

## **EXECUTIVE SUMMARY**

### **PENINSULA LAKE STREAM INVENTORY PROJECT, HUNTSVILLE, ON**

#### **PROBLEM:**

The purpose of this study is to assess the health of all streams entering and leaving Peninsula Lake, Huntsville Ontario. The study will allow for insights to be created and used to improve the health of the lake, which will benefit everyone that enjoys the beautiful and historic area. Without an updated study of the streams and their health, the streams could be polluting the lake without warning, which could cause drastic effects on the Peninsula Lake community.

#### **RECOMMENDATIONS:**

The main recommendations for the canal are to maintain signage warning pleasure craft operators to reduce their speed. In addition, further development along the canal should be done carefully as to not contaminate this important river, and to increase buffer zone size to an appropriate length in order to reduce erosion and sedimentation.

Along the Deerhurst section of the lake, two streams are found in Mosquito (or Sunset) Bay. To maintain their good quality, the maintenance of the wetland is recommended as the golf course around the stream is heavily managed to keep it aesthetically pleasing.

Grassmere contains a main stream to protect in that area. Due to being slightly acidic, and having low dissolved oxygen, this stream is not providing proper habitat for desired aquatic life.

In addition, the Hillside area is also heavily developed with agriculture and residential areas. Recommendations should be made for each individual stream and we urge property owners to care about the health of their streams. This can be done by increasing buffer zones below the roads and near the entrance to the lake. Another management practice is to keep the streams natural. The natural meandering of the streams will allow for natural filtering, and provide habitat for a range of aquatic life. Another way to improve aquatic life in each stream is to improve the amount of shade over the stream path. Shade allows for the water to cool, and provides an attractive resting spot for aquatic life such as fish.

A stream located near North Portage is another priority stream for rehabilitation. Due to a high level of phosphorus, turbidity and temperature, this area is in need of rehabilitation to improve the quality of water it carries into Peninsula Lake. Since this stream's mouth is very close to a main access road, management should be taken to improve vegetation buffer zones near to the road to reduce its impact on the stream. By creating a natural riffle and pool sequence in this stream's path, this could allow for oxygen to be added and attract more aquatic life, while vegetating along its banks will assist in the reduction of nutrients suspended in the stream water.

## GENERAL RECOMMENDATIONS:

General Recommendations for the entire lake include: keeping the streams natural, reducing contamination of the streams, adding 30 m wide riparian zones adjacent to the streams, reducing use of soaps, reducing lawn treatment, maintain properly functioning septic tanks, and not encouraging water fowl establishment.

Though the focus of this report is on the streams attached to Peninsula Lake, motorized pleasure craft activity still affects their condition as well. Obviously pleasure craft affect the Canal as they pass through to Fairy Lake, but smaller streams are affected by the wake left by those that drive quickly near the shoreline. The wake left not only erodes the shoreline of the lake but it can also widen the mouths of the streams. This can increase erosion at those banks and slowly widen the stream. The wakes can also reduce the separation of habitats between those from the lake and the streams by decreasing shorelines and banks between the stream and the lake.

In addition to implementing management plans, post monitoring efforts must be put into place to ensure the success of management efforts.