

2020 Canandaigua Lake Sampling and Monitoring Program

Report to the Canandaigua Lake Watershed Council
April 7, 2021

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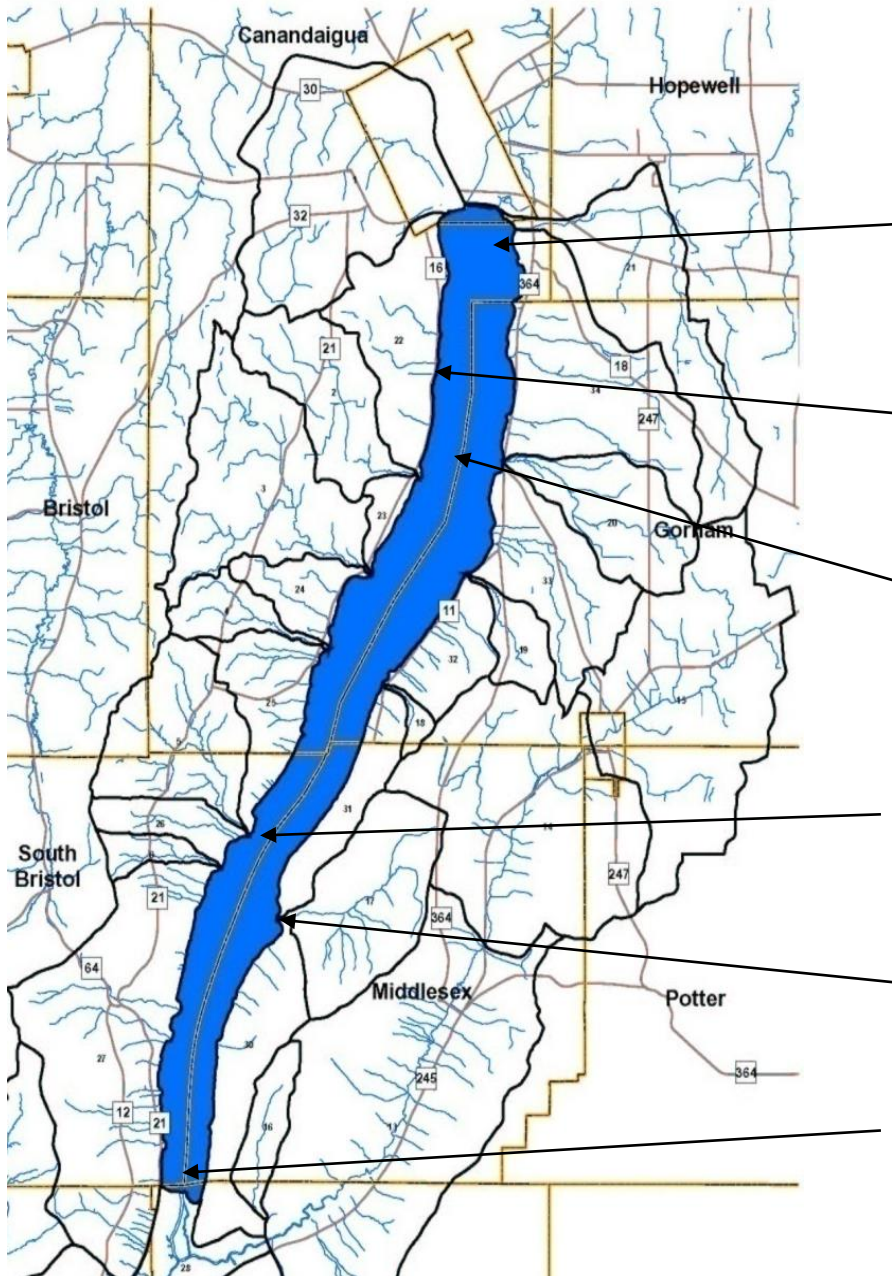
Program Background

- Program in it's 26th year (1996 – 2021)
- FLCC's role
- Lake attributes that are monitored each year since 1996:
 - Water clarity
 - Lake algal productivity
 - Lake nutrients
 - Water quality profiles: temperature, dissolved oxygen, pH, conductivity

Program Notes

- 2017: Patty joins project
- 2018: Reduced sampling period:
 - From April to November
 - To May to October
- 2019:
 - Increased FLCC student participation
 - QAAP updates
 - Increased profile resolution sampling (2019)
- 2020:
 - April – factory maintained YSI sonde (removed one probe)
 - May – returned sonde after housing leaked and retested in field
 - June – began sampling for this year's grant
- 2021:
 - Put into college budget 30K for a boat and 20K for a new sonde

Study Sites



Fallbrook (FB)

Hope Point (HP)

Deep Run (DR)

mid-lake locations

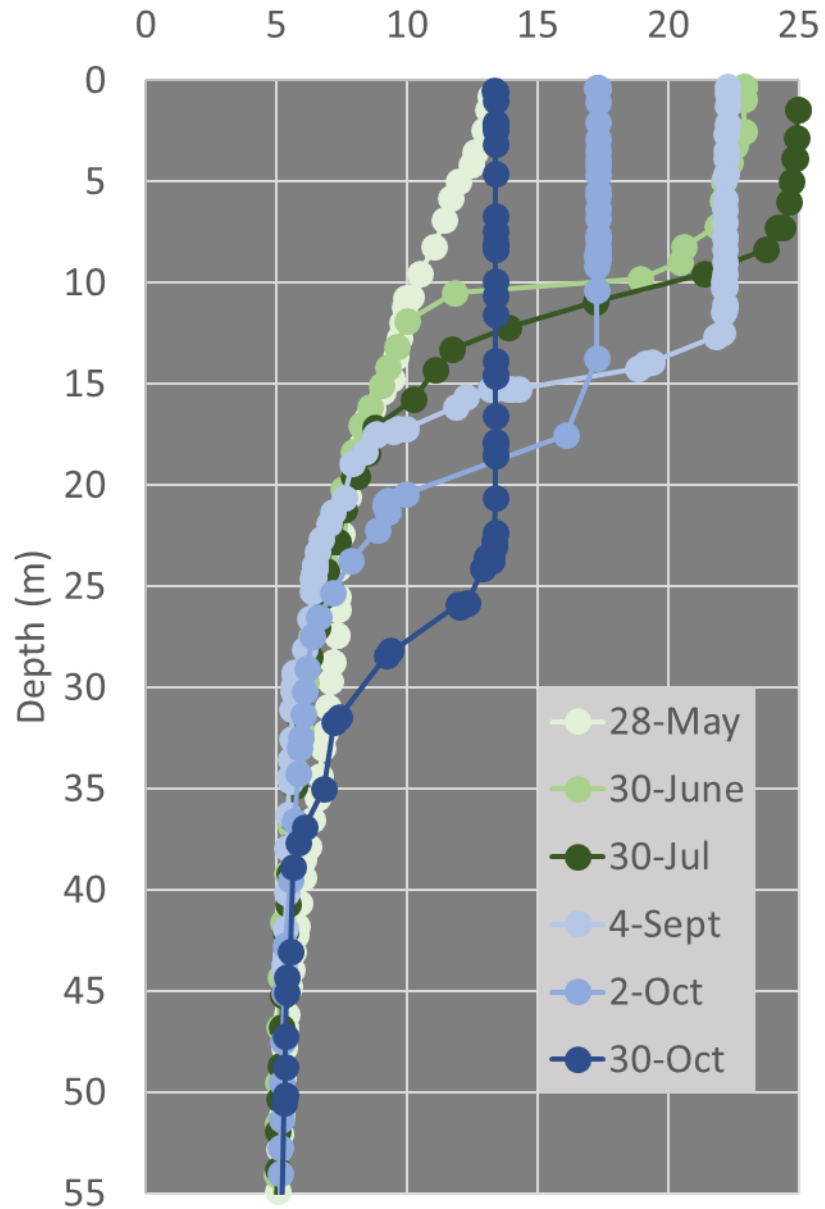
Seneca Point (SP)

