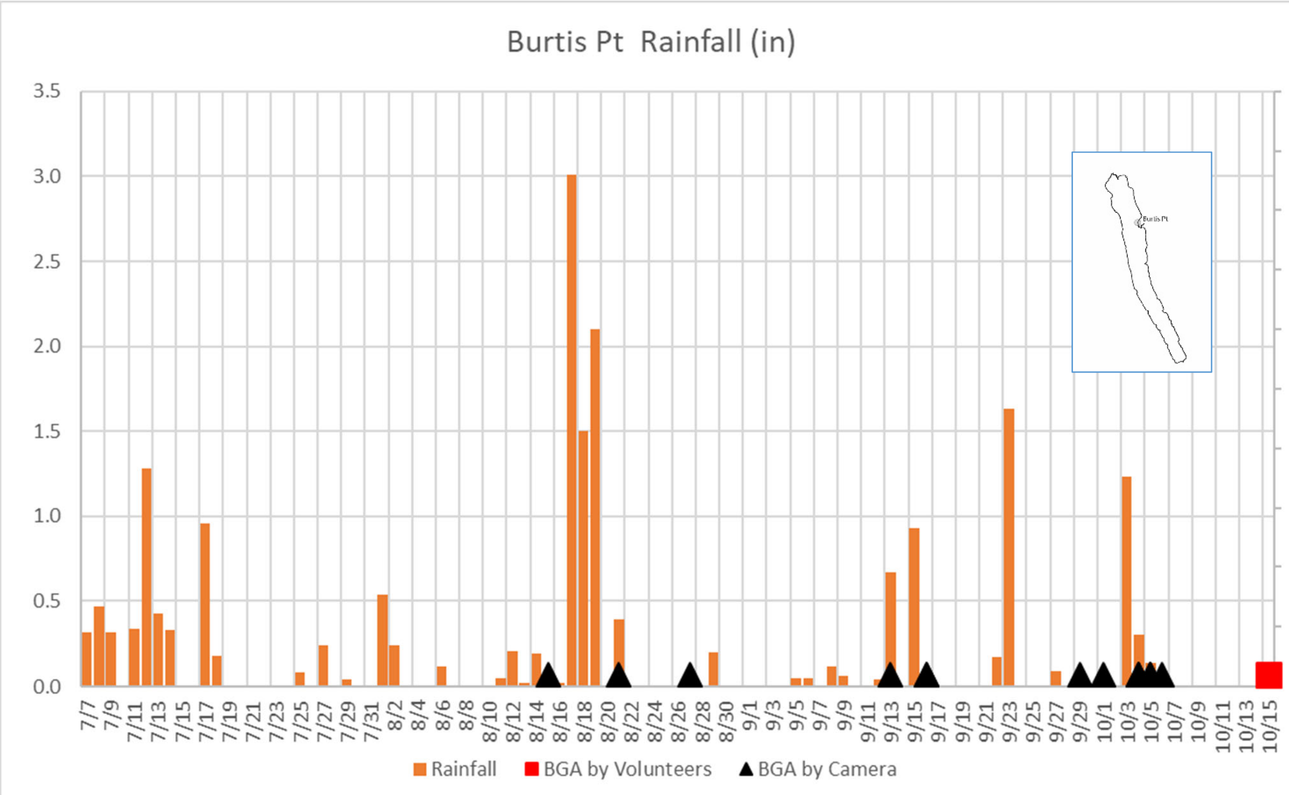

DiOrio-SWC Rainfall (in/day)
DiOrio SWC
SWC
BGA by Volunteers
BGA by Camera


Rose-SW Rainfall (in/day)
Rose SW
SW
BGA by Volunteers
BGA by Camera

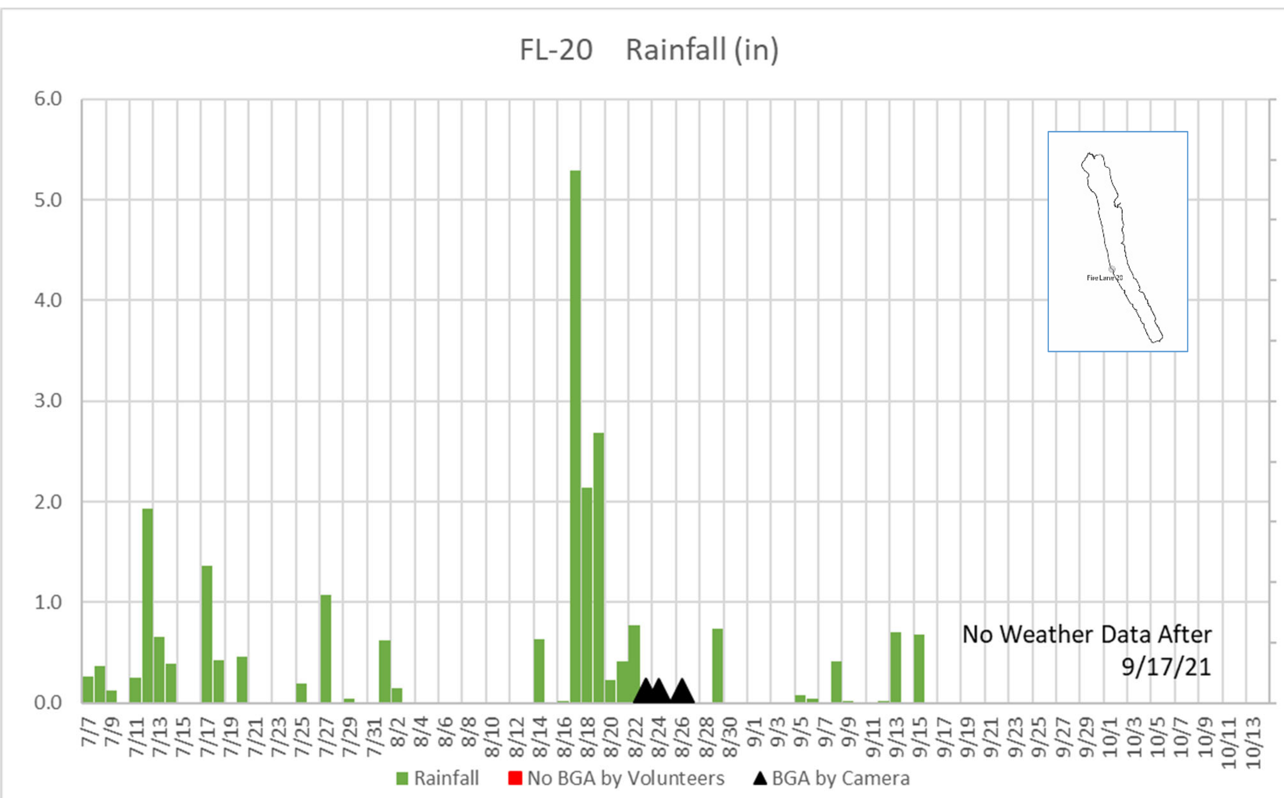
Owasco Lake Rainfall





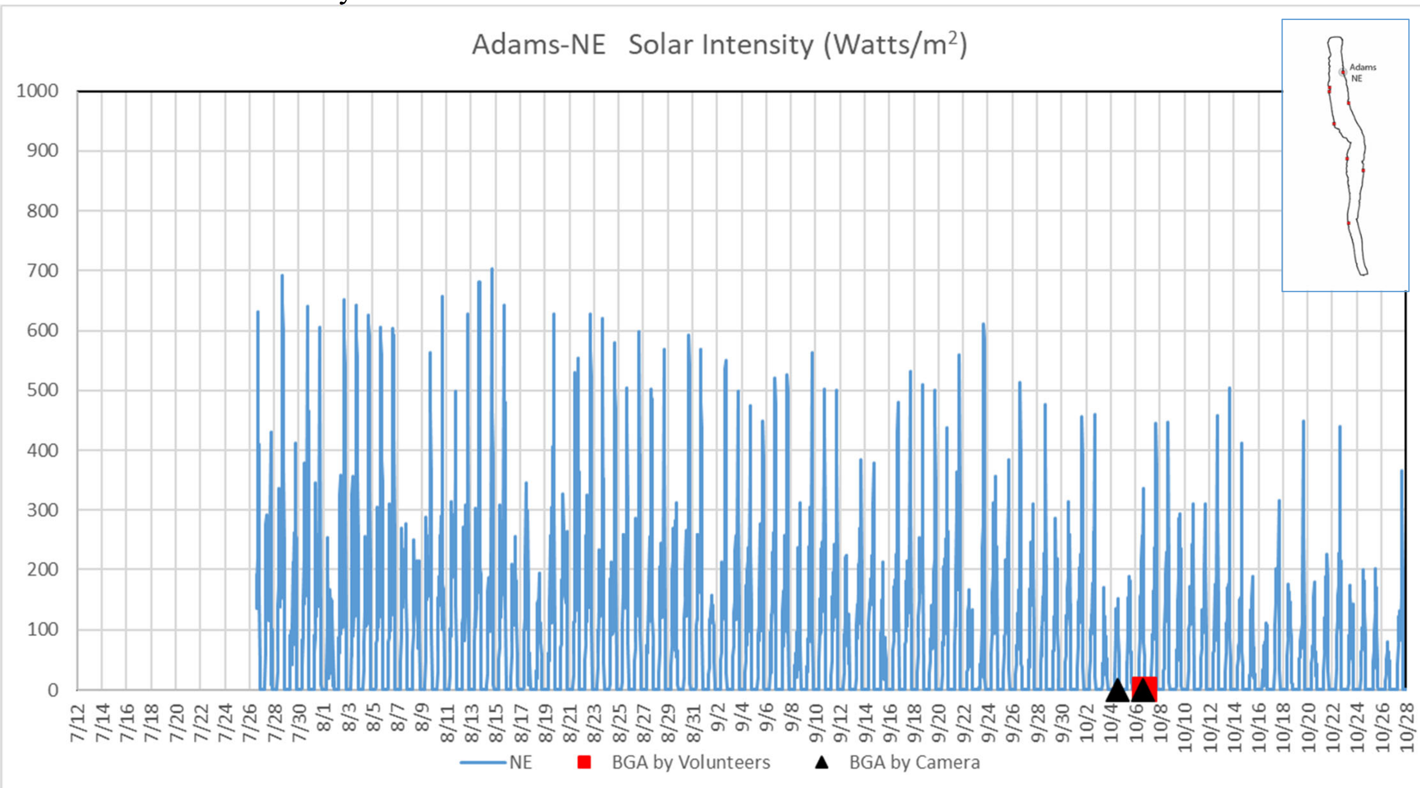


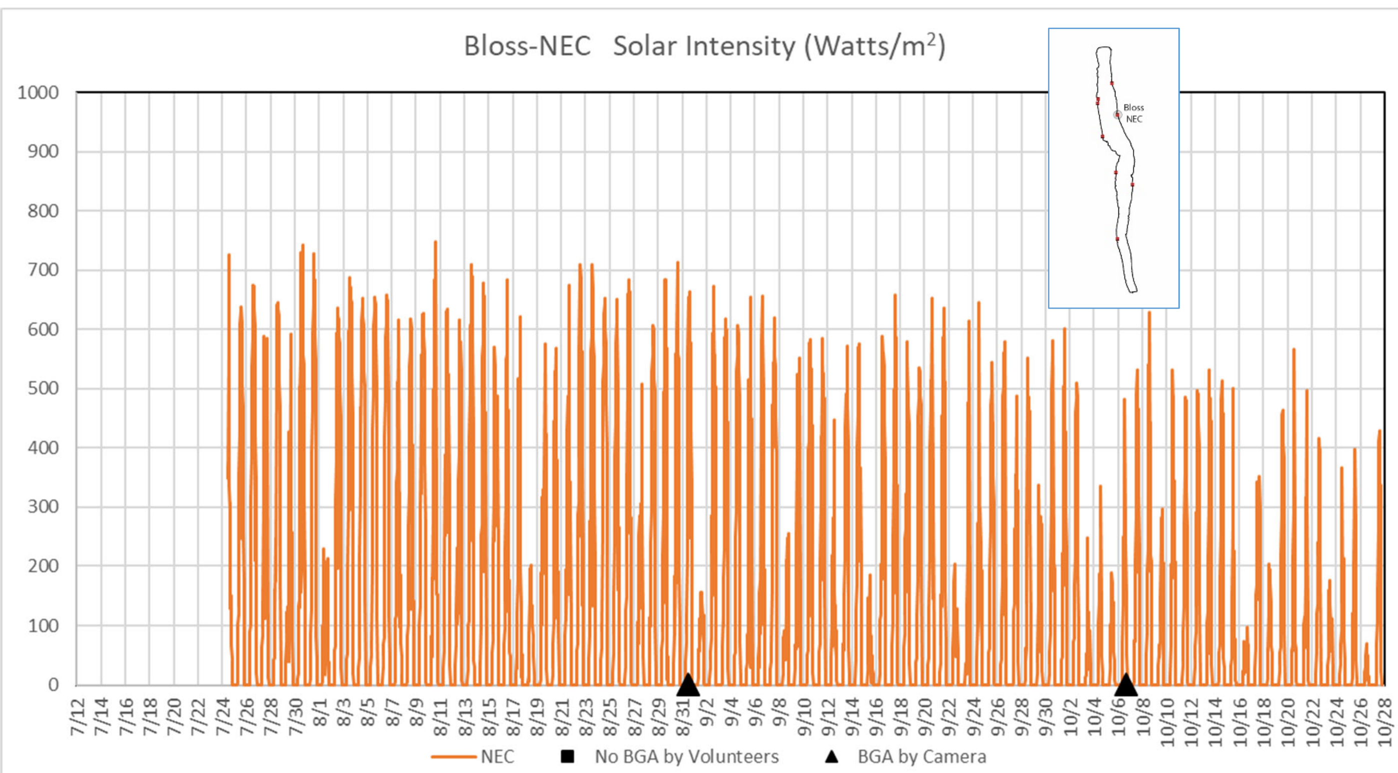
Burtis Pt Rainfall (in)
Burtis Pt
Rainfall
BGA by Volunteers
BGA by Camera

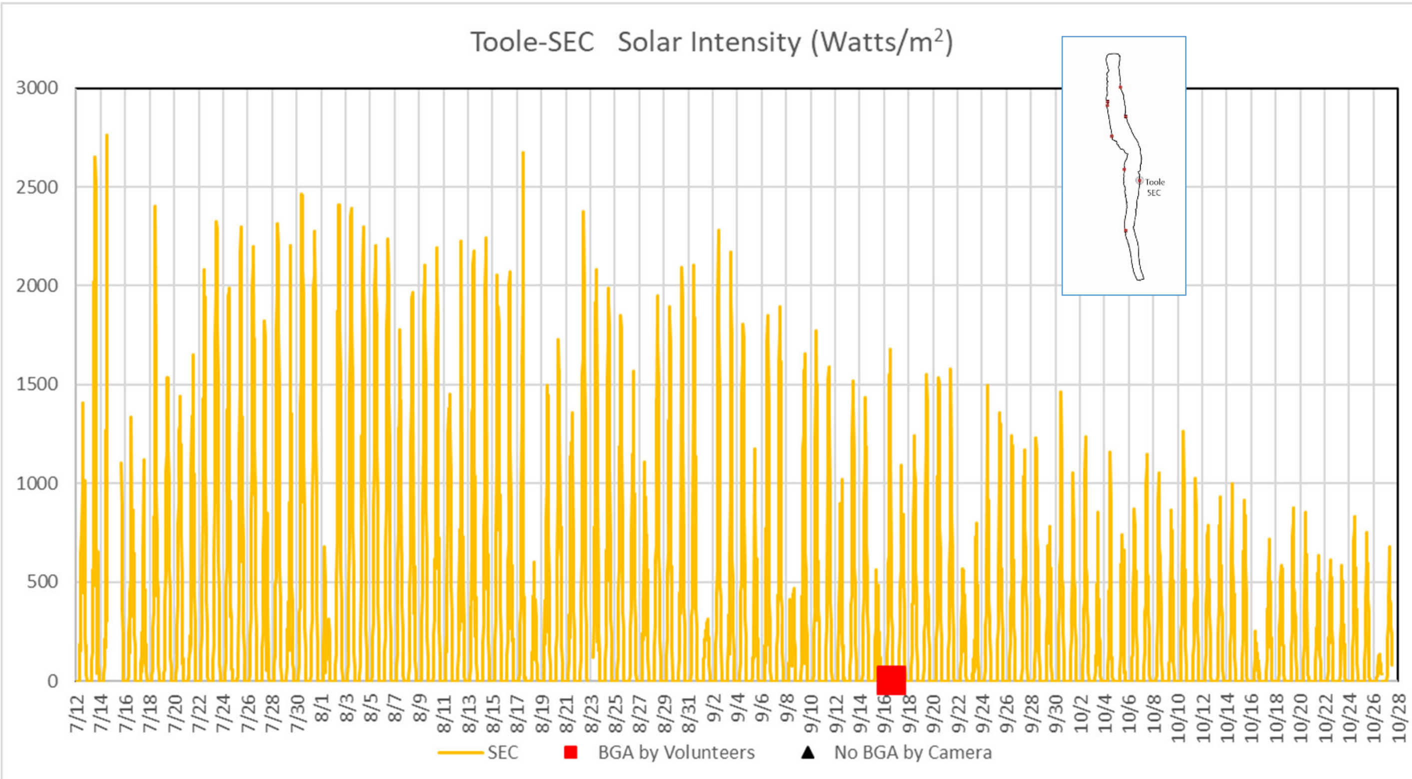


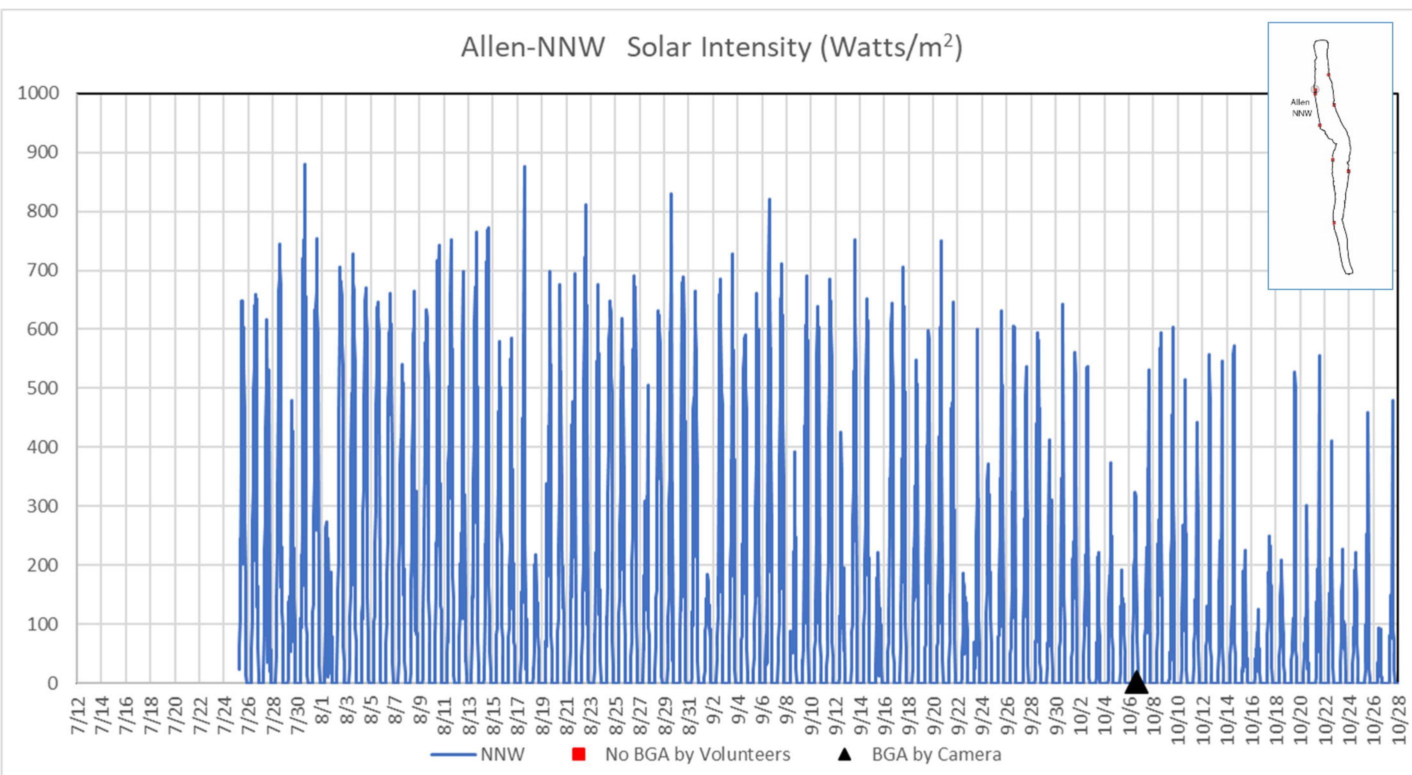
FL-20 Rainfall (in)
Fire Lane 20
No Weather Data After 9/17/21
Rainfall
No BGA by Volunteers
BGA by Camera

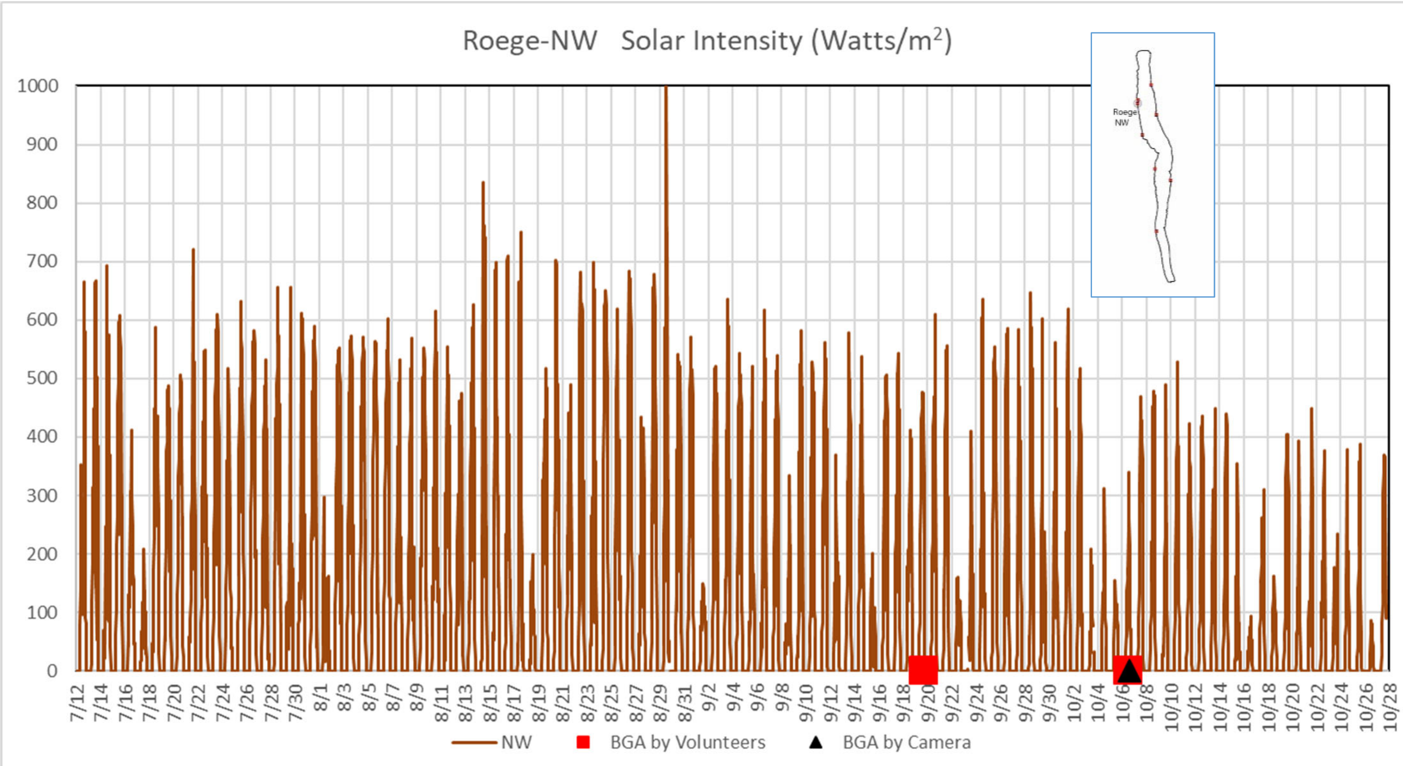
Seneca Lake Solar Intensity

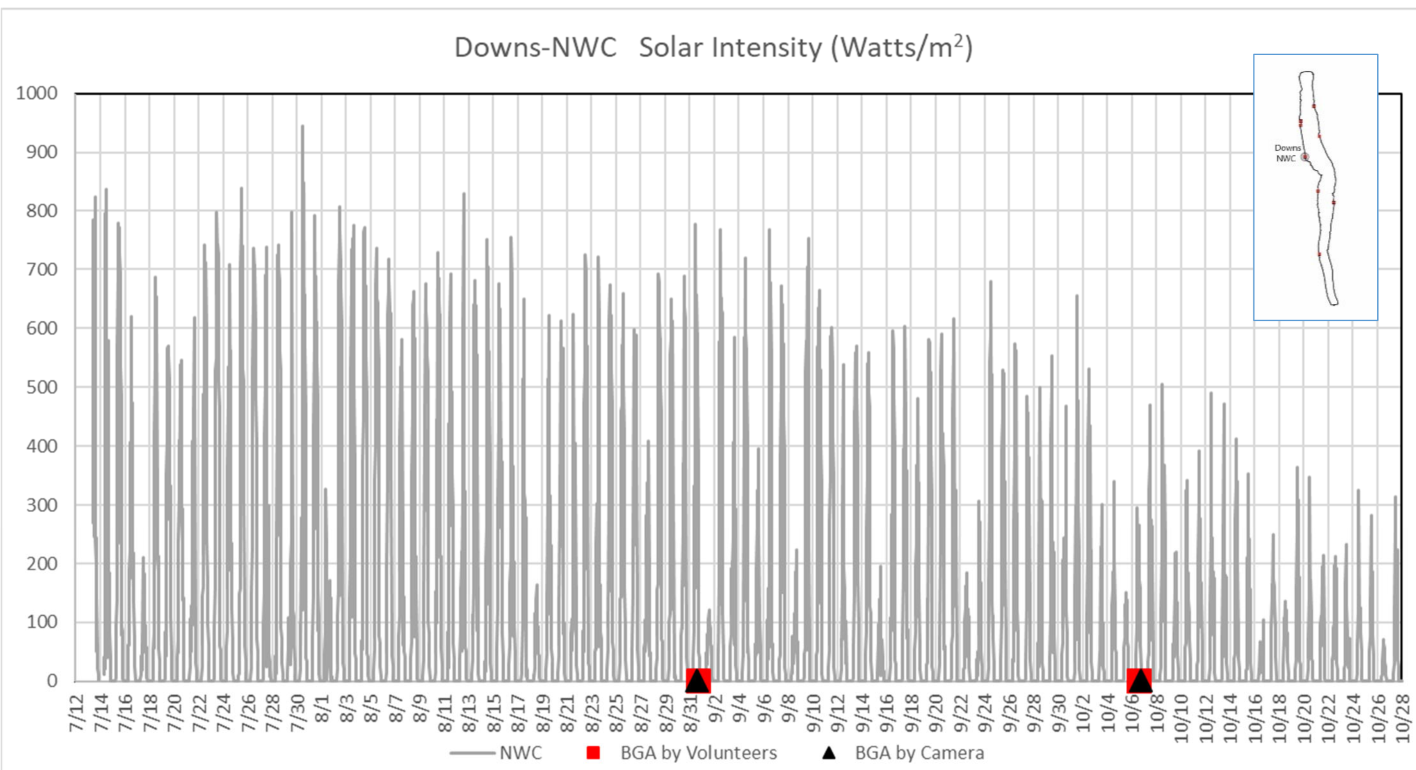


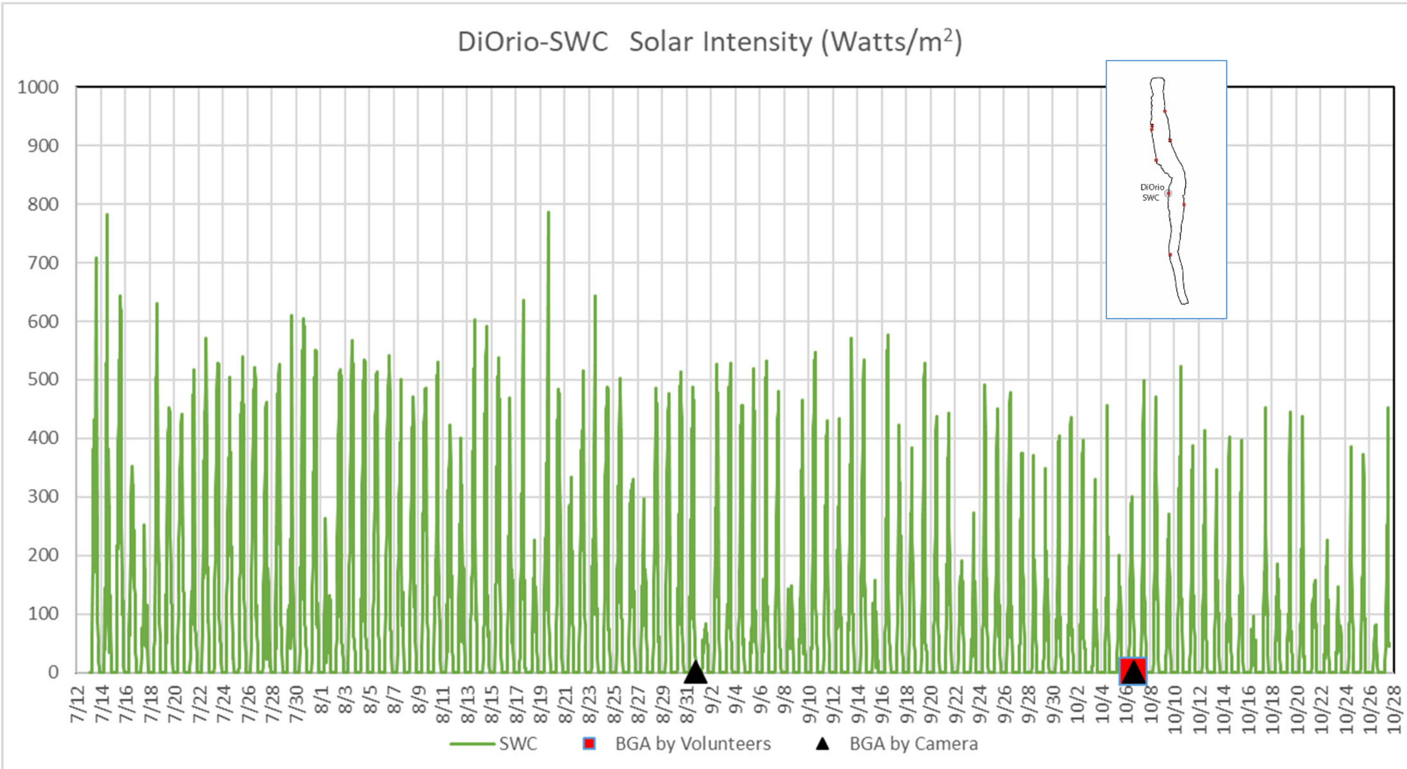


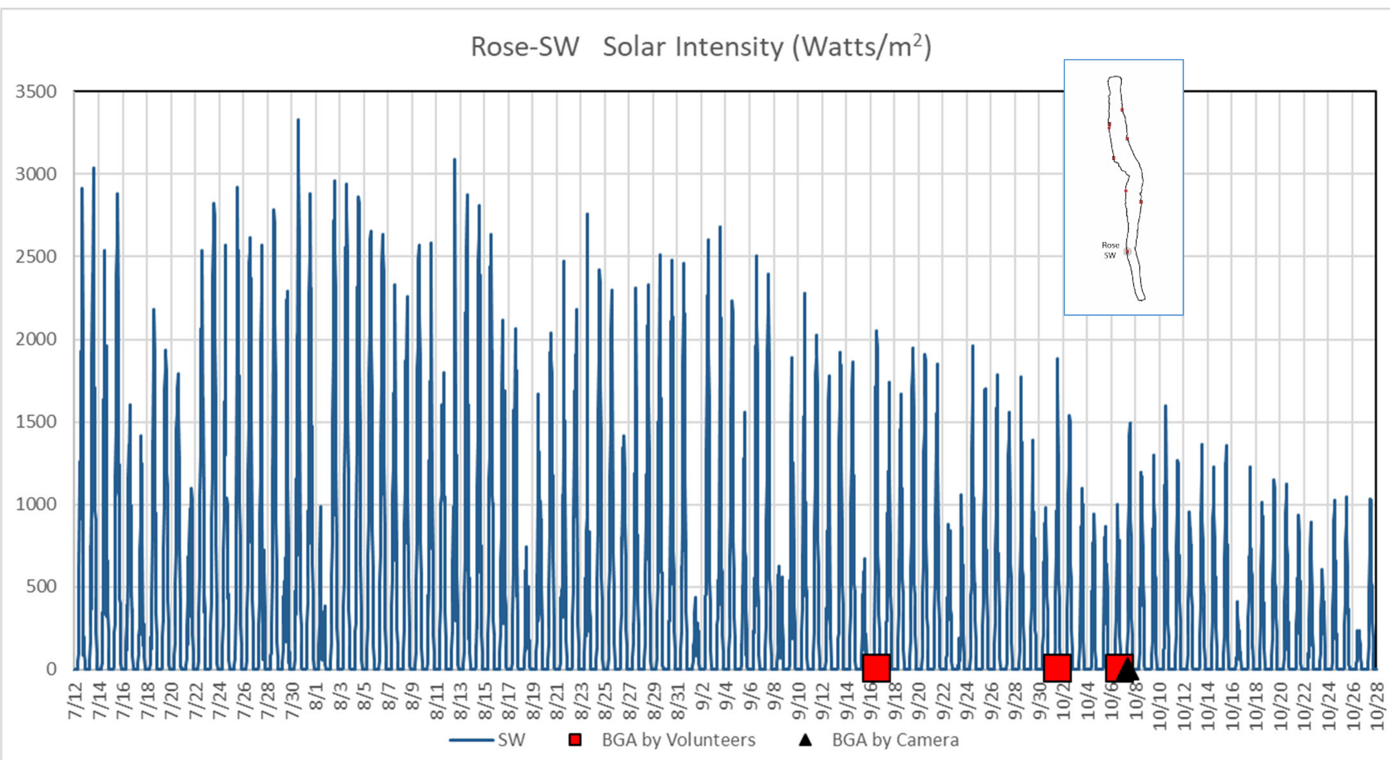

Toole-SEC Solar Intensity (Watts/m2)
Toole SEC
SEC
BGA by Volunteers
No BGA by Camera


