Protect Our Lake

Fairbank Lake Camp Owners

Introduction

Camp owners on Fairbank Lake are proud to live on one of the healthiest lakes in the City of Greater Sudbury. In order to maintain the water quality, each of us is responsible for our lake front property. All pollutants like phosphate and nitrogen found in: fertilizers, pesticides, garbage, cleansers, soaps, septic systems overflow, or grey water from our properties will directly enter our lake through run off of rain, snow or indirectly in ground water.

This book briefly outlines the background and activities of The Fairbank Lake Camp Owner's Association Inc. The following explains some methods, though not all aspects, that we as owners, on Fairbank Lake can do to prevent pollutants from entering our lake. If we all take small steps, the potential for invading species and blue-green algal blooms in our lake, will be prevented.

FAIRBANK LAKE

Fairbank Lake was originally named Wa-Shai-Ma-Gog (Clear Lake) by the Ojibwa or Nishnabe Indians who settled in the south west corner of the lake. They traded at a Hudson Bay Post situated near Whitefish. In 1872, with the discovery of virgin white pine, lumbering began on the south shore. At the entrance to the Provincial Park, an anchor that was found by scuba divers stands. It was identified as belonging to a steam-powered tub boat that towed log booms. One of the walking trails commemorates the original name. In 1883, the Lake was officially named Fairbank Lake after J.H. Fairbank, a MP for East Lampton County

The lake is situated on the south west rim of the Sudbury Basin and lies in four townships; Fairbanks, Trill, Drury, and Denison, within the City of Greater Sudbury in Ward 2, Walden. The lake has eight islands. It is a natural spring fed lake where trout spawning occurs on rocky shoals and gravel areas. Our watershed is blessed with having no other lakes or rivers flowing into it. The lake empties at an outlet in Little Fairbanks Lake, flowing eventually to the Vermillion River. Topographically the lake ranges from rocky headlands and steep cliffs with little overburden to low swampy land with little or poor drainage and shallow embayments. In shallow bays, one of the disadvantages is, in the summer months, as water levels lower, stagnation can occur. The lake turns over spring and fall as the water temperatures change.

At present, in 2009, Fairbank Lake has 256 residences. Fifty six of these are permanent. There is also the Fairbank Provincial Park on the north shore and Fairbank Resort situated on the south east shore.

Fish Species

Fairbank Lake has 16 species of fish, as identified through a fish survey done by Laurentian University. They are bluntnose minnow, cisco (lake herring), iowa darter, lake trout, lake whitefish, logperch, ninespine, stickleback, northern pike, pumpkinseed, rockbass, smallmouth bass, spoonhead sculpin, spottail shiner, walleye, whitesucker and yellow perch.

Aquatic Insects

For information of macro invertebrates (aquatic insects) the City of Greater Sudbury website has a list of insects found in the lake. www.greatersudbury.ca No invading species have been identified as yet. Through OFAH we have tested for zebra mussels and spiny water fleas.

HOW IS TESTING DONE ON OUR LAKE?

Volunteers have been doing testing on Fairbank Lake since 1995. Currently, Dale Muirhead is the volunteer.

A Secchi disk is used to measure water clarity. Water clarity may be affected by three different factors: algae, sediment and water color.

> The Secchi disk is used to measure how deep a person can see into the water. It is lowered into the lake on a measured rope and observed till out of sight, then raised until it reappears. The depth where it reappears is the reading. A water quality sample is also obtained for phosphorous levels, the first time out on the lake.
>
> This Secchi testing is done every two weeks in the same four areas, roughly at the same time. The results are only forwarded to the Ministry of Environment at the end of the season. The Ministry then calculates the findings and reports back with a graphic report on the levels. This report is handed out at our annual meeting in April.

Fairbank Lake is one of 330 lakes in the Region of Sudbury. For over 35 years, similar testing has been done by the city. They have stated that because of the make up of the lake as well as the association's prime aim over the years to preserve our water quality, we, at this stage are an example for other lakes in the area to follow.

Testing has consistently shown phosphorous levels at 5.0mcg/l, indicating we are an oligotrophic lake. This means that we are at this stage, unlikely to develop algal bloom. In 2008, thirteen of our region's lakes have developed blue-green algae blooms, causing a great concern to our association. Dr. Ramcharan, an Aquatic Biologist with Laurentian University spoke at the 2009 General Meeting and indicated that blooms are occurring in lakes that were previously thought safe. In the past, blooms were seen at phosphorous levels of 17mcg/l. In recent years, studies have identified blooms occurring at phosphorous levels of 9-10mcg/l. Research is on going to find the cause.