Vine Valley (VV)

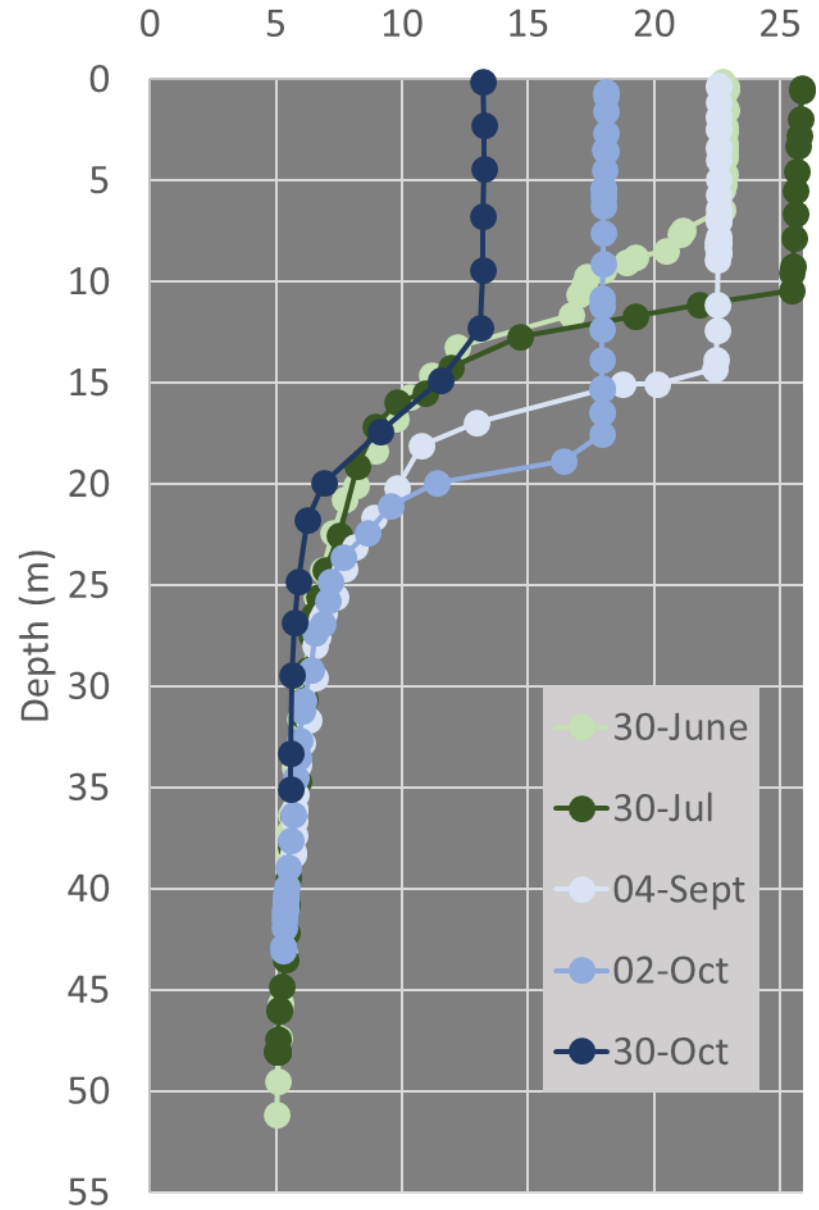
West River (WR)

2020

Seneca Point Temp. (°C)

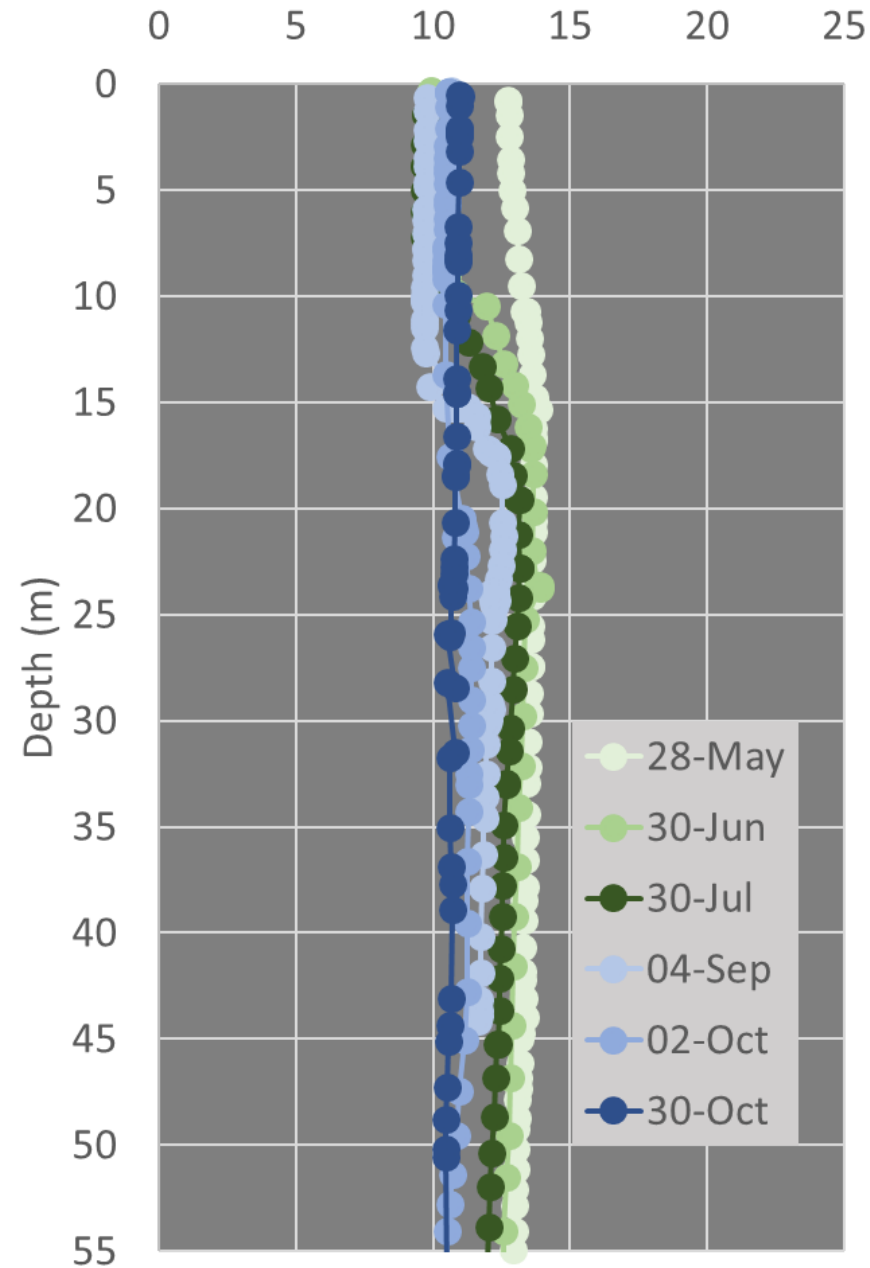


Deep Run Temp. (°C)