Allen-NNW Solar Intensity (Watts/m2)
Allen NNW
NNW
No BGA by Volunteers
BGA by Camera

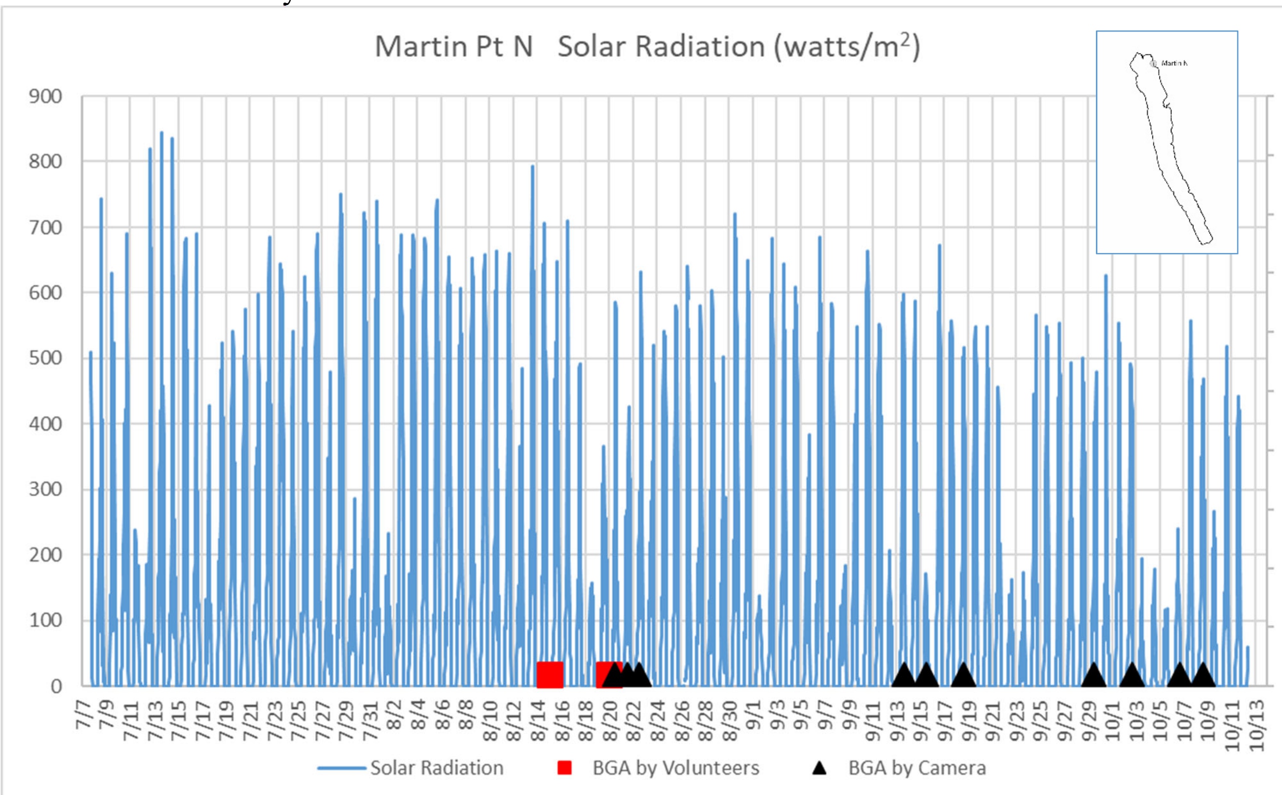

Roege-NW Solar Intensity (Watts/m2)
Roege NW
NW
BGA by Volunteers
BGA by Camera

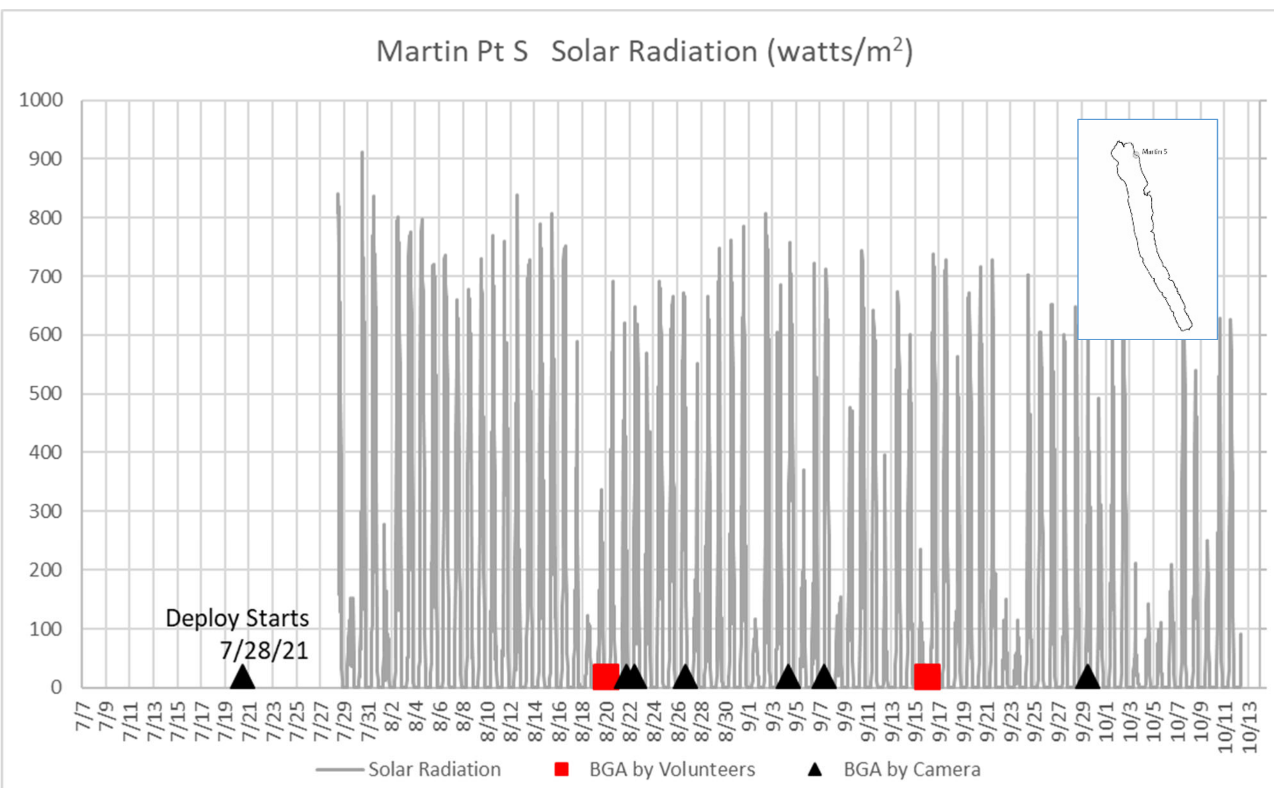

Downs-NWC Solar Intensity (Watts/m2)
Downs NWC
NWC
BGA by Volunteers
BGA by Camera

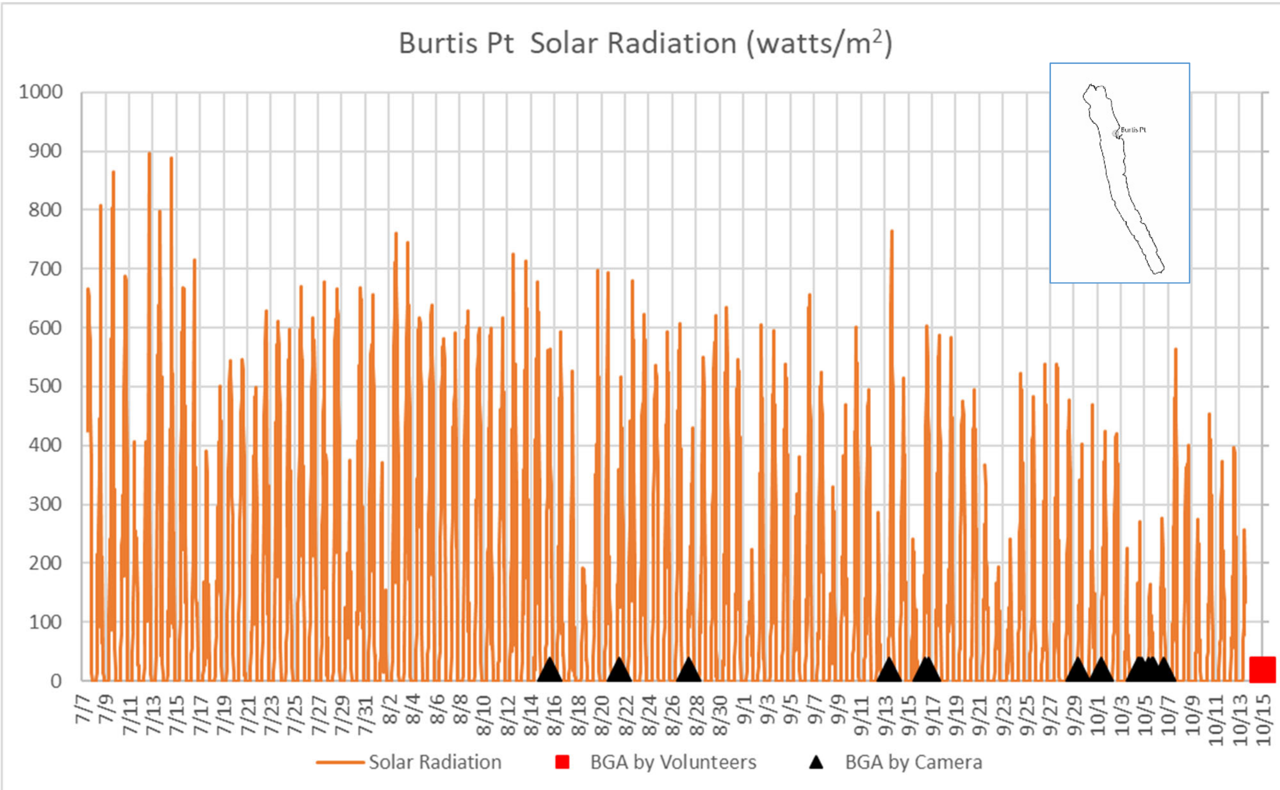

DiOrio-SWC Solar Intensity (Watts/m2)
DiOrio SWC
SWC
BGA by Volunteers
BGA by Camera

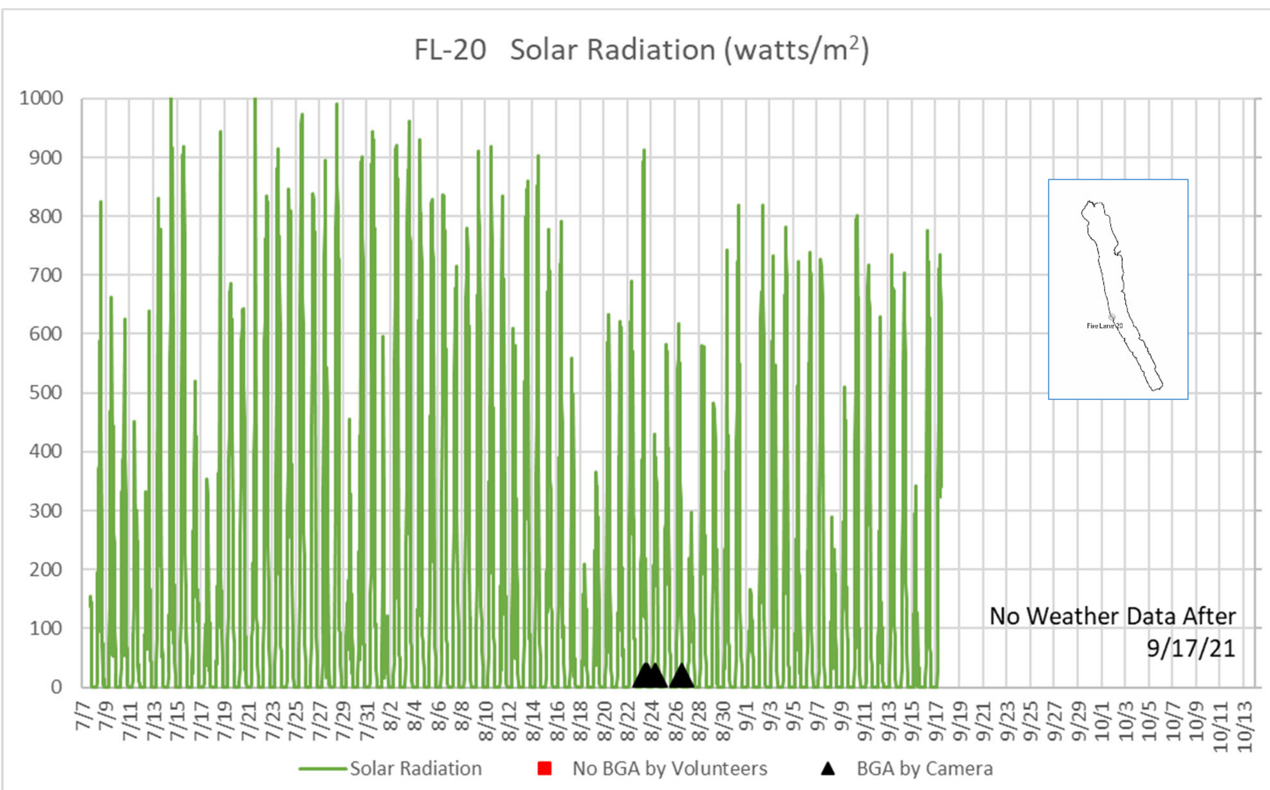

Rose-SW Solar Intensity (Watts/m2)
Rose SW
SW
BGA by Volunteers
BGA by Camera

Owasco Lake Solar Intensity

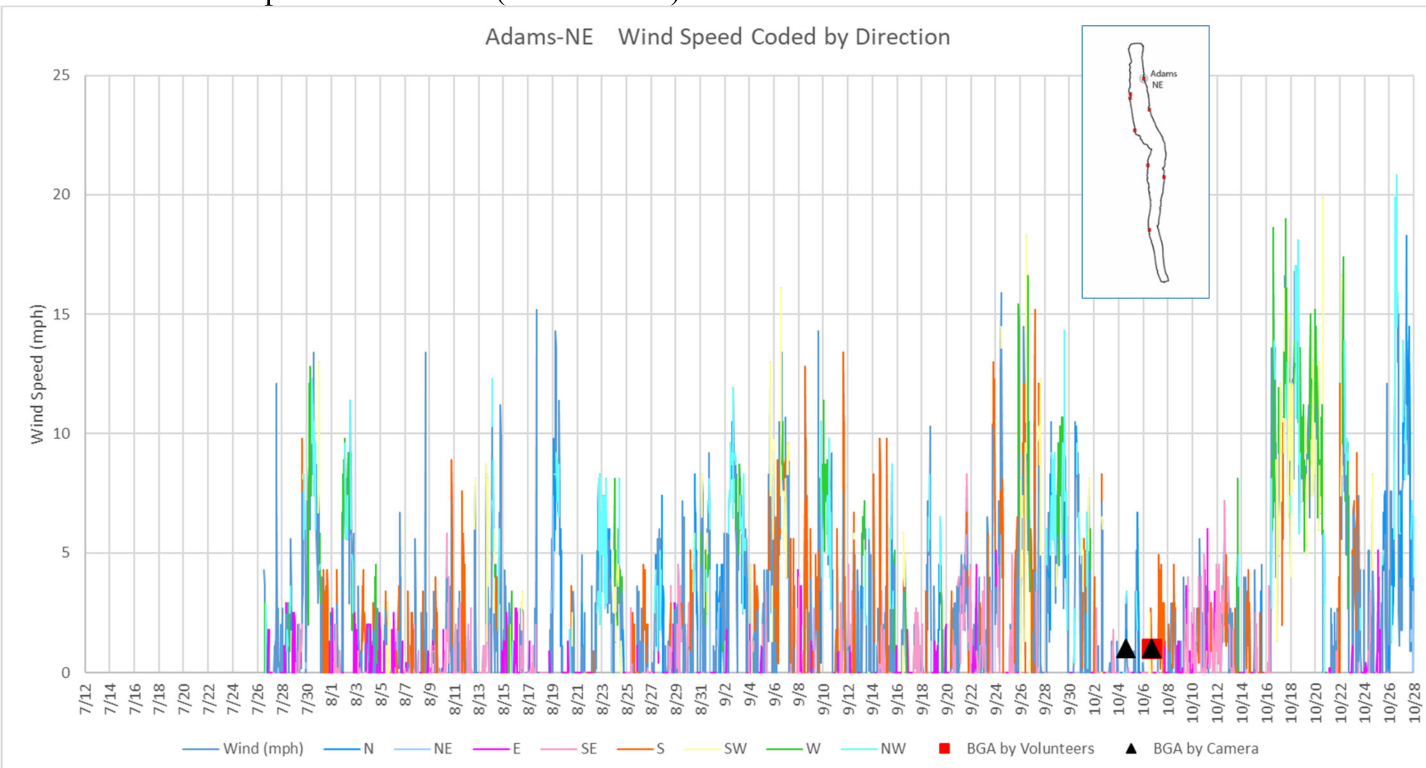


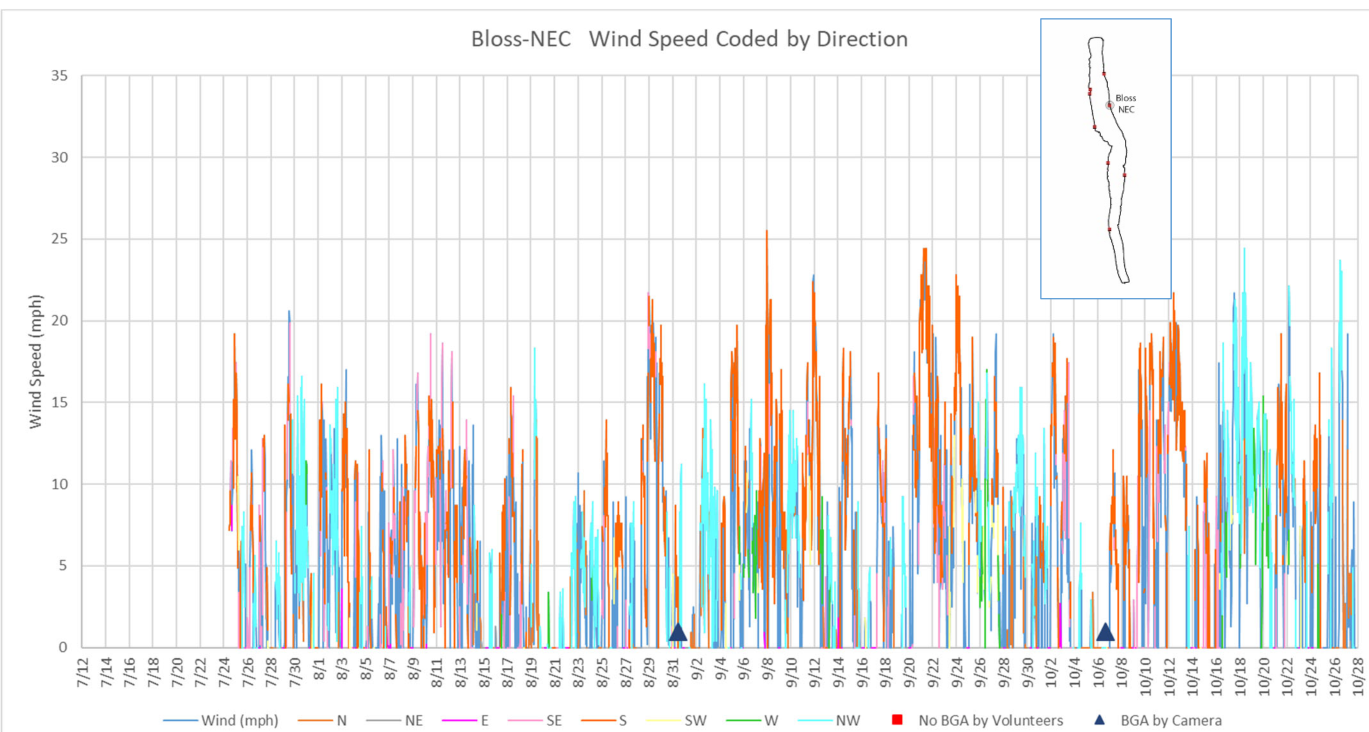


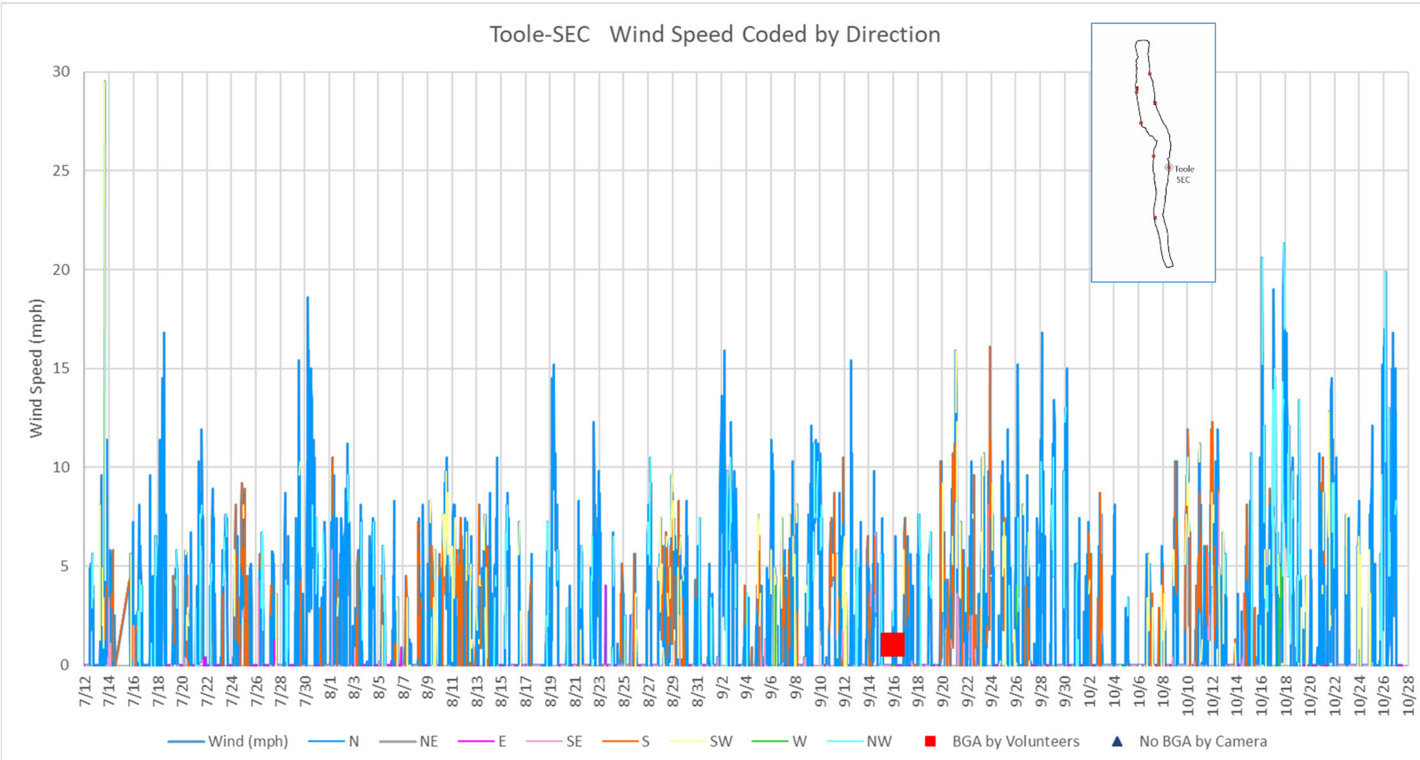

Burtis Pt Solar Radiation (watts/m2)
1000
900
800
700
600
500
400
300
200
100
0
7/7
7/9
7/11
7/13
7/15
7/17
7/19
7/21
7/23
7/25
7/27
7/29
7/31
8/2
8/4
8/6
8/8
8/10
8/12
8/14
8/16
8/18
8/20
8/22
8/24
8/26
8/28
8/30
9/1
9/3
9/5
9/7
9/9
9/11
9/13
9/15
9/17
9/19
9/21
9/23
9/25
9/27
9/29
10/1
10/3
10/5
10/7
10/9
10/11
10/13
10/15
Solar Radiation
BGA by Volunteers
BGA by Camera

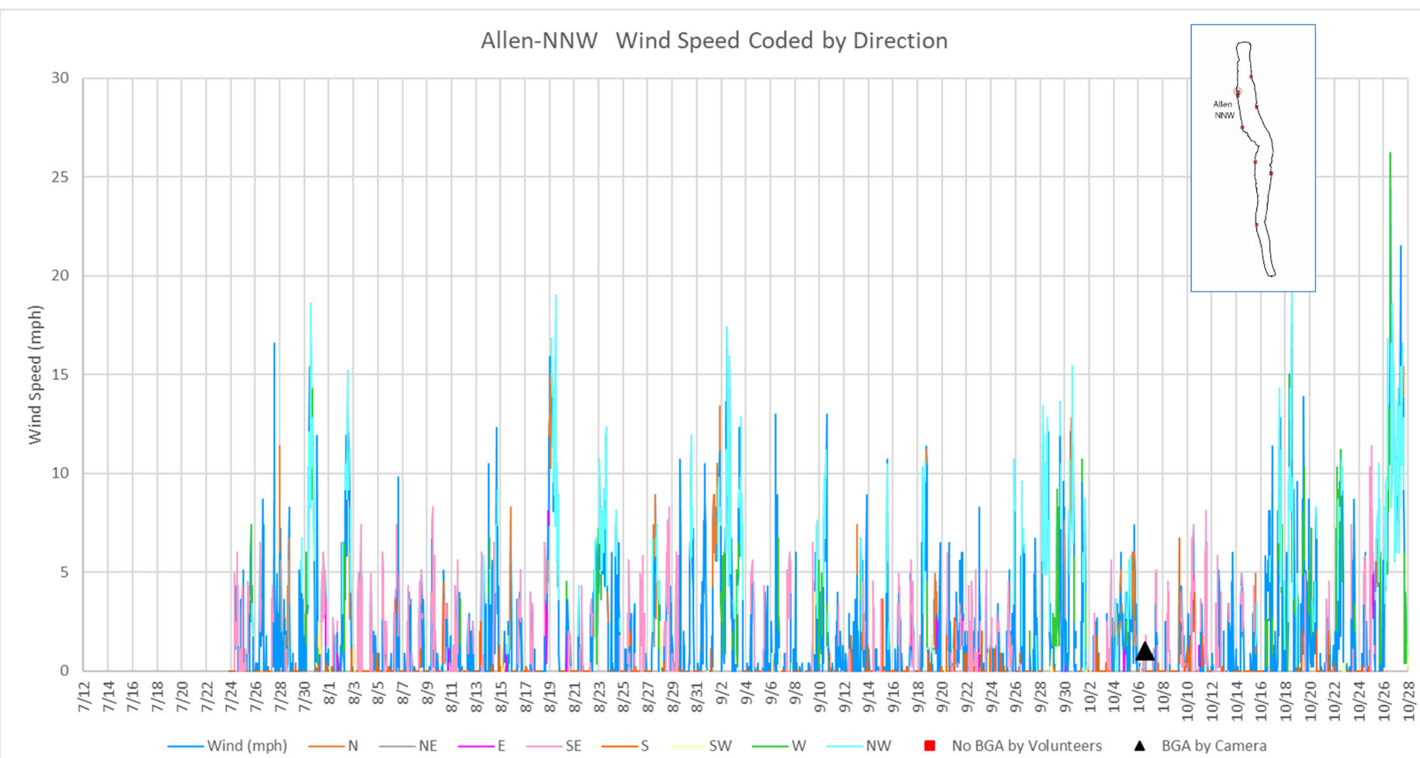

FL-20 Solar Radiation (watts/m2)
1000
900
800
700
600
500
400
300
200
100
0
7/7
7/9
7/11
7/13
7/15
7/17
7/19
7/21
7/23
7/25
7/27
7/29
7/31
8/2
8/4
8/6
8/8
8/10
8/12
8/14
8/16
8/18
8/20
8/22
8/24
8/26
8/28
8/30
9/1
9/3
9/5
9/7
9/9
9/11
9/13
9/15
9/17
9/19
9/21
9/23
9/25
9/27
9/29
10/1
10/3
10/5
10/7
10/9
10/11
10/13
No Weather Data After
9/17/21
Solar Radiation
No BGA by Volunteers
BGA by Camera

