# East Alaska Lake Alum Treatment - Two Years Post Treatment

2013 Monitoring Update

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After 20 plus years of study and planning, the East Alaska Lake alum treatment was implemented in mid-October 2011 and included the application of nearly 84,000 gallons of aluminum sulfate over a two-day period. Two growing seasons' worth of data has now been collected at East Alaska Lake as a part of the post alum treatment monitoring. For the second summer in a row, no observations of filamentous algae were reported to Onterra or noted as a part of Onterra's field studies. As seen in Figure 1, post treatment, near surface phosphorus values remain much lower than pretreatment values, with the 2013 values being slightly lower than those recorded in 2012. The difference between the 2012 and 2013 values are likely natural fluctuations between years and not attributable to an increase in the effects of the alum treatment.

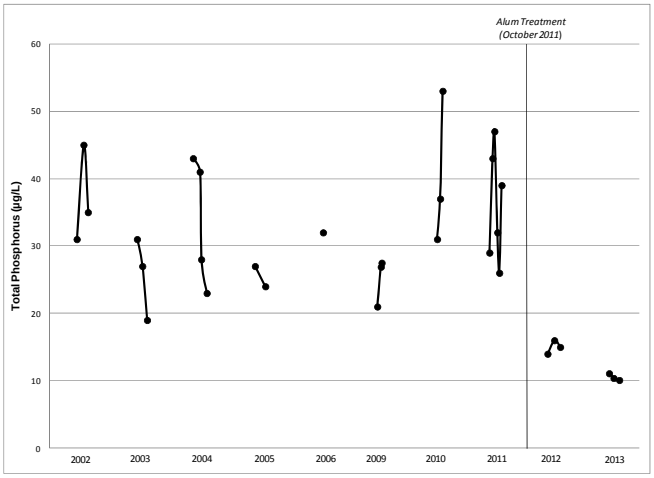


**Figure 1. East Alaska Lake summer (June, July, August) near surface total phosphorus values.**

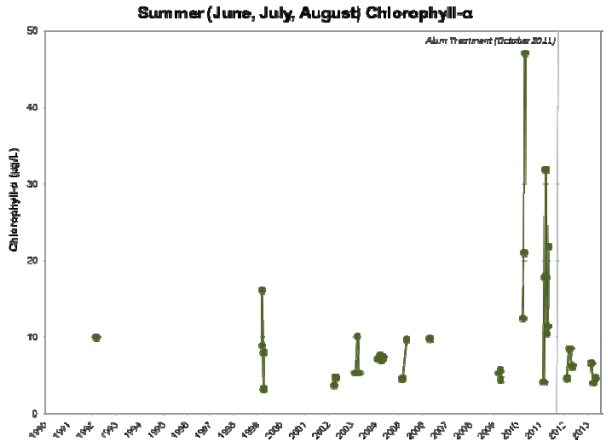


**Figure 2. East Alaska Lake summer (June, July, August) chlorophyll *a* values.**

Decreased levels of phosphorus in the upper layer of the lake have resulted in lower chlorophyll *a* values within East Alaska Lake as well (Figure 2). In general, the lower chlorophyll *a* values have also increased water clarity. The increased water clarity is beneficial for aquatic plant growth, which of course increases valuable fish habitat. Unfortunately, the exotic plant species in East Alaska Lake also benefit from the greater light penetration and may be expanding in both area and density. The two primary species of concern are Eurasian water milfoil and curly-leaf pondweed.

Currently, there are remaining funds in the WDNR Lake Protection Grant used to complete the alum treatment in 2011 and the subsequent monitoring. Instead of returning the remaining funds to the state, the WDNR has asked that the TLA continue its monitoring efforts to further document the success of the treatment. Therefore, the project will be amended to incorporate an additional year's worth of monitoring, including the repeat analysis of 8 sediment cores that will be extracted from the lake during the late summer of 2014 and a mapping survey of Eurasian water milfoil and curly-leaf pondweed within East Alaska Lake. The exotic mapping survey will provide information needed to determine if control actions are appropriate to manage Eurasian water milfoil and/or curly-leaf pondweed. The amended project will also include a public information meeting to be held during 2015.