

# The Plan for Leonard Lake

June 15, 2008 - Draft



## Introduction

The purpose of this plan is to outline a roadmap which will help ensure that Leonard Lake evolves in a way that will preserve, promote and enhance the quality of life on Leonard Lake; promote the safe use of the Lake; and recognize and promote the protection of the unique characteristics of Leonard Lake; and to encourage land use policy and stewardship approaches to ensure the long-term protection, maintenance and restoration of its natural, social and physical features including water, shoreline, water shed and adjacent lands.

The following principles and planning criteria guided the development of this plan:

- The plan will focus on realistic actions to achieve results that respond to high priority issues.
- Implementation will favour stewardship and educational approaches with voluntary compliance over legislation and regulation. The presumption is that most lake residents want to take their share of the responsibility to preserve and improve the lake but may not be fully aware of how to do so. Where education alone is insufficient or not the appropriate mechanism (for example, development), we propose to rely on regulation through the Township, District and other government agencies.

The Leonard Lake Stakeholders Association (LLSA) was formed in 2006 to represent the stakeholders, monitor and deal with issues and concerns now and in the future. The stakeholders of Leonard Lake are all registered owners of property bordering on Leonard Lake, Leonard Lake Road #1, Leonard Lake Road # 2, Glen Gordon Road and downstream property owners to Highway 118 West.

LLSA with the aid of other volunteer stakeholders will be responsible for developing, updating and implementing this plan. A number of areas of focus have been established to carry out the work of the Association on behalf of the Stakeholders, with one or more Board members assigned to provide leadership. The mandate of each focus area and the names of the respective leaders are set out below:

Water quality (including fish and wildlife and natural shorelines)	Gord Roberts
Property development and land usage	Bill Tryon
Boating and Recreation	Joanne Rusnell
Sense of community and communications	Leigh Bright and Betty Isbister
Finance	Wayne Penny
Membership	Adam Newman
Lake Plan	Bob Manning

## Values and concerns

This Plan started in earnest with a Lake Plan Residents Workshop on August 6, 2005. Every stakeholder was invited to attend. Approximately 40 Leonard Lake stakeholders actively participated. The workshop provided valuable input on several topics - important things, special places, memories, current and future issues and priority issues.

Using the input gained from the Workshop, a survey was distributed in the fall of 2006 to all Leonard Lake stakeholders. One hundred and fifty (150) surveys were distributed and a total of 86 surveys were returned, for a very respectable 57.3 % response rate. Survey respondents identified the following values and concerns:

### Values

According to the information queried from the surveys (see table below), Leonard Lake stakeholders value highly (very important or moderately important) the following lake features:

- Water quality;
- Natural landscapes;
- Night skies;
- Peace and quiet;
- Natural shorelines and wildlife; and
- Water levels

Personal Values that Contribute to the Enjoyment of Leonard Lake				
Values	Percentages			
	Very Important	Moderately Important	Not Important	Don't Know
Water Quality	99%	1%	0	0
Landscapes (Scenery/View)	81%	16%	3%	0
Night Skies (no light pollution)	75%	19%	6%	0
Peace & Quiet (Tranquility)	74%	23%	3%	0
Natural Shorelines	69%	31%	0	0
Fish and Wildlife Habitat	67%	28%	5%	0
Water Quantity/Level	64%	32%	3%	1%
Non-Power Boating	44%	36%	17%	3%
Power Boating	16%	39%	41%	4%

## **Issues and concerns**

Respondents identified several issues that may negatively impact their quality of life on Leonard Lake:

- Water pollution from septic systems and garbage, surface run-off and pollutants, shoreline alteration, and boating activity;
- Future development along the shoreline and back-lots, inappropriate structures and lot sizes, and commercial development;
- Inappropriate use and lack of consideration towards other lake users from boaters, PWCs, ATVs and dirt bikes;
- Water level fluctuations; and
- General concern of overcrowding, increasing development and conflicting uses causing an overuse of the Lake.