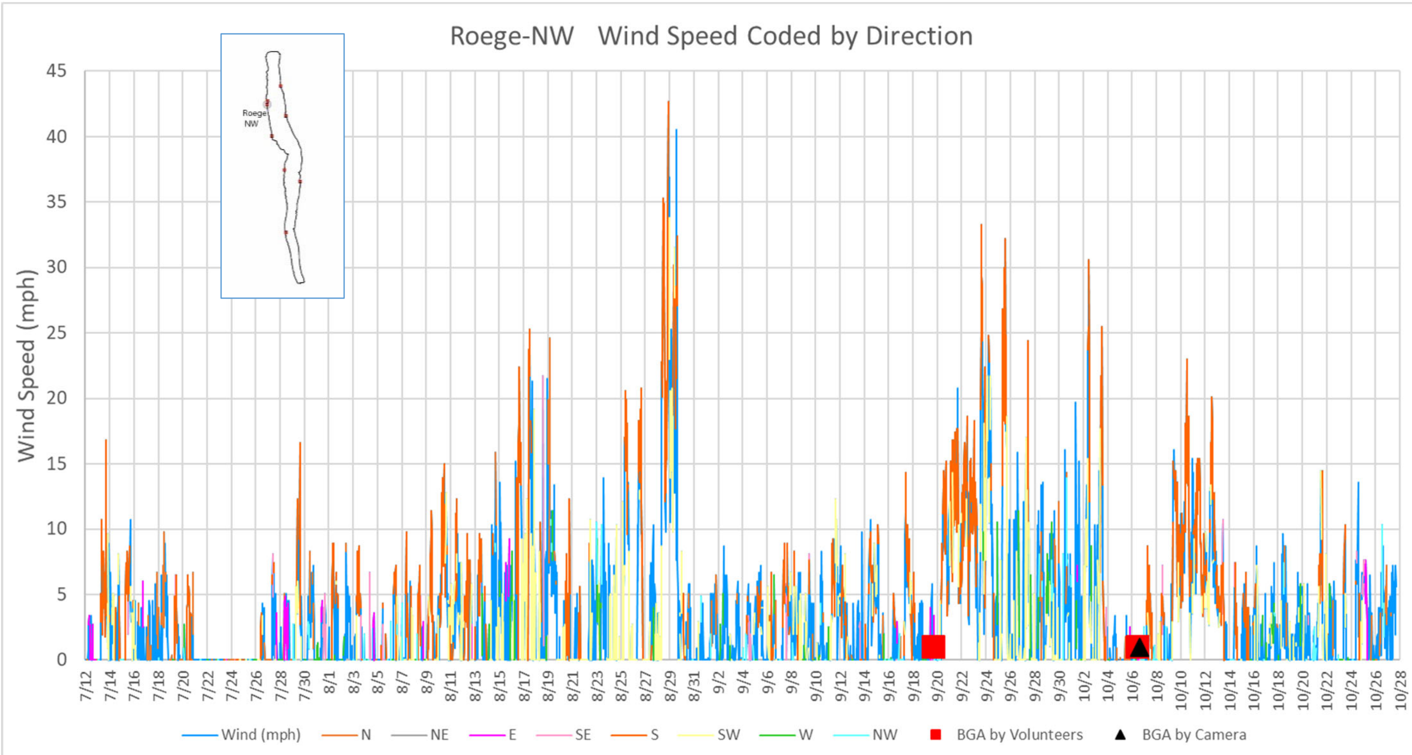
Seneca Lake Wind Speed & Direction (Color Coded)

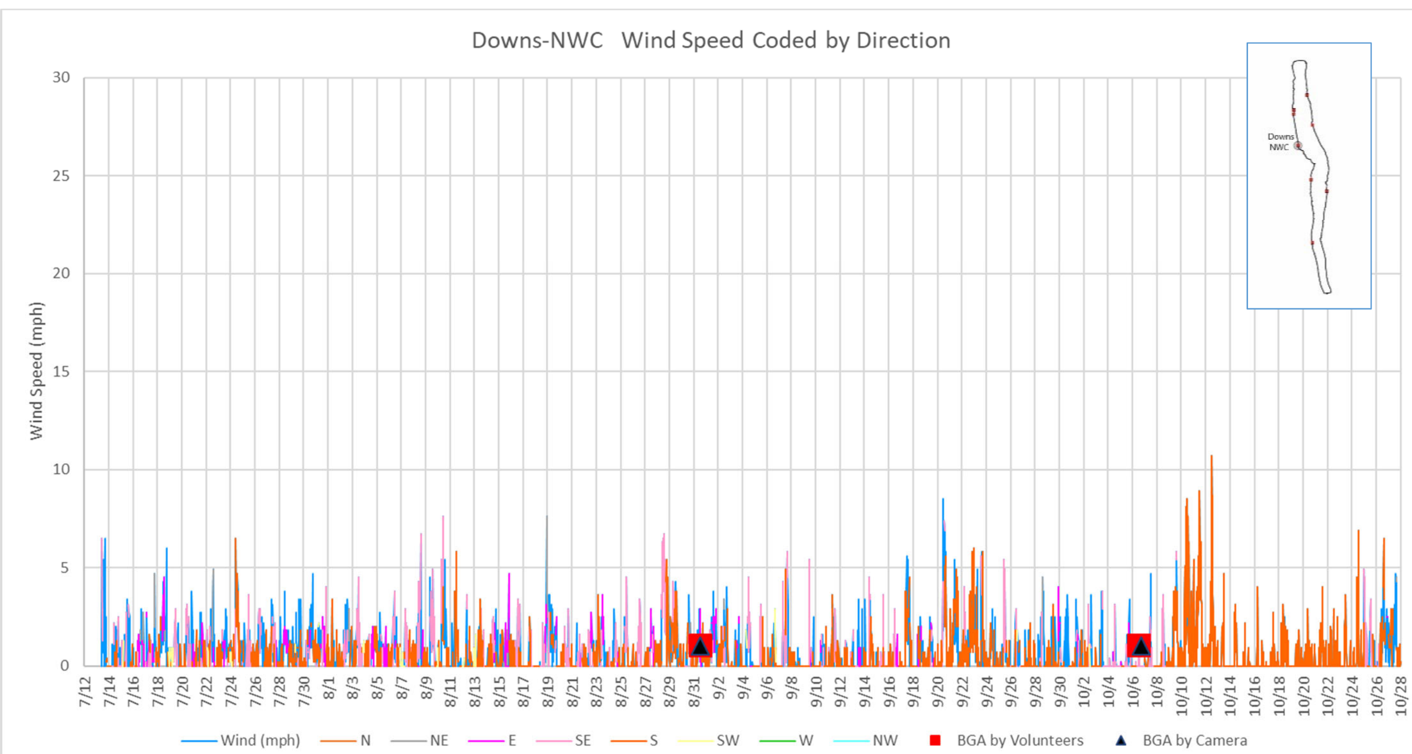


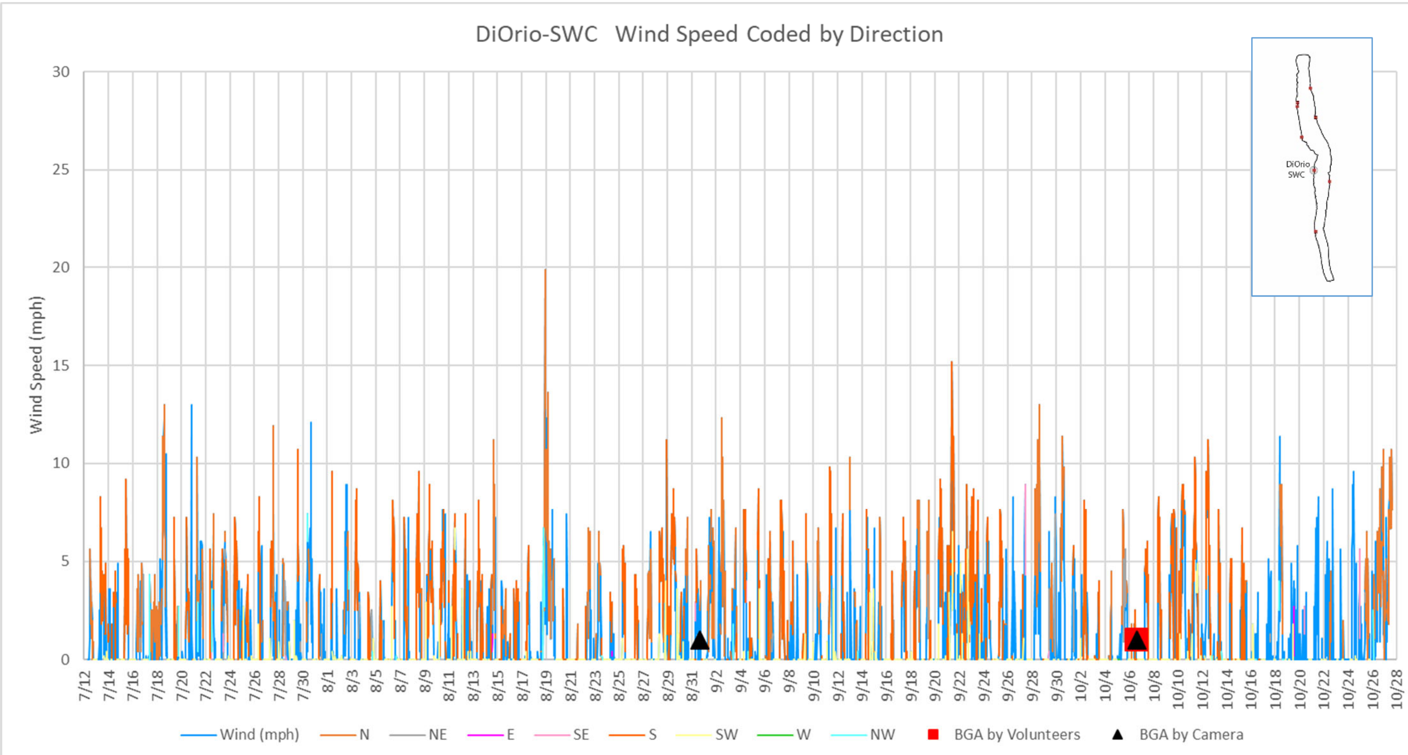


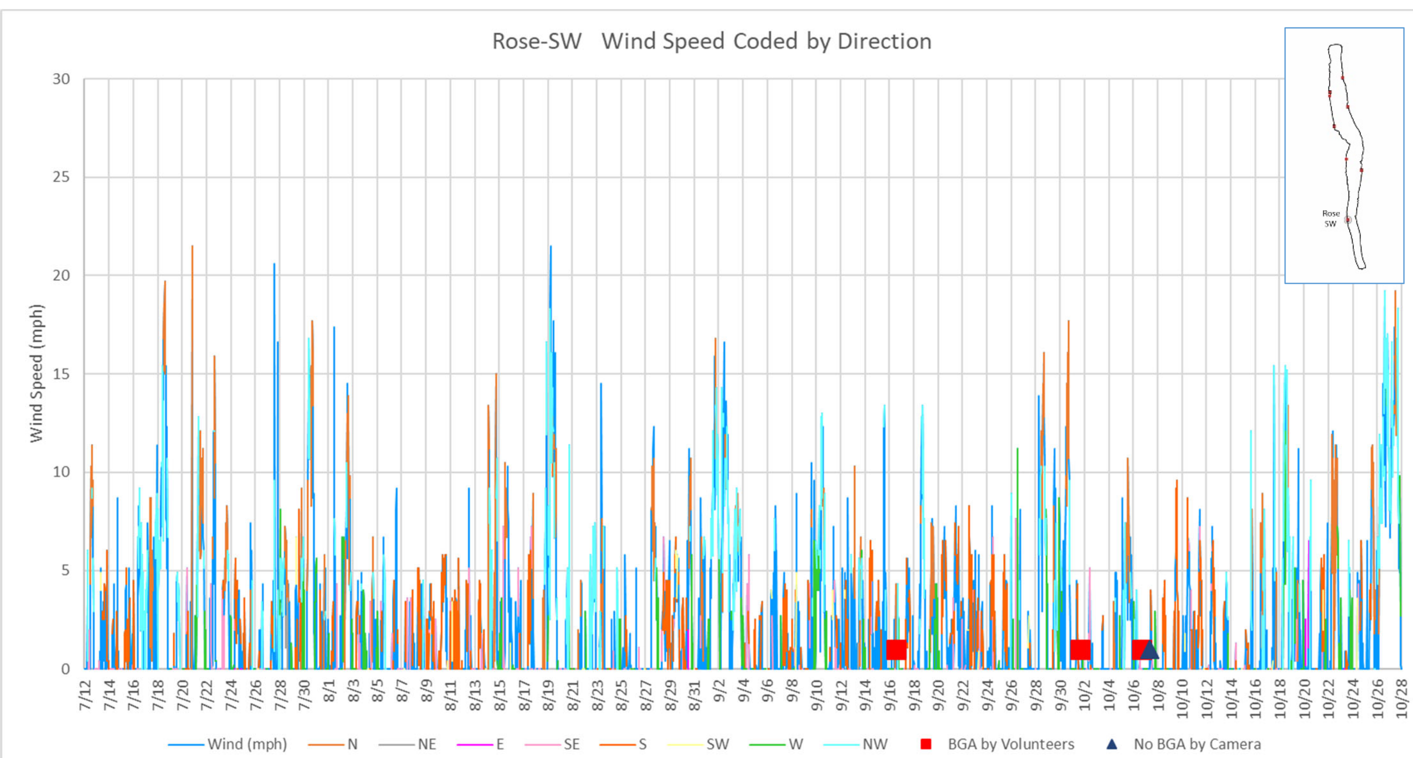

Toole-SEC Wind Speed Coded by Direction
Wind Speed (mph)
Toole SEC
Wind (mph)
N
NE
E
SE
S
SW
W
NW
BGA by Volunteers
No BGA by Camera


Allen-NNW Wind Speed Coded by Direction
Wind Speed (mph)
Allen NNW
Wind (mph)
N
NE
E
SE
S
SW
W
NW
No BGA by Volunteers
BGA by Camera

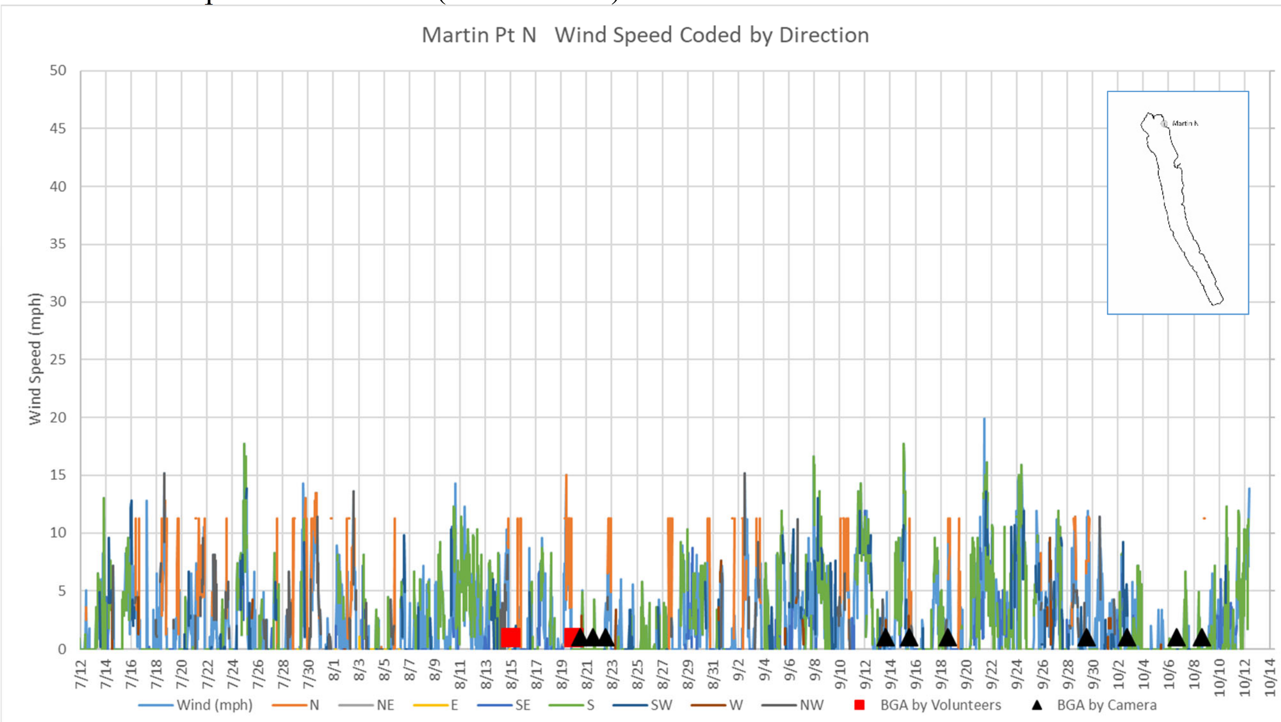

Roege-NW Wind Speed Coded by Direction
Wind Speed (mph)
Roege NW
Wind (mph)
N
NE
E
SE
S
SW
W
NW
BGA by Volunteers
BGA by Camera

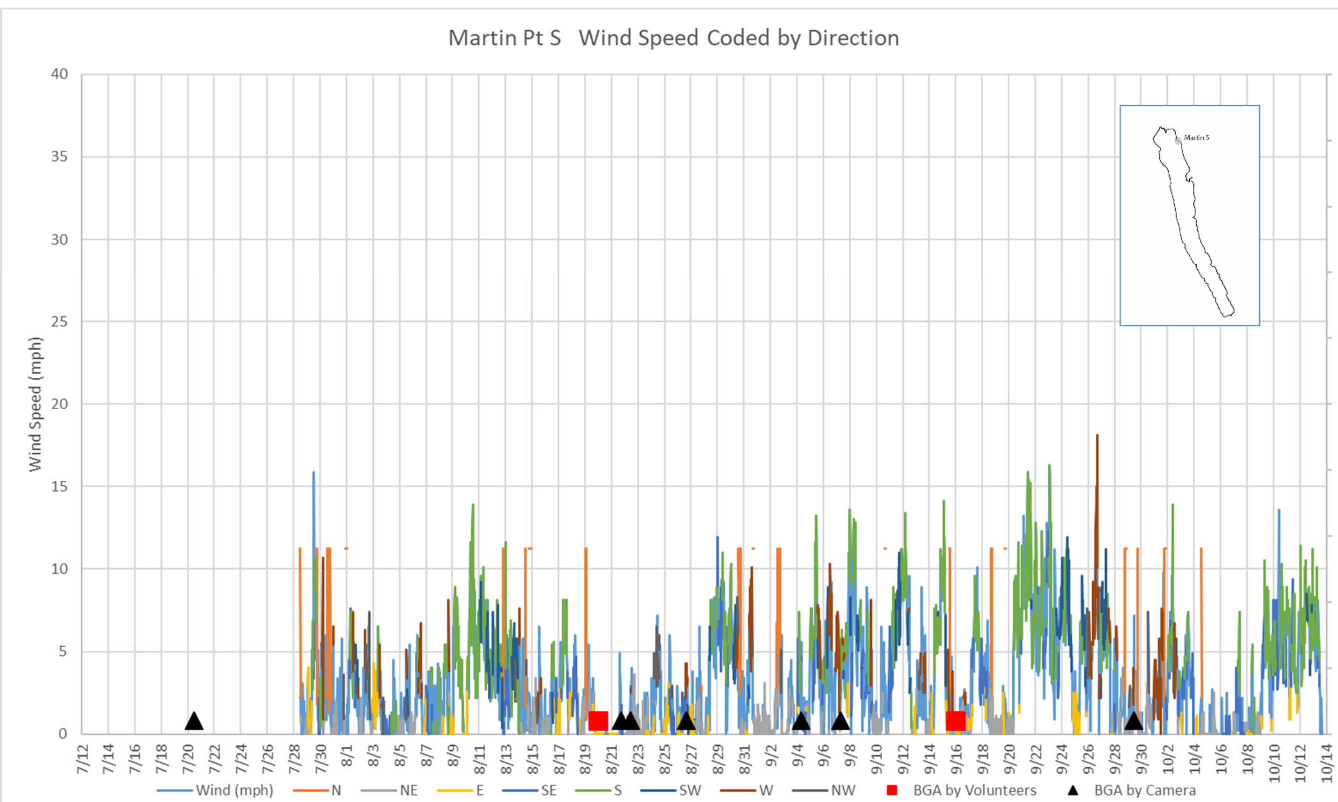

Downs-NWC Wind Speed Coded by Direction
Wind Speed (mph)
Downs NWC
Wind (mph)
N
NE
E
SE
S
SW
W
NW
BGA by Volunteers
BGA by Camera

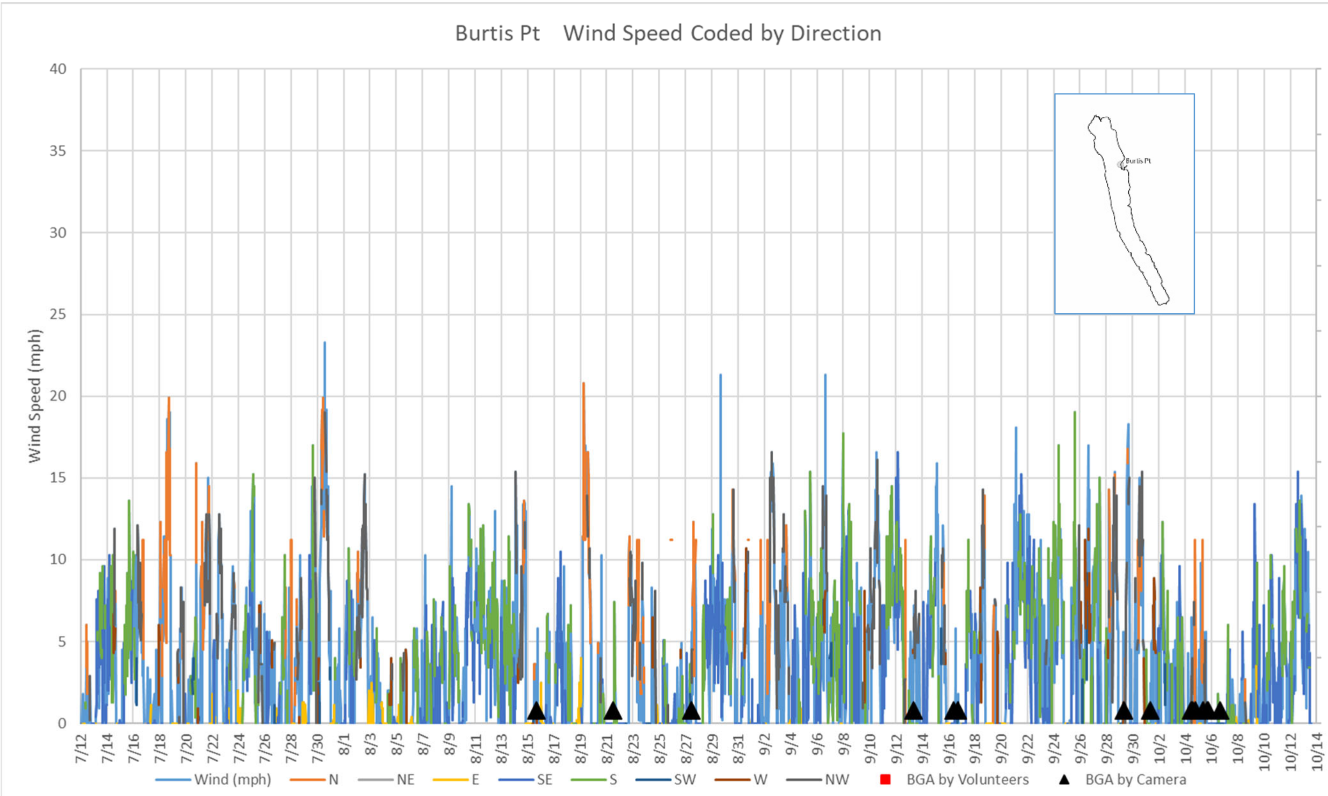

DiOrio-SWC Wind Speed Coded by Direction
Wind Speed (mph)
DiOrio SWC
Wind (mph)
N
NE
E
SE
S
SW
W
NW
BGA by Volunteers
BGA by Camera

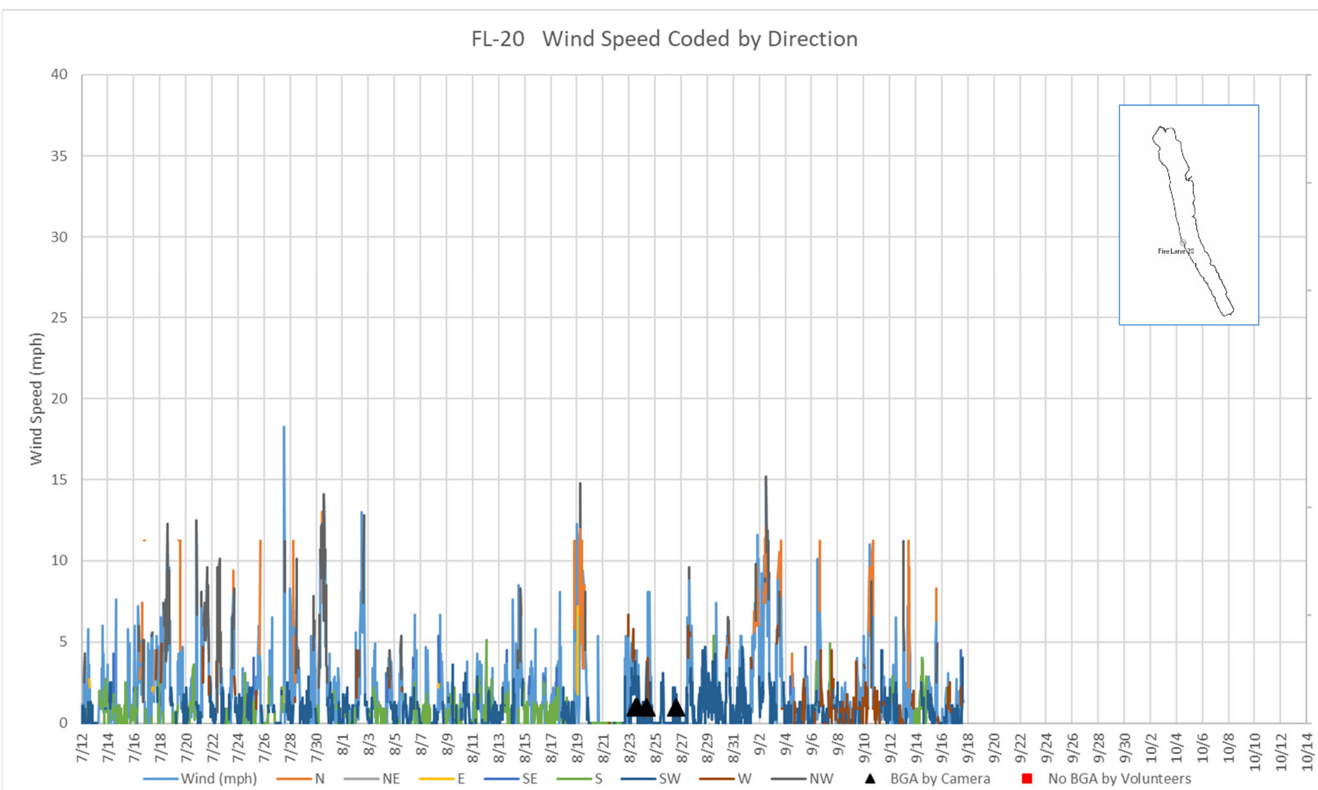

Rose-SW Wind Speed Coded by Direction
Wind Speed (mph)
Rose SW
Wind (mph)
N
NE
E
SE
S
SW
W
NW
BGA by Volunteers
No BGA by Camera

Owasco Lake Wind Speed & Direction (Color Coded)

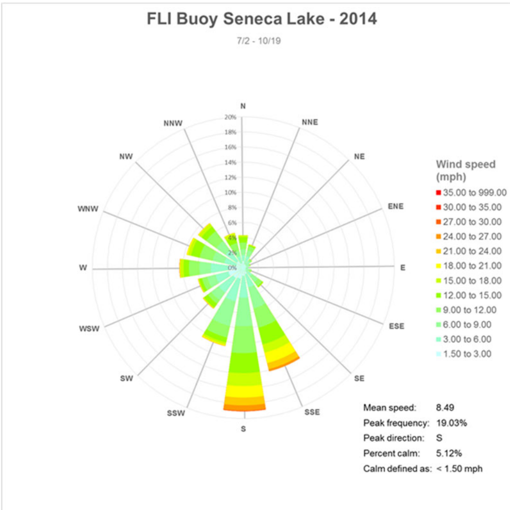


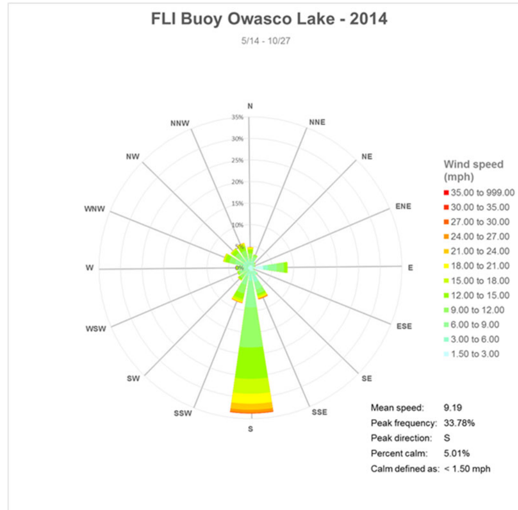


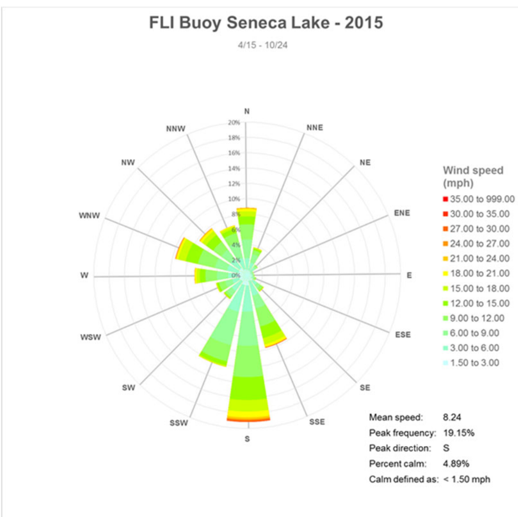

Burtis Pt Wind Speed Coded by Direction
Wind Speed (mph)
Burtis Pt
Wind (mph)
N
NE
E
SE
S
SW
W
NW
BGA by Volunteers
BGA by Camera