WHAT IS BLUE GREEN ALGAE?

Algae are natural to all water ways. Algae are MICROSCOPIC aquatic plants, containing chlorophyll. Algae are critical for the life of our lake, having been in waterways for over 2 million years. They are scientifically named Cyanobacteria. In our region, blue-green algae (pond scum), green diadons, and pigmented flagellates are common.

The blue green algae prefer warm, shallow, slow moving water. In late summer the climate is right for blooms to naturally occur. Human intervention over the years has escalated the bloom growth in two ways, first through physical means with storm run-off, faulty septic systems and secondly with chemicals with increased levels of nutrients like phosphorous and nitrogen. When blooms do thrive, the water looks like bluish pea soup and at first will smell like newly mown law. Later as it breaks down, the smell will be like rotting garbage. Toxins are being released at this time, affecting the water for humans and animals. There is no action that can be taken to remove the blooms. You can get more information from the following: Sudbury and District Health Unit 705-522-9200 or Ministry of Environment 1-800-565-4923.

TWO SERIOUS POLLUTERS

- *LAWN AND GARDEN PRODUCTS* (Fertilizers, Herbicides, and Pesticides)
- *DETERGENTS – ESPECIALLY DISHWASHER DETERGENTS* (It has been documented that 10-40% of phosphates produced by shoreline property owners are caused by dishwasher detergent.)

Phosphorous levels take years to increase and it will take years to get rid of. The cure cannot take place over a few seasons. Therefore the actions taken today, will directly influence the outcome of our lake.

PREVENTING POLLUTANTS FROM ENTERING OUR LAKE

ESTABLISHING A BUFFER ZONE

One of the most important areas on your property is the natural buffer zone. It is an area of natural vegetation running the length of your property shoreline. When shorelines are cleared of natural debris and native vegetation, the buffer area has a potential for becoming an erosion zone. An effective buffer zone would be approximately 10 meters. It is made up of plants of varying sizes, different types, and ages. Leave fallen trees to provide nutrients for new grasses, flowers, ferns and shrubs. The need for maintenance is minimal when a buffer zone has been established. Wide buffers are best at filtering out pollutants before they reach the lake. It protects the soil from eroding and decreases flooding. The growth at the shoreline will provide a natural shade for fish habitat and travel corridor for other wildlife.

By leaving fallen logs, debris and vegetation on land and along shorelines you will provide a habitat for amphibians, reptiles, birds, mammals and beneficial insects. Plan for wildlife by building bird nesting boxes or platforms and bat boxes. Dead trees that don't pose a safety hazard can be left standing to provide home for insects, birds and mammals. If you want to improve your view of the lake, prune your trees, but avoid cutting them down.
Handle gas and oil safely. It doesn't take much to affect wildlife and habitat in the lake. Clean-up and remove garbage at your shoreline.

How to Restore the Buffer Zones

Start small by leaving a strip of turf grass alone, at the shore line and let nature take over. Stop mowing and slowly the area will fill in with native vegetation. Introduce native shrubs and plants to supplement the buffer zone.
"Our Lake" has a diverse shoreline, that may not support a full variety of vegetation but the buffers can still be healthy. As opposed to more populated lakes, Fairbank Lake still has 95% growth around shorelines. When we harden our shoreline with walls, boat ramps, solid docks etc., we severely interfere with the buffers ability to work. It is important to also provide a buffer zone around wetland areas of our lake.

PREVENT SHORELINE EROSION

Natural Causes of Erosion:

1. Water: Wave energy currents, fluctuating water levels often wash soil along shorelines. Surface run-off with rain and snow melt, pick up and erodes loose soil particles depositing it directly into the lake.
2. Ice: As ice shifts and expands over the winter and spring season it can displace soil causing ridges to form.
3. Wind: Wind can pick up soil particles in areas that have had vegetation removed.
4. Construction and shoreline alteration: These can contribute to erosion. Cleared lots, freshly exposed, are prone to erosion. The use of filter cloths, straw bales, silt fences, are important means of preventing erosion during a project.