The following table lists the results of the survey question that asked respondents to indicate their feelings about the activities and issues that impact the enjoyment of Leonard Lake.

<b>Activities and Issues that Impact the Enjoyment of Leonard Lake</b>				
Percentages				
<b>Activities and Issues</b>	<b>Significant Impact</b>	<b>Moderated Impact</b>	<b>No Impacts</b>	<b>Don't Know</b>
Water Pollution	79%	15%	6%	0
Future Development	68%	25%	2%	5%
Personal Water Craft	55%	33%	9%	3%
Overuse of the Lake	51%	30%	15%	4%
Night-time Noise	50%	24%	25%	1%
ATV's/Dirt Bikes	45%	22%	27%	6%
Wakes from Powerboats	44%	34%	22%	0
Vegetation Removal Along the Shoreline	40%	35%	19%	6%
Boat Traffic	38%	50%	12%	0
Fluctuating Water Levels	27%	63%	8%	2%
Outdoor Light Pollution	27%	44%	27%	2%
Daytime Noise	21%	43%	34%	2%
Snowmobiles	15%	21%	48%	16%

## Vision and Goals

Leonard Lake is a small residential lake in Muskoka having a small watershed, no commercial lands, limited public access, limited wetlands, and no inflow of water from other lakes. Leonard Lake is almost completely developed with mostly seasonal residences.

During the development of this plan it became clear that we needed a definition of the end result – What will Leonard Lake be like in the future – **our vision for the future**. We believe that the following vision statement reflects the values and desires of the Leonard Lake community.

*The Stakeholders of Leonard Lake see our lake to be a place where:*

- *The beauty of the landscape, the tranquillity of the surroundings and the quality of the water are protected and preserved;*
- *Preference is given to activities that maintain the natural qualities of the Lake over activities that have the potential to degrade the environment;*
- *Wildlife, fish and natural habitat are safeguarded;*
- *The Leonard lake community balances the needs of those that desire tranquillity with the needs of recreational users;*
- *Our lake is a shared experience, where respect is shown to others and expected in return;*
- *Activities are in place to foster friendship amongst all stakeholders; and*
- *The Leonard Lake stakeholders are actively involved in the stewardship of the Lake.*

To realize our vision, **goals** needed to be established in several important areas. We have attempted to describe each goal in as specific terms as possible so that we will be able to assess our progress in achieving them.

**Water quality** – That the water quality of Leonard lake should be as close as possible to natural historic levels (i.e., the level of contaminants that would occur in nature prior to human habitation), or not exceed standards specified by qualified official bodies.

**Fish and wildlife** - That Leonard Lake and surrounding lands support sustainable fish and wildlife population and maintain stability in the bio-diversity of wildlife species and their habitat;

**Natural shorelines** – That the protection and rehabilitation of the lake shoreline, described as the “ribbon of life” that supports a diverse range of fish and wildlife species, be promoted to increase the amount of natural shoreline;

**Trees and Vistas** – That the natural vista from Leonard Lake be maintained and that the buildings, structures, other man made objects (e.g. vehicles) and evening/night lighting have a minimal impact on the natural appearance of the shoreline and on the viewscape from the lake;

**Property development and land usage** – That Leonard Lake will remain a residential lake and that all new proposed residential development, redevelopment and land usage will respect the environment, the character and carrying capacity of the Lake, as well as maintain property values;

**Boating and recreation** – That the Leonard Lake community will encourage a range of boating and recreational activities that are consistent with the natural character and ambiance of the lake, preserving the environment, respecting the need for peace and tranquillity, ensuring the safety of swimmers and power and non-power craft operators, and protecting wildlife

**Sense of Community** – That Leonard Lake will be an inclusive and mutually supportive community based on a shared interest in and responsibility for protecting the natural environment of the Lake, and mutual enjoyment of the lake.