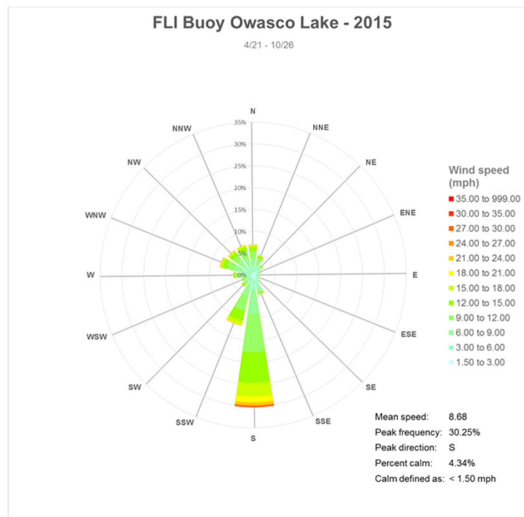

FL-20 Wind Speed Coded by Direction
Wind Speed (mph)
Wind (mph)
N
NE
E
SE
S
SW
W
NW
BGA by Camera
No BGA by Volunteers

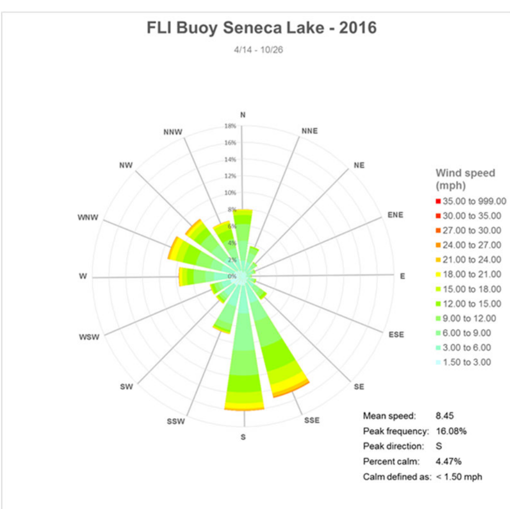
Seneca & Owasco Lake Buoy Site Wind Roses

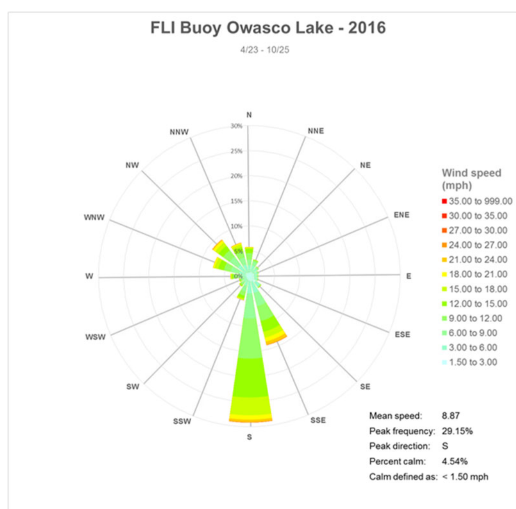


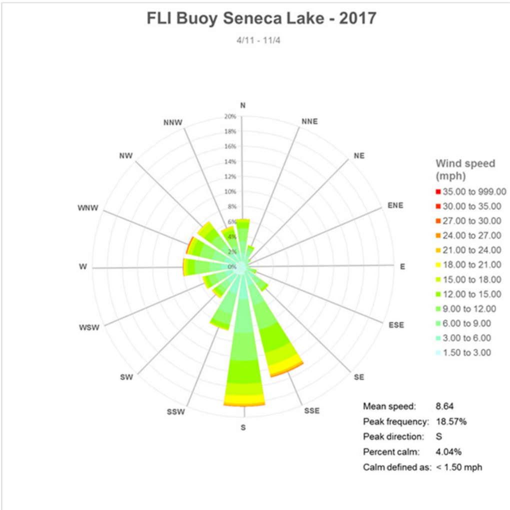


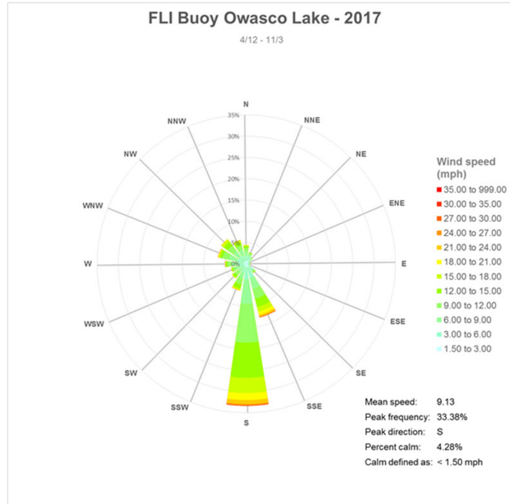


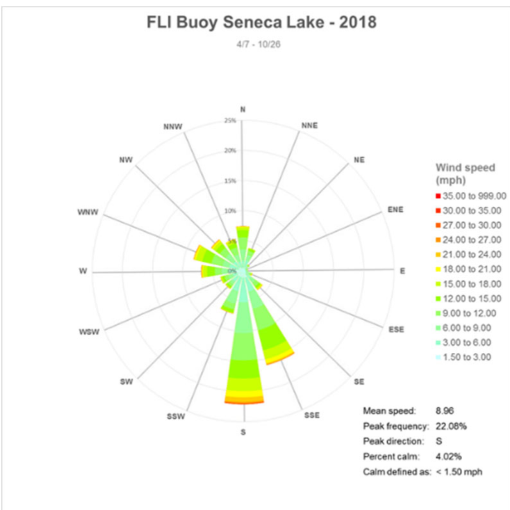


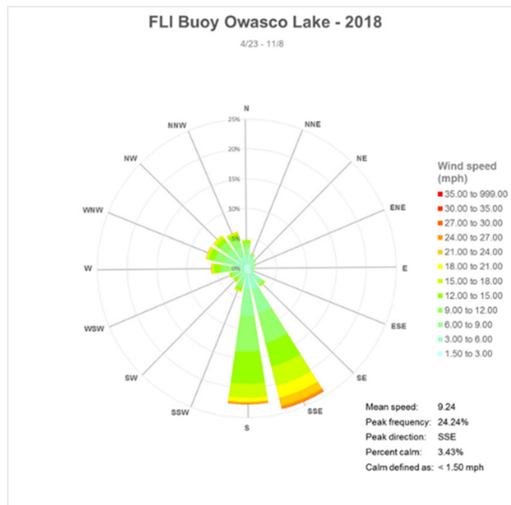


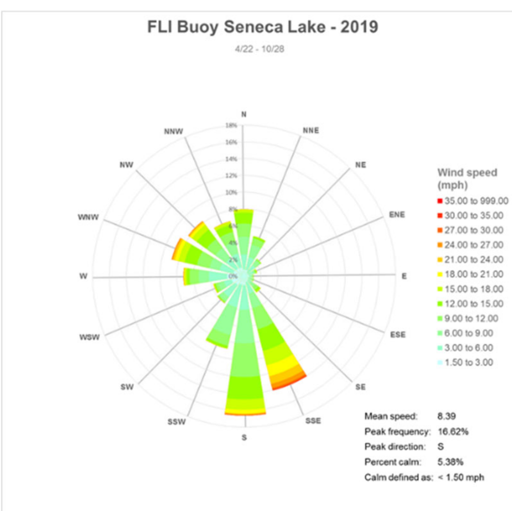


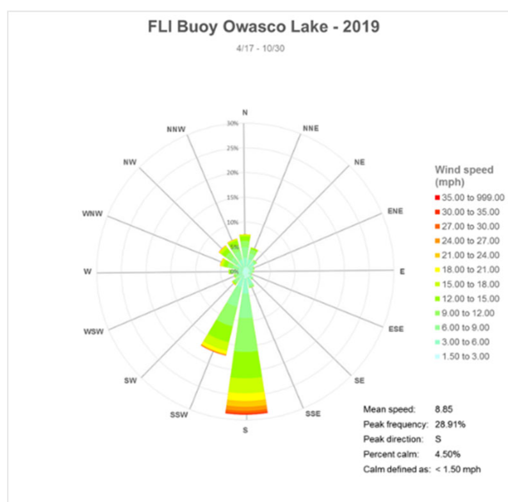

FLI Buoy Seneca Lake - 2017
4/11 - 11/4
Wind speed (mph)
35.00 to 999.00
30.00 to 35.00
27.00 to 30.00
24.00 to 27.00
21.00 to 24.00
18.00 to 21.00
15.00 to 18.00
12.00 to 15.00
9.00 to 12.00
6.00 to 9.00
3.00 to 6.00
1.50 to 3.00
Mean speed: 8.64
Peak frequency: 18.57%
Peak direction: S
Percent calm: 4.04%
Calm defined as: < 1.50 mph

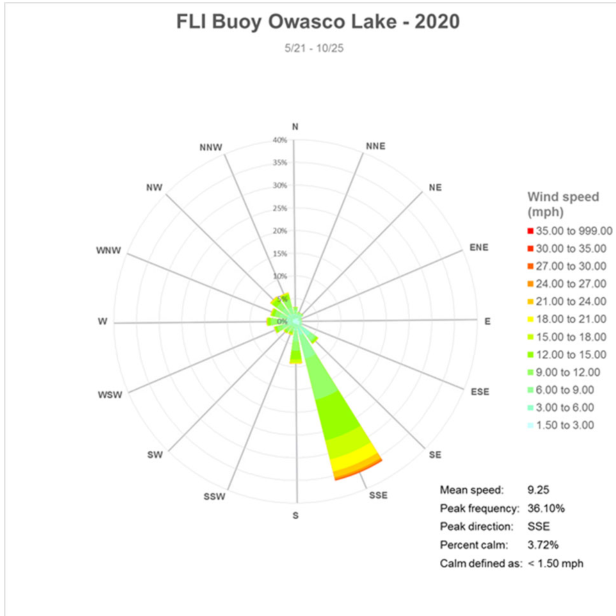

FLI Buoy Owasco Lake - 2017
4/12 - 11/3
Wind speed (mph)
35.00 to 999.00
30.00 to 35.00
27.00 to 30.00
24.00 to 27.00
21.00 to 24.00
18.00 to 21.00
15.00 to 18.00
12.00 to 15.00
9.00 to 12.00
6.00 to 9.00
3.00 to 6.00
1.50 to 3.00
Mean speed: 9.13
Peak frequency: 33.38%
Peak direction: S
Percent calm: 4.28%
Calm defined as: < 1.50 mph

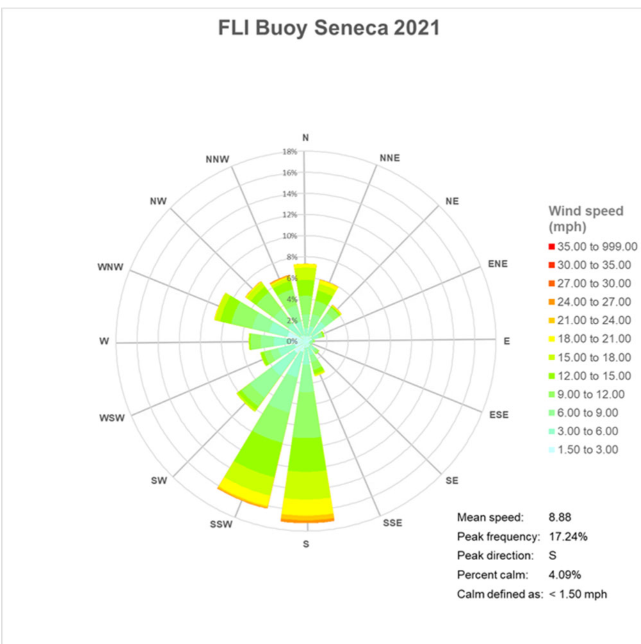

FLI Buoy Seneca Lake - 2018
4/7 - 10/26
Wind speed (mph)
35.00 to 999.00
30.00 to 35.00
27.00 to 30.00
24.00 to 27.00
21.00 to 24.00
18.00 to 21.00
15.00 to 18.00
12.00 to 15.00
9.00 to 12.00
6.00 to 9.00
3.00 to 6.00
1.50 to 3.00
Mean speed: 8.96
Peak frequency: 22.08%
Peak direction: S
Percent calm: 4.02%
Calm defined as: < 1.50 mph

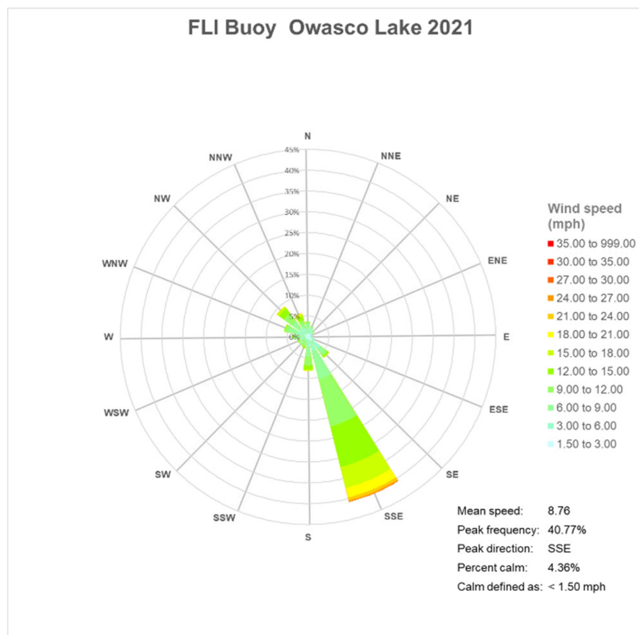

FLI Buoy Owasco Lake - 2018
4/23 - 11/8
Wind speed (mph)
35.00 to 999.00
30.00 to 35.00
27.00 to 30.00
24.00 to 27.00
21.00 to 24.00
18.00 to 21.00
15.00 to 18.00
12.00 to 15.00
9.00 to 12.00
6.00 to 9.00
3.00 to 6.00
1.50 to 3.00
Mean speed: 9.24
Peak frequency: 24.24%
Peak direction: SSE
Percent calm: 3.43%
Calm defined as: < 1.50 mph


FLI Buoy Seneca Lake - 2019
4/22 - 10/28
Wind speed (mph)
35.00 to 999.00
30.00 to 35.00
27.00 to 30.00
24.00 to 27.00
21.00 to 24.00
18.00 to 21.00
15.00 to 18.00
12.00 to 15.00
9.00 to 12.00
6.00 to 9.00
3.00 to 6.00
1.50 to 3.00
Mean speed: 8.39
Peak frequency: 16.62%
Peak direction: S
Percent calm: 5.38%
Calm defined as: < 1.50 mph

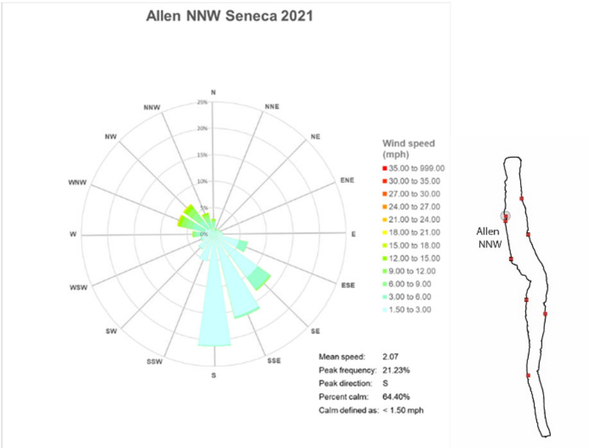

FLI Buoy Owasco Lake - 2019
4/17 - 10/30
Wind speed (mph)
35.00 to 999.00
30.00 to 35.00
27.00 to 30.00
24.00 to 27.00
21.00 to 24.00
18.00 to 21.00
15.00 to 18.00
12.00 to 15.00
9.00 to 12.00
6.00 to 9.00
3.00 to 6.00
1.50 to 3.00
Mean speed: 8.85
Peak frequency: 28.91%
Peak direction: S
Percent calm: 4.50%
Calm defined as: < 1.50 mph

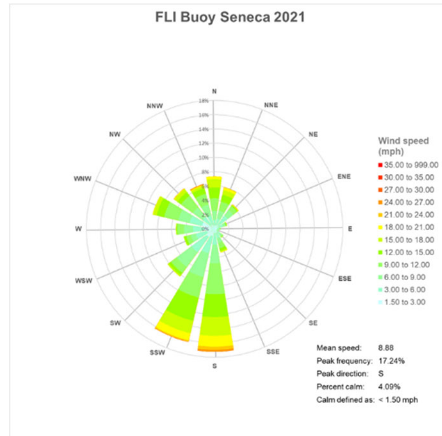

FLI Buoy Owasco Lake - 2020
5/21 - 10/25
Wind speed (mph)
35.00 to 999.00
30.00 to 35.00
27.00 to 30.00
24.00 to 27.00
21.00 to 24.00
18.00 to 21.00
15.00 to 18.00
12.00 to 15.00
9.00 to 12.00
6.00 to 9.00
3.00 to 6.00
1.50 to 3.00
Mean speed: 9.25
Peak frequency: 36.10%
Peak direction: SSE
Percent calm: 3.72%
Calm defined as: < 1.50 mph

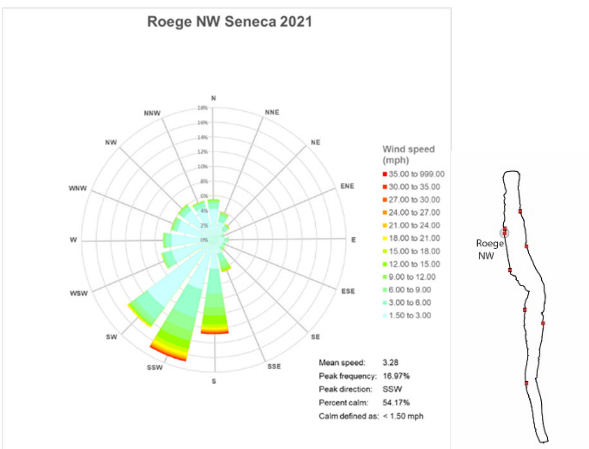

FLI Buoy Seneca 2021
Wind speed (mph)
35.00 to 999.00
30.00 to 35.00
27.00 to 30.00
24.00 to 27.00
21.00 to 24.00
18.00 to 21.00
15.00 to 18.00
12.00 to 15.00
9.00 to 12.00
6.00 to 9.00
3.00 to 6.00
1.50 to 3.00
Mean speed: 8.88
Peak frequency: 17.24%
Peak direction: S
Percent calm: 4.09%
Calm defined as: < 1.50 mph

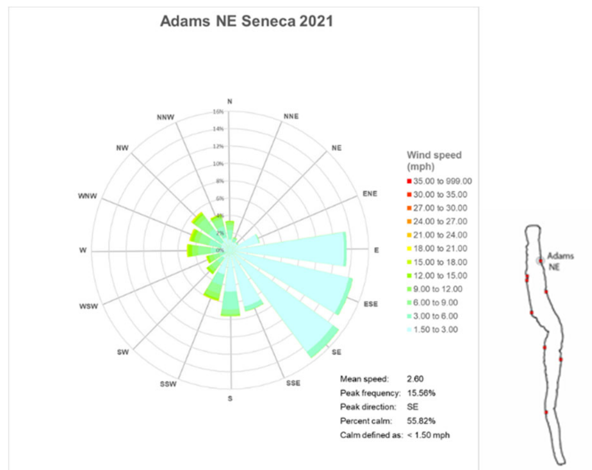

FLI Buoy Owasco Lake 2021
Wind speed (mph)
35.00 to 999.00
30.00 to 35.00
27.00 to 30.00
24.00 to 27.00
21.00 to 24.00
18.00 to 21.00
15.00 to 18.00
12.00 to 15.00
9.00 to 12.00
6.00 to 9.00
3.00 to 6.00
1.50 to 3.00
Mean speed: 8.76
Peak frequency: 40.77%
Peak direction: SSE
Percent calm: 4.36%
Calm defined as: < 1.50 mph

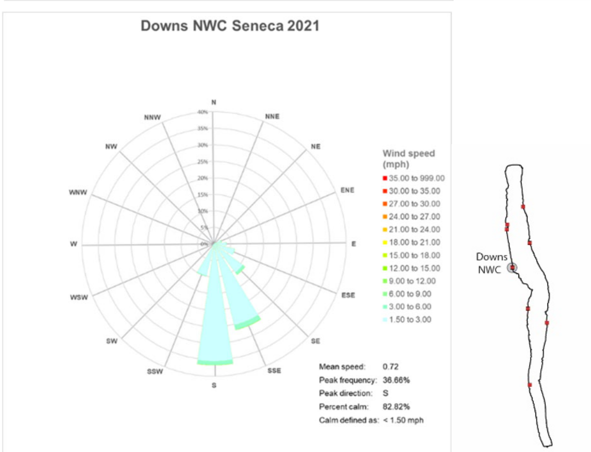
Seneca Lake Wind Roses

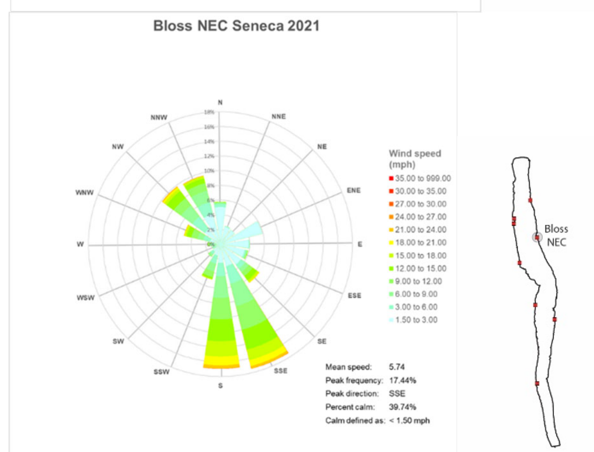


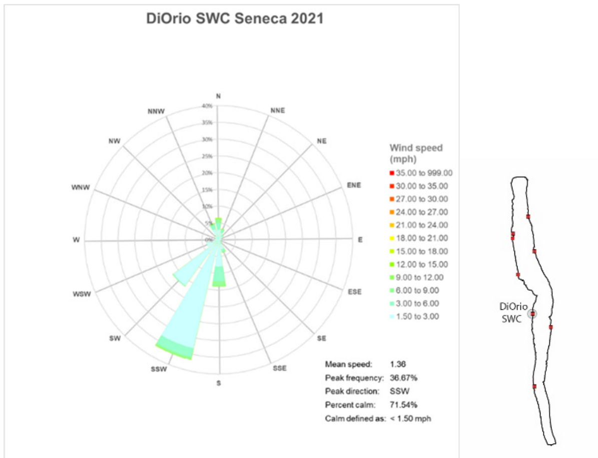


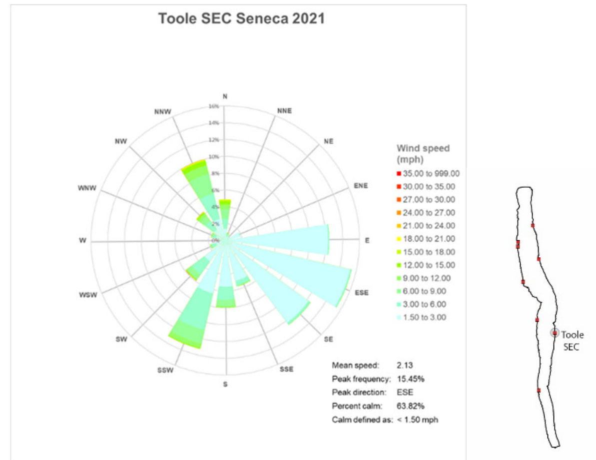


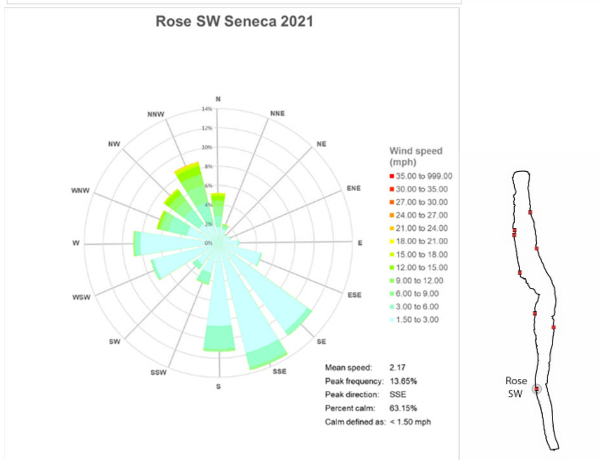




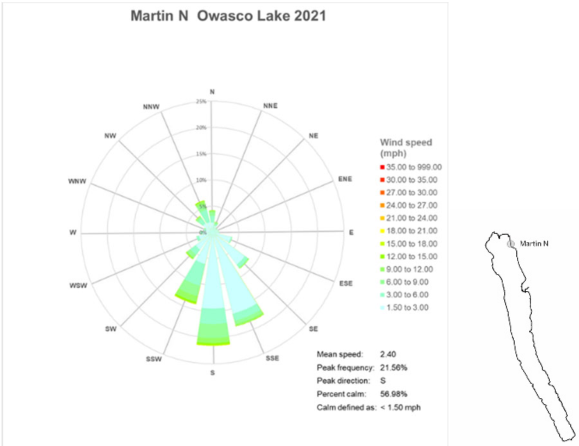


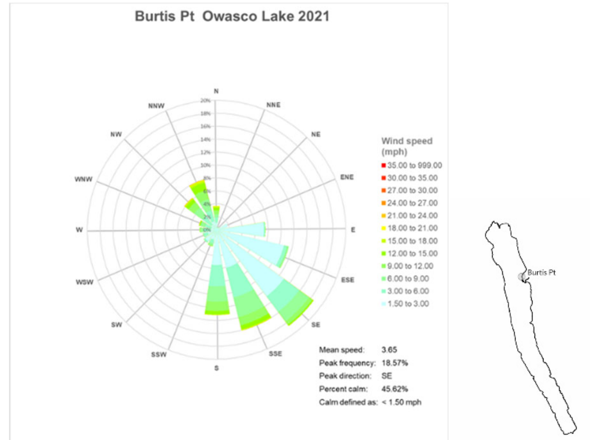

DiOrio SWC Seneca 2021
Wind speed (mph)
35.00 to 999.00
30.00 to 35.00
27.00 to 30.00
24.00 to 27.00
21.00 to 24.00
18.00 to 21.00
15.00 to 18.00
12.00 to 15.00
9.00 to 12.00
6.00 to 9.00
3.00 to 6.00
1.50 to 3.00
Mean speed: 1.36
Peak frequency: 36.67%
Peak direction: SSW
Percent calm: 71.54%
Calm defined as: < 1.50 mph
DiOrio SWC

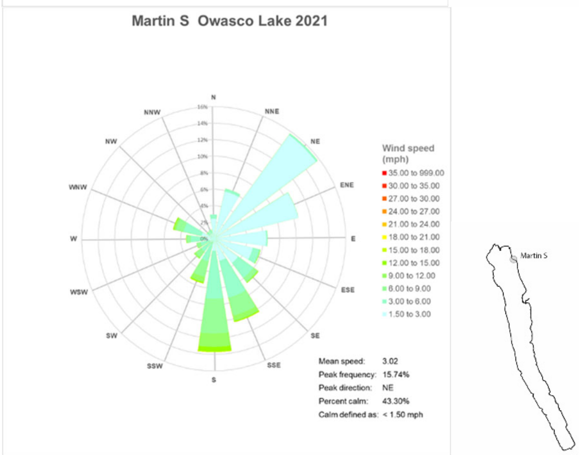

Toole SEC Seneca 2021
Wind speed (mph)
35.00 to 999.00
30.00 to 35.00
27.00 to 30.00
24.00 to 27.00
21.00 to 24.00
18.00 to 21.00
15.00 to 18.00
12.00 to 15.00
9.00 to 12.00
6.00 to 9.00
3.00 to 6.00
1.50 to 3.00
Mean speed: 2.13
Peak frequency: 15.45%
Peak direction: ESE
Percent calm: 63.82%
Calm defined as: < 1.50 mph
Toole SEC

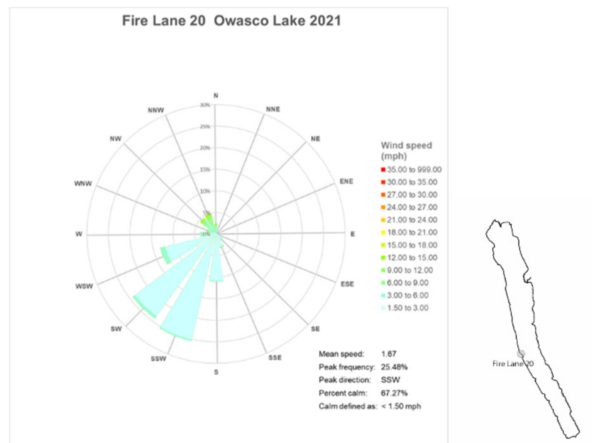

Rose SW Seneca 2021
Wind speed (mph)
35.00 to 999.00
30.00 to 35.00
27.00 to 30.00
24.00 to 27.00
21.00 to 24.00
18.00 to 21.00
15.00 to 18.00
12.00 to 15.00
9.00 to 12.00
6.00 to 9.00
3.00 to 6.00
1.50 to 3.00
Mean speed: 2.17
Peak frequency: 13.65%
Peak direction: SSE
Percent calm: 63.15%
Calm defined as: < 1.50 mph
Rose SW

