



# Quarterly Water Test Results

First Quarter 2022

For

***Windstar***



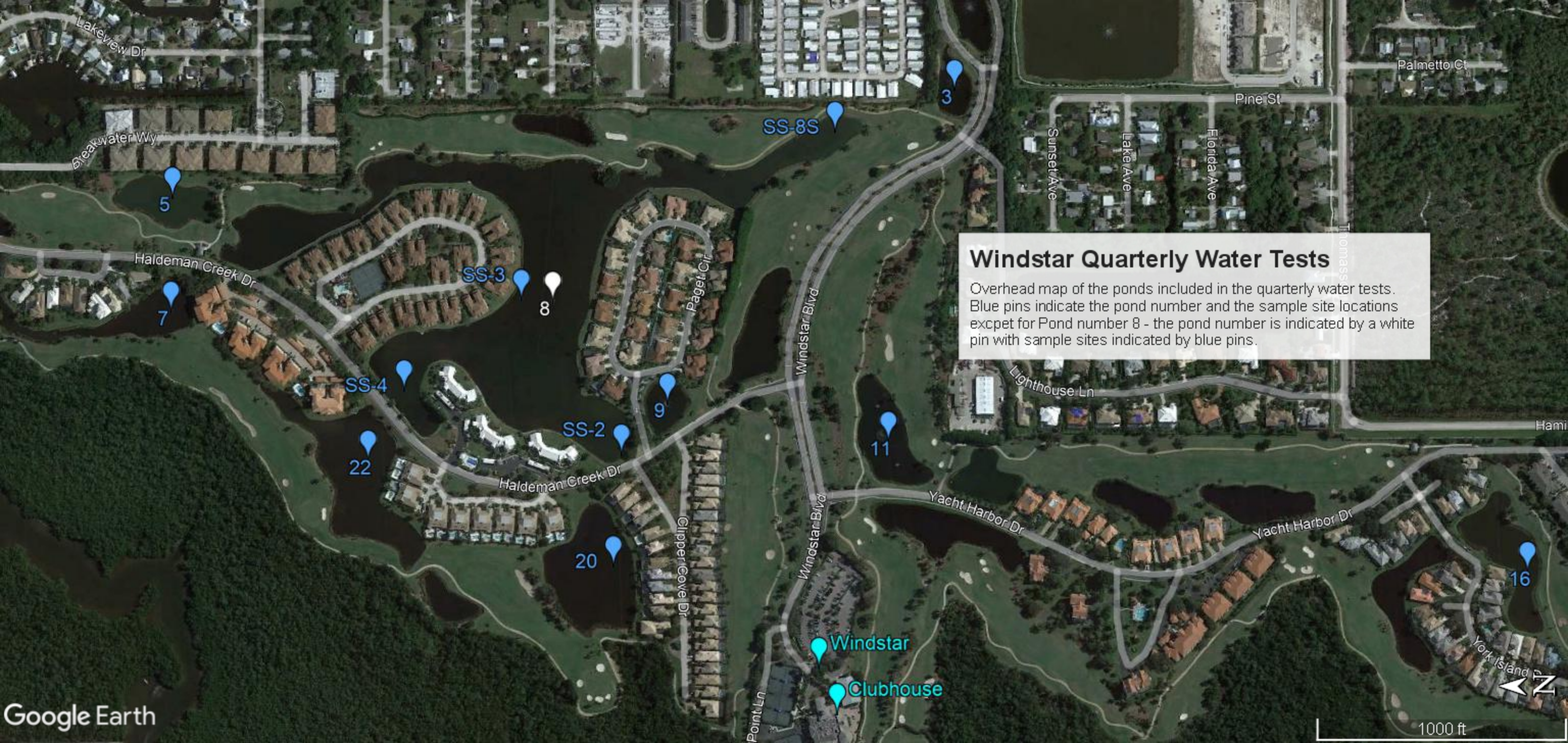
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292 S. Military Trail – Deerfield Beach, FL 33442

Locations in: Deerfield Beach, Fort Myers, Port St. Lucie, and Clearwater/Tampa

1-800-491-9621





**Windstar Quarterly Water Tests**

Overhead map of the ponds included in the quarterly water tests. Blue pins indicate the pond number and the sample site locations except for Pond number 8 - the pond number is indicated by a white pin with sample sites indicated by blue pins.