## Discussion

In this section we discuss the major areas of concern in more depth.

### *Water Quality*

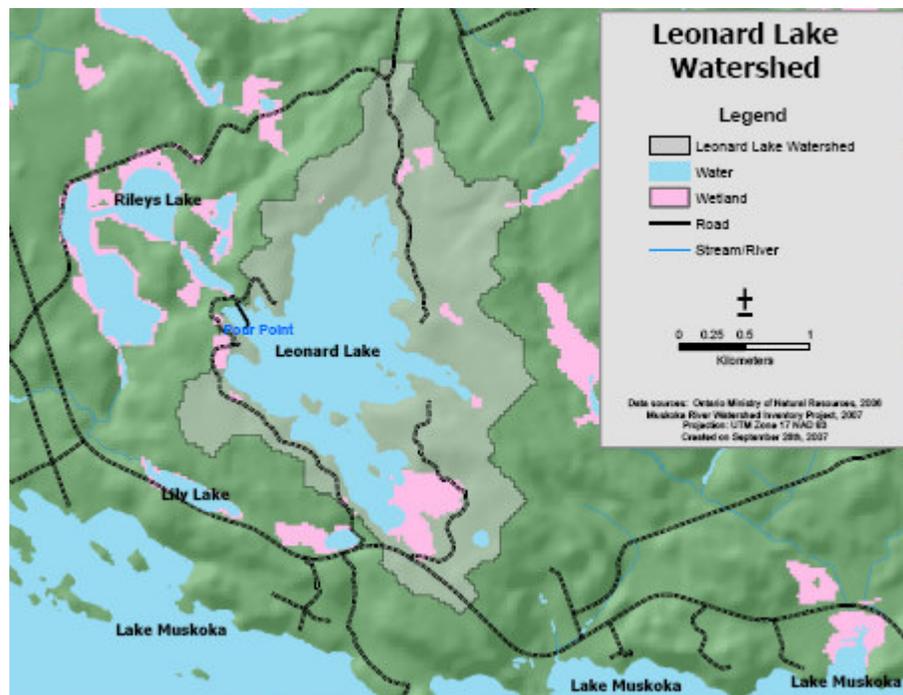
There is no doubt that water quality is at the top of everyone's list and this is not surprising - it is true in every lake survey across southern Ontario. As indicated previously, the survey showed that "water quality" was the single unanimous choice as the most valued positive factor in our enjoyment of Leonard Lake.

Although 82 % felt that current water quality was excellent or good, there was significant concern registered about bacteria, algae, smell, appearance, and weeds.

Leonard Lake's Perceived Water Quality Condition		
Water Quality	# of Respondents	% of Respondents
Good	61	71%
Excellent	10	11%
Poor	10	11%
Don't Know	5	6%

Respondents' Water Quality Concerns for Leonard Lake					
Percentages					
Water Quality Issues	Significant Concern	Moderate Concern	Little Concern	No Concern	Don't Know
Bacteria	74%	18%	4%	1%	3%
Algal Blooms (algae)	65%	24%	8%	1%	2%
Smell	64%	15%	13%	8%	0
Appearance	48%	39%	7%	6%	0
Clarity	42%	47%	9%	2%	0
Weeds	32%	39%	21%	7%	1%

Leonard Lake is unique because it is a head water lake with a small watershed that surrounds it in its location which is much higher in elevation than its nearest neighbour Lake Muskoka. There are no streams flowing into the lake. Leonard Lake also has a very limited flushing rate which means that water quality problems will be difficult to fix.



Lake health and water quality issues have recently undergone extensive review in the District of Muskoka and have been addressed in policy through an Official Plan Amendment #32. Protection of the water quality will be through the use of either one or a combination of; lot sizes, setbacks, lot creation restrictions, shoreline vegetative buffers, environmental and wetland protection. The protection will be carried out through the use of a number of planning tools.