Owasco Lake Wind Roses

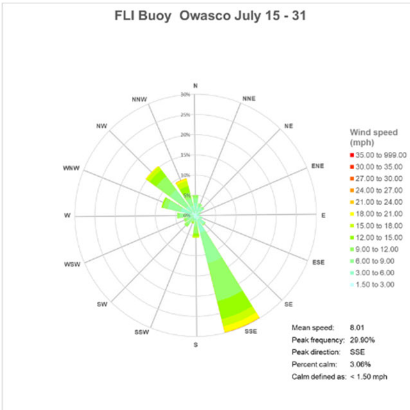


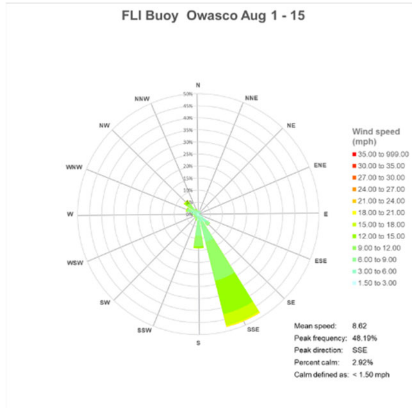


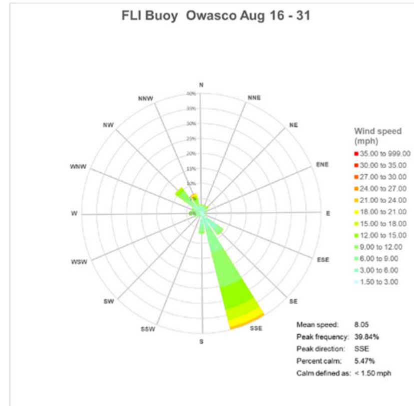


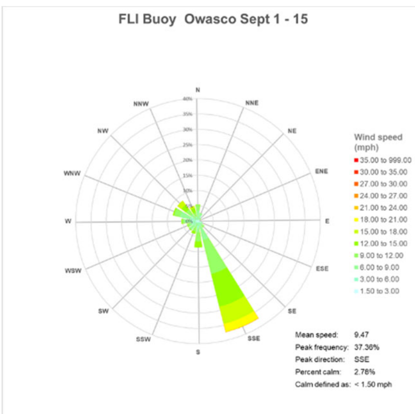


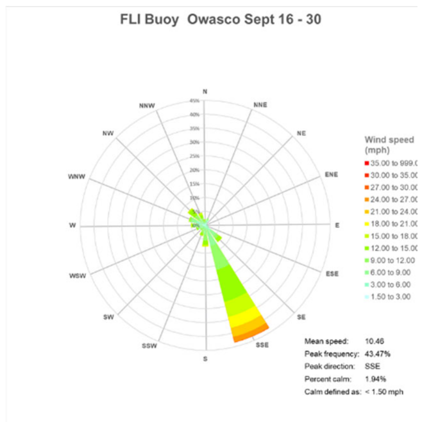
Seasonal Wind Roses FLI Buoy Owasco Lake

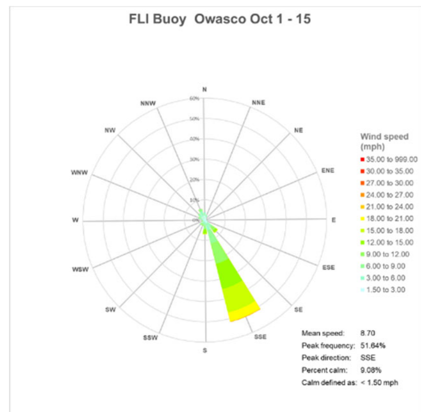




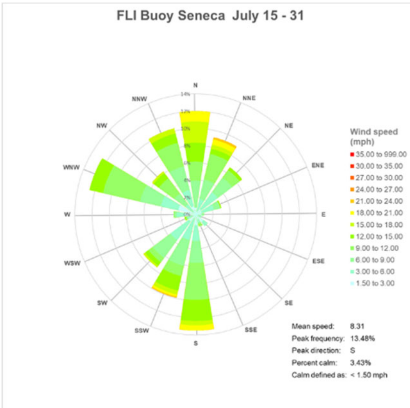


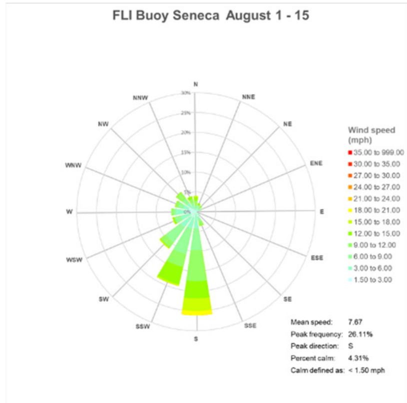


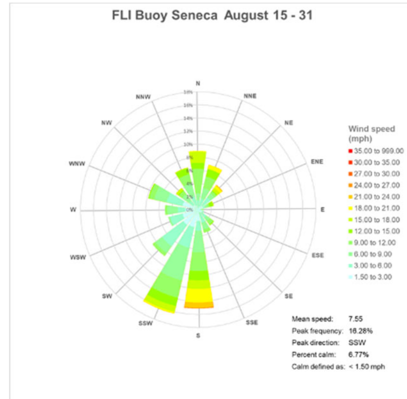


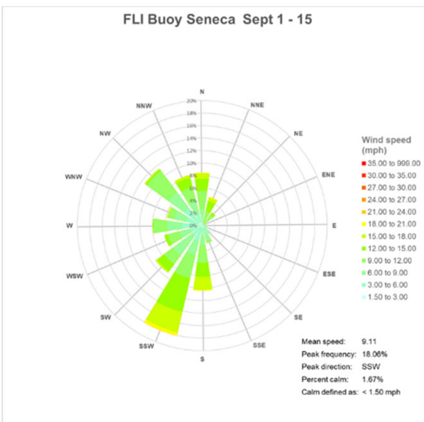


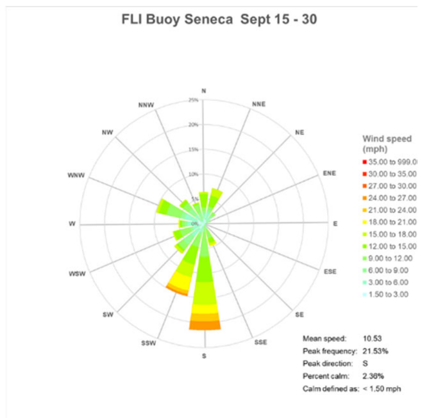
Seasonal Wind Roses FLI Buoy Seneca Lake

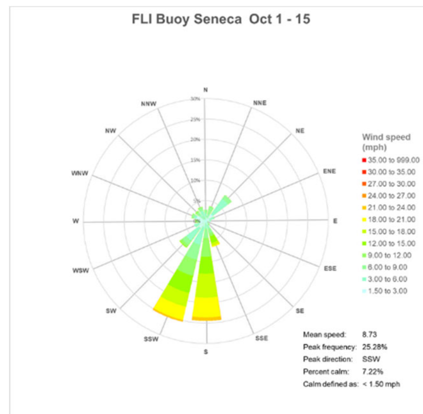




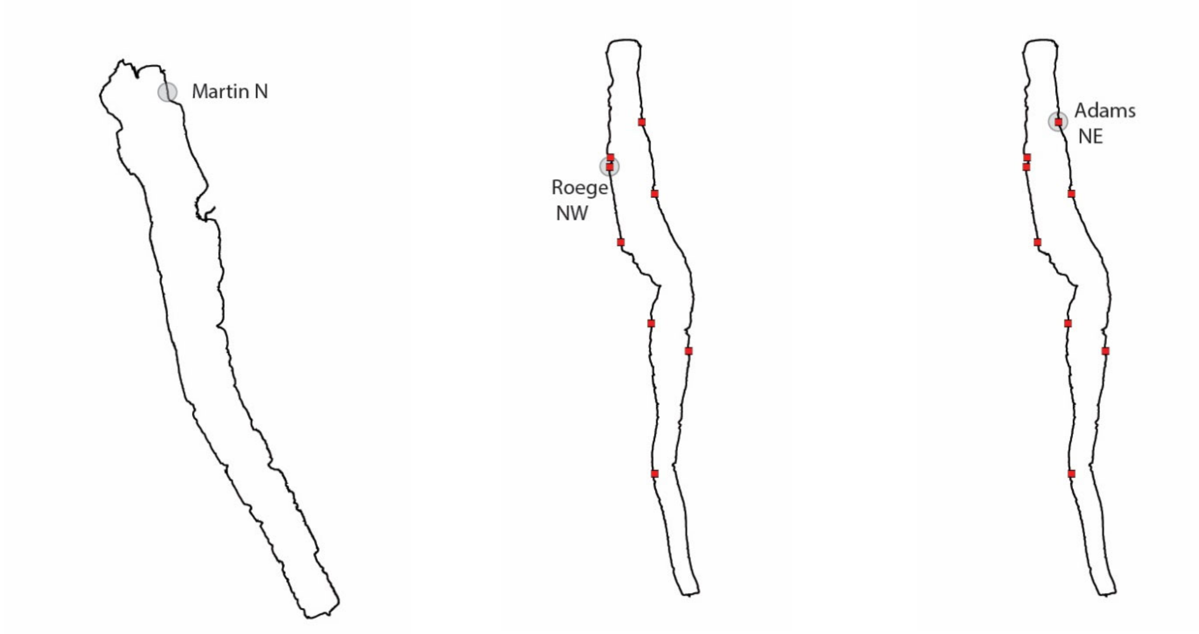


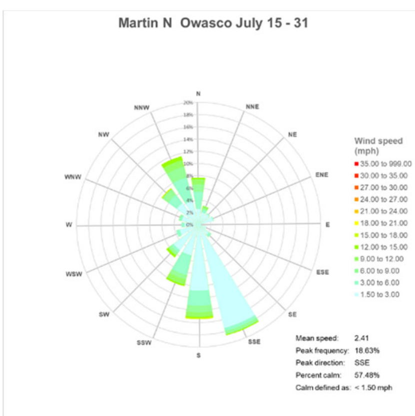


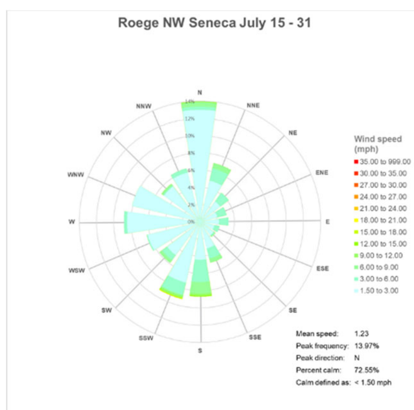


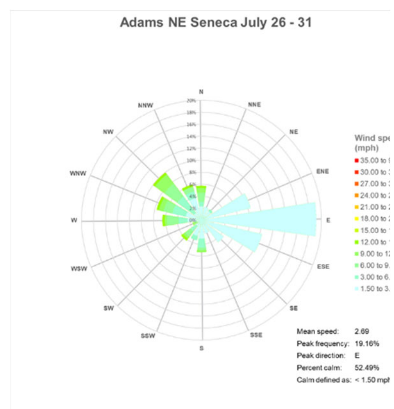


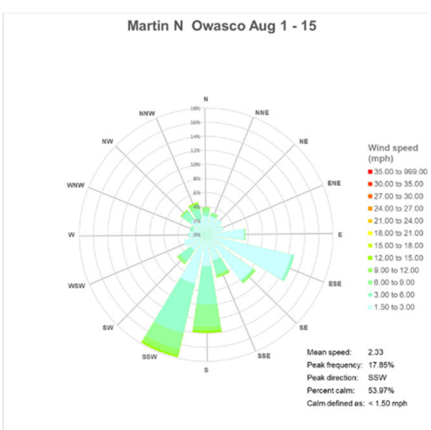
Seasonal Wind Roses at Selected Sites, Seneca & Owasco Lakes

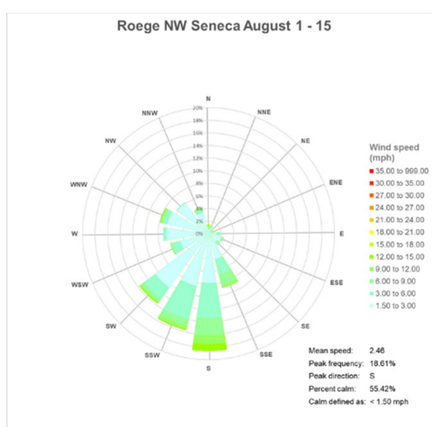


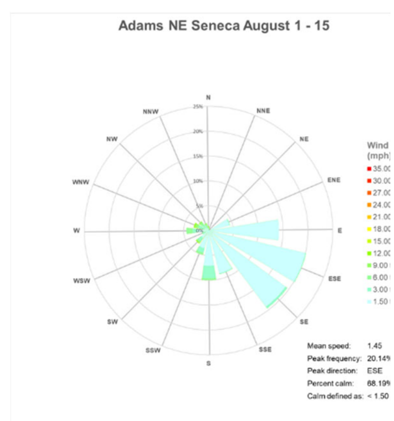


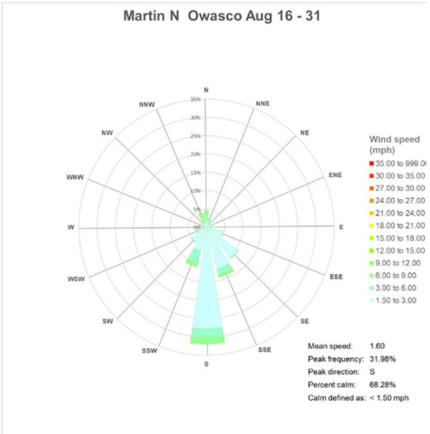


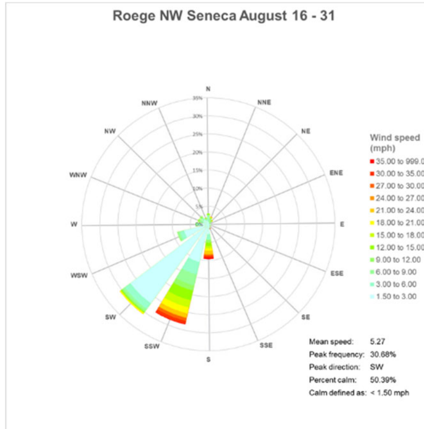


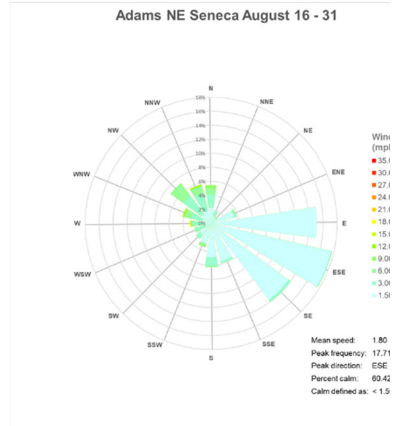


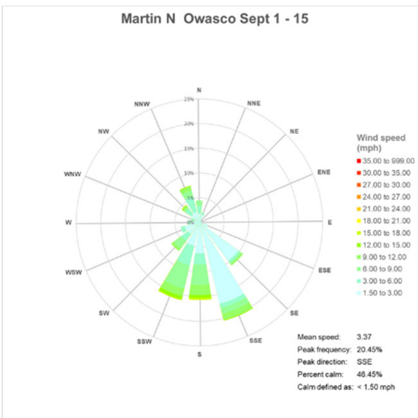


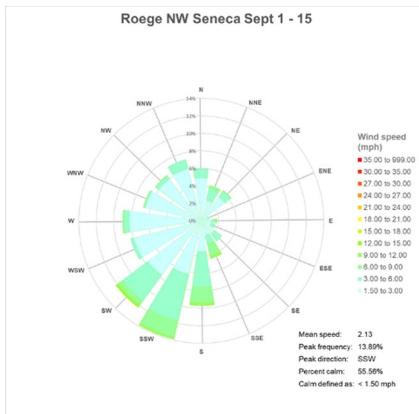


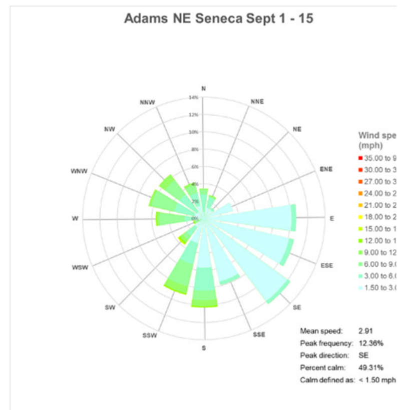

Martin N Owasco Aug 16 - 31
Wind speed (mph)
Mean speed: 1.60
Peak frequency: 31.98%
Peak direction: S
Percent calm: 68.28%
Calm defined as: < 1.50 mph

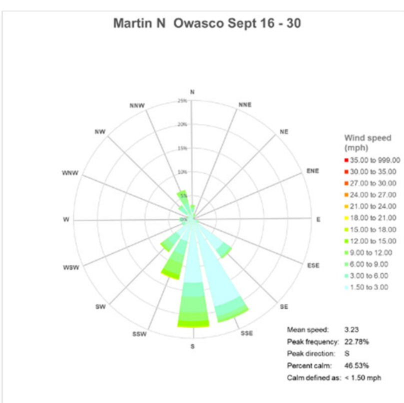

Roege NW Seneca August 16 - 31
Wind speed (mph)
Mean speed: 5.27
Peak frequency: 30.68%
Peak direction: SW
Percent calm: 50.39%
Calm defined as: < 1.50 mph

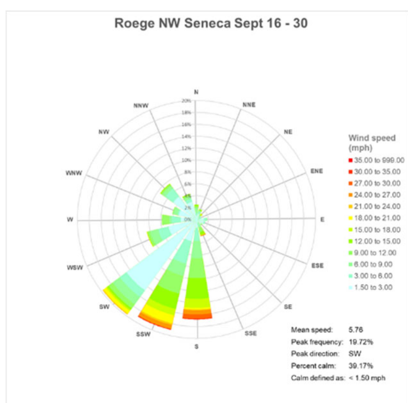

Adams NE Seneca August 16 - 31
Mean speed: 1.80
Peak direction: ESE

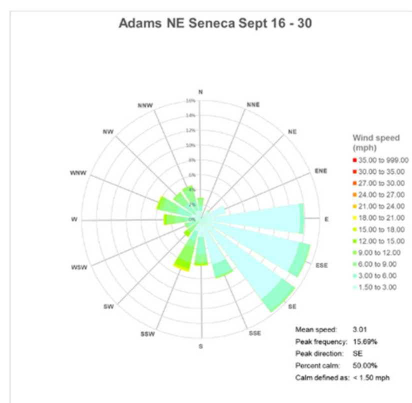

Martin N Owasco Sept 1 - 15
Wind speed (mph)
Mean speed: 3.37
Peak frequency: 20.45%
Peak direction: SSE
Percent calm: 46.45%
Calm defined as: < 1.50 mph

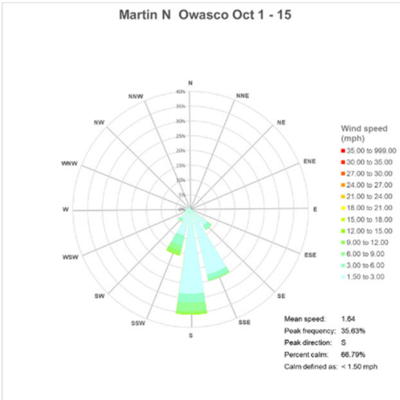

Roege NW Seneca Sept 1 - 15
Wind speed (mph)
Mean speed: 2.13
Peak frequency: 13.89%
Peak direction: SSW
Percent calm: 55.56%
Calm defined as: < 1.50 mph

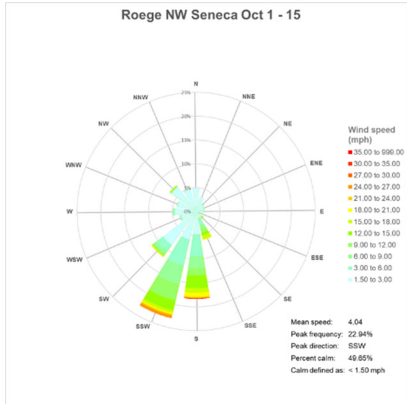

Adams NE Seneca Sept 1 - 15
Mean speed: 2.91
Peak frequency: 12.36%
Peak direction: SE
Percent calm: 49.31%
Calm defined as: < 1.50 mph

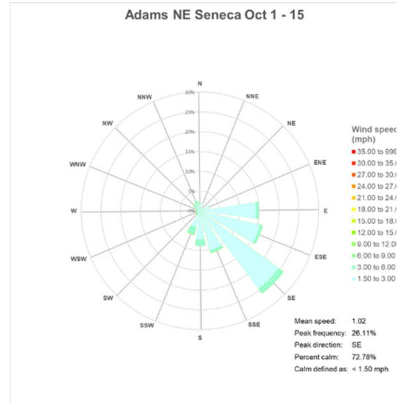

Martin N Owasco Sept 16 - 30
Wind speed (mph)
Mean speed: 3.23
Peak frequency: 22.78%
Peak direction: S
Percent calm: 46.53%
Calm defined as: < 1.50 mph


Roege NW Seneca Sept 16 - 30
Wind speed (mph)
Mean speed: 5.76
Peak frequency: 19.72%
Peak direction: SW
Percent calm: 39.17%
Calm defined as: < 1.50 mph

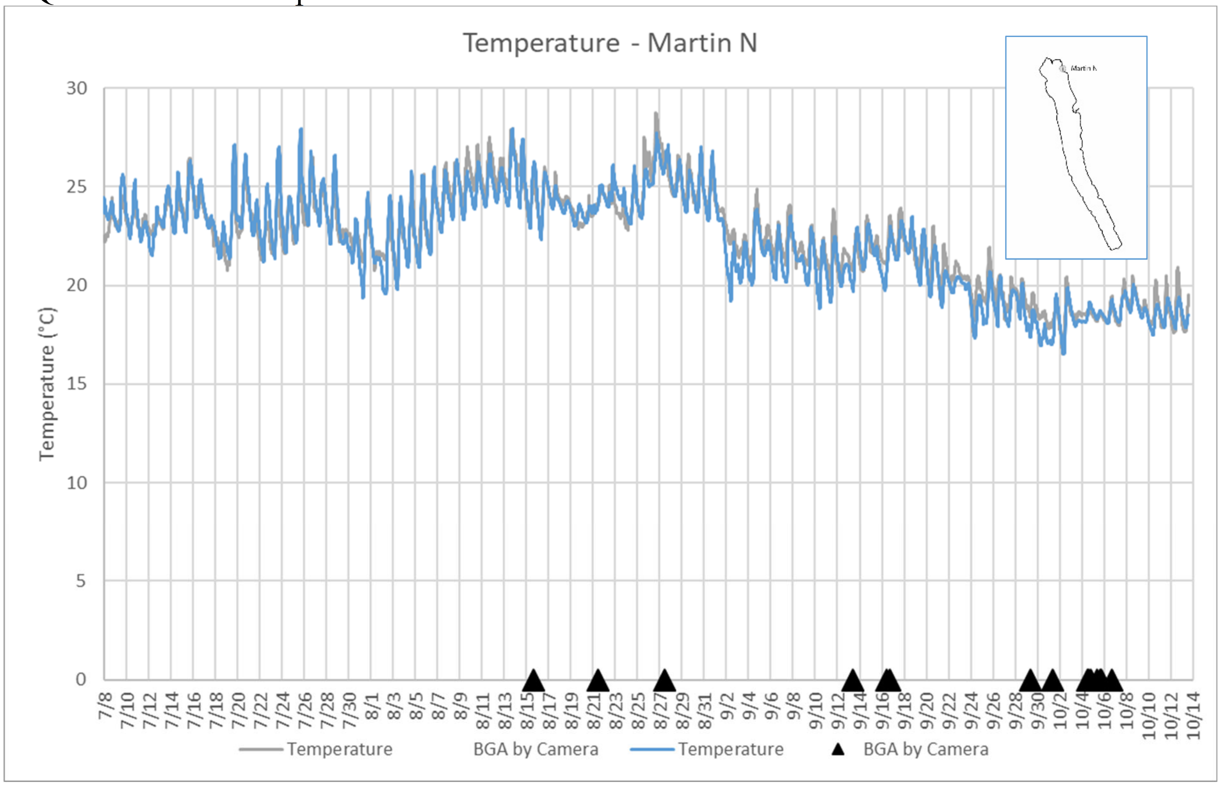

Adams NE Seneca Sept 16 - 30
Wind speed (mph)
Mean speed: 3.01
Peak frequency: 15.69%
Peak direction: SE
Percent calm: 50.00%
Calm defined as: < 1.50 mph

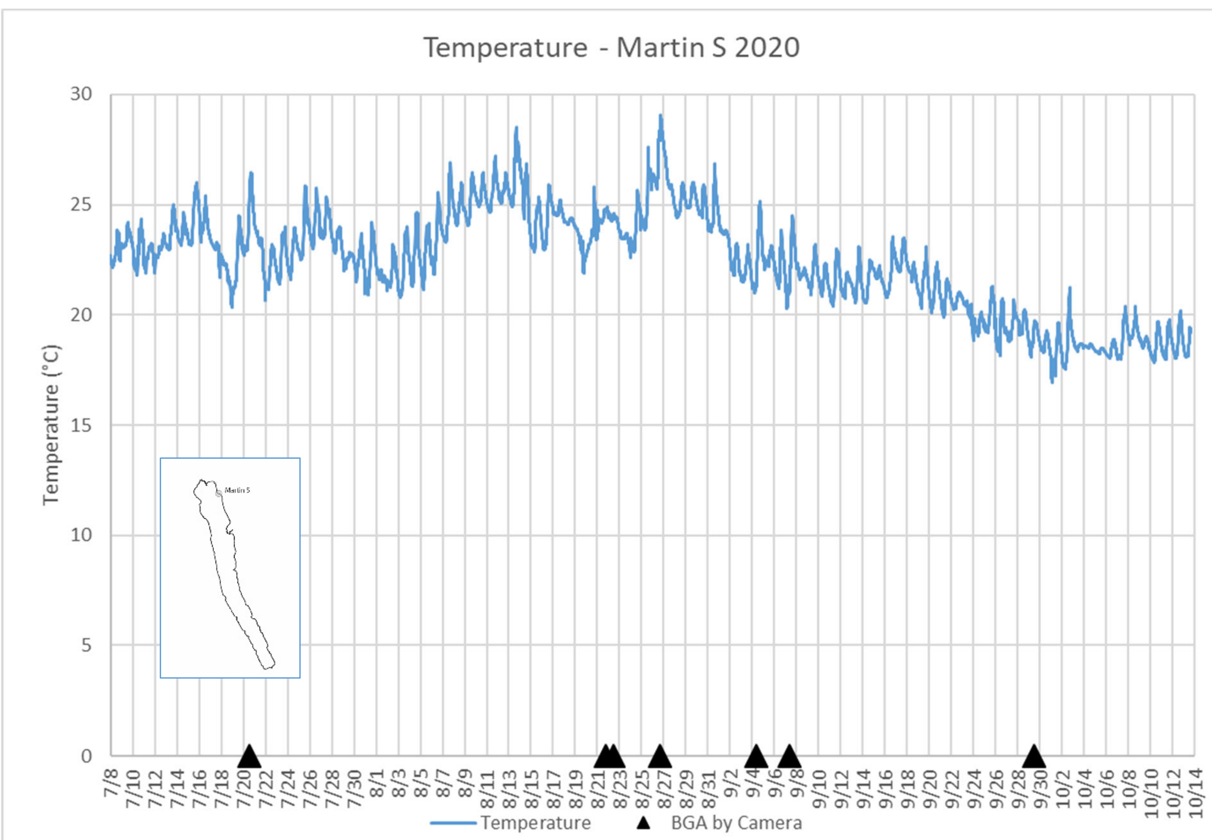

Martin N Owasco Oct 1 - 15
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
Wind speed (mph)
35.00 to 999.00
30.00 to 35.00
27.00 to 30.00
24.00 to 27.00
21.00 to 24.00
18.00 to 21.00
15.00 to 18.00
12.00 to 15.00
9.00 to 12.00
6.00 to 9.00
3.00 to 6.00
1.50 to 3.00
Mean speed: 1.64
Peak frequency: 35.63%
Peak direction: S
Percent calm: 66.79%
Calm defined as: < 1.50 mph

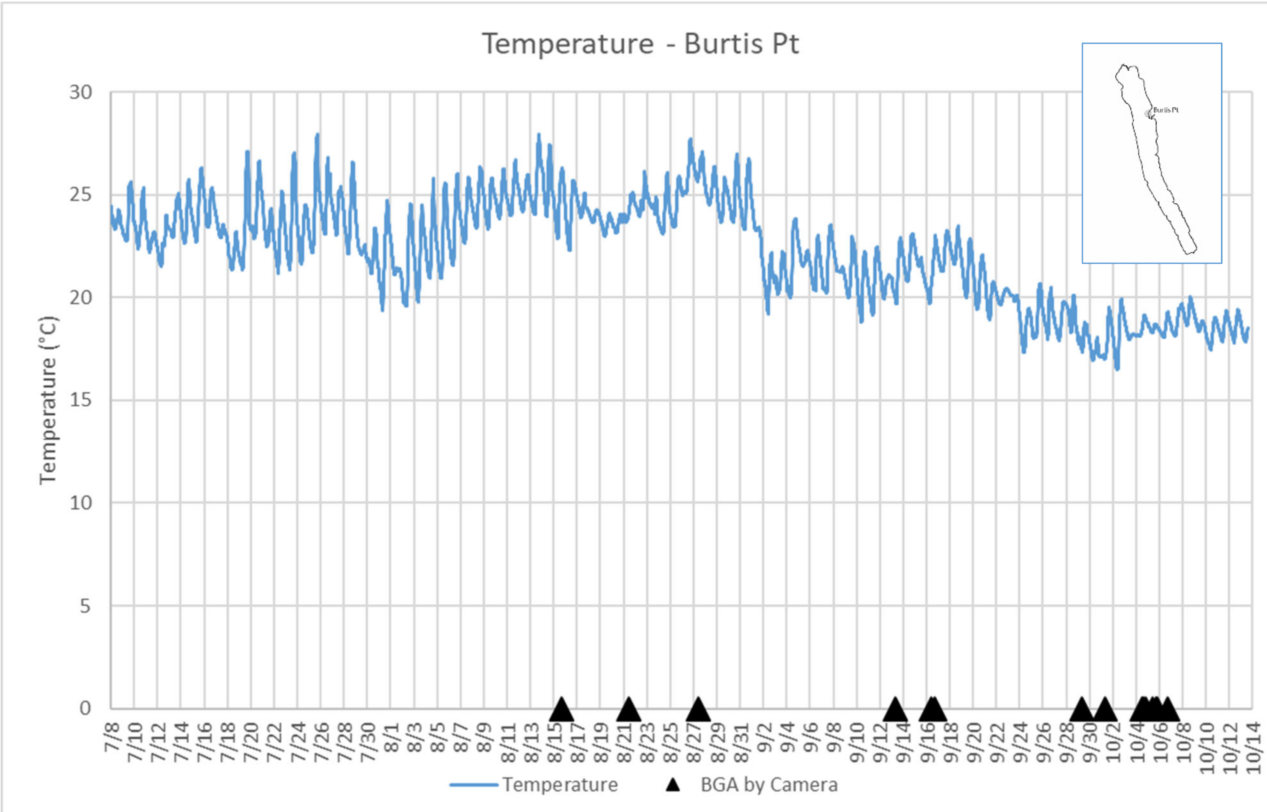

Roege NW Seneca Oct 1 - 15
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
Wind speed (mph)
35.00 to 999.00
30.00 to 35.00
27.00 to 30.00
24.00 to 27.00
21.00 to 24.00
18.00 to 21.00
15.00 to 18.00
12.00 to 15.00
9.00 to 12.00
6.00 to 9.00
3.00 to 6.00
1.50 to 3.00
Mean speed: 4.04
Peak frequency: 22.94%
Peak direction: SSW
Percent calm: 49.65%
Calm defined as: < 1.50 mph