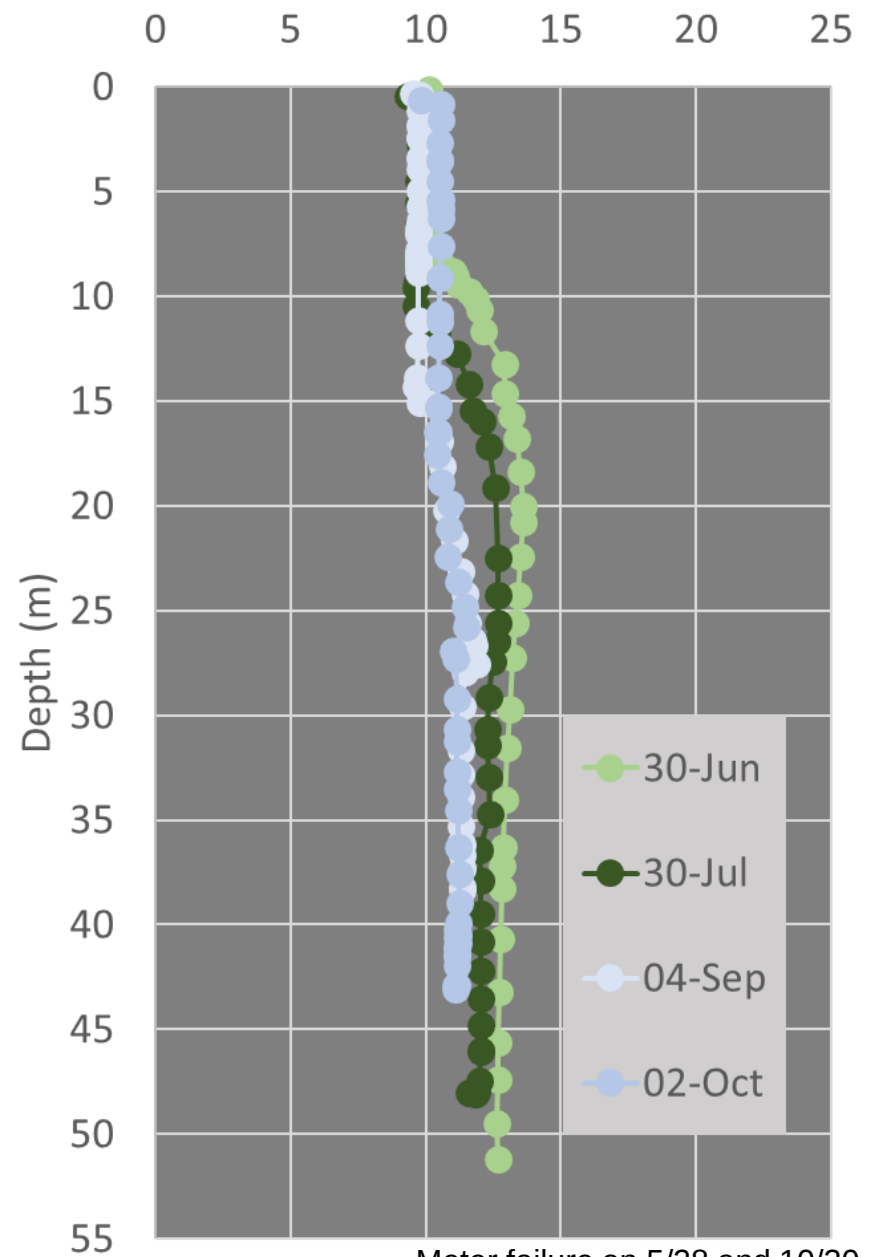


Probe failure on 5/28/2020

2020 Seneca Point Dissolved Oxygen (mg/L)

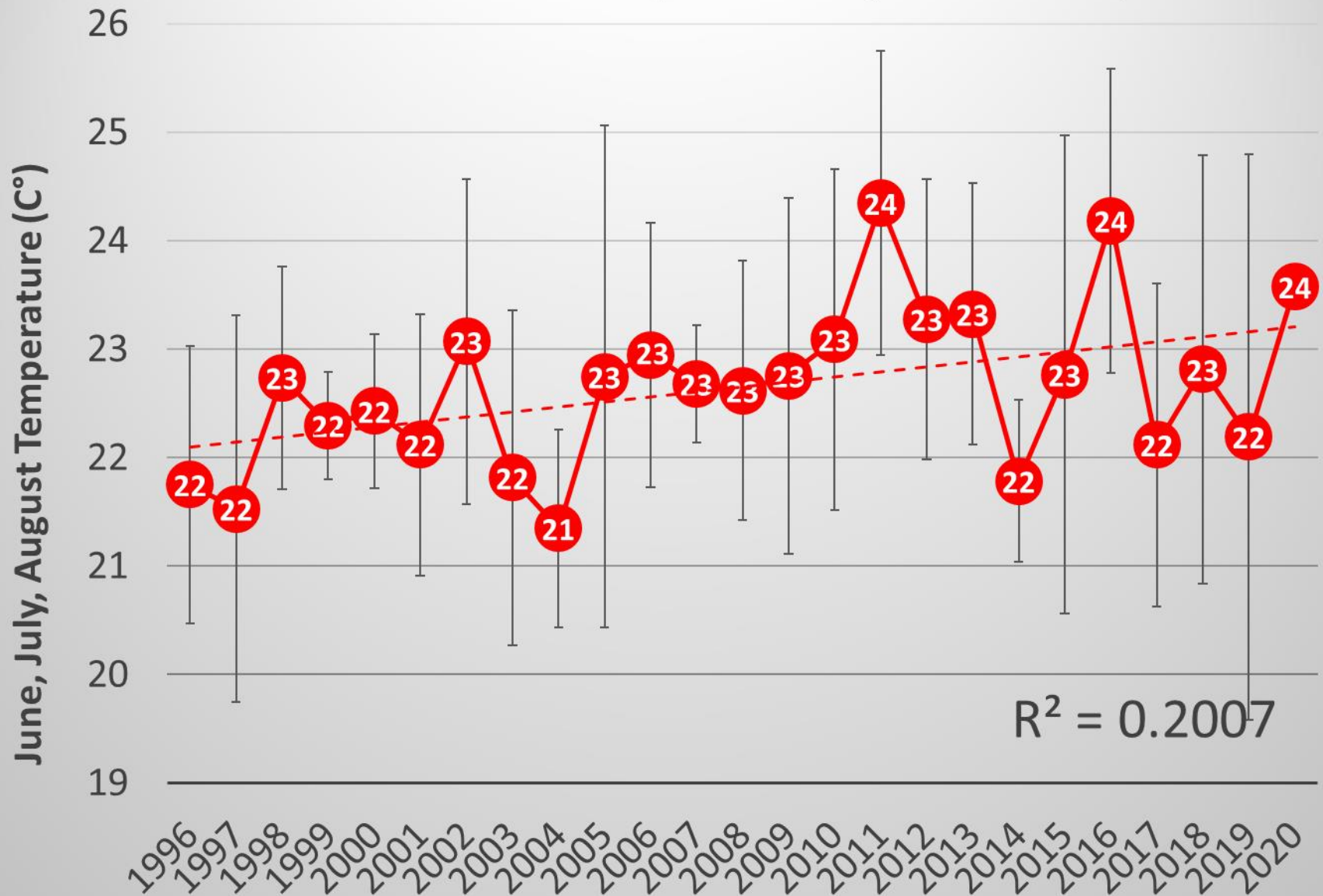


Deep Run Dissolved Oxygen (mg/L)



