



Lake and Pond Solutions Co.

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Camp and Center Lake Rehabilitation District
Attn: Tom Strachan
9508 271st Ave.
Trevor, WI 53179

December 7th, 2020

Dear Mr. Strachan,

The attached laboratory results reflect data from our FALL sampling efforts on Camp and Center Lakes.

The following parameters were analyzed: pH, Conductivity, Alkalinity, Total Hardness, Calcium Hardness, Reactive Phosphorus, Total Phosphorus, Ammonia, NO₂+NO₃, Total Kjeldahl Nitrogen, Chloride, Sulfate, Sodium, Potassium, Turbidity and Color. Since we've previously sent out detailed reports, I've only interpreted each component and commented where appropriate.

<u>ANALYSIS</u>	<u>CAMP</u>	<u>CENTER</u>
pH	NORMAL	NORMAL
Conductivity	NORMAL	NORMAL
Alkalinity	NORMAL	NORMAL
Total Hardness	HARD	VERY HARD
Calcium Hardness	NORMAL	NORMAL
Reactive Phosphorus	LOW (Good)	LOW (Good)
Total Phosphorus	LOW (Good)	LOW (Good)
Ammonia Nitrogen (NH ₃)	LOW (Good)	LOW (Good)
Nitrite plus Nitrate Nitrogen (NO ₂ +NO ₃)	LOW (Good)	LOW (Good)
Total Kjeldahl Nitrogen (TKN)	ELEVATED	NORMAL
Chloride (Cl)	NORMAL	NORMAL
Sulfate (SO ₄)	NORMAL	NORMAL
Sodium (Na)	NORMAL	NORMAL
Potassium (K)	NORMAL	NORMAL
Turbidity	ELEVATED	NORMAL
Color	NORMAL	NORMAL

Overall, the water quality in both lakes looks good as most components remained constant. We did see an increase in TKN (highest ever value) and turbidity (2nd highest value) in Camp Lake this Fall. TKN is a measure of the amount of ammonia (NH₃), ammonium (NH₄), and other organic nitrogen in the water. Typically, the organic-N in TKN is the largest portion and found in proteins, amino acids, urea, living or

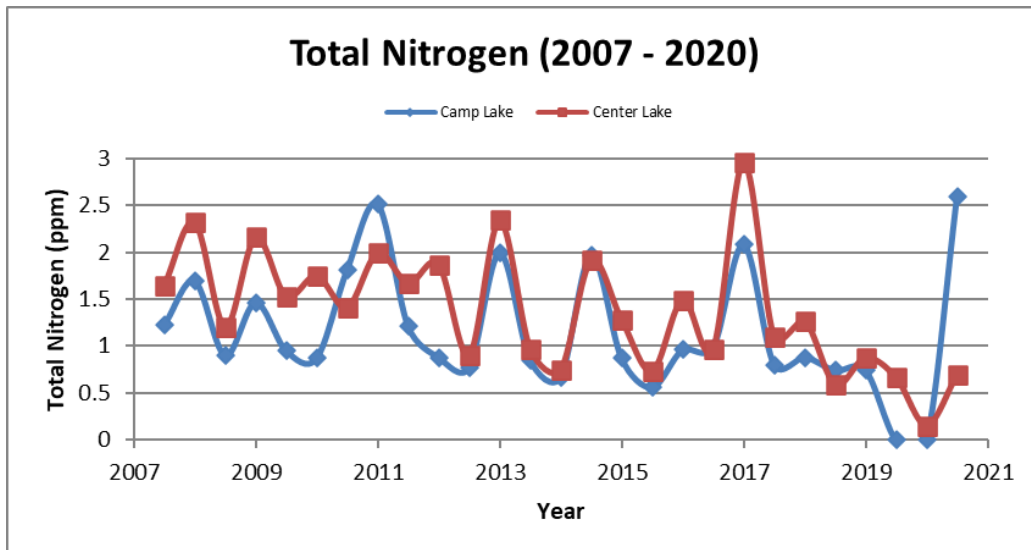
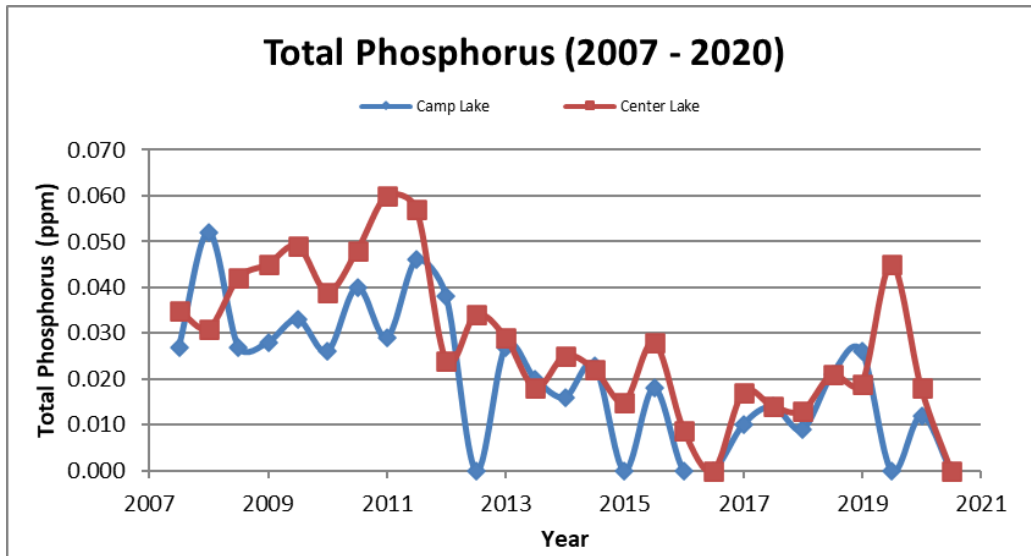


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dead organisms, decaying plant material, and organic based sediments like muck. When TKN is added to nitrite plus nitrate, the resulting value is the total nitrogen of a water body which can be used to calculate nitrogen to phosphorus ratios. For our area, TKN values range between 0.7 and 1.7 ppm. Although the organic portion is usually not available for growth, plants and algae do convert other forms of nitrogen back to the organic form. Ultimately high TKN values can indicate potential growth impacts, runoff issues or organic sediment accumulation.

It tough to point to a source for the increase in TKN, although the increased turbidity may indicate this was a runoff issue. It's worth keeping an eye on in future sampling periods. Below are the historical phosphorus and nitrogen graphs.

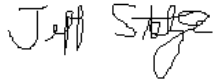


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If you have any questions or concerns don't hesitate to contact me.

Sincerely,



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