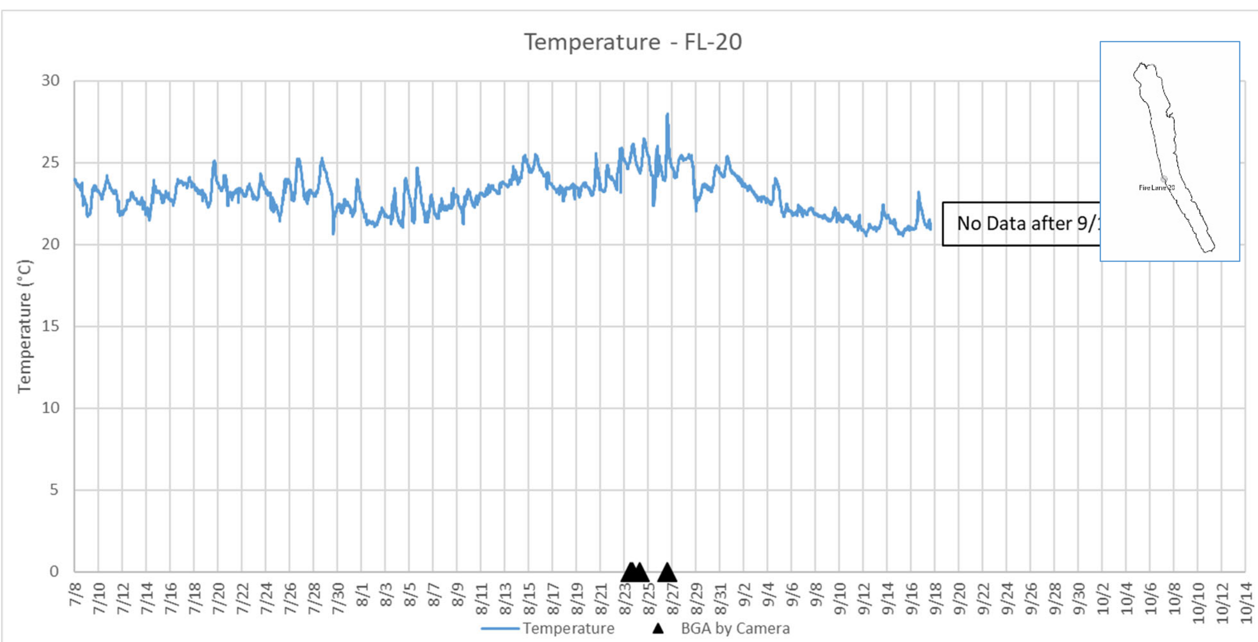

Adams NE Seneca Oct 1 - 15
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
(mph)
6.00 to 9.00
3.00 to 6.00
1.50 to 3.00
Mean speed: 1.02
Peak frequency: 26.11%
Peak direction: SE
Percent calm: 72.78%
Calm defined as: < 1.50 mph

Owasco WQ Sonde Water Temperature

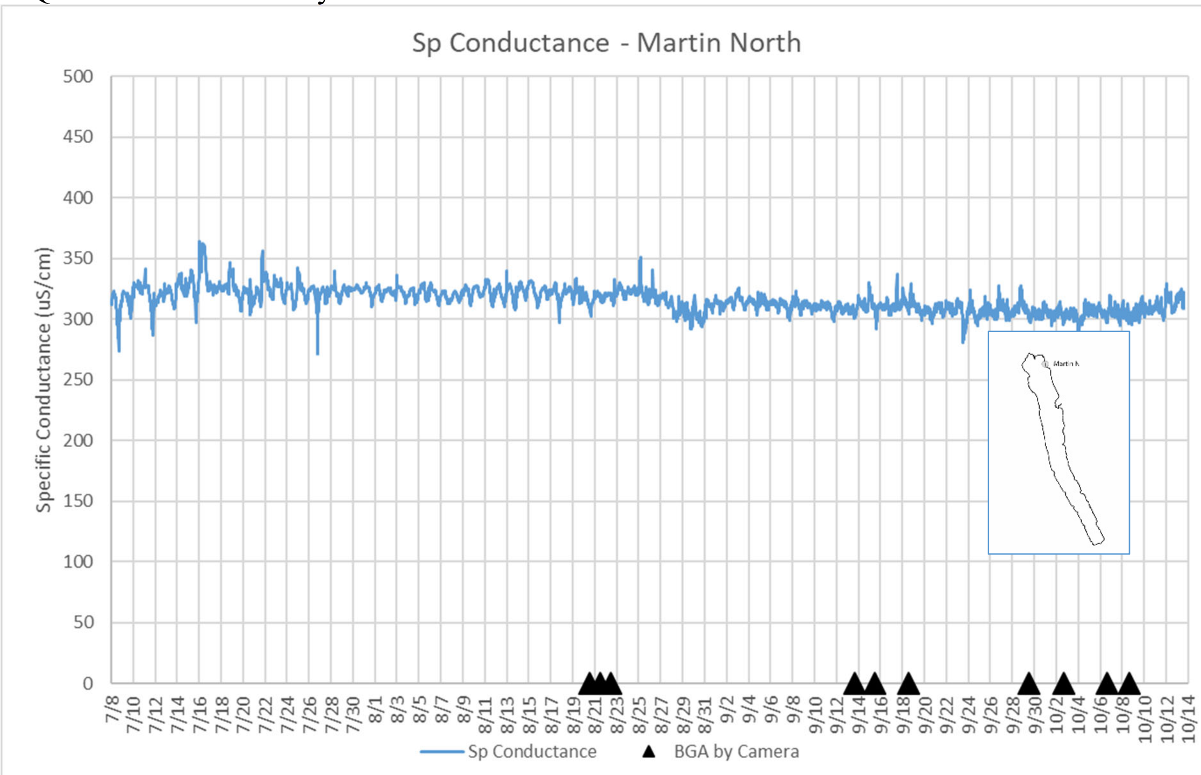


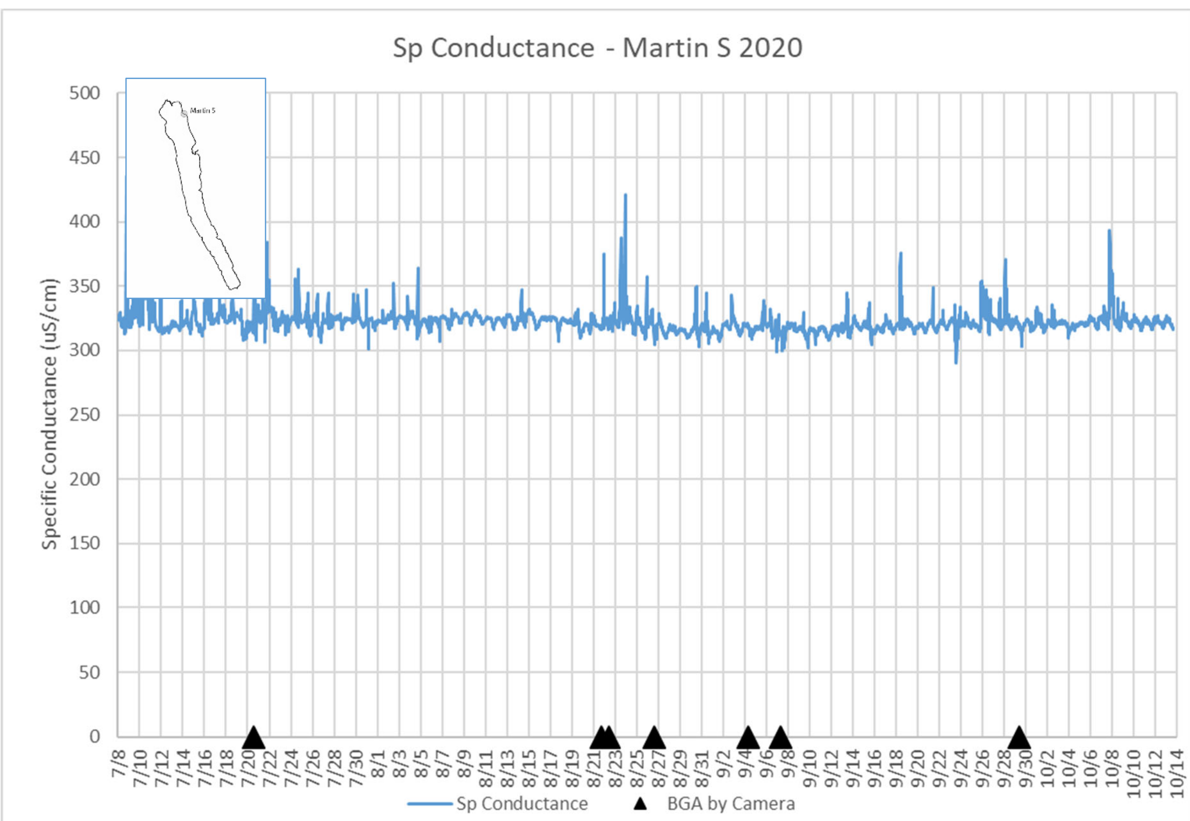


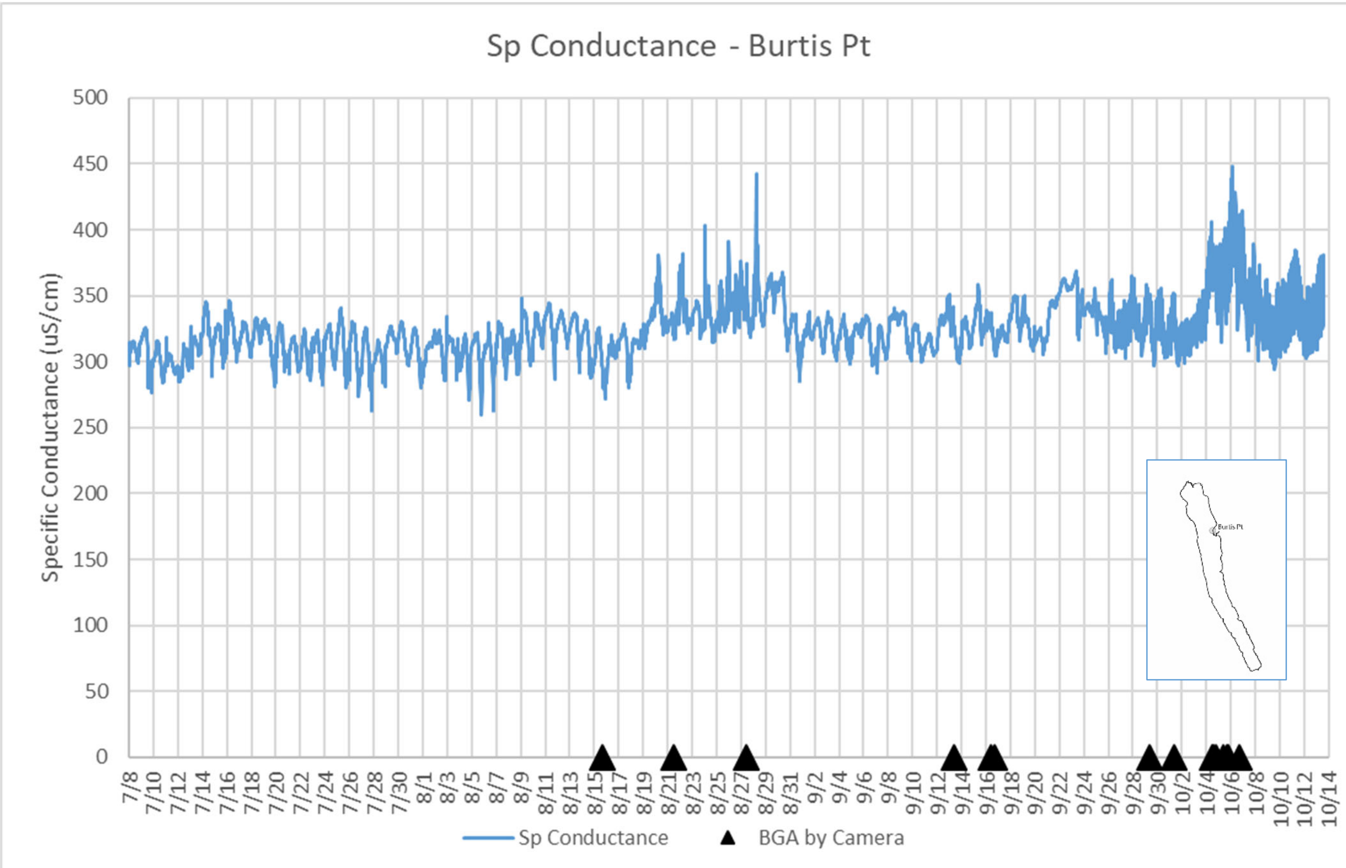

Temperature - Burtis Pt
Temperature (°C)
Temperature
BGA by Camera

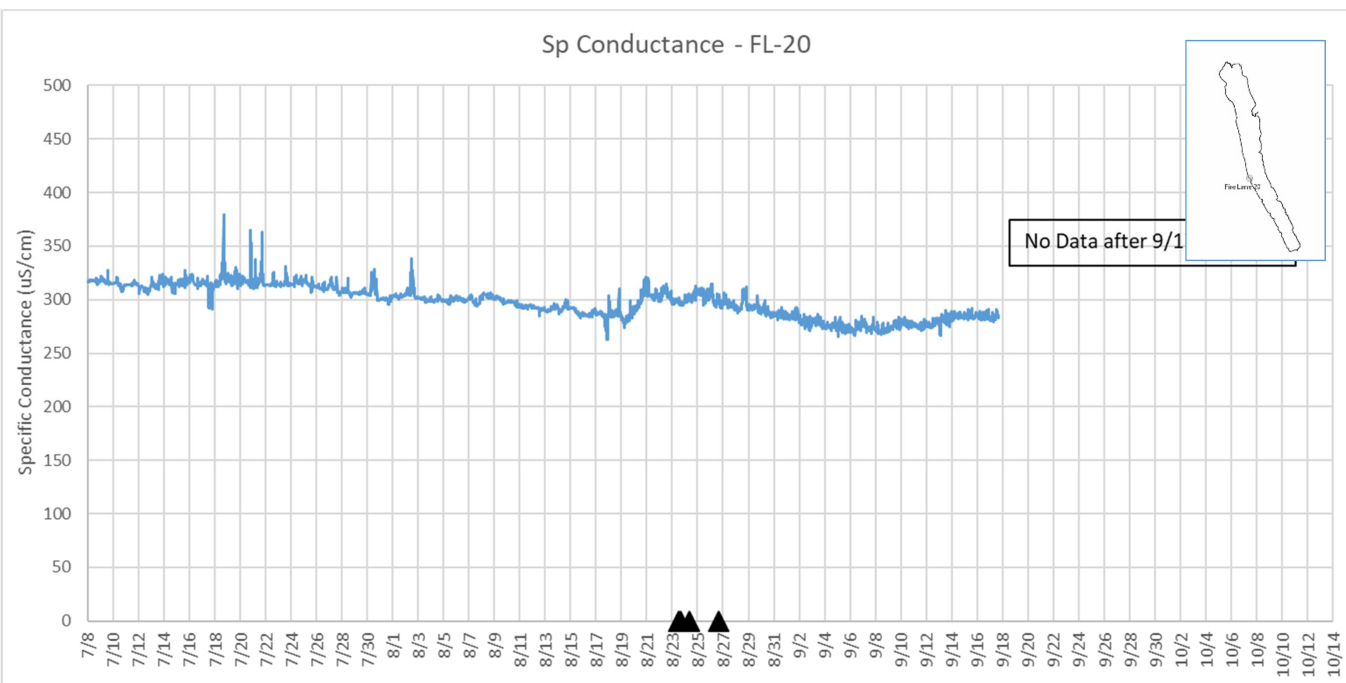

Temperature - FL-20
Temperature (°C)
No Data after 9/1
Temperature
BGA by Camera

Owasco WQ Sonde Water Salinity

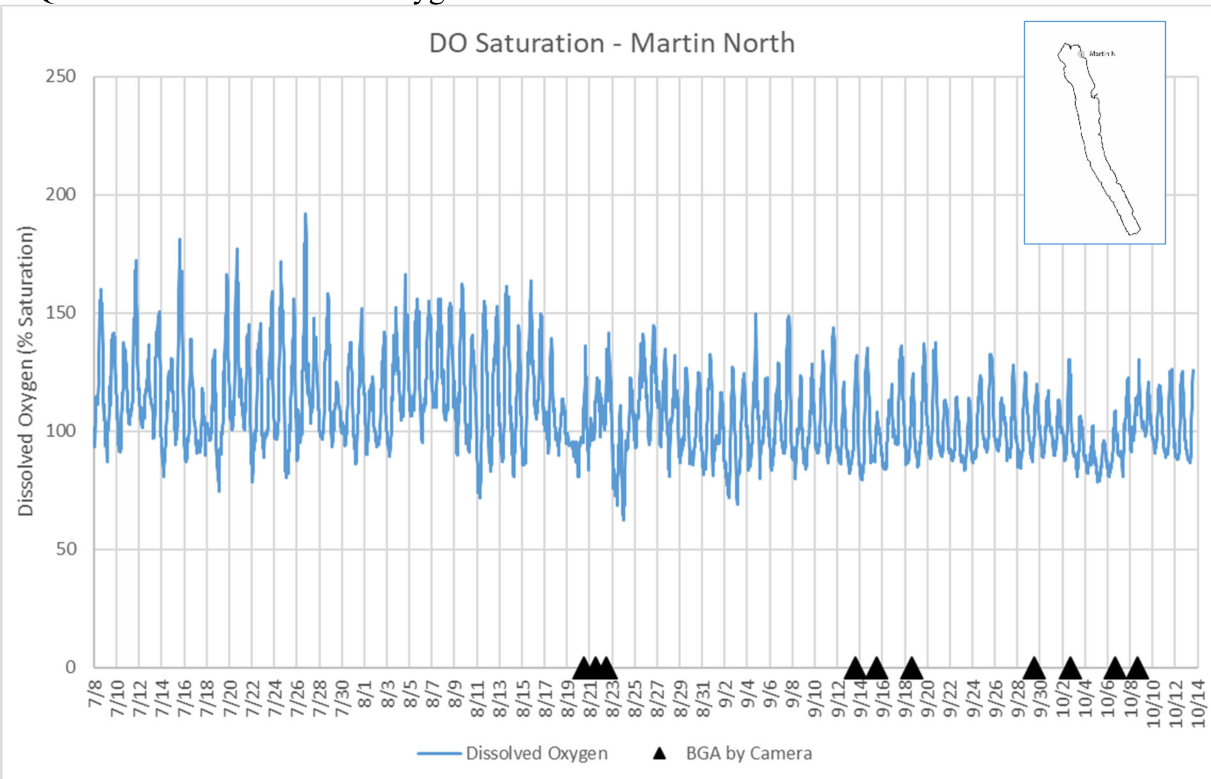


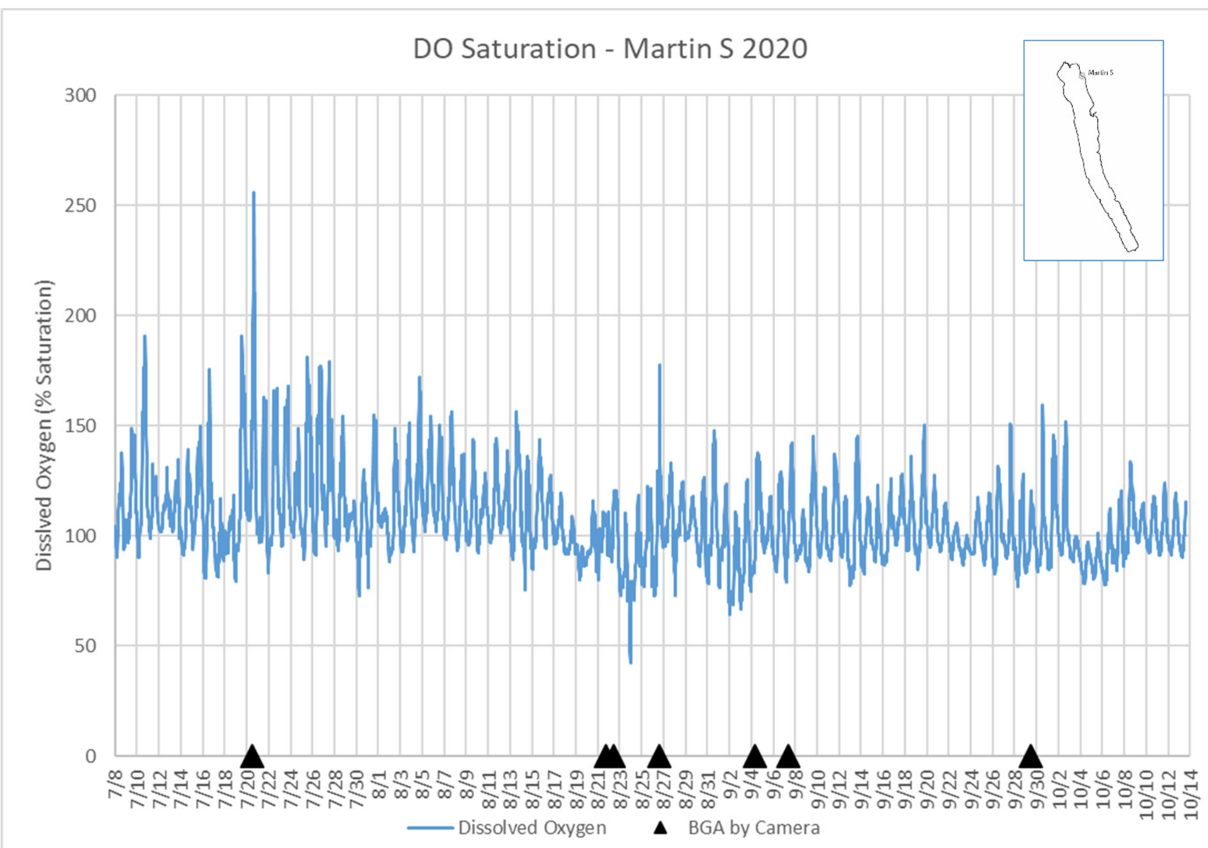


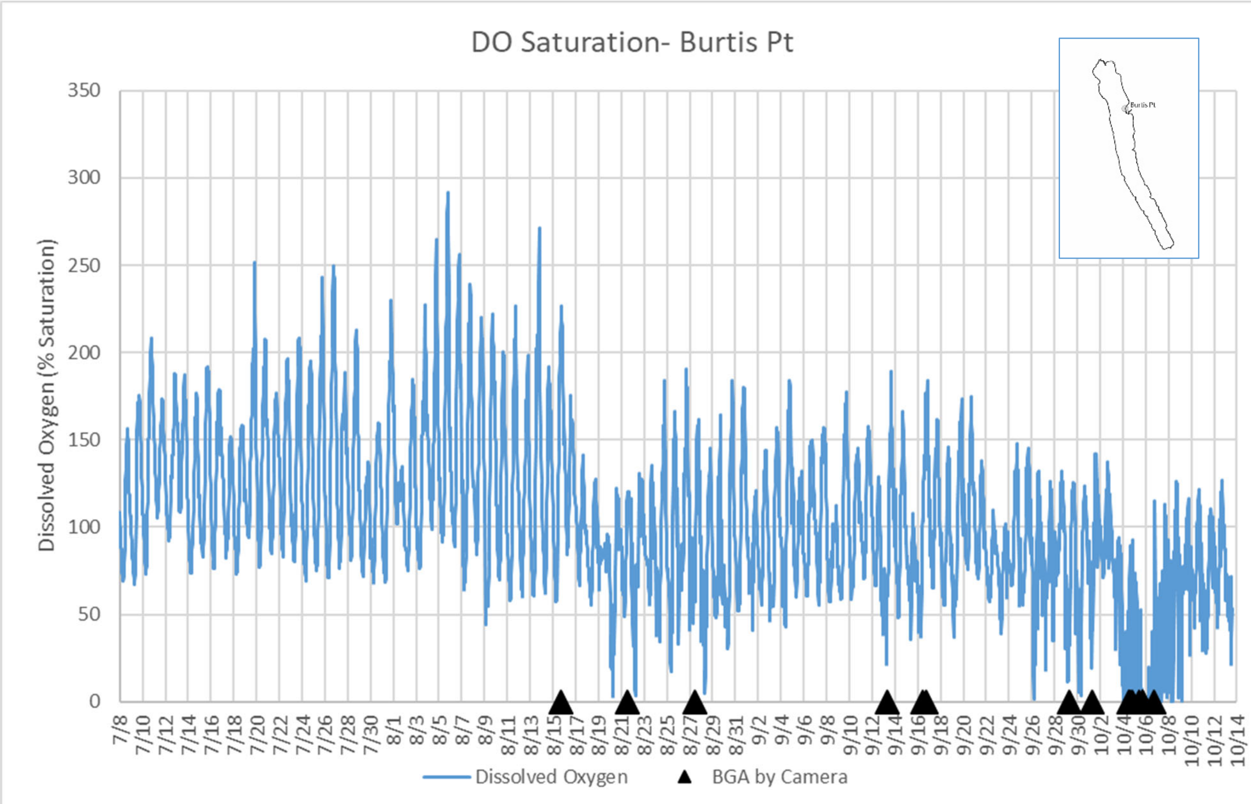

Sp Conductance - Burtis Pt
Specific Conductance (uS/cm)
500
450
400
350
300
250
200
150
100
50
0
7/8 7/10 7/12 7/14 7/16 7/18 7/20 7/22 7/24 7/26 7/28 7/30 8/1 8/3 8/5 8/7 8/9 8/11 8/13 8/15 8/17 8/19 8/21 8/23 8/25 8/27 8/29 8/31 9/2 9/4 9/6 9/8 9/10 9/12 9/14 9/16 9/18 9/20 9/22 9/24 9/26 9/28 9/30 10/2 10/4 10/6 10/8 10/10 10/12 10/14
Burtis Pt
Sp Conductance
BGA by Camera

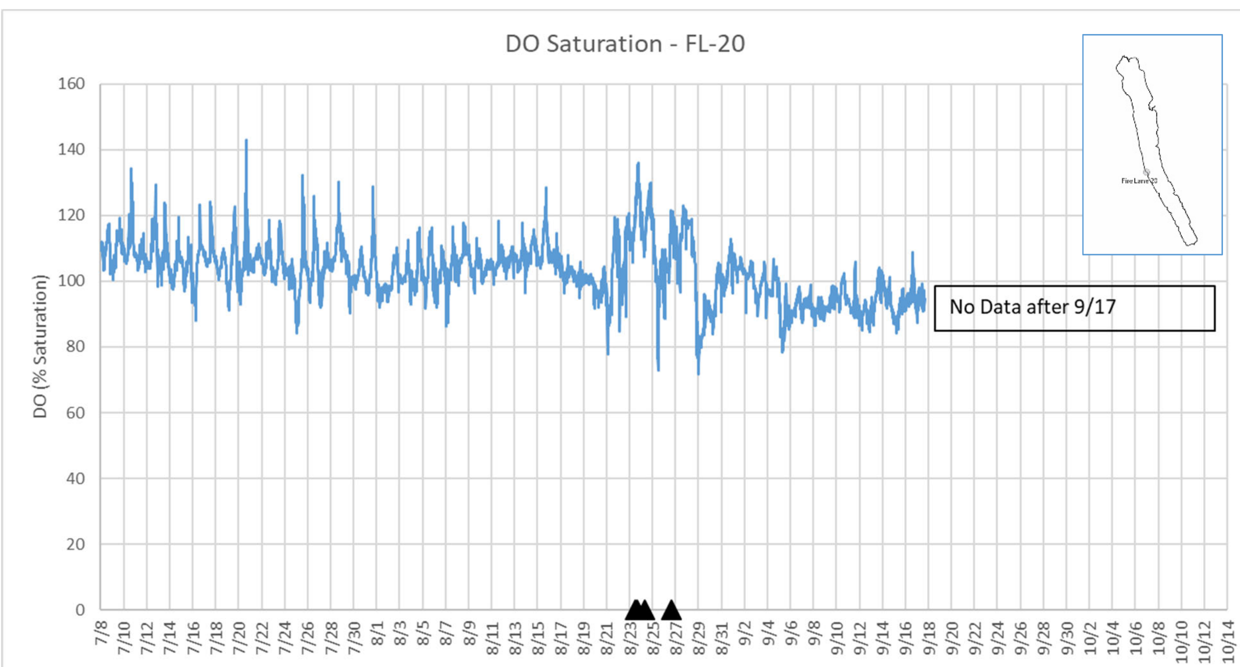

Sp Conductance - FL-20
Specific Conductance (uS/cm)
500
450
400
350
300
250
200
150
100
50
0
7/8 7/10 7/12 7/14 7/16 7/18 7/20 7/22 7/24 7/26 7/28 7/30 8/1 8/3 8/5 8/7 8/9 8/11 8/13 8/15 8/17 8/19 8/21 8/23 8/25 8/27 8/29 8/31 9/2 9/4 9/6 9/8 9/10 9/12 9/14 9/16 9/18 9/20 9/22 9/24 9/26 9/28 9/30 10/2 10/4 10/6 10/8 10/10 10/12 10/14
No Data after 9/1
Fire Lane 20

