



**The Healthy Lakes Committee (HLC) of the BLCA has been active for a long time working to improve water quality.**

- It has offered SERP, Shoreland Best Practices Education, seminars and Mini Grants that help property owners restore shoreline and otherwise prevent contaminants from running into the lake.
- Volunteers have been testing water flowing into and out of the lakes. They also take regular measurements of lake water quality. These tests have helped determine reasons for the deteriorating water quality.



### **Causes for deteriorating water quality**

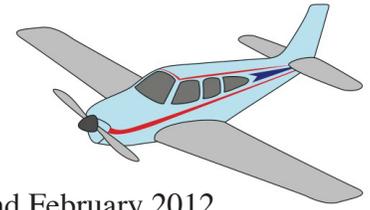
- Farm and livestock run-off via Briggs Creek and The Elk River (which runs through Big Elk Lake and floods into the upper three lakes via the Bayou). Controlling runoff into these waterways falls to State and County Water Boards. They have been working at it but have a big job ahead.
- The rest is run-off into the lakes through the properties surrounding them. This is something lakeshore property owners and Committee members can address.
- The tests of water into and out of our lakes shows we haven't done a good enough job of fixing our own lakeside run-off problems.
- **All four of our lakes have fallen into Impaired status according to the DNR.**



### **The Fly-over is another step in the process of turning around the water quality in our chain on lakes.**

- Healthy Lakes Committee recognized the flyover could be an effective way to assess the role of individual property owners in the decline of our lake quality.
- Problems on individual properties could be identified so they could be fixed.
- The BLCA, Palmer Township and Sherburne County jointly financed the AWRL Fly-over project.

## The flyover process



### Two overflights were done

- Data was collected as video images taken, June 2011 and February 2012  
Summer and winter thermal images
- Enabled sensors to detect areas colder or hotter than the surroundings.

### AWRL Examines data for factor impacting water quality

- Hundreds of photos examined
- Cameras recorded various types of images: high-resolution color photographs (for topography, property lines and landmarks), Water Penetrating, Near IR, Chlorophyll a, and Thermal
- Detected point and non-point sources of nutrients destined for the lake
- **CHART**

### AWRL produces report

- Five Big books
- Many computer discs
- AWRL Recommendations
- Final report is expected in September

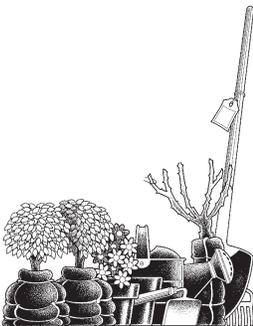


### Groundtruthing

- HLC volunteers plan to inspect each property with the owner and together examine the flyover data
- HLC volunteers will have to undergo “groundtruthing” training with AWRL so they can competently do this

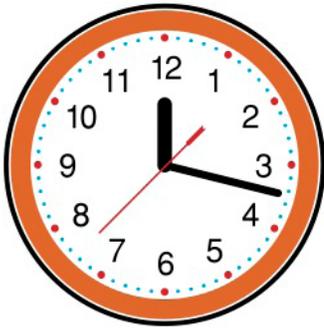
### Property owners mission

- Use the AWRL report to detect point and non-point sources of nutrients destined for the lake
- Prioritize actions to minimize the adverse impacts of the pollution
- Successful efforts will result in attaining the ultimate goal of improved water quality, along with cleaner and healthier environment for everyone to enjoy



### HLC Goal

- Remove all our lakes from the DNR’s Impaired Waters List



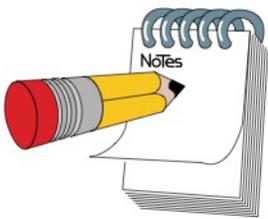
### **Timeline**

- “Groundtruthing” volunteers training by August
- AWRL final report by August
- “Groundtruthing” starts in August
- Property owners address recommendations and start using Best Management Practices immediately after “Groundtruth-



### **Researching aid**

- BLCA and HLC are locating means to help needy property owners with financing for recommended projects
- Low interest loans are available
- Grants are being explored



### **Sign up and volunteer today**

- “Groundtruthers” can start as soon as they are trained
- Include: name, property address, and contact number
- Including Email address will help us keep you updated on how things are progressing

**Please join us in fixing our lakes.**

*The Healthy Lakes Committee*