## Water test analysis descriptions

### **Total Phosphorous (TP)**

Is the measurement of all forms of phosphorous; inorganic, organic, particulate and dissolved. Excess phosphorous is the prime contributor to eutrophication in most water systems. Measuring the amount of phosphorus indicates how productive and susceptible to algae blooms the pond is.

### **Total Nitrogen (TN)**

An important test indicating the concentration of organic and inorganic forms of nitrogen that are in the water column. Nitrogen is one of the primary nutrients required by plants and algae for growth. At high levels, and in combination with phosphorous, plant and algae growth can excel to undesirable levels.

### **Chlorophyll-a**

Determines the biomass of planktonic algae (phytoplankton) in the waterbody. High concentrations are the direct result of large amounts of nutrients that are available in the water column. An important test to indicate the productivity and trophic status of a pond.

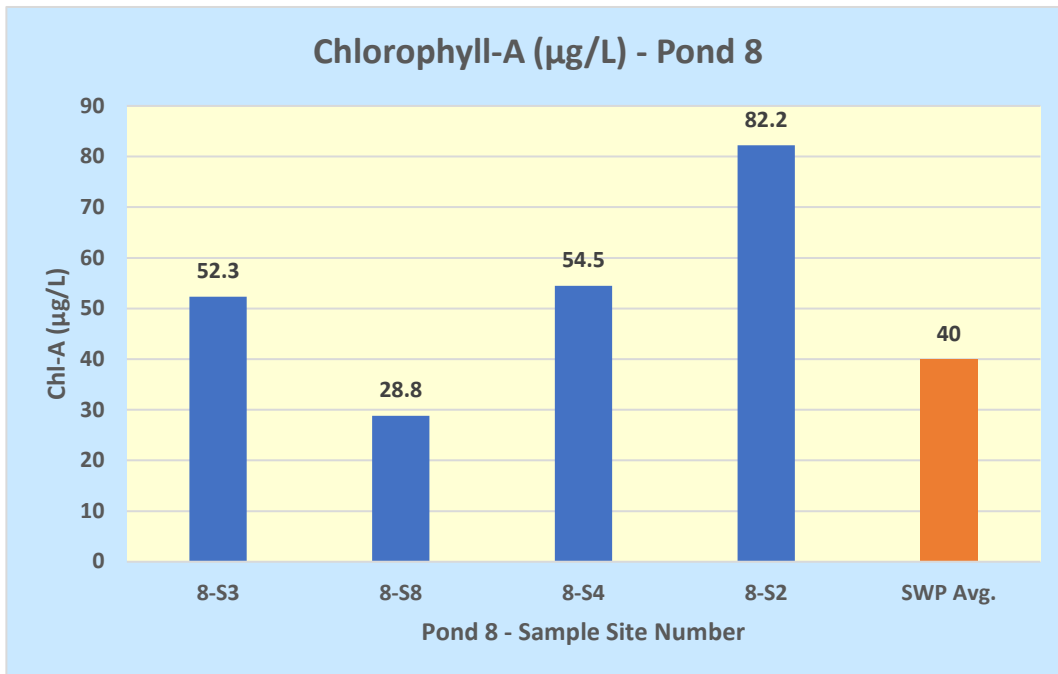
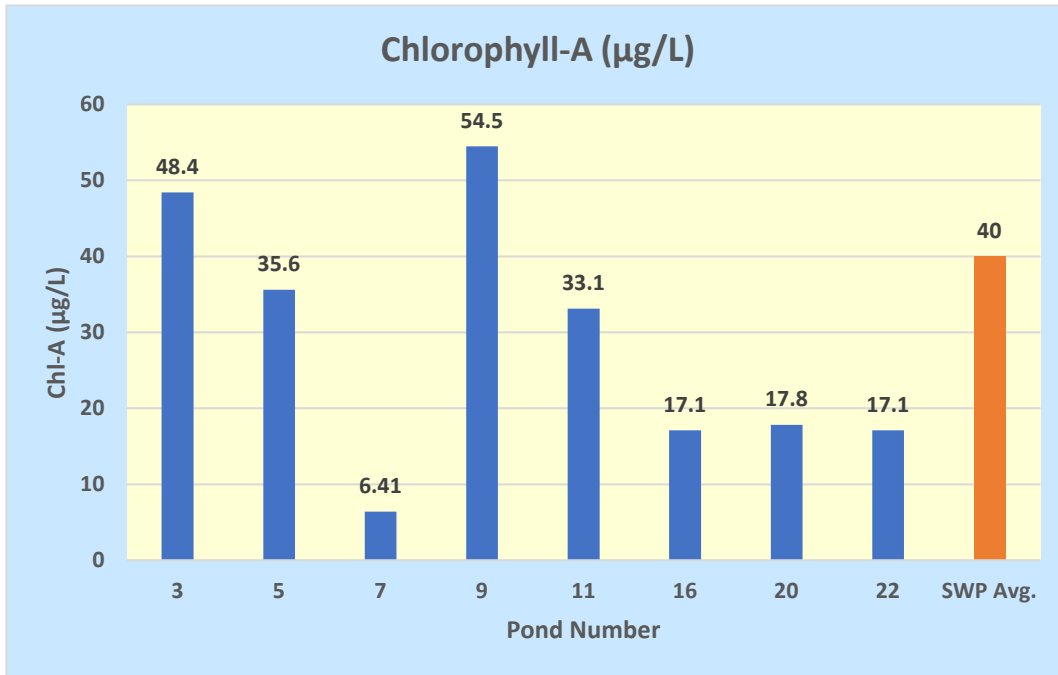
### **Electrical Conductivity (EC)**

