

2004 – Self-Help Lake Monitoring Report from Jeff Burke

Self-Help Lake Monitoring

Van Vliet Lake began its current Self-Help Lake Quality Monitoring in 2002. Through a DNR grant we were able to begin Secchi disc monitoring which is a simple method of establishing visual clarity of the water throughout the open water season. Secchi testing is a more profoundly important test now, since satellite monitoring of our lakes allows feedback from tested sites to be used to extrapolate conditions of untested regional lakes that have similar hydrographic conditions.

In 2003 our testing program expanded to phosphorus and chlorophyll monitoring. This involves taking water samples and, with the use of DNR provided lab supplies and equipment, sending these fixed, prepared samples to Madison for analysis. The chlorophyll monitoring seeks to determine the amount of algae present at the time of testing. The phosphorus testing looks at its relationship in solution and the complex part it plays in stimulating weed and algae production. Typically, human contribution accounts for the majority of phosphorus presence in our waters and, once contributed, it doesn't leave.

This year, in light of our Lake Management Grant, we began dissolved oxygen testing in addition to the aforementioned data collection. This testing, while not particularly difficult, is time consuming since each of seven samples per series requires multiple treating and handling to extract d.o. data in parts per million. Dissolved oxygen testing is important since its relationship to fish survival/viability and weed production continues beyond the seasons of open water. One of the Lake Association's current goals is to acquire a d.o. meter which will hasten the data collection process and will allow us to retrieve this info during ice in, particularly late in the season when d.o. depletion may reach dangerous levels.

The direction of this testing is to establish a long-term database that will allow some sort of predictability model to be established for the Lake. It should help build a virtual flow chart (pun intended) of Van Vliet's year-to-year health based on the activity levels on the Lake (human contributions) and climatic input. The Lake is progressing along a time line, as are we. The Lake Association believes continued stewardship like the Self-Help Monitoring and the Lake Management Grant are both positive steps to ensuring a quality Lake resource. Despite our individual current perceptions of Van Vliet's condition, it is believed that this ecosystem, in concert with the rest of the chain, represents a high quality body of water but assuredly at risk from increased use and it is this factor that represents the greatest threat to Van Vliet's long-term health.