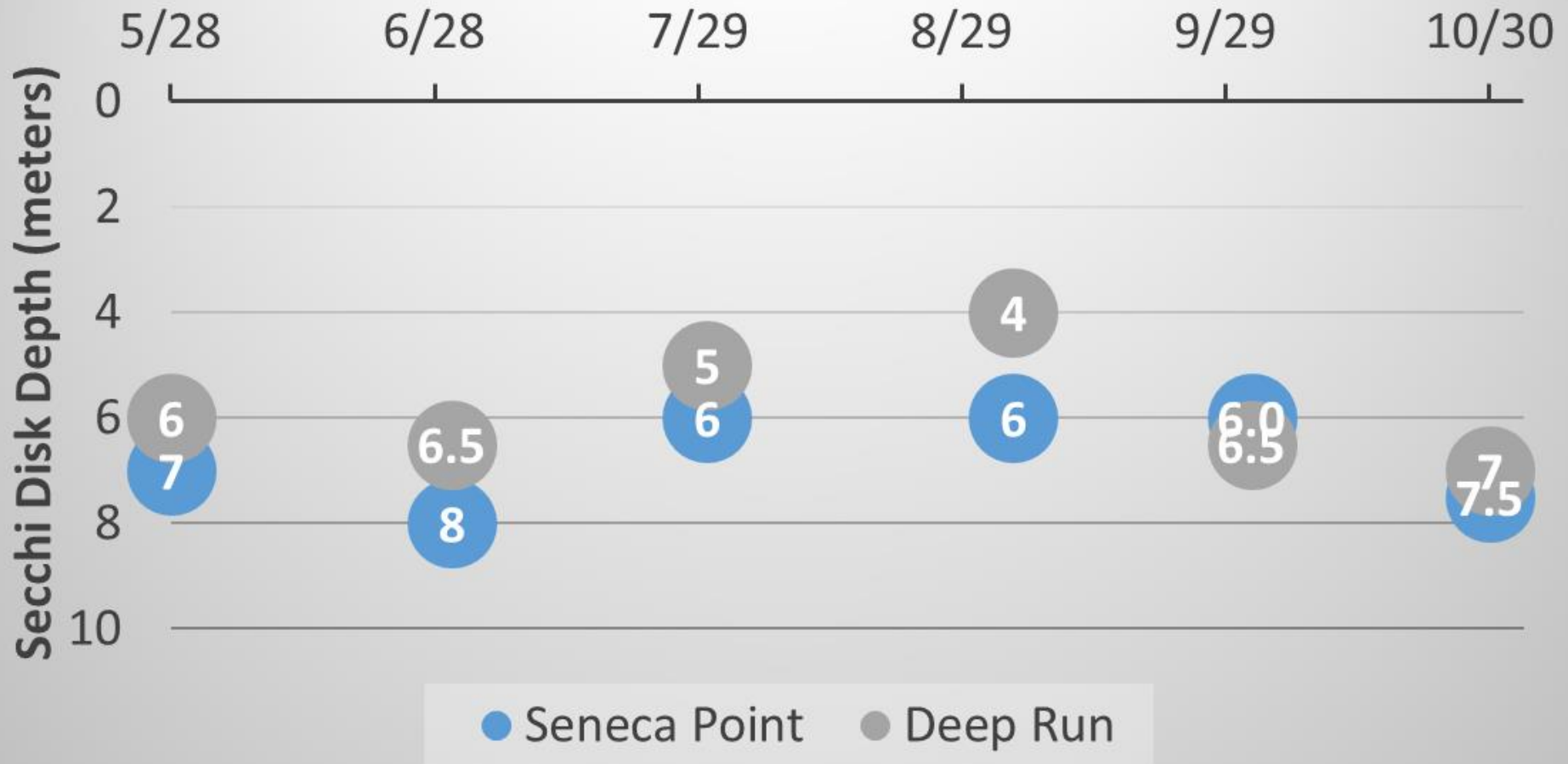
Meter failure on 5/28 and 10/30

Summer Surface Temperatures (1996 - 2020)