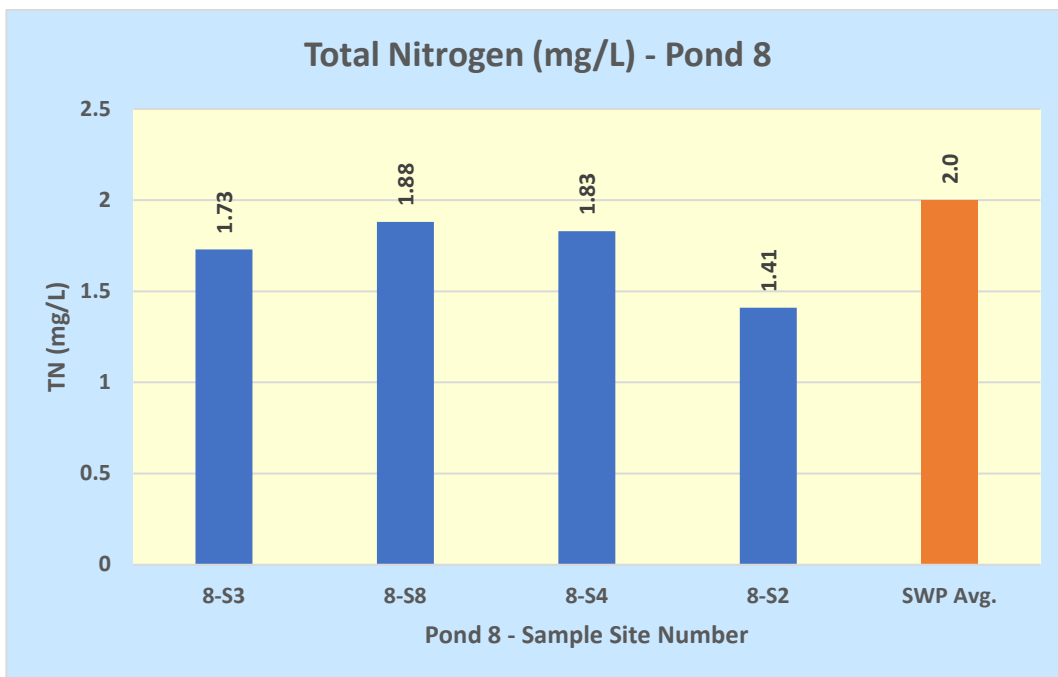
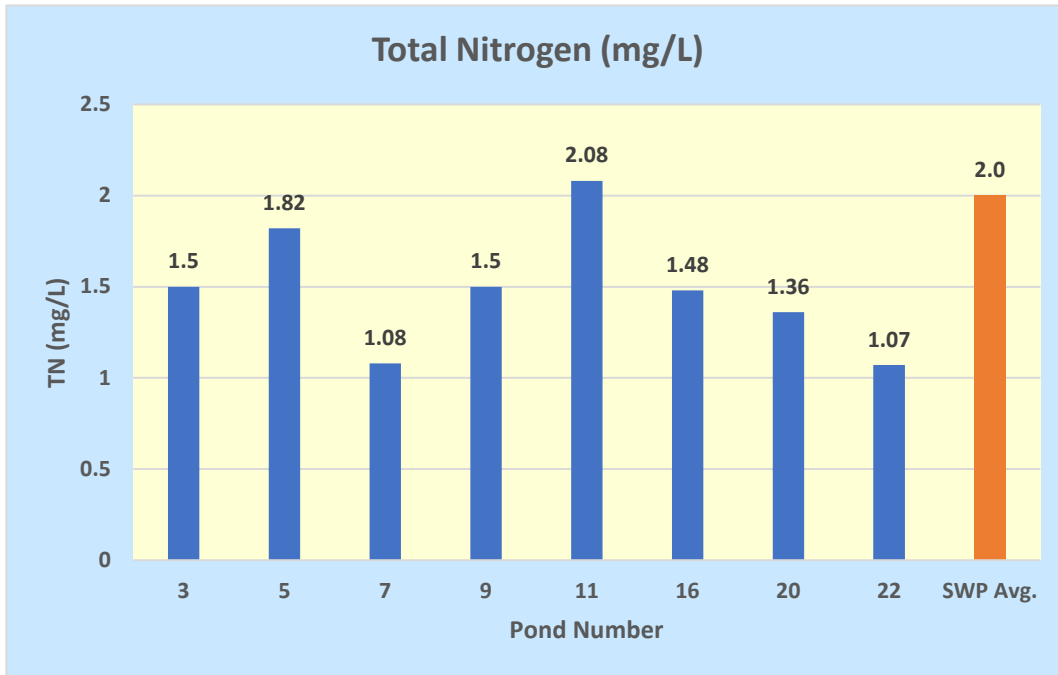
Water has the ability to dissolve many substances as it moves across a watershed. This measurement is the number of dissolved solids or salts that have dissolved in a waterbody. This test is a general indicator of the overall health of the pond. Variations from its normal range may indicate an abnormal amount of pollution e.g., phosphorous, nitrogen, etc. that has entered the pond.