The District has classified lakes as having high, moderate or low sensitivity to phosphorus. The sensitivity of the lake to nutrient input can change over time and is dependent upon the responsiveness of a lake to phosphorus and the mobility of phosphorus within the watershed. Where phosphorus loading to a lake exceeds 50% of the natural background phosphorus load, the lake is considered as being 'Over Threshold' for phosphorus. Policies in the District are tailored to lake sensitivity, with the most restrictive policies applying to high sensitivity water bodies or over threshold water bodies. Leonard Lake is considered over threshold.

The single most significant impact on water quality on most recreational lakes in Ontario is the increased levels of nutrients, particularly phosphorus, that are entering surface water bodies. Sources of phosphorus are both natural and man made. Natural sources of phosphorus include such things as precipitation and natural drainage from the watershed. Man made sources of phosphorus include increases in overland flow as a result of disruption in the natural vegetation (leading to erosion) in and beyond the riparian zone, use of fertilizers, increased storm water run-off from impervious surfaces and leaching from septic systems.

## ***Fish and wildlife***

Healthy populations of fish and wildlife are directly linked to healthy habitats. Generally there is a lack of awareness about the natural habitat features on the lake and within the watershed.

For example, many shoreline owners are not aware of the near-shore and in-water activities that destroy fish habitat such as removal of rock rubble substrates, removal of submerged wood materials, removal of aquatic plants, and the creation of sand swimming areas over spawning sites for bass and other species.

We need much more information about the fish and wildlife in and around Leonard Lake.

This research will provide us with the information and tools to improve habitats and maintain a healthy fish and wildlife population.

## ***Natural Shorelines***

A healthy natural shoreline is one of the most important factors in maintaining a healthy lake.

The shoreline of a lake is often referred to as the "ribbon of life". If the ribbon is broken by human influence such as landscaping and boat wakes, erosion occurs and, the natural shoreline suffers directly. Erosion allows pollutants to run into the lake and bring to an end the life of shoreline plants and wildlife that naturally inhabit the shore area (bushes, grasses, ferns, minnows, frogs and birds etc.)

Most of the important natural cleansing that occurs in a healthy lake occurs in the few feet on either side of the shoreline. So this shoreline buffer is always an important focus in any effort to maintain good water quality. As shown in the table below from the stakeholder survey, perceived recent changes to the appearance of the shoreline were pretty evenly split between "worse" and "the same".

<b>Perceived Changes to Leonard Lake's Shoreline Appearance</b>		
Shoreline Appearance	# of Respondents	% of Respondents
Worse	36	42 %
Same	35	42 %
Better	4	5 %
Don't Know	9	11 %

A shoreline survey was completed for Leonard Lake in 2006 by the District of Muskoka. Having such a survey is important to provide a baseline for measuring our progress going forward. Only a few such surveys are completed each year and we were given priority because Leonard Lake is "Over Threshold" for phosphorus.

For this survey shoreline means what is happening right where the water meets the land and backlot means the area 20 meters back from the shoreline – essentially the area between the shore and the cottage.

While this is a good first step, we will need to ensure that it is completely accurate and reflects the current situation on the Lake.

As shown below, the survey indicated that over 90% of the shoreline (where the water meets the land) of Leonard Lake is natural, which is good.

Type	Length (meters)	Percent
Natural beach	127.06	0.36
Natural mud	49.49	0.14
Natural rock	18,866.87	54.07
Natural shrub	12,709.43	36.43
Man made beach	38.41	0.11
Marine railway	325.58	0.93
Deck	349.01	1.00
Cement ramp	81.00	0.23
Stone ramp	72.85	0.21
Wood ramp	35.04	0.10
Stone shore wall	1,262.32	3.62
Wooden shore wall	390.51	1.12
Unbuffered lawn	583.28	1.67
Total	34,890.85	100.00
Natural	31,752.85	91.01
Altered	3,138.00	8.99

However, only 23 percent of the backlot (the next 20 meters) remains in a natural state.