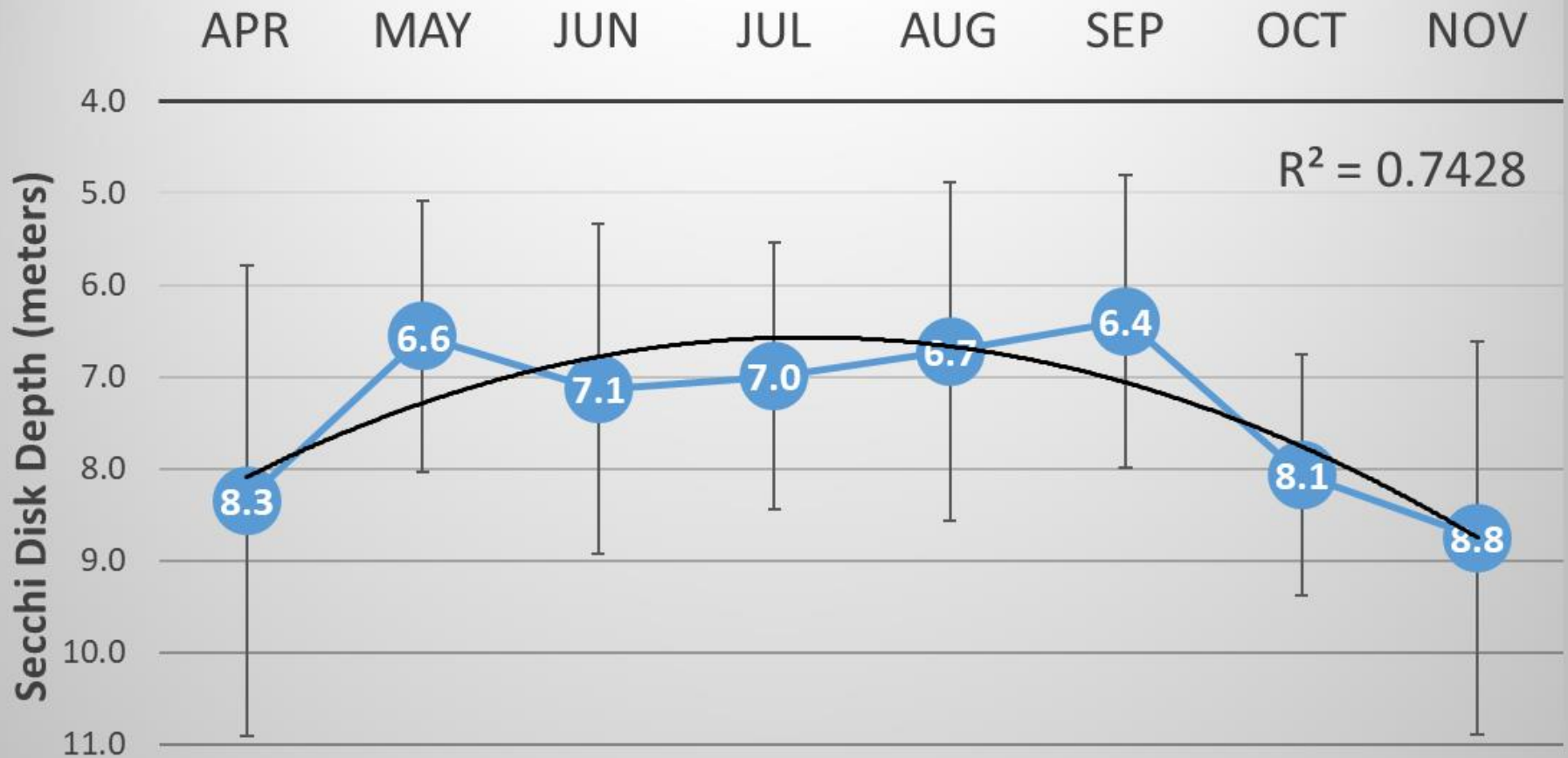


Lake Clarity

2020 Secchi Disk Measurements (meters)



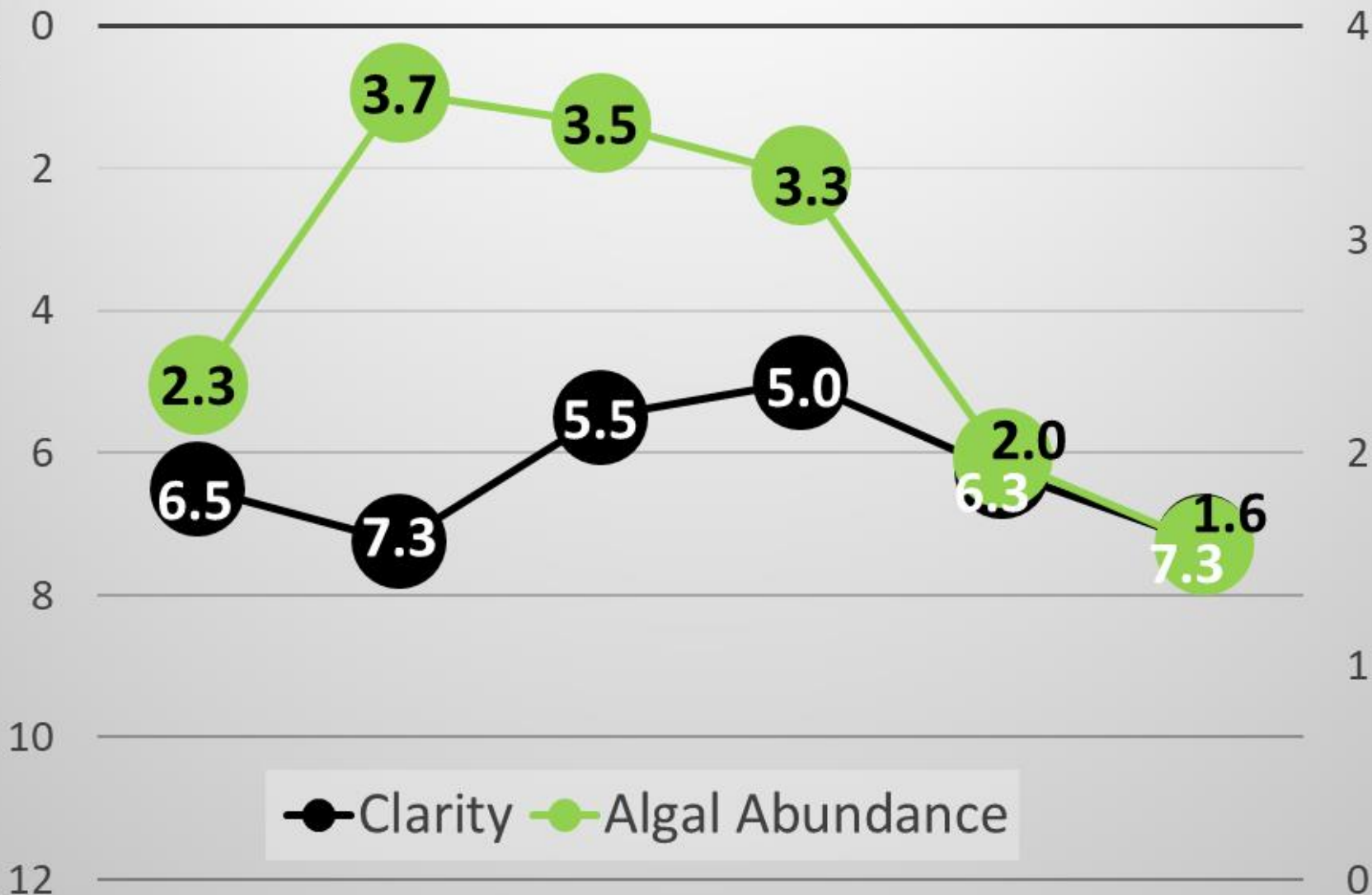
Seasonal Mean Lake Clarity (1996-2020)



Clarity versus Algal Abundance (2020)

MAY JUN JUL AUG SEP OCT

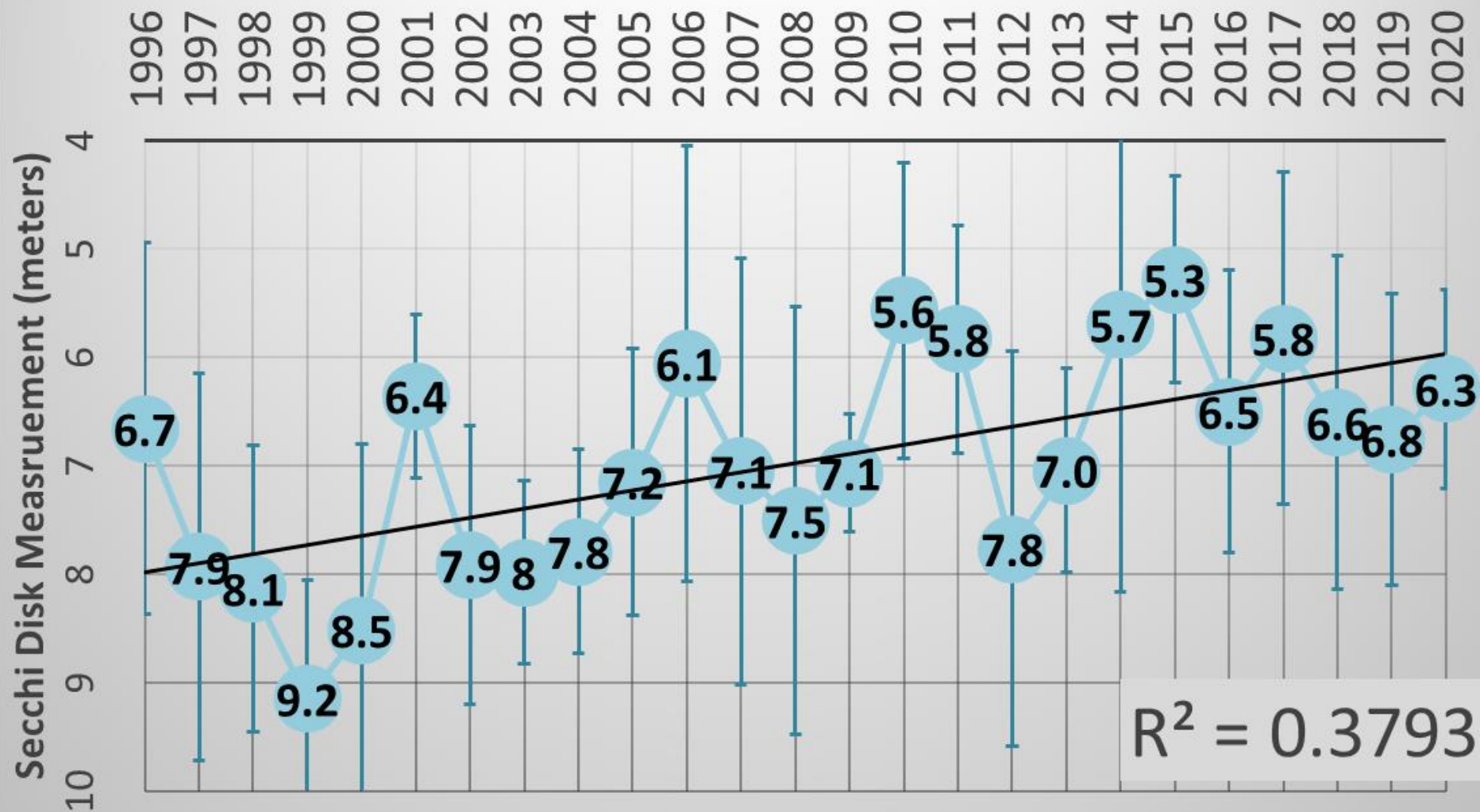
Secchi Disk Measurement (meters)