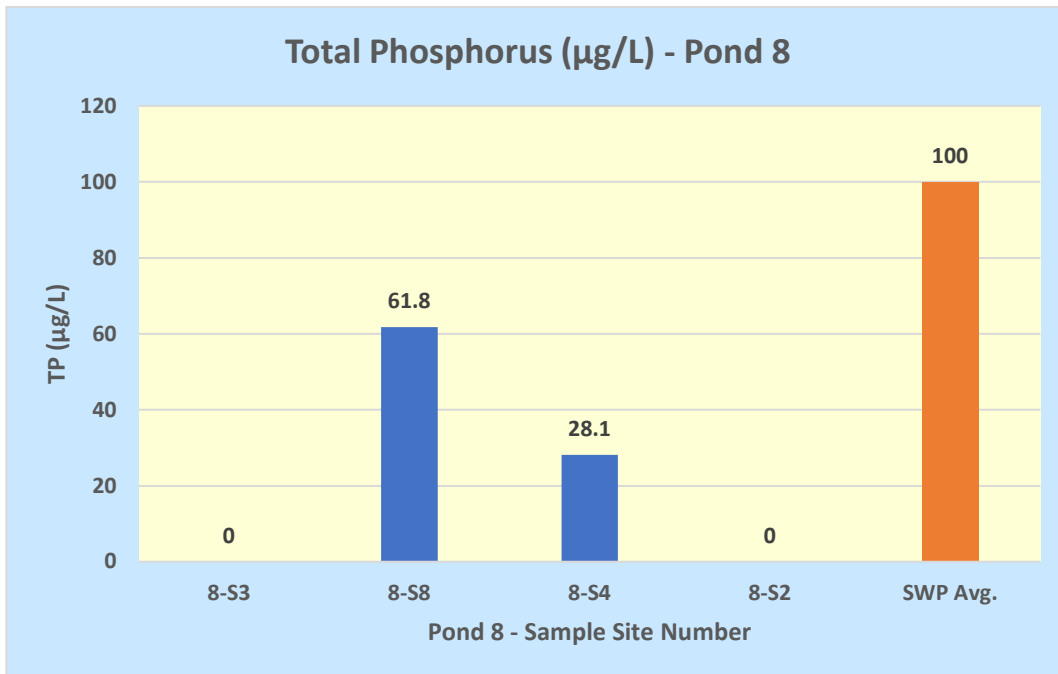
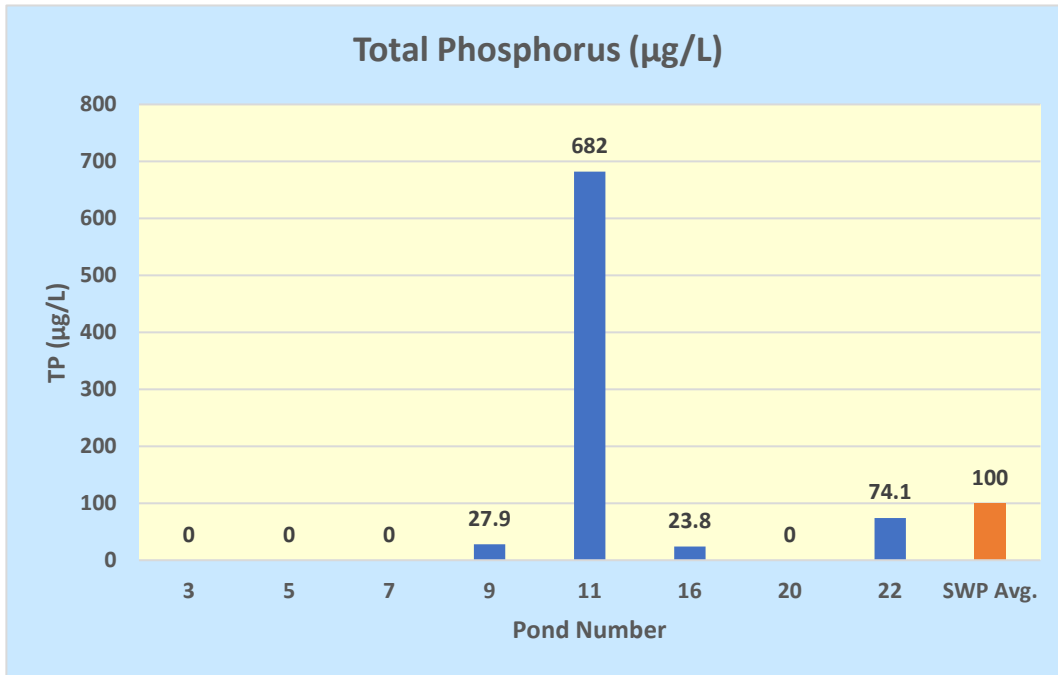
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