Type	Area (square meters)	Percent
Mixed forest	463.12	3.23
Thinned forest	4,528.54	31.61
Overgrowth	515.95	3.60
Rocks	2,666.15	18.61
Shrubs	110.92	0.77
Cottage	211.17	1.47
Landscaping	820.97	5.73
Buffered lawn	542.89	3.79
Un-buffered lawn	4,061.48	28.35
Total	14,324.46	100.00
Natural	3,240.19	22.62
Altered	11,084.27	77.38

The survey identified the structures on the shoreline as well as follows:

Type	Count
Crib boathouse	2
1 Slip crib boathouse	4
2 slip crib boathouse	1
Boathouse on land	12
Crib dock	91
1 slip crib dock	7
2 slip crib dock	1
Floating dock	31
Pillar dock	43
Sleep cabin	2
Total	194

### ***Property development and land usage***

The character of Leonard Lake is unique and over 90 % of respondents of the 2007 resident survey indicated that people were concerned that future development could significantly or moderately impact their quality of life on Leonard Lake. Not all development is undesirable; however, development that impacts water quality, causes negative change in the natural environment or character of the lake as a small, quiet community lake, or results in loss of fish and wildlife habitat, or wetlands is not acceptable.

The general trend of development for waterfront properties within the last 10 years is “bigger”. However, when oversized cottages are developed on smaller lots not meant for such building footprints, vegetation cover and natural habitat suffers as vegetation and landscapes are altered for decking, docking, parking, large septic systems and lawns. Increased density of development on the waterfront, or overbuilding, has become a growing concern in the Township.

Both the District of Muskoka and the Township of Muskoka Lakes have taken major steps through recent changes to their Official Plans and zoning by-laws to restrict new development and re-development in order to protect water quality and the natural characteristics of lakes. In January 2005 the Township of Muskoka Lakes Waterfront Density By-law (By-law 2005-05) and complementary Official Plan Amendment 33 restricted the scale of residential development on waterfront property by prohibiting oversized docks, boathouses and cottages on all lakes and rivers in the Township. Some of the particulars of the current Township’s Zoning By-law include, but are certainly not limited to:

- a maximum habitable floor area of 7,500 square feet (697 square metres);

- a maximum lot coverage ranges from 5%-10% depending on the category of lake (Leonard lake is 8%);
- prohibition on the removal of vegetation within 15 metres of the high water mark running parallel to the shoreline;
- increase in front yard setback of 20 metres from the high water mark; and
- Construction of two-storey boathouses is limited to the large lakes and only then permitted if the property has over 300 feet of frontage.

The Leonard Lake challenge is to ensure that new development or re-development is consistent with the vision, goals and desired character of Leonard Lake. First, we need to fully understand the potential for development on or near Leonard Lake. At the moment we do not have a comprehensive picture of the ownership, zoning and development potential of the vacant land on and surrounding Leonard Lake. We also need to obtain a better understanding of the application of the Official Plans, by-laws and regulations of the District of Muskoka, Township of Muskoka Lakes, Ministry of the Environment, Ministry of Natural Resources and other agencies with jurisdiction on Leonard Lake.

In order to understand the implications of new development or redevelopment, we need to describe the current land use patterns and to assess the effectiveness of current provincial and municipal land use regulation in maintaining the desired character of the lake. Some of the questions we will be addressing include:

- What are the current land uses around the lake and in the watershed?
- What are the current development pressures ?
- What development is permitted according to current municipal and provincial regulations and do these provisions protect the character and health of the lake?
- What is the impact on development or redevelopment as a result of Leonard Lake being “Over Threshold” (according to the District Official Plan)?
- Is there a limit on the number of new waterfront properties on Leonard Lake given its capacity level?
- What are the actions that all lake property owners and lake users should consider to protect and improve the natural and social health of Leonard Lake?
- What stewardship (volunteer) initiatives should the Association and property owners initiate to protect and improve the natural and social health of Leonard Lake?