Human Causes of Erosion:

1. Removal of vegetation, the root systems that once held the soils in place are no longer there.
2. With heavy rain, run-off from hard surfaces such as patios, sheds, turf grass can lead to erosion. Collect roof run-off in rain barrels to use as water for gardens.
3. Boat wake: The bigger the wakes the greater the potential of erosion, especially driving boats parallel to shorelines. In Ontario, by law, the speed for boaters within 30 meters of the shoreline is no greater than 10km/hr.
4. Construction and shoreline alteration: These can contribute to erosion. Cleared lots, freshly exposed are prone to erosion. The use of filter cloths, straw bales, silt fences, are important means of preventing erosion during a project.

MAINTAINING HEALTHY SEPTIC SYSTEMS

Since the early 70's the Association has been actively requesting the assistance of the Municipality to ensure septic systems and grey water systems are not affecting our watershed.

A septic system treats your waste water and sewage to return it in a safe manner to our ground system. Sewage is broken down by millions of bacteria and enzymes in your septic tank and soil in your leaching bed. Overloading can force waste out of the system too soon and clogs up the pipes or enters the leaching bed. The bacteria in the system can be killed by cleaning products that are antibacterial, non-biodegradable or toxic materials. It is important to allow the bacteria in the tank time to treat waste water. Sept-o-bac is not necessary to establish a healthy system.

Here are some guides to help maintain the system:

1. Don't put the following items down the system: Fats, oils, grease, gas, antifreeze, varnishes, paint, and solvents. These items will run into ground water and enter our lake.
2. Avoid the use of caustic drainos, toilet bowl cleaners.
3. Nail polish removers, dental floss, prescription drugs, Tampons, sanitary pads, condoms
4. No plastics, coffee grounds, egg shells or kitchen waste. Use basket strainers in sinks and tubs
5. Use biodegradable nontoxic shampoos, detergents, soaps and cleansers. Keep phosphorous to a minimum.
6. Use a lint filter in your washing machine.

7. When possible regulate your water usage. Eg. Laundry can be spread over several days. Run washers and dishwasher only when full.

Regular maintenance is the most important step in having a healthy septic system. Make sure your system meets Ontario Building Code Standards and comply with the distance from the lake, buildings, and wells. Ensure that your system is inspected and pumped every 3-5 years by a licensed contractor.

Your leaching beds are maintenance free, but some points are important to remember.

1. Nothing should be constructed over the bed. Eg. Parking areas, patios, decks, storage areas. Covering will prevent oxygen from getting into the soil.
2. Do not drive vehicles over the bed as weight could crush pipes. In winter don't drive snowmobiles over the bed as the compacting of the snow will decrease the insulating affect and chance of freezing may occur.
3. Do not water grass over the leaching beds and prevent direct drainage of eaves onto beds. Both will interfere with the ability of the soil to absorb and treat the waste water.

THE CITY OF GREATER SUDBURY OFFICIAL PLAN

Within the City of Greater Sudbury Official Plan, enacted in 2008, is a section for the Fairbank Lake Policy Area (Previously called Fairbank Lake Secondary Plan). These are city bi-laws and points of importance for waterfront developments:

a) Prior to issuance of a building permit, approval from the appropriate regulatory authorities must be obtained for location and operation of a private sewage disposal system. All new or replacement field beds shall have a minimum setback of 30 metres from high water mark.
b) All new main or accessory buildings except boathouses and docks shall have a minimum setback of 25 metres from the high water mark.
c) The lot created and the lot remaining must have a lot size of not less than 0.8 hectares and a minimum water frontage of 80 metres.

Any projects that you plan to make on your property may involve other Regulating Agencies for approval or licences like: Ontario Ministry of Natural Resources, Local Health Department, Nickelbelt Conservation, Department of Fisheries and Oceans Canada Operations Statements. If changes are done, keep all records of construction for future reference.

USE PHOSPHATE FREE DETERGENTS, CLEANSERS AND SOAPS

Environment Canada has established "The Environmental Choice" program that provides consumers with credible third party info on products and their environmental impact. "EcoLogo" identifies products that are certified as being less harmful to the environment, while maintaining safety and performance standards. Some products are found at:

ECOGENT: www.ecogent.ca or 1-877-994-9908
SIMPLY CLEAN: www.simplyclean.ca or 1-416-282-1107
NATURE CLEAN: www.franktross.com
PARIS NATIONAL & INTERNATIONAL FOODS, 1500 Paris St.
BATTISTELLIS YOUR INDEPENDANT GROCER, 65 Regional Rd 24, Lively
ECO.PRO: www.ecoprocanada.com or 1-613-722-0798
RELIABLE MAINTENANCE PRODUCTS, 345 Regent Street. S 675-5281
PC GREEN LINE PRODUCTS: for home and garden. Can be found at Your Independent Grocers
ECOVER, ECOETHIC AND SEVENTH GENERATION: Are all brands that are available to the consumer.