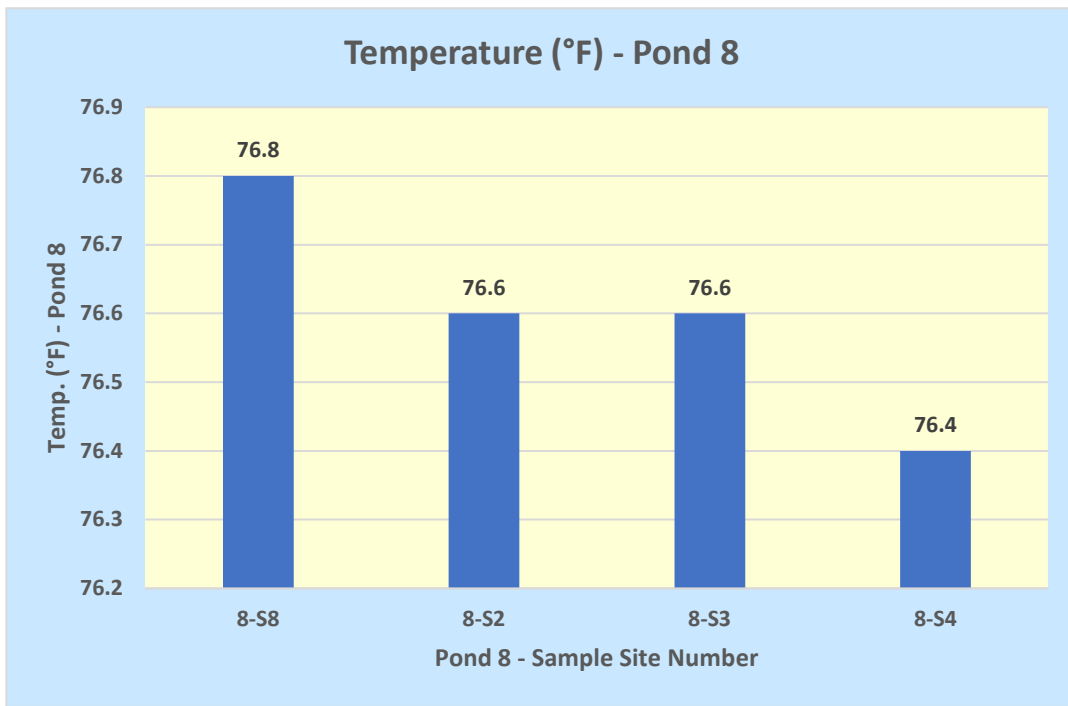
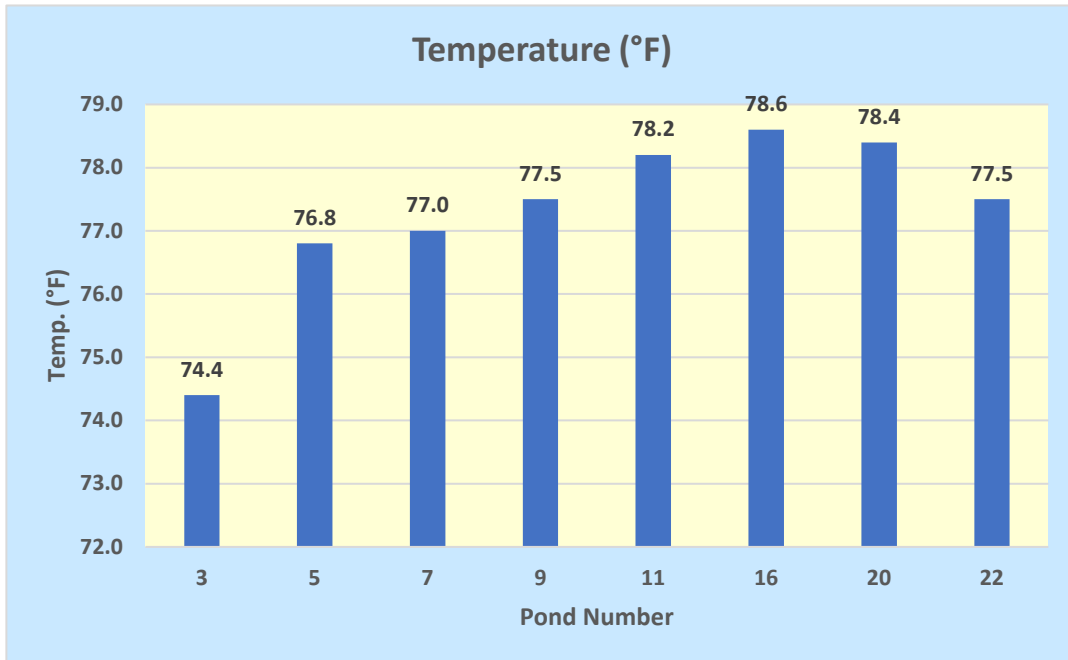
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## What is Electrical Conductivity and why do we measure it?