Owasco WQ Sonde Water Dissolved Oxygen

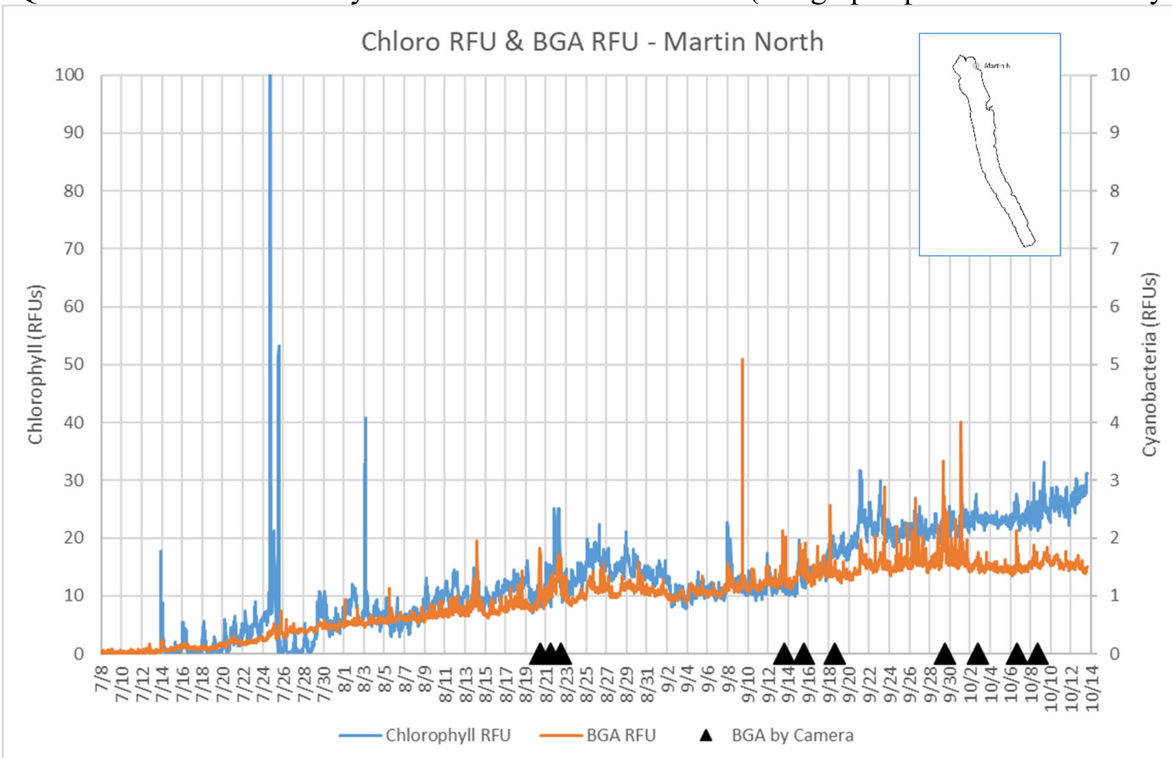


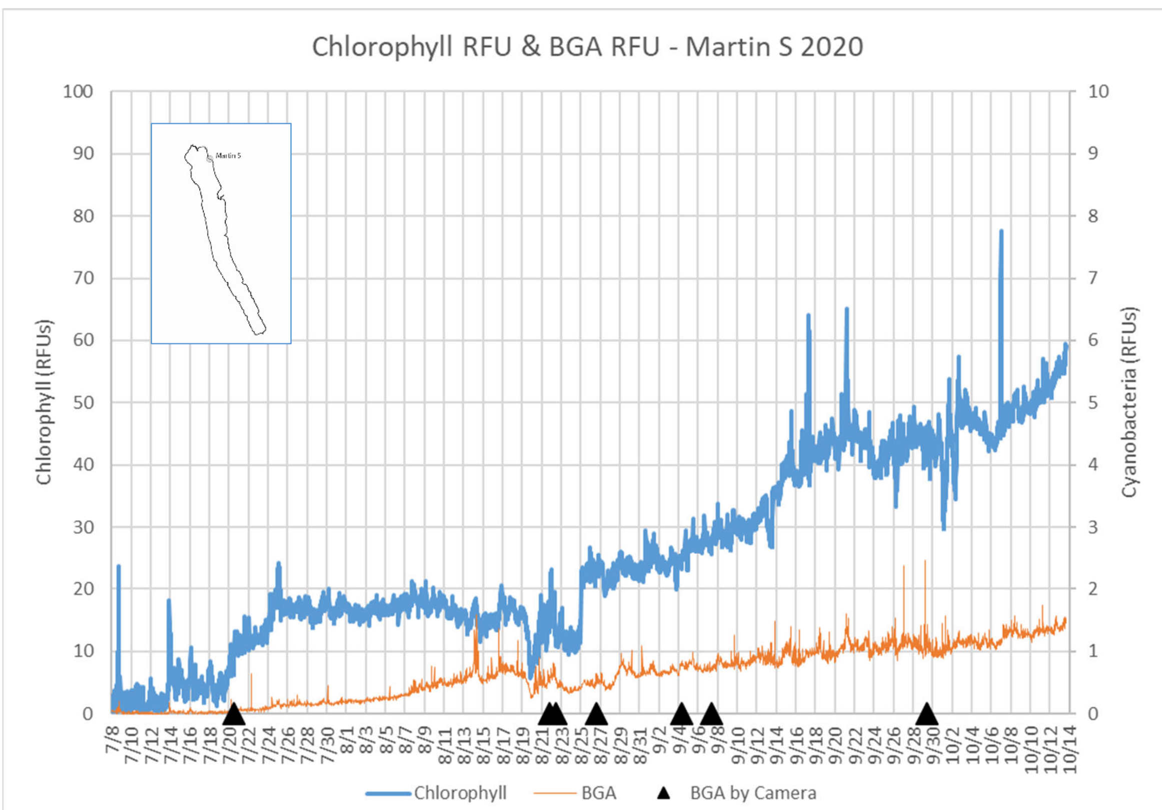


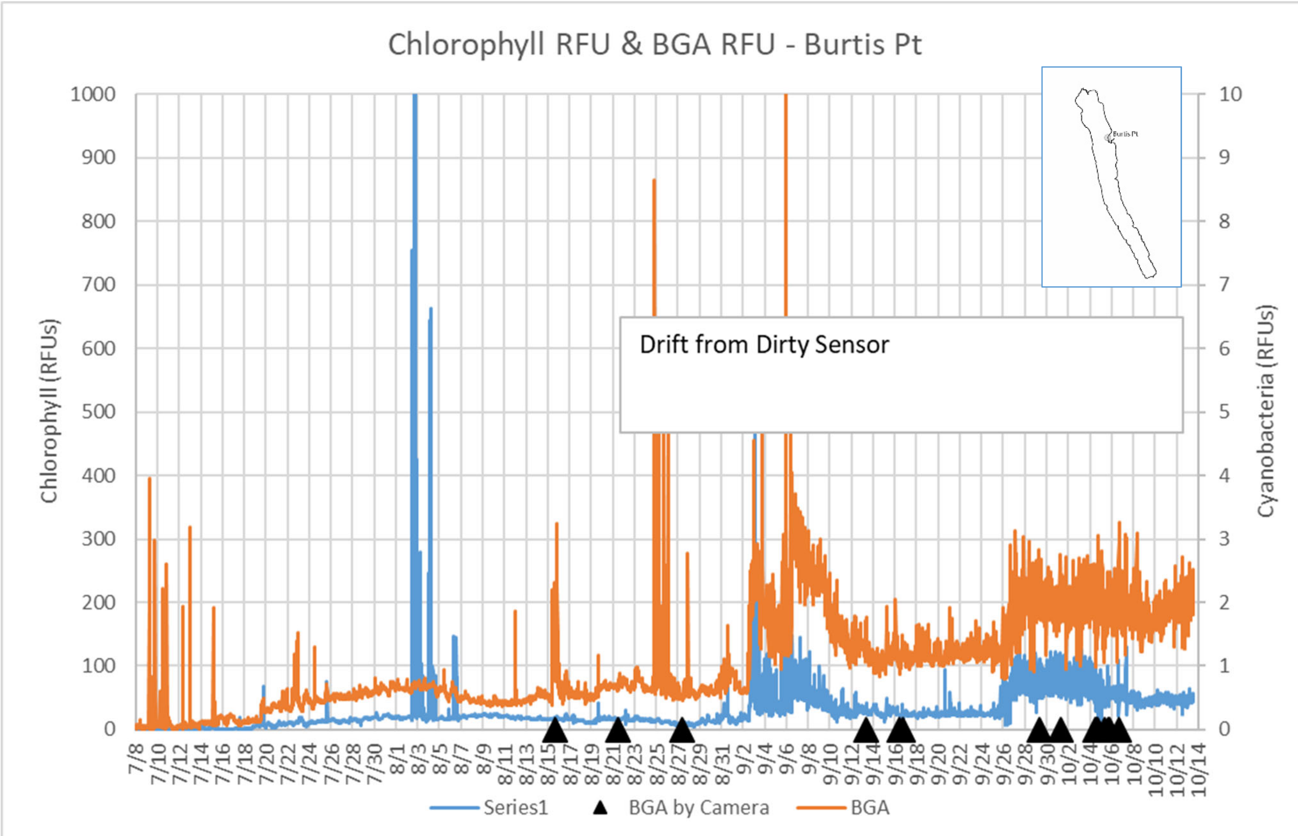

DO Saturation- Burtis Pt
Dissolved Oxygen (% Saturation)
Burtis Pt
Dissolved Oxygen
BGA by Camera

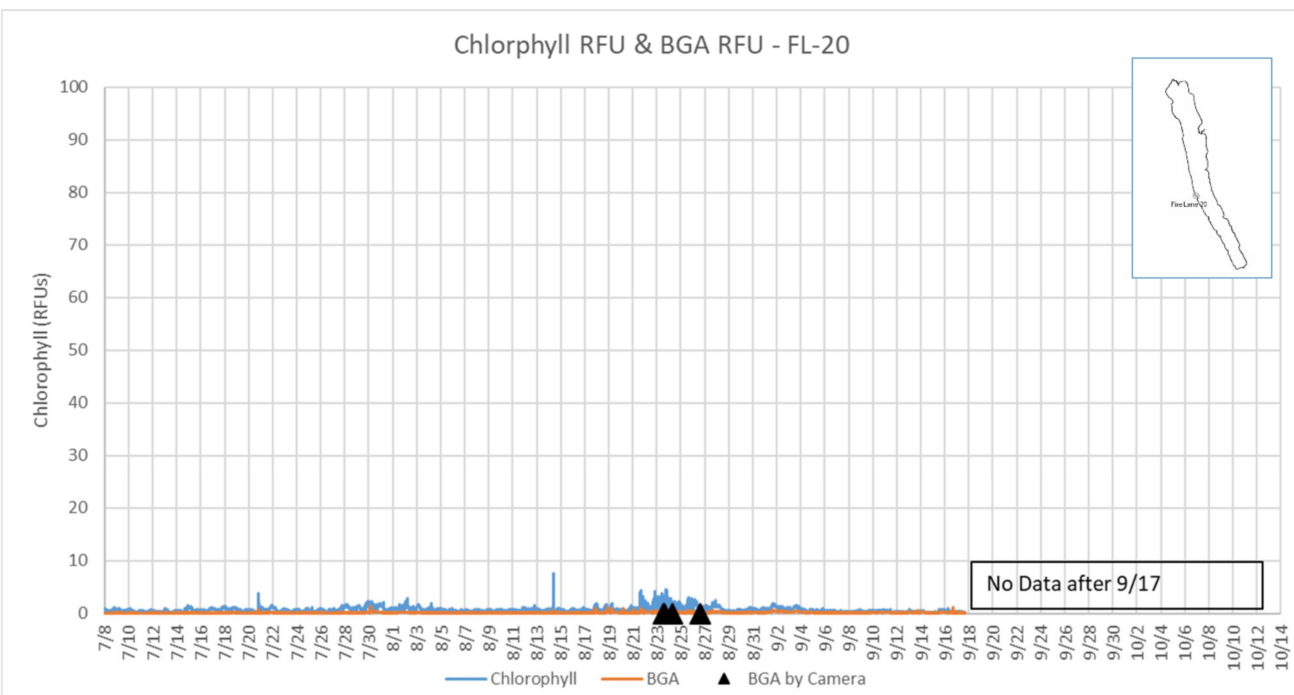

DO Saturation - FL-20
DO (% Saturation)
No Data after 9/17

Owasco WQ Sonde Water Total & Cyanobacteria-PC Fluorescence (Long upslope is drift from dirty sensors)

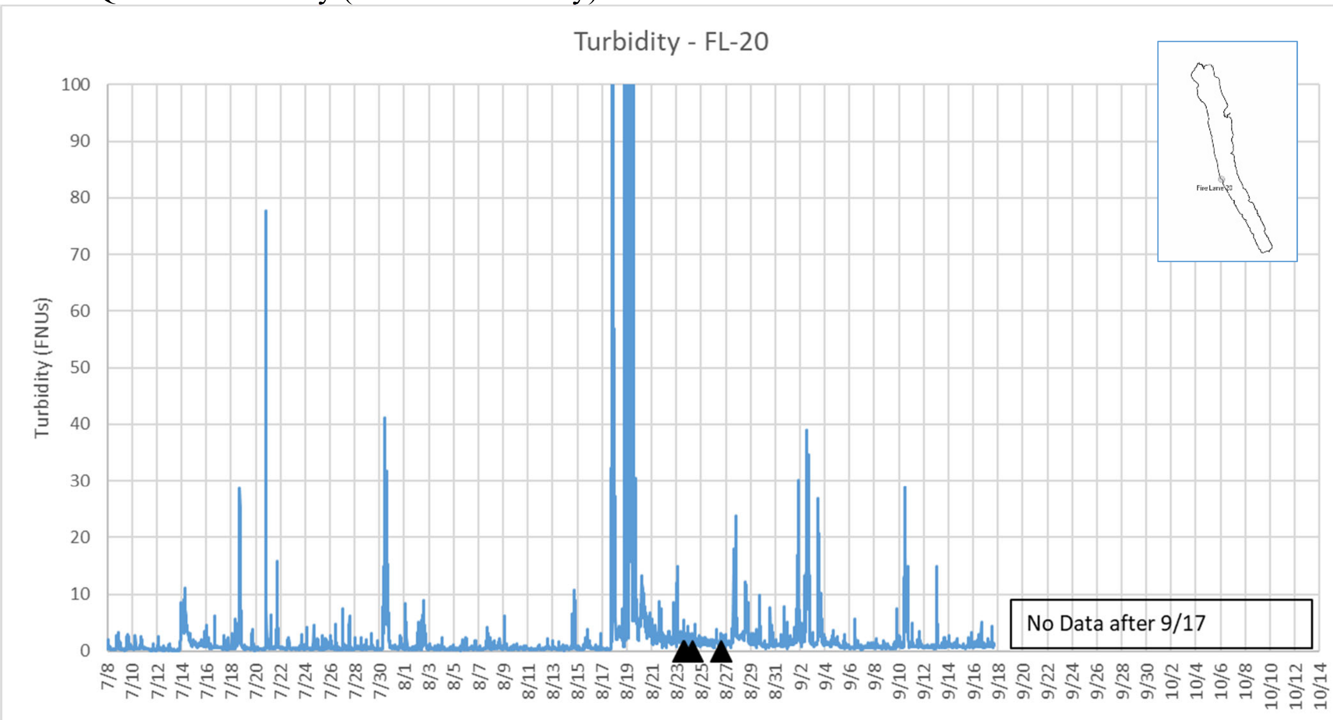





Chlorophyll RFU & BGA RFU - Burtis Pt
Chlorophyll (RFUs)
Cyanobacteria (RFUs)
Burtis Pt
Drift from Dirty Sensor
Series1
BGA by Camera
BGA

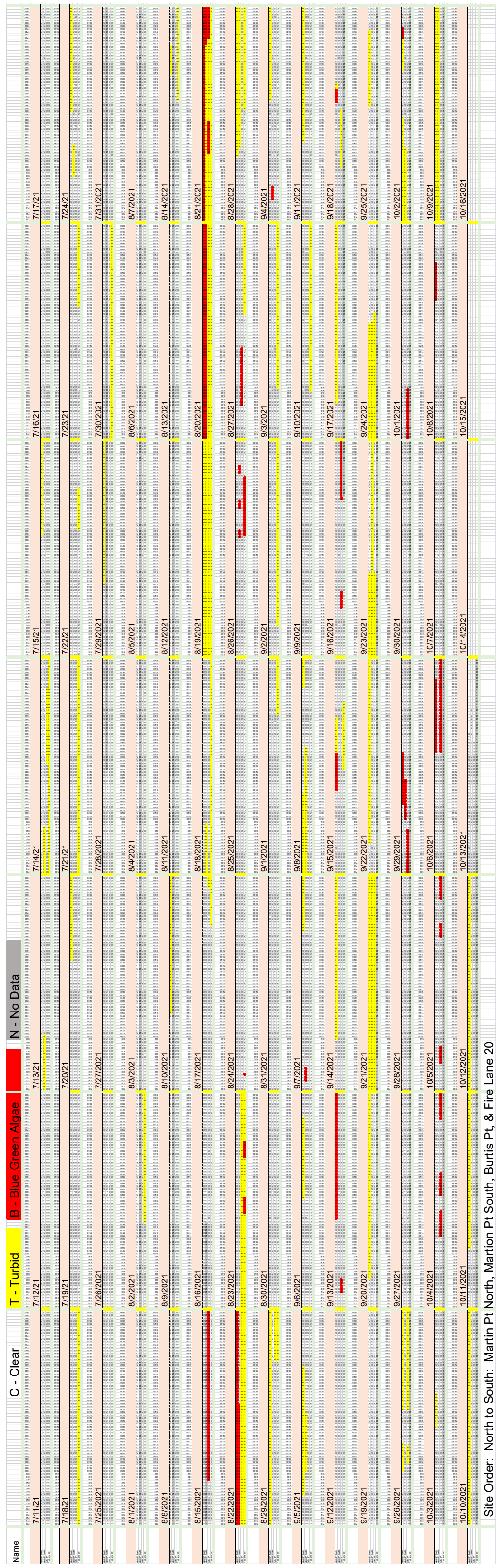

Chlorphyll RFU & BGA RFU - FL-20
Chlorophyll (RFUs)
No Data after 9/17
Chlorophyll
BGA
BGA by Camera

Owasco WQ Sonde Turbidity (Fire Lane 20 Only)

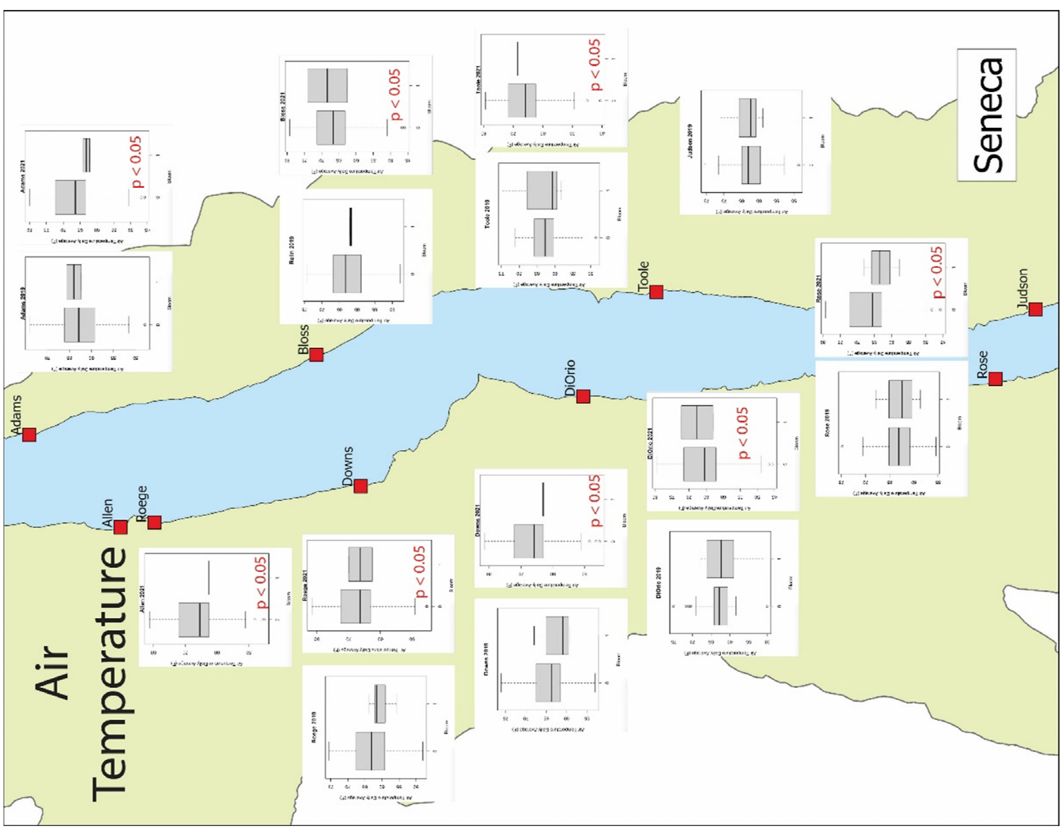


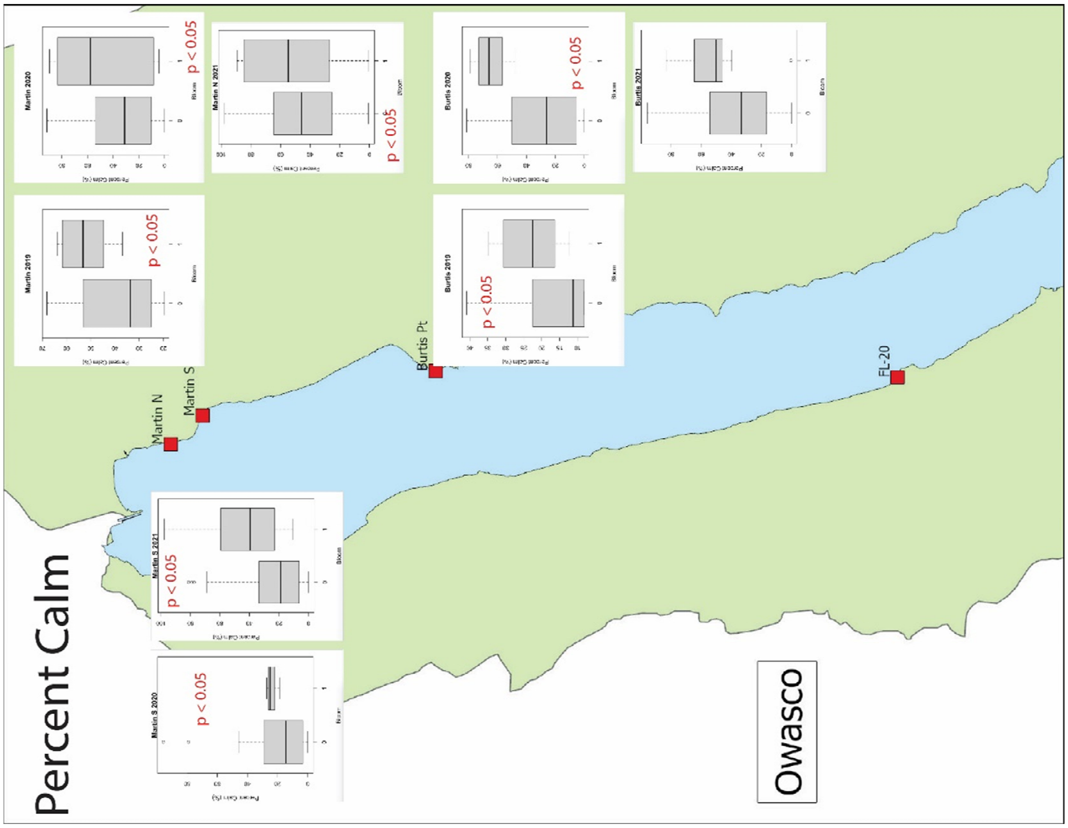
Seneca Lake Camera Summary:

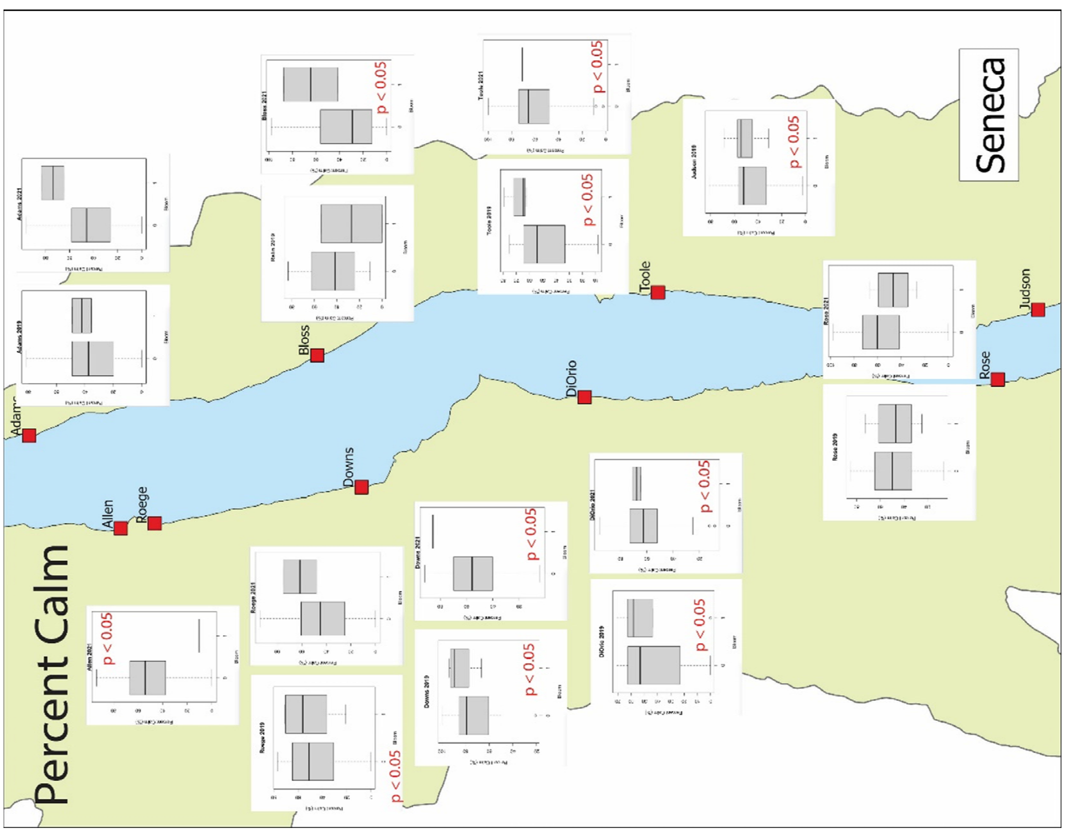
Owasco Lake Camera Summary



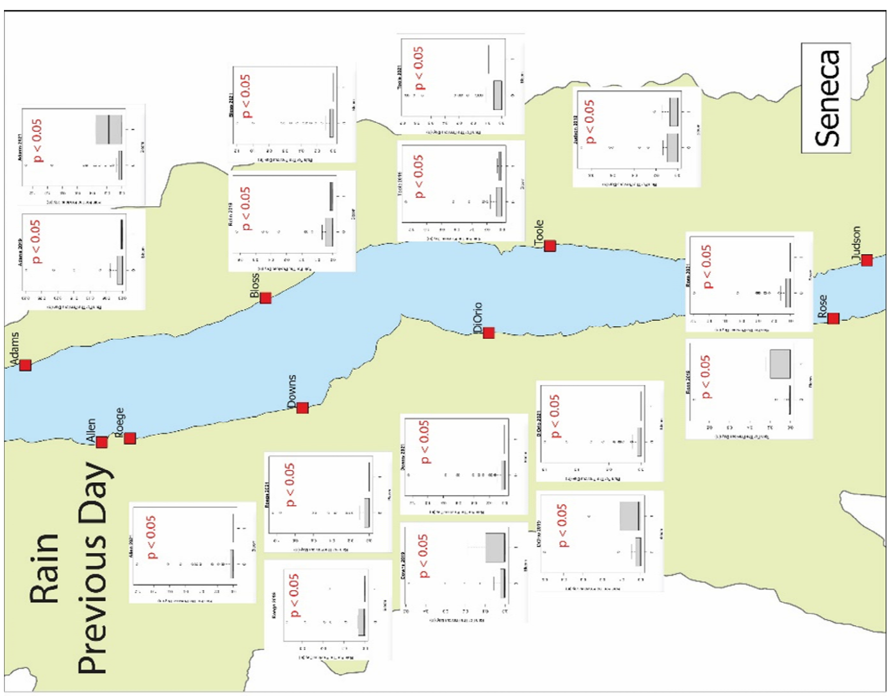
Seneca & Owasco Lake Statistical Summaries