The collection of this information will assist the community of Leonard Lake and the Leonard Lake Stakeholders Association in working with Provincial Ministries, the District of Muskoka and the Township of Muskoka Lakes in establishing appropriate guidelines and stewardship initiatives to ensure the future environmental and social health of the lake. The recommendations generated from this research must be reviewed by all community members in the watershed (rural, shoreline residents, and business operators), the people who directly or indirectly depend on the lake, and this includes any government or non government body that has a stake in the future health and use of the lake.

The Leonard Lake Stakeholders Association will need to be very involved with our governing agencies to ensure that new development is within the existing character and density of the lake, and protects its natural environment.

### ***Boating and recreation***

Our lakes and their surroundings are primarily a recreational area. The word 'recreation' is used here in its broadest sense. In addition to the usual images that the word raises of such activities as swimming, boating, water sports (for example, waterskiing, tubing and wakeboarding, fishing), walking, cross-country skiing and snowmobiling. It also refers to the simple, peaceful enjoyment of our natural surroundings including appreciation of the natural environment, birds and wildlife. This enjoyment and appreciation depends on the health of the natural environment and is negatively affected by some human activities which create undue noise, water, ground and light pollution and degradation of the natural environment and natural vistas.

Some boating behaviours raise safety and environmental issues and negatively affect the quality of life on Leonard Lake. Concerns raised by stakeholders include i) safety ii) intensity of power-boating use, iii) noise pollution, iv) water pollution and v) the impacts of large wakes from powerboats on the shoreline, on wildlife and on human enjoyment of the lake.

Most of the boaters on the lake practice safe boating and are considerate of others. However, with growth in boat traffic, boat sizes, and the number of wakeboarding boats, there is increased concern about boating behaviour and increasing recognition that boaters must be better educated on the rules of boating and safety as well as, in some cases, courtesy. Some boaters jeopardize the safety of swimmers and small non-power craft by unsafe or reckless operation, by ignoring speed limits and by cruising at high speeds in bays and close to shore. Some wake boarders and water skiers prefer to go in the calmer waters of the bays rather than in the larger, open water of the lake. However the wakes of these boats (particularly the large wakes from wakeboarding boats), when operated near shore, endanger swimmers (especially young children) and damage shorelines and wildlife habitat, as well as docks and docked boats. They also affect enjoyment of the lakeside by residents using floating docks. Historically there has been little or no enforcement of legal speed limits (less than 10 km / hour within 30 metres of shore) and other boating laws on Leonard Lake.

The LLSA will take a balanced approach to attempt to address these concerns based on communication and education, and then evaluation of the results.

### ***Sense of Community***

This Plan has value only if it is followed through by actions. Throughout the preparation of this Plan every effort was made to involve as many people as possible and make it a community plan. Now, as the implementation phase approaches, it will be very important to mobilize as much of the community as possible through informing people of the importance of contributing their time to assist in some of the work that will be needed.

Over the course of the development of this plan, a sense of community has been building among the cottagers and residents of Leonard Lake. The survey and the findings of the workshop highlighted the strong shared values of protecting the quality of life on the lake. Through dock drops, board meetings, newsletters, annual events and general meetings, people have shared information, met neighbours and kindled relationships based on a shared concern and respect for the lake.

This sense of community will continue to grow via ongoing newsletters, the website, implementation of the lake Plan and annual social, educational and official gatherings.

## Actions

The “Lake Plan” is an ongoing process and we will update and/or develop action plans that will address the issues facing the Lake and move us towards achieving our vision and goals. Respondents to the stakeholder survey and at the workshop provided a wealth of suggestions for possible action to improve life at Leonard Lake, many of which have been incorporated in this plan.

The Leonard Lake Stakeholders Association Board of Directors is responsible for ensuring that these plans are implemented effectively.