### Electrical Conductivity (EC)

Electrical conductivity is the total dissolved salts, measured as ions, in the water. These salts separate into positively and negatively charged ions (kind of like electrolytes in your sports drink). Some negative ions you may have heard of include bicarbonate, carbonate, chloride, sulfate, phosphates, and nitrates; four positive ions you may have heard of include calcium, magnesium, sodium, potassium, and ammonium. Ions in the water affect the quality of water for drinking or irrigation. The concentration of ions also influences what microorganisms will prosper in the water based on their desired salinity range. Conductivity will vary based on where the water source comes from and can be a good indicator of groundwater seepage or a sewage leak. Waters that have been heavily impacted by industry can fall into the high conductivity range which is bordering on saline conditions, and is not suitable for some fish or plants.

*For reference:*

- *0-300  $\mu\text{S}$  = Excellent water quality. Can be consumed by humans. Can be used for irrigation.*
- *300-800  $\mu\text{S}$  = Good drinking water for humans as long as organic material has been filtered out. Generally good for irrigation, although above 300  $\mu\text{S}$  may start to cause leaves to scorch on sensitive plants.*
- *800-2500  $\mu\text{S}$  = Can be consumed by humans, although it would be preferred to have an EC value on the lower end of this scale (800-1650  $\mu\text{S}$ ). Requires special management when used for irrigation – consider suitability of soil, good drainage, and salt tolerance of plants.*
- *2500-10,000  $\mu\text{S}$  = Not recommended for human consumption. Not normally suitable for irrigation although 6000  $\mu\text{S}$  can be used for extremely salt tolerant crops with special management.*
- *10,000+  $\mu\text{S}$  = not suitable for human consumption or irrigation.*

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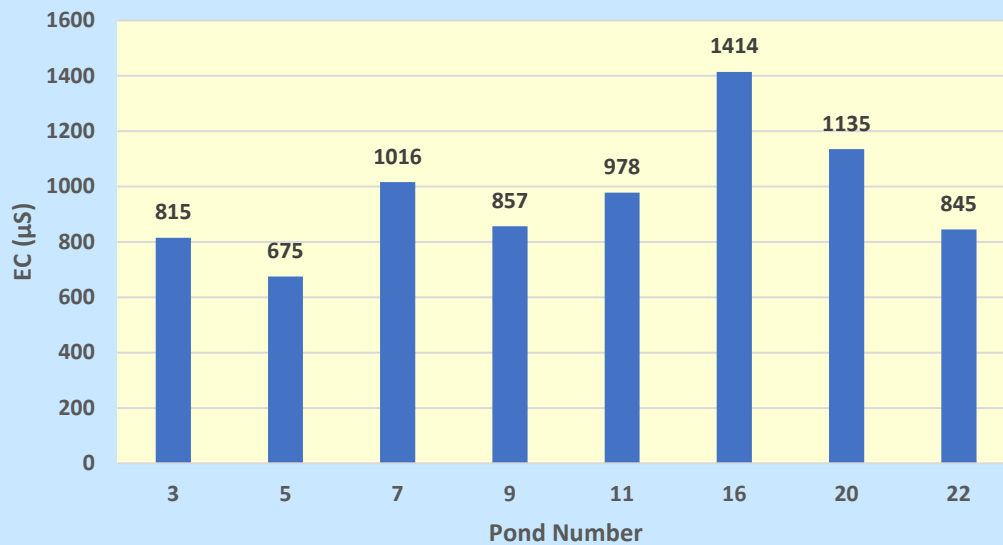
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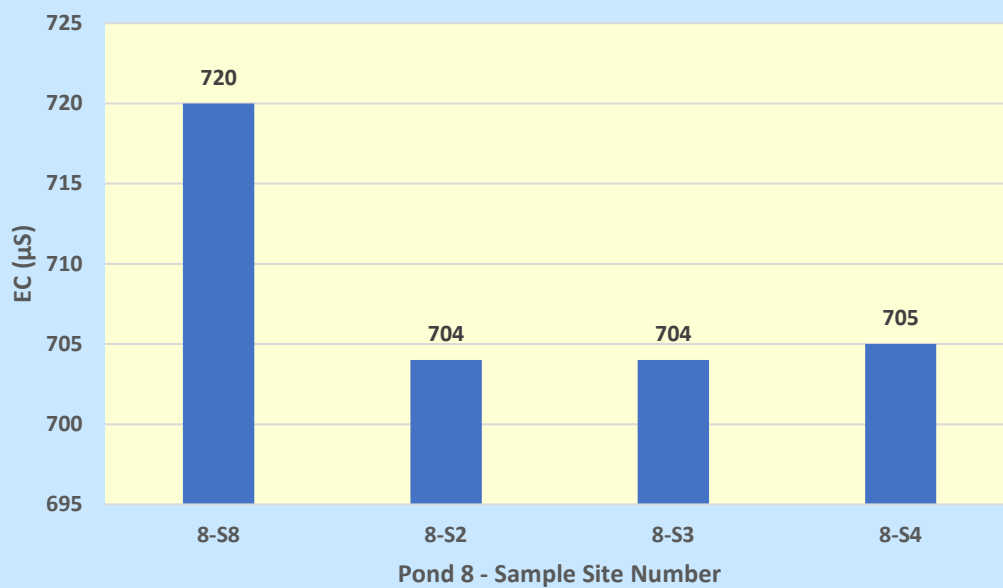