● Clarity ● Algal Abundance

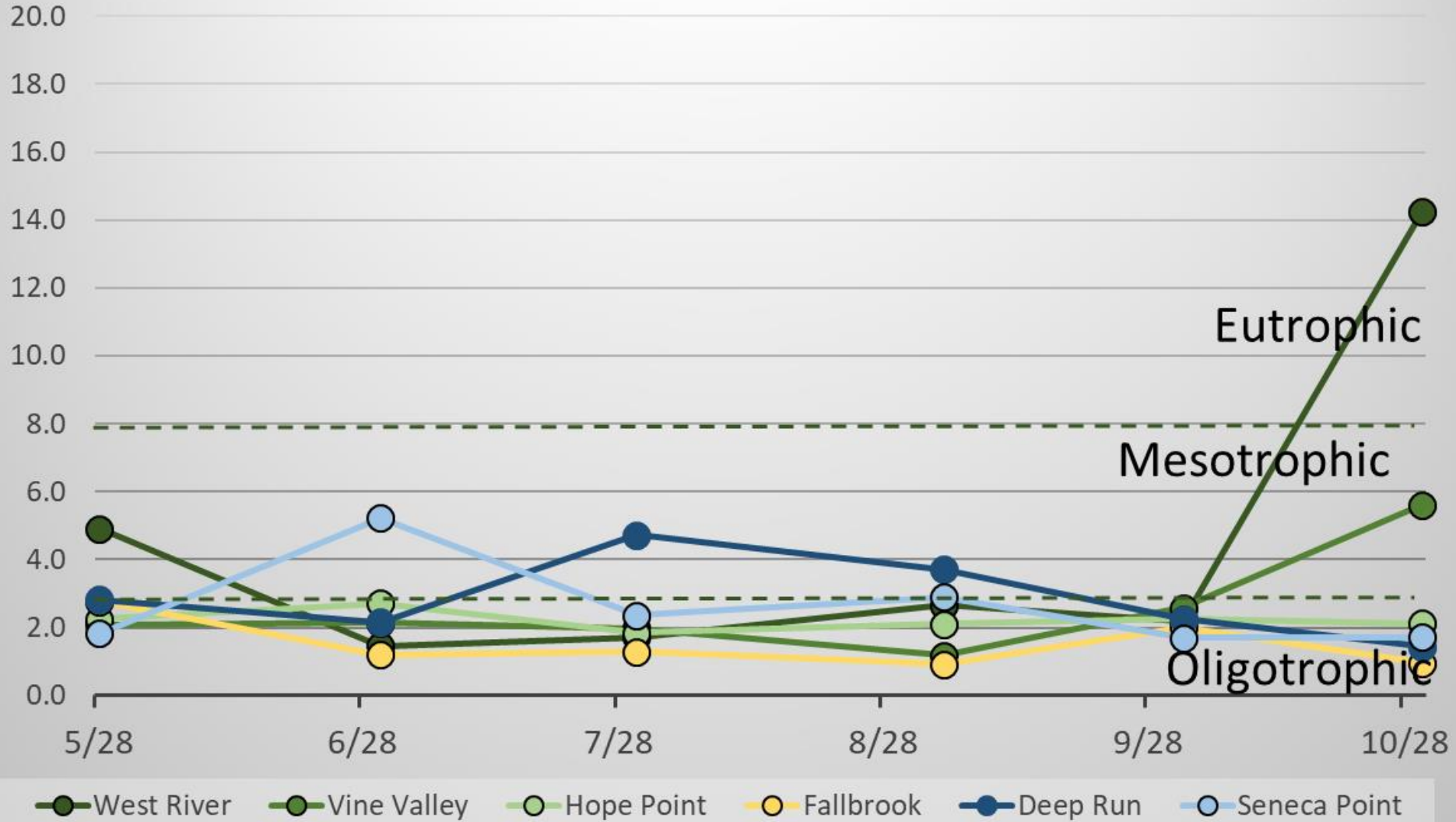
Chlorophyll-a Measurements (ug/L)

Summer Mean Lake Clarity (1996 - 2020)



2020 Seasonal Algal Abundance

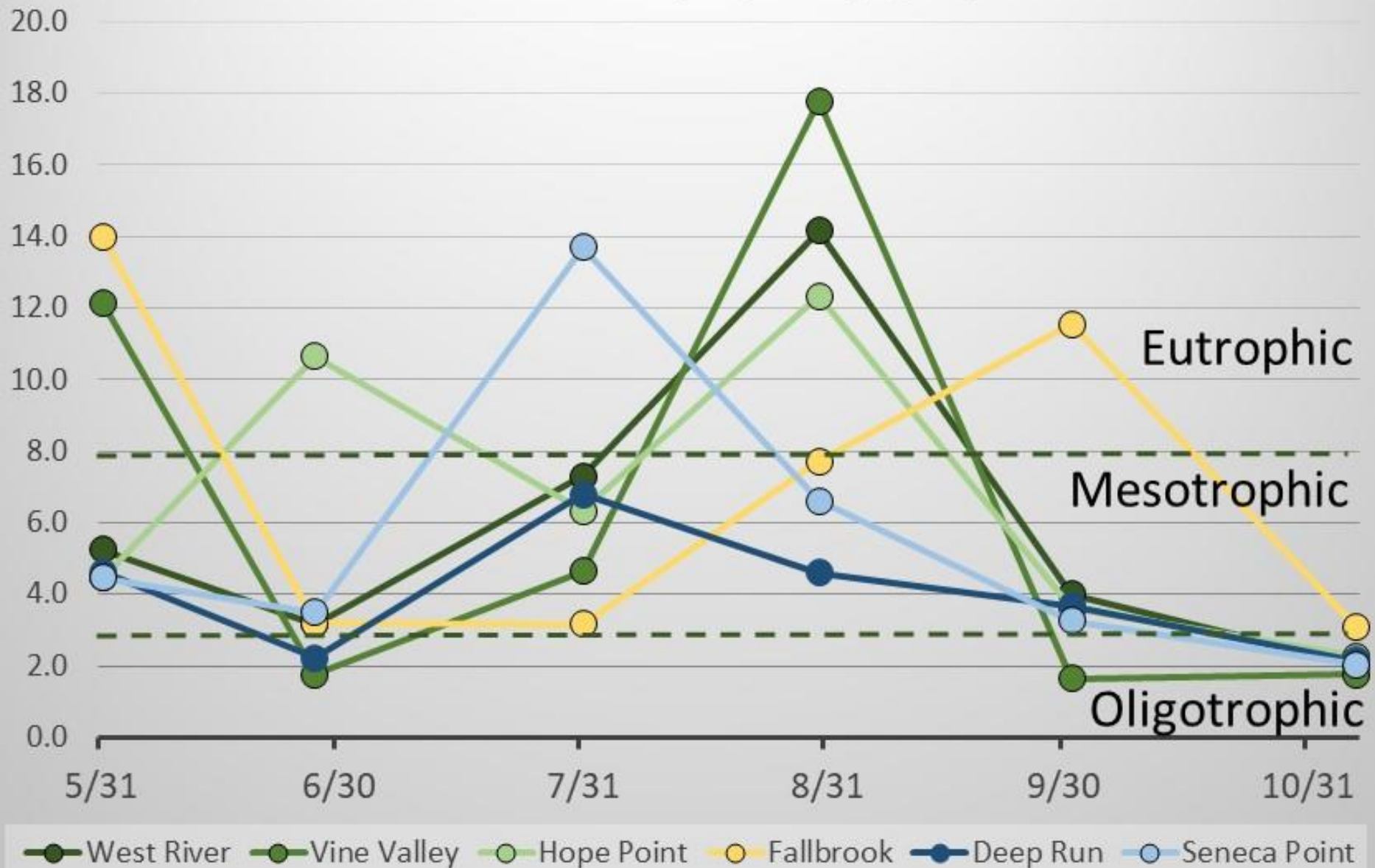
Chlorophyll-a (ug/L)