Subject to the amount of effort contributed by volunteers as well as the Board of the Leonard Lake Stakeholders Association, the actions described below can be completed relatively quickly. In those cases where professional expertise is required, our progress may be limited in the short term by financial resources. This plan will be updated and additional actions will be added.

<b>Actions</b>	<b>Director</b>
<b>Water Quality</b>	
Research the history of water quality and create a data base of historical information. This information will be used to help define recommendations and actions for improving Leonard Lake water quality.	Gord Roberts
Formalize LLSA’s involvement in the water quality monitoring programs which are currently carried out by the Muskoka Watershed Council and The Ministry of the Environment and others.	Gord Roberts
Participate in the 2008 Muskoka Lakes Association water quality monitoring program.	Gord Roberts
Review Muskoka Septic Re-Inspection Programs to understand how implementation of this type of program could benefit Leonard Lake.	Gord Roberts
Contact the relevant Ministry to discuss water levels and gain a better understanding of the situation.	Gord Roberts
Continue annual benthic study.	Gord Roberts
<b>Natural shorelines</b>	
Update and correct the shoreline survey.	Gord Roberts
<b>Property development and land usage</b>	
Fully analyse the Official plans of the District of Muskoka and Township of Muskoka Lakes to determine their impact on the Lake and recommend changes.	Bill Tryon
Review Township by-laws and other planning tools such as site plan control to determine current development and redevelopment potential. Determine where inappropriate regulations/tools exist and develop recommendations for change.	Bill Tryon

Prepare a complete inventory of all private and public lands in the Leonard Lake watershed. Determine their ownership, zoning, etc.	Bill Tryon
Identify potential for new residential and commercial development within the current Official Plan and Zoning By-Law regulations. Also identify potential for redevelopment on the Lake.	Bill Tryon
Determine a) the ownership of lands on and around the Lake by the Township and b) their policy with respect to these properties.	Wayne Penny
<b>Boating and recreation</b>	
Create a boating code of conduct, distribute it to stakeholders and post on the website. Distribution to include a laminated card of the lake showing no-wake zones. Also distribute Safe Boating Guide.	Joanne Rusnell
Seek feedback at the end of the summer to determine whether progress has been made with the use of educational and communication efforts	Joanne Rusnell
<b>Sense of community and communications</b>	
Develop a comprehensive strategy for the website to guide its development in the future.	Leigh Bright Betty Isbister
Prepare and issue 6 newsletters – Winter, Pre season, June, July, August and Fall.	Leigh Bright Betty Isbister
Organize events – AGM and picnic.	Leigh Bright Betty Isbister
Develop a plan to increase the sense of community for Leonard Lake.	Leigh Bright Betty Isbister
<b>Finance</b>	
Develop a plan for fund raising.	Wayne Penny
Prepare annual budgeting and cash flow, prepare monthly financial statements.	Wayne Penny
<b>Membership</b>	
Maintain Leonard Lake stakeholders and LLSA membership lists.	Adam Newman
Develop a program to increase the number of volunteers.	Adam Newman
Continue to implement programs to maintain and increase membership.	Adam Newman
<b>Planning</b>	
Finalize 2008/9 Lake Plan with Stakeholders.	Bob Manning
Assemble the information necessary to submit a Lake Plan according to Official Plan amendment #28.	Bob Manning
Establish a monitoring program to ensure that LLSA is continually on top of potential activities by developers, government bodies, and others that may negatively impact Leonard Lake.	Bob Manning
Meet with the Mayor, local councillor and other Township officials to review this plan with them and get their guidance and support.	Joanne Rusnell. Bob Manning

<b>Other</b>	
Build and maintain relationships with key government and other people important to Leonard Lake	Various

The LLSA Board will report regularly to the Stakeholders on the implementation of this plan. Input from Leonard Lake stakeholders is welcomed at any time