Electrical Conductivity ( $\mu\text{S}$ )

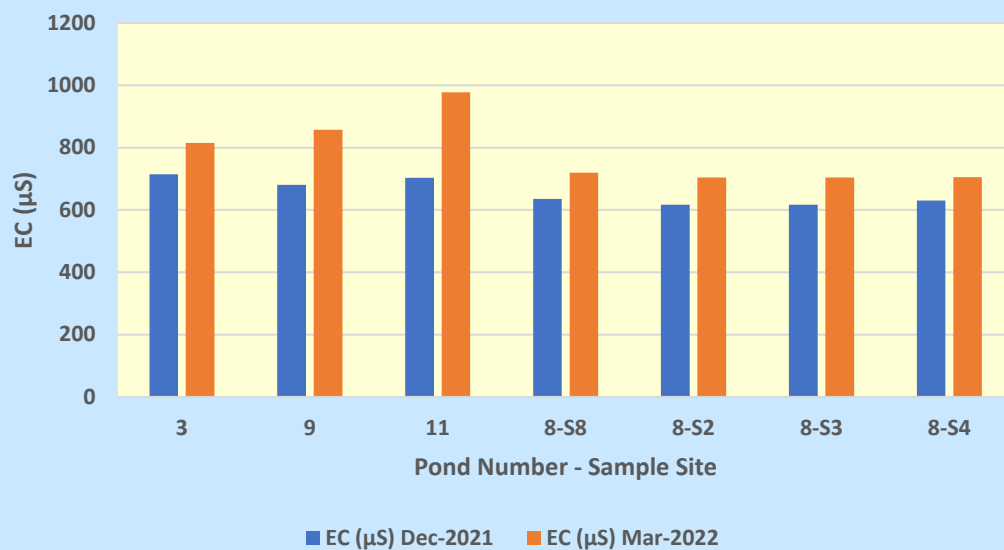


Electrical Conductivity ( $\mu\text{S}$ ) - Pond 8





### EC Readings Comparison: December 2021 to March 2022



Lake	EC (µS) Dec-2021	EC (µS) Mar-2022
1	536	/
2-East	670	/
2-West	668	/
3	714	815
5	/	675
7	/	1016
9	681	857
10	700	/
11	703	978
12	1253	/
16	/	1414
20	/	1135
22	/	845
8-S8	635	720
8-S2	617	704
8-S3	617	704
8-S4	630	705