HOMEMADE "GREEN CLEANERS"

These common household products can clean your home without introducing pollutants to our watershed. As found in The Sudbury Star and Harrowsmith Country Life: Almanac solutions,

- Vinegar removes mildew, stains and wax build up. Use it to clean coffeepots, glass, paintbrushes, grout, windows, and fireplaces. Vinegar can also be used as a fabric softener. Add ½ cup to the rinse cycle.
- Pure soap, which doesn't contain any added scents or chemicals, cleans everything from dishes to cars.
- Lemon juice is a great grease cutter
- Salt is a basic scrubber to give you added cleaning power.
- Baking soda cleans and deodorizes scours, polishes, removes stains and softens fabric.

Some Recipes for Environmentally Friendly Cleansers:

General Purpose Cleaner
1 tsp. Borax
1 tsp baking soda
2 tsp vinegar or lemon juice
¼ tsp dish soap
2 cups hot water

Wall Cleaner
1 cup ammonia
1 cup baking soda
1 gal. Warm water

Bathroom Cleaner
3 tsp. Baking soda
½ cup ammonia
2 cups warm water

Rug Cleaner
¼ dishwashing liquid
1 cup warm water
Place in spray bottle. Spray on rug, blot dry.

Glass Cleaner
¼ cup vinegar
4 cups warm water
Place in pump spray bottle. Spray glass.
Rub with crumpled newspapers.

Toilet Bowl Cleaner
1 cup vinegar
Baking soda
Pour vinegar into toilet bowl.
Let stand ½ hour or overnight
Sprinkle baking soda in and scour.

INITIATING THE USE OF NATURAL FERTILIZERS AND PESTICIDES

How can we have a green lawn and still protect our lake?

Natural fertilizers are most effective if used in combination with natural lawn and garden techniques. Notice how rain flows off your yard and promote drainage away from the lake. Large lawns act as a hard surface with up to 50% run-off occurring. Therefore when fertilizing, 50% of the product you put on your lawn is lost! (Consider decreasing lawn size and replacing with native trees, shrubs and perennials and let nature look after itself.) Check to avoid introducing invasive species.

- As of April 2009, the Province of Ontario has enacted "Cosmetic Pesticide Ban". It is enforced by MOE and restricts the sale and non-essential use of chemical herbicides, insecticides and fungicides. By 2011, these will be off store shelves. There are exceptions. For information: www.ene.gov.on.ca/en/land/pesticides/indes.php

SOME TIPS FOR NATURAL LAWN

1. Over seed with non fertilized seed, spring and fall, in areas not considered your buffer zone. ECO Lawn can be obtained – Info at www.wildflowerfarm.com
2. Use a lawn aerator to help soil to breathe, allowing water, oxygen flow and fertilizer to reach roots.
3. Leave grass clippings on your lawn after cutting at a 3 inch length.
4. Water your lawn once a week with one inch of water unless it has rained. Use soaker hose on your garden.
5. Pull weeds by hand when the soil is moist
6. Spread organic material such as compost each year on your lawn.

7. Applying a natural fertilizer is only necessary every 3 years.
8. Spread mulch eg. Leaves and bark chips in garden beds and around trees.
9. Choose plants and grasses that are suitable to your yard.
10. Refer to www.sdhu.com for natural pesticides.
11. Do a soil sample before applying additives. Refer to www.grassroots.ca or Green Communities www.gca.ca
12. Pick insects manually and drop them into soapy water.

GENERAL HINTS FOR AROUND YOUR LAKE RESIDENCE

Reduce Waste to Keep Our Properties Clean and Free of Pollutants. When keeping our properties clean and free of garbage, remember the three "R"s. Reuse, Recycle and Reduce. Whatever comes to our lake front property, has to leave in some fashion. Use as many reusable products as possible, and buy items that have recyclable packaging if possible. Dispose of hazardous