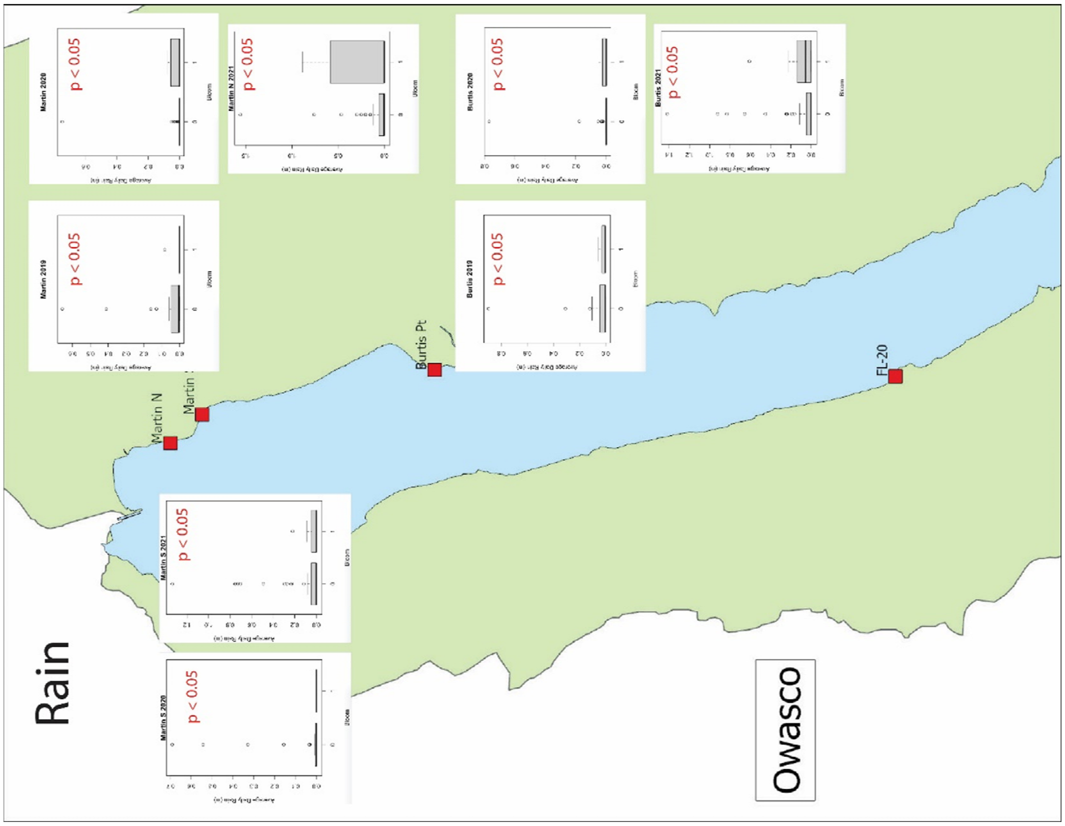



Percent Calm
Owasco
Martin N
Martin S
Burtis Pt
FL-20
p < 0.05


Percent Calm
Seneca
Allen
Roege
Downs
Bloss
DiOrio
Toole
Rose
Judson
p < 0.05

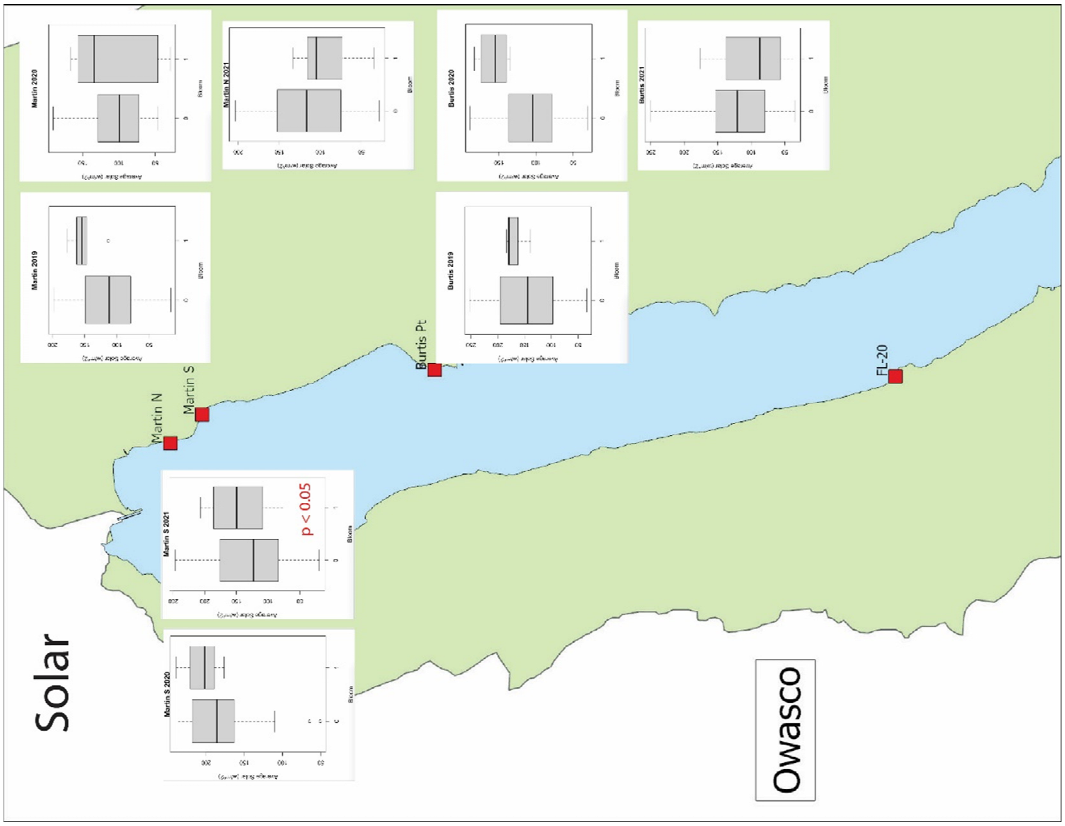

Rain
Previous Day
Owasco
Martin N
Martin S
Burtis Pt
FL-20
Martin N 2020
Martin N 2021
Burtis 2020
Burtis 2021
Martin 2019
Burtis 2019
Martin S 2021
Martin S 2020
p < 0.05

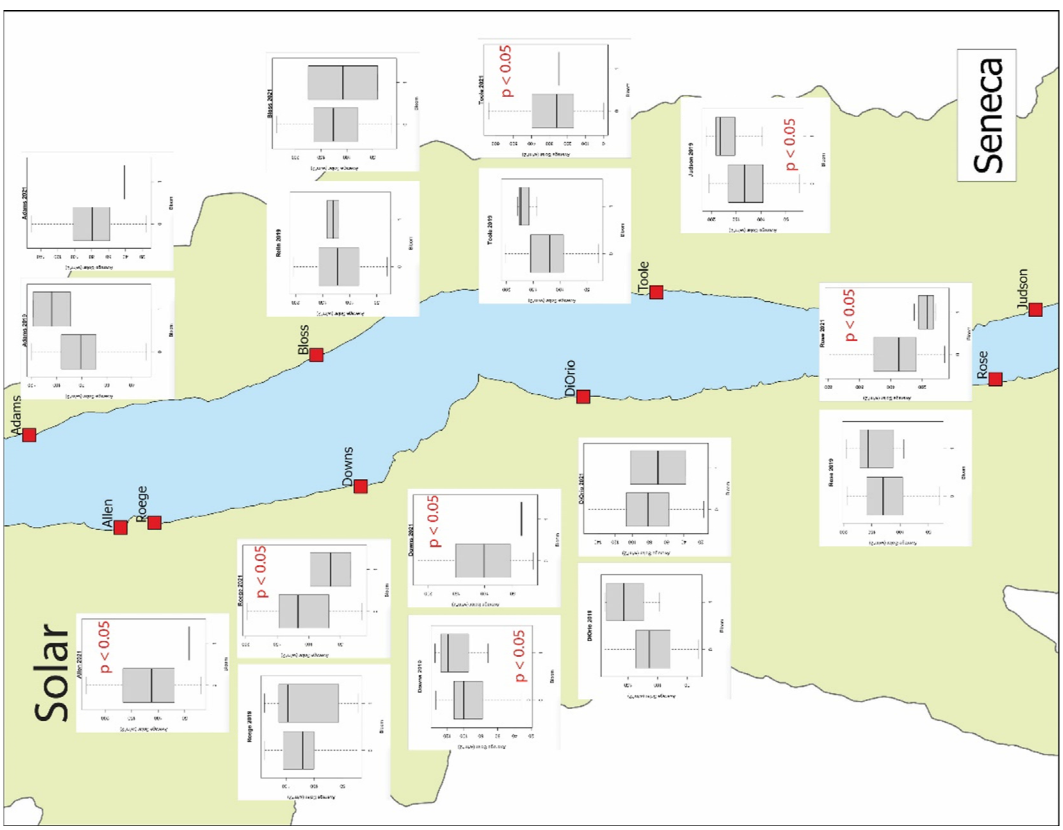

Rain
Previous Day
Seneca
Adams
Allen
Roege
Downs
Bloss
DiOrio
Toole
Rose
Judson
p < 0.05

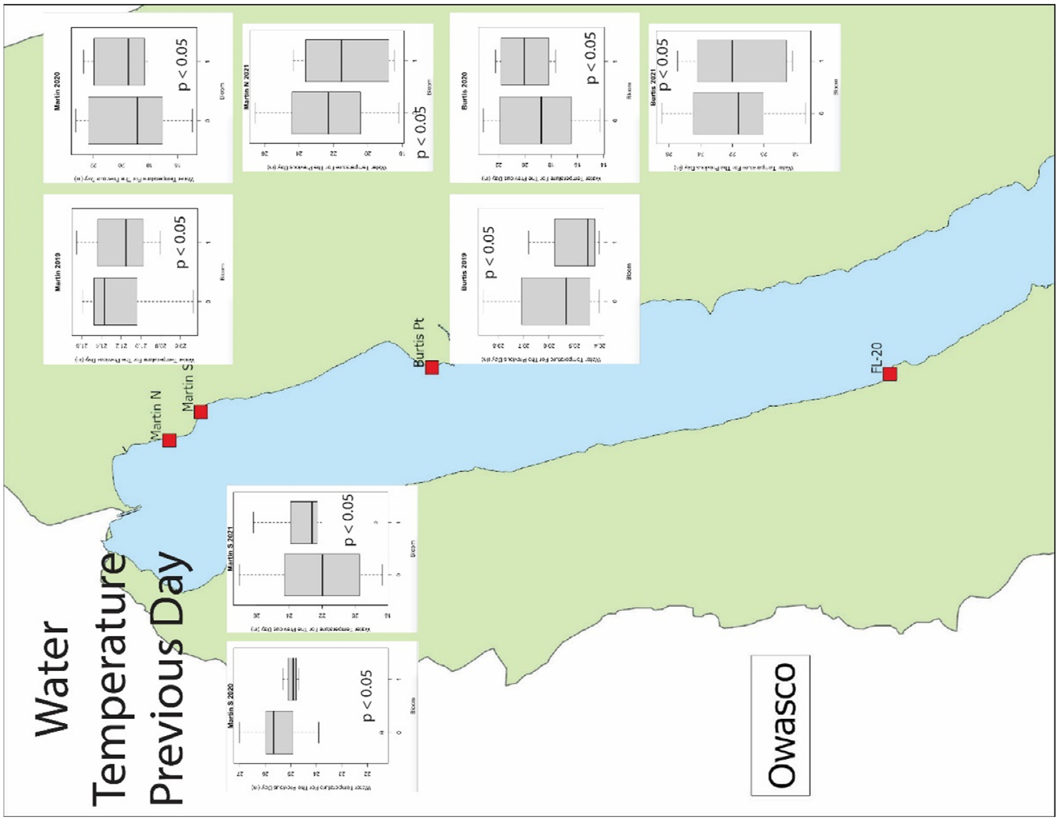


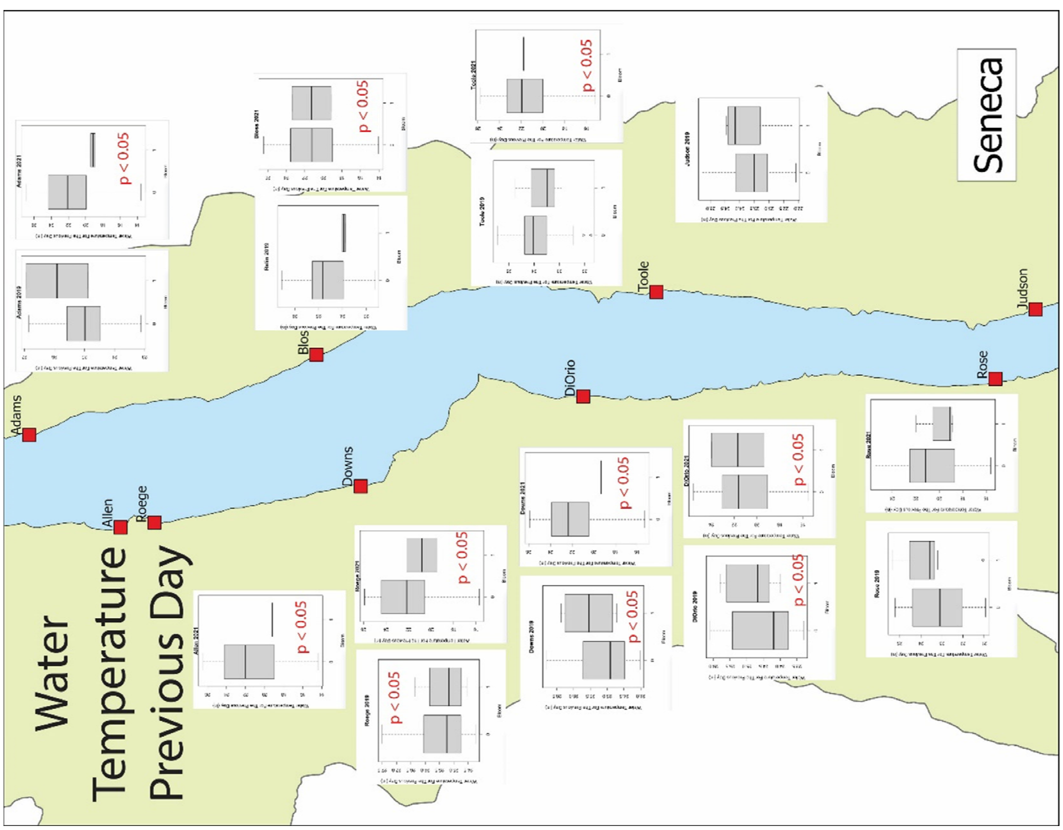
Rain
Owasco
Martin N
Martin S
Burtis Pt
FL-20
Martin 2019
Martin 2020
Martin N 2021
Burtis 2019
Burtis 2020
Burtis 2021
Martin S 2020
Martin S 2021
p < 0.05

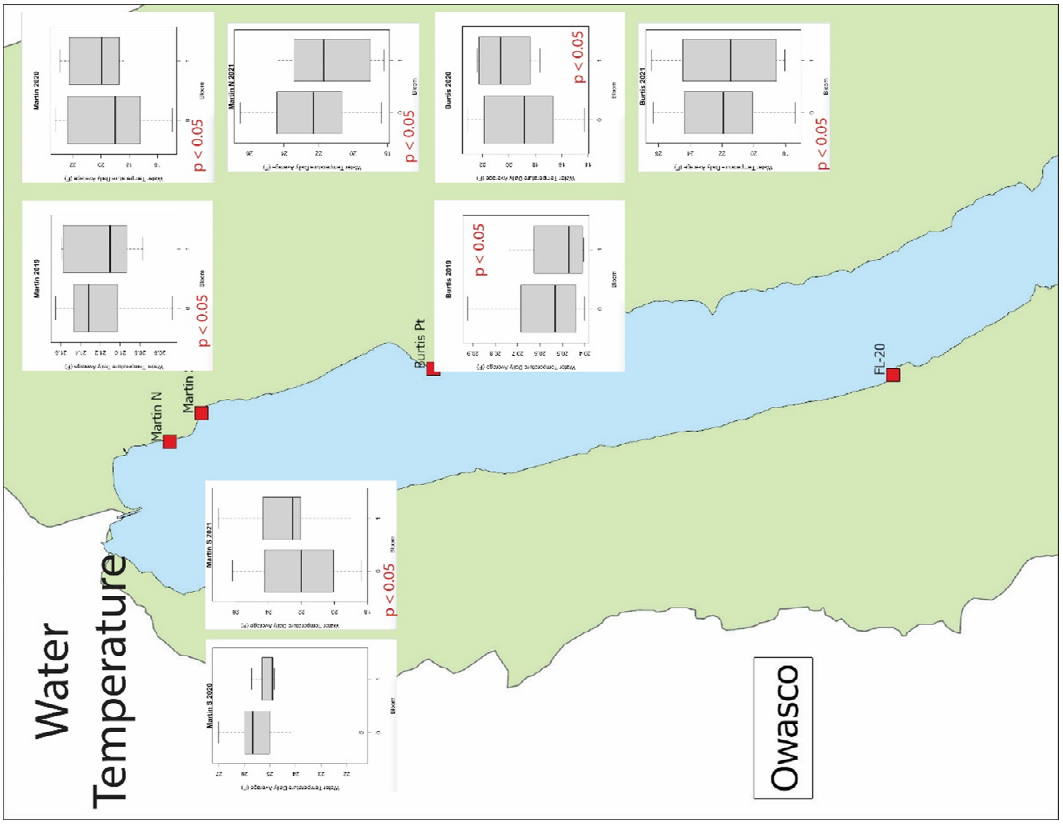
Rain
Seneca
Ada
Allen
Roege
Downs
Bloss
DiOrio
Toole
Rose
Judson
Adams 2019
Adams 2021
Allen 2021
Roege 2019
Roege 2021
Bloss 2019
Bloss 2021
Downs 2019
Downs 2021
Toole 2019
Toole 2021
DiOrio 2019
DiOrio 2021
Judson 2019
Rose 2019
Rose 2021
p < 0.05

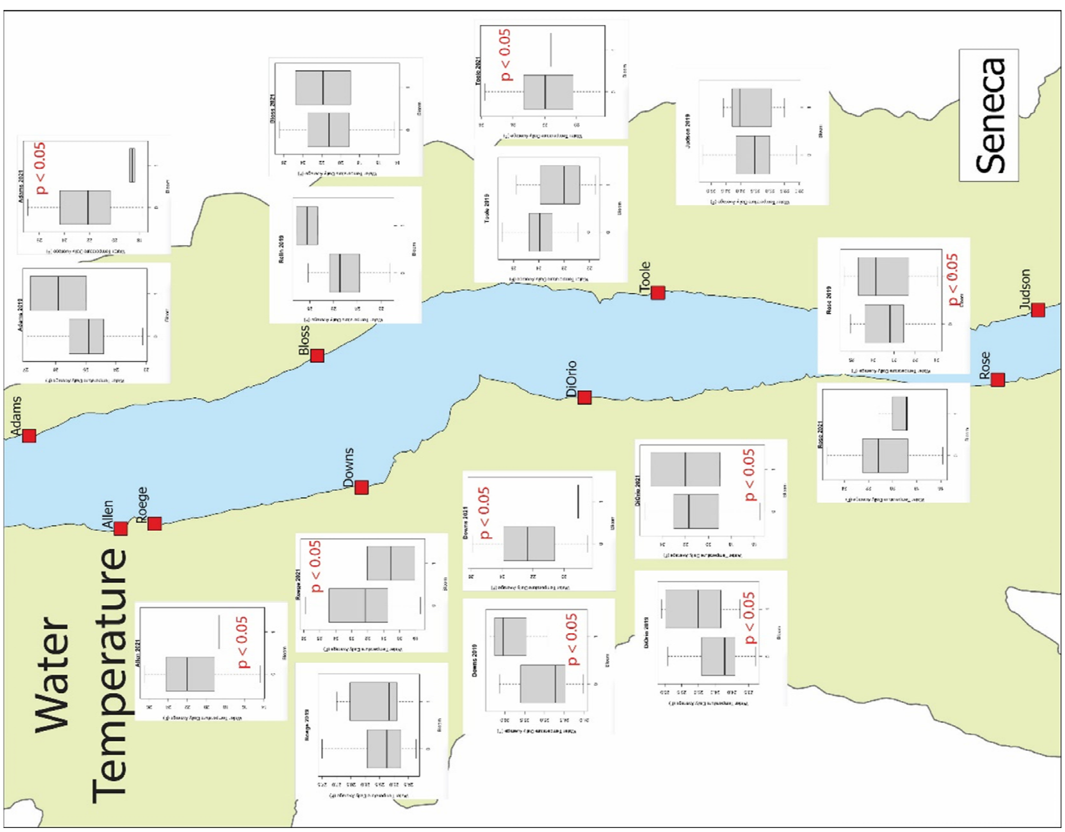

Solar
Owasco
Martin N
Martin S
Burtis Pt
FL-20
p < 0.05

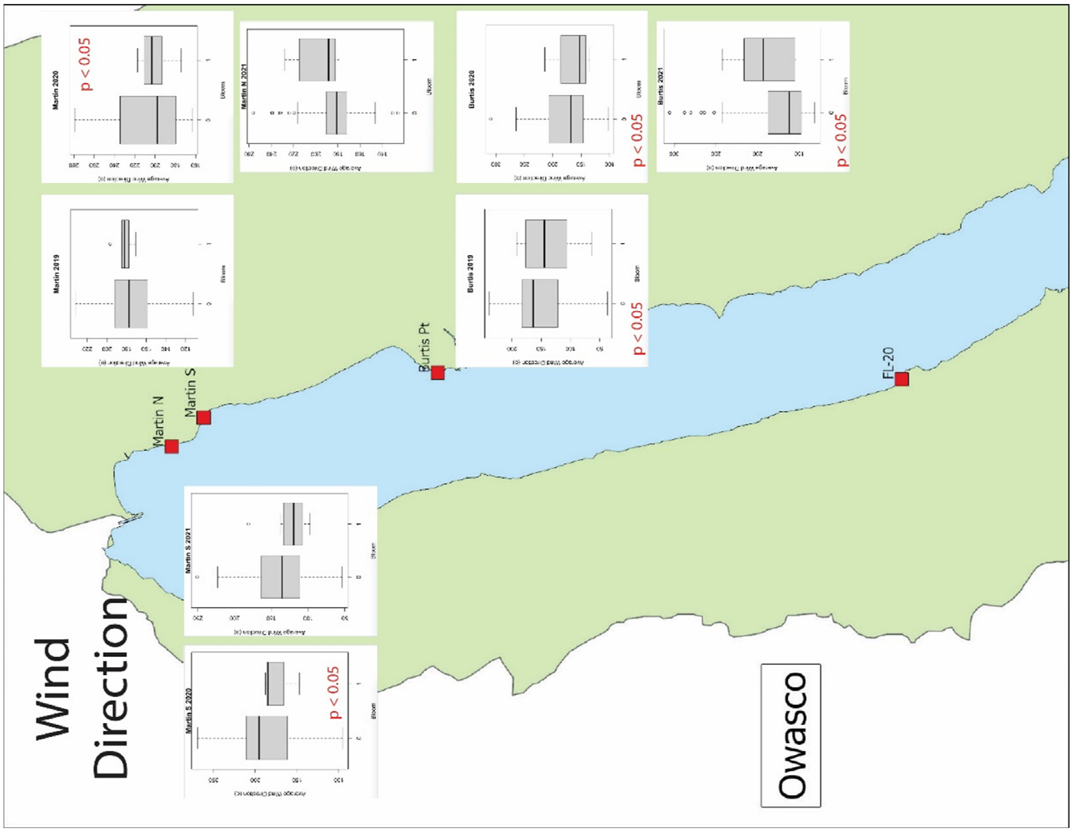

Seneca
Solar
Adams
Bloss
Toole
Judson
Rose
DiOrio
Downs
Allen
Roege
p < 0.05
p < 0.05
p < 0.05
p < 0.05
p < 0.05
p < 0.05
p < 0.05

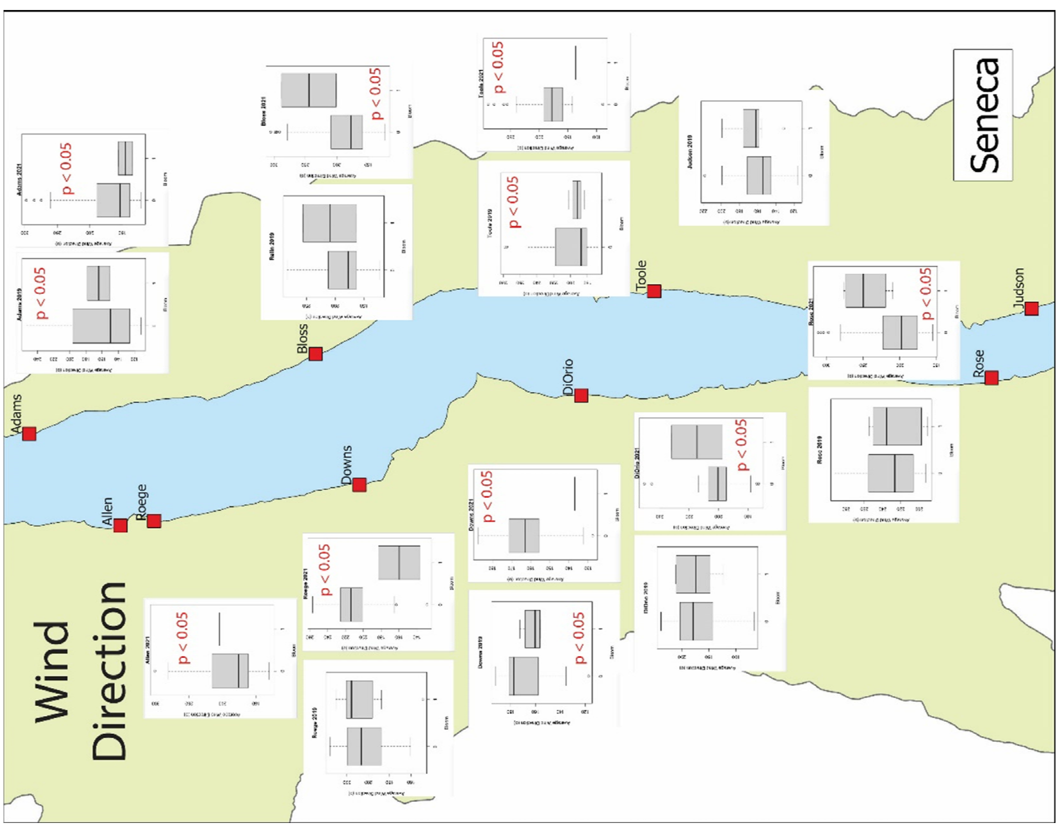

Water Temperature Previous Day
Owasco
Martin N
Martin S
Burtis Pt
FL-20
Martin 2019
Martin 2020
Martin N 2021
Burtis 2019
Burtis 2020
Burtis 2021
Martin S 2020
Martin S 2021
p < 0.05


Water Temperature Previous Day
Seneca
Adams
Allen
Roege
Blos
Downs
DiOrio
Toole
Rose
Judson
p < 0.05

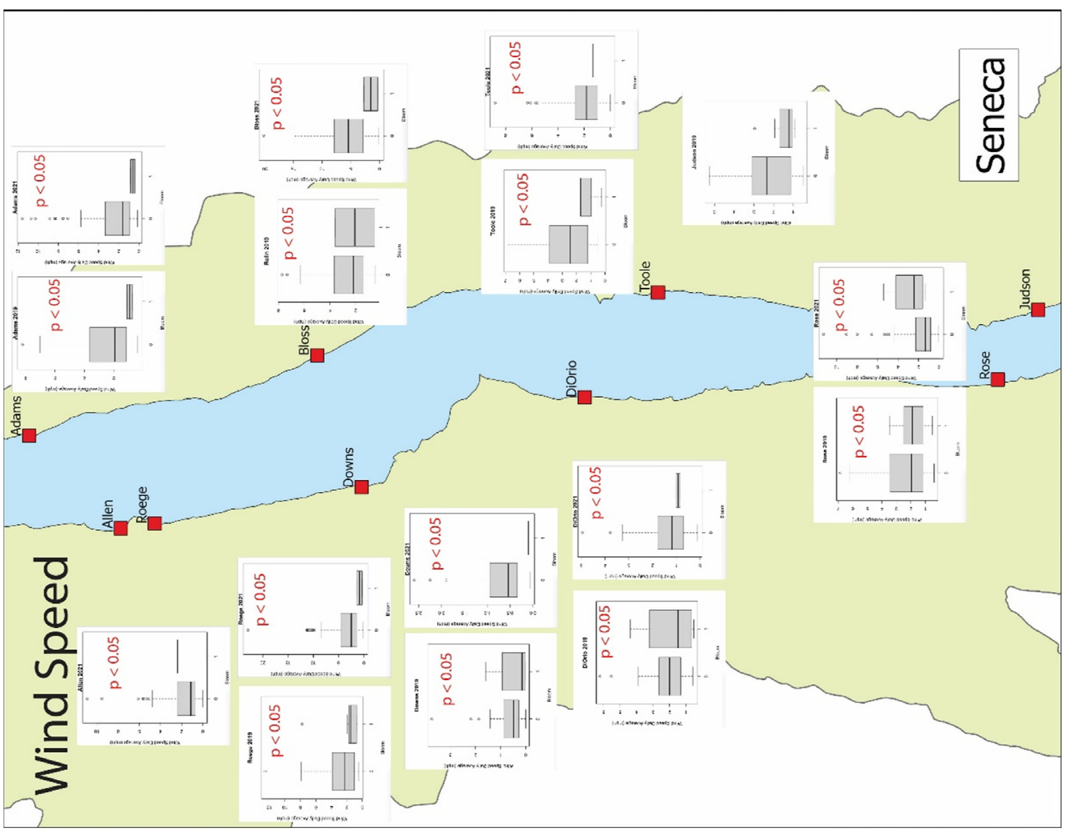

Water Temperature
Owasco
Martin N
Burtis Pt
FL-20
p < 0.05


Water Temperature
Seneca
Adams
Allen
Roege
Bloss
Downs
DiOrio
Toole
Rose
Judson
p < 0.05


Wind Direction
Owasco
Martin N
Martin S
Burtis Pt
FL-20
Martin 2019
Martin 2020
Martin N 2021
Martin S 2020
Martin S 2021
Burtis 2019
Burtis 2020
Burtis 2021
p < 0.05
p < 0.05
p < 0.05
p < 0.05
p < 0.05


Wind Direction
Seneca
Adams
Allen
Roege
Bloss
Downs
DiOrio
Toole
Rose
Judson
p < 0.05
p < 0.05
p < 0.05
p < 0.05
p < 0.05
p < 0.05
p < 0.05
p < 0.05
p < 0.05
p < 0.05
p < 0.05


Wind Speed
Owasco
Martin N
Martin S
Burtis Pt
FL-20
p < 0.05


Wind Speed
Seneca
Adams
Allen
Roege
Bloss
Downs
DiOrio
Toole
Rose
Judson
p < 0.05

Statistical Results:

Year	Site-Yr	Rain - Preceding Day	Rain	Wind Speed	W Temp - Preceding Day	%Calm	Water Temp	Wind Direction	Air Temp	Solar Intensity
2021	Allen 21	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.05	0.01
2019	Roege 19	0.00	0.00	0.00	0.03	0.01	0.05	0.06	0.65	0.06
2021	Roege 21	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.03	0.03
2019	Downs 19	0.00	0.00	0.00	0.04	0.04	0.03	0.02	0.45	0.05
2021	Downs 21	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.04	0.00
2019	DiOrio 19	0.00	0.00	0.00	0.02	0.00	0.03	0.13	0.16	0.42
2021	DiOrio 21	0.00	0.00	0.00	0.01	0.03	0.02	0.00	0.03	0.17
2019	Rose 19	0.00	0.00	0.01	0.14	0.66	0.13	0.09	0.22	0.35
2021	Rose 21	0.00	0.00	0.00	0.05	0.06	0.05	0.00	0.03	0.04
2019	Adams 19	0.00	0.00	0.00	0.47	0.74	0.49	0.01	0.60	0.26
2021	Adams 21	0.00	0.00	0.00	0.01	0.06	0.00	0.00	0.04	0.32
2019	Relin 19	0.00	0.00	0.00	0.61	0.18	0.73	0.09	0.79	0.29
2021	Bloss 21	0.00	0.00	0.00	0.04	0.00	0.05	0.00	0.02	0.07
2019	Toole 19	0.00	0.00	0.03	0.39	0.02	0.62	0.00	0.70	0.16
2021	Toole 21	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.01	0.02
2019	Judson 19	0.00	0.00	0.25	0.34	0.02	0.33	0.73	0.76	0.04
2019	Martin N 1	0.00	0.00	0.00	0.01	0.01	0.02	0.64	0.25	0.33
2020	Martin N 2	0.00	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.38
2021	Martin N 2	0.00	0.00	0.00	0.01	0.00	0.01	0.90	0.13	0.06
2020	Martin S 2(	0.00	0.00	0.00	0.00	0.00	0.98	0.00	0.38	0.00
2021	Martin S 2:	0.00	0.00	0.00	0.01	0.00	0.01	0.90	0.13	0.06
2019	Burtis 19	0.00	0.00	0.05	0.00	0.00	0.01	0.05	0.32	0.32
2020	Burtis 20	0.00	0.00	0.06	0.02	0.00	0.02	0.04	0.05	0.39
2021	Burtis 21	0.00	0.00	0.05	0.00	0.07	0.00	0.00	0.13	0.14
		Those in yellow are significant at 95% confidence level								