Pickerel Lake Water Quality 2015

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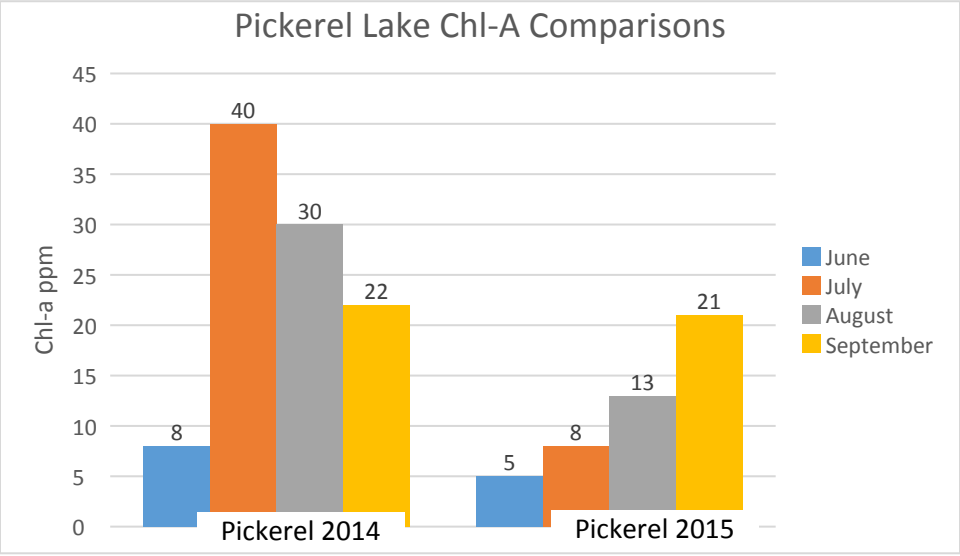
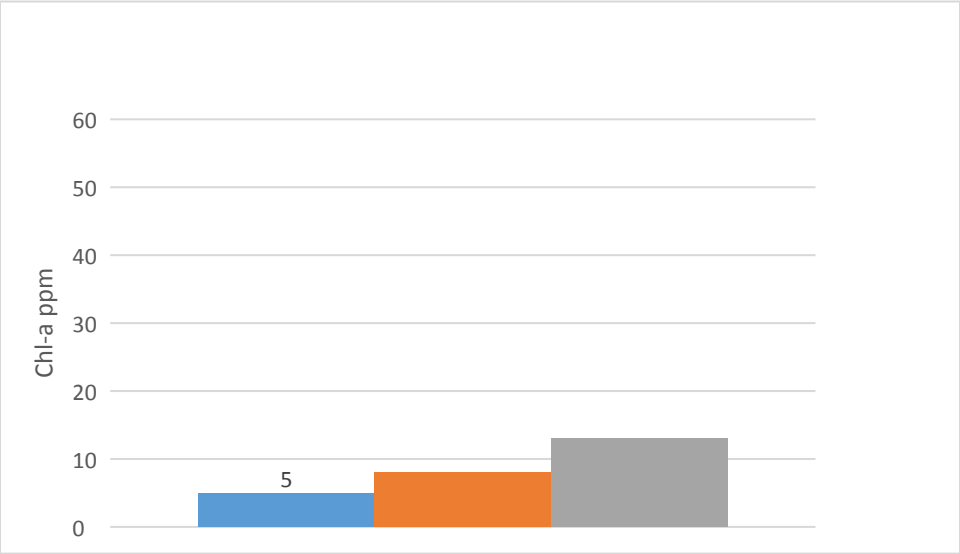
Preliminary water quality data collected during May to Sept 2015 shows improvement in some of the lake's water quality parameters. The most noticeable improvement was the lake's water clarity and chlorophyll *a*.

If you remember last summer's water quality (2014), the lake had a severe blue-green algae bloom, something that a majority of lake residents had not observed before. The reason or reasons for the 2014 algae bloom still has not been determined, however surface water temperatures this summer were much lower than last summers and less favorable for algae growth. We will be comparing phosphorus levels from both tributary samples and in-lake samples from 2014 and 2015 this winter which may shed more light on the 2014 algae bloom. Phosphorus is the nutrient most often cited as the cause for excessive algae blooms. In fact, studies have shown that one pound of phosphorus can produce 500 pounds of algae!

The graph below shows chlorophyll *a* levels in the lake for 2014 and 2015. Chlorophyll is the green pigment in algae (and all green plants that photosynthesis), and chlorophyll *a* is a measurement of this pigment that relates to algae biomass. In 2014, chlorophyll *a* peaked unusually early in July at one of the highest levels ever seen on the lake since yearly sampling began in 2002. As the summer progressed chlorophyll *a* numbers decreased. In 2015, chlorophyll *a* levels were much lower, and the normal trend of algae becoming more predominant as the summer growing season progressed was observed.



The graph below shows how Pickerel Lake's chlorophyll *a* levels compared with other area lakes in 2015. Enemy Swim Lake had the lowest chlorophyll *a* levels while Roy Lake had a fairly heavy bloom of green algae in August.



During 2015, we collected monthly in-lake surface and bottom samples from Pickerel Lake May thru September. To date, a total of 586 tributary samples have been collected in 2015 from eight tributary sites located in the lake's watershed, and Pickerel Lake's outlet.