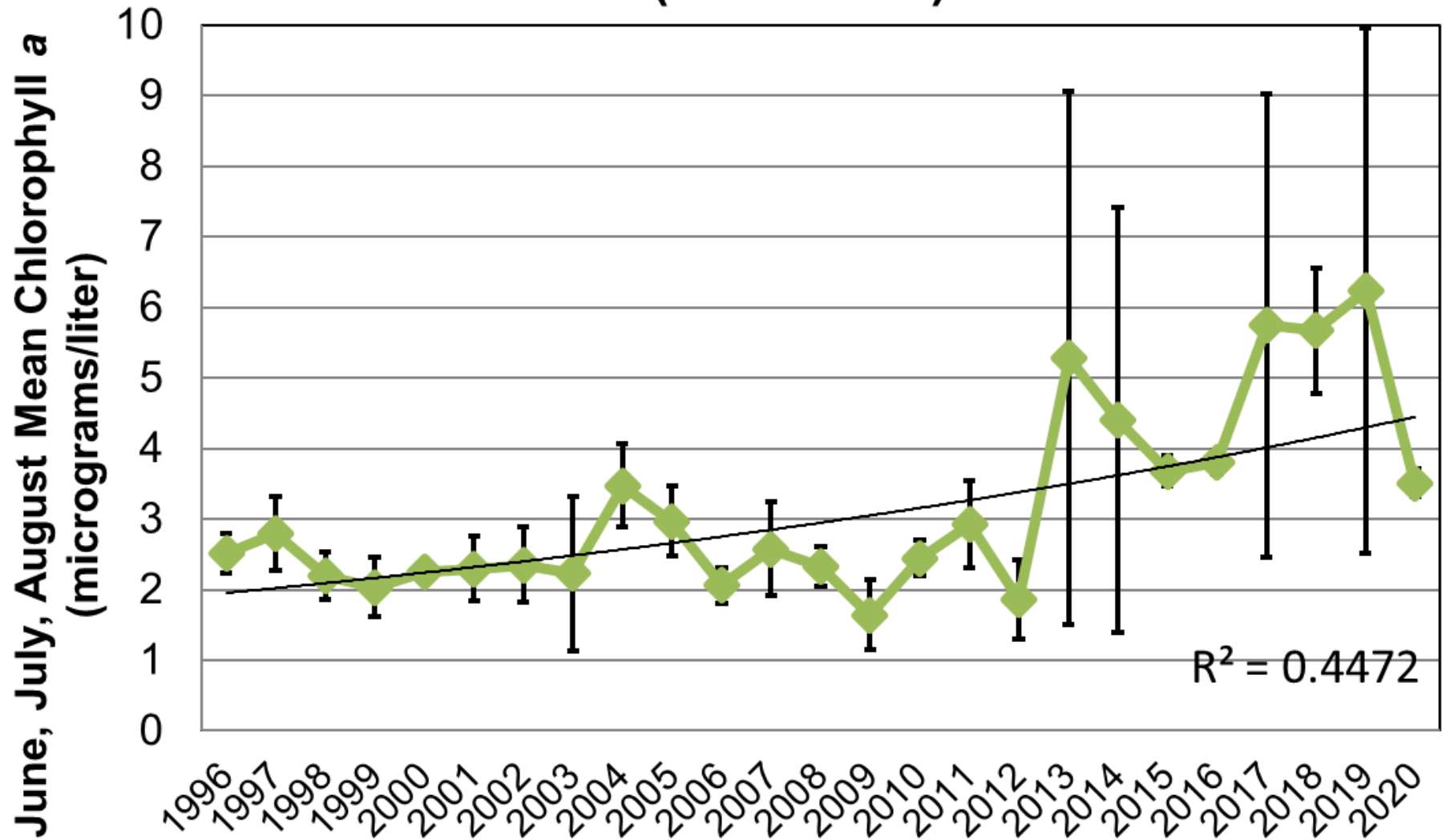
West River Vine Valley Hope Point Fallbrook Deep Run Seneca Point

2019 Seasonal Algal Abundance

Chlorophyll-a (ug/L)



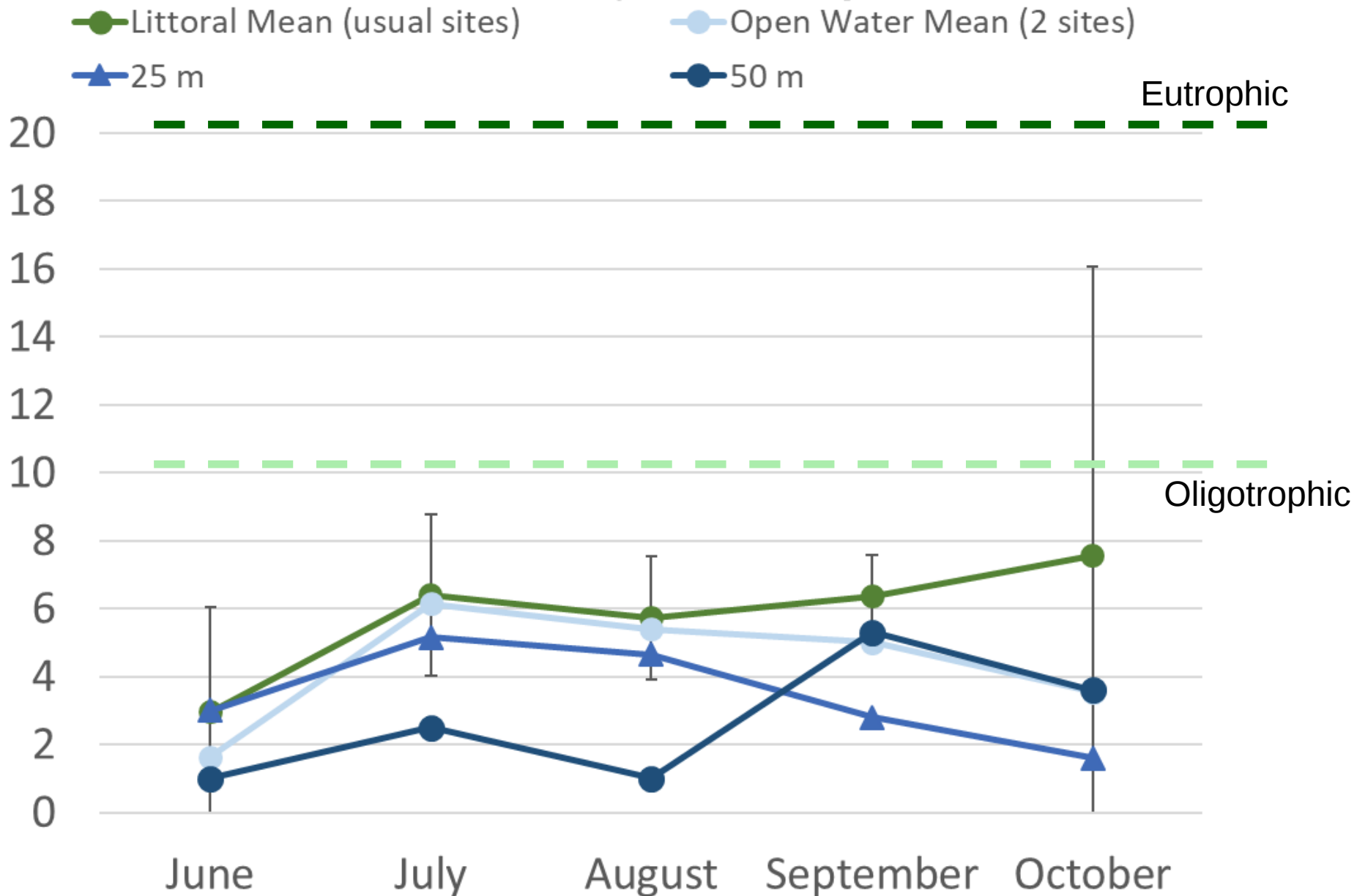
Long-term Summer Mean Algal Abundance (1996-2020)



Total Phosphorous

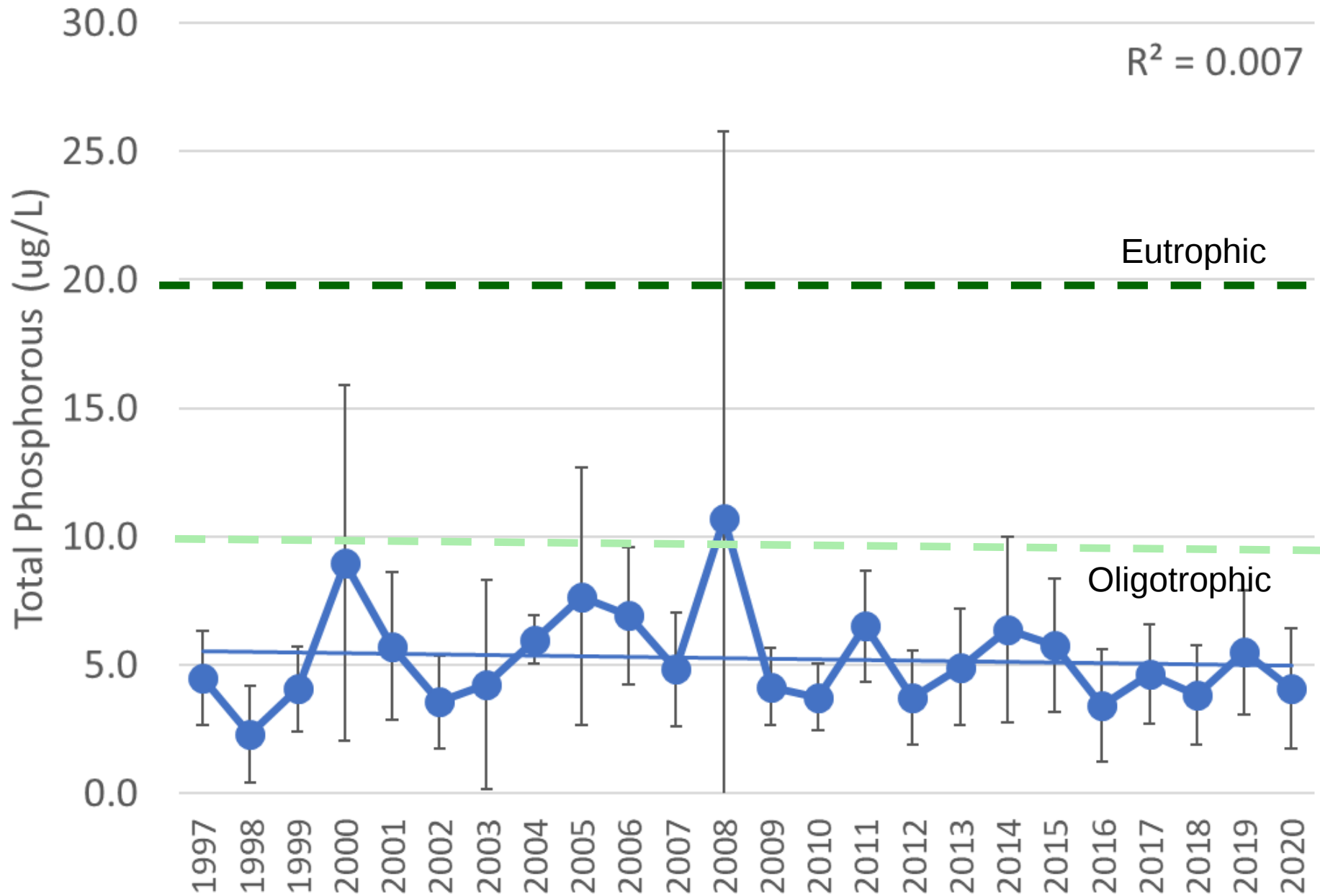
- Includes ortho-phosphate and the phosphorus in suspended plant and animal fragments
- New York State's trophic assessments
 - Eutrophic: total phosphorus readings exceeded 20 ug/l
 - Mesotrophic: between the two categories
 - Oligotrophic: total phosphorus readings below 10 ug/l

2020 Total Phosphorus (ug/L)



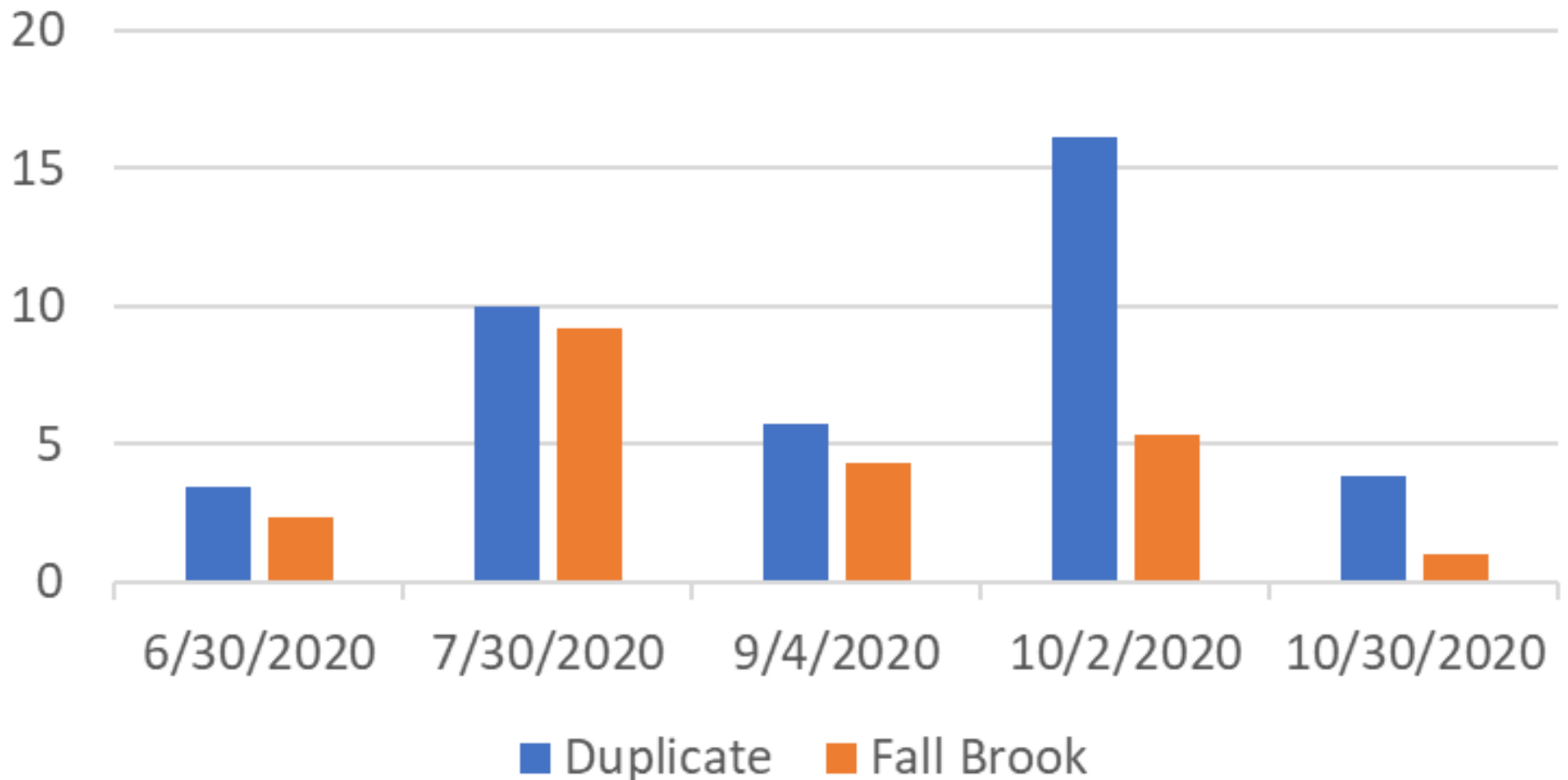
No samples were collected in May.

Mean TP (ug/L) May to October at Deep Run (2 m)



QAQC results

2020 Duplicates versus Site Samples



Thank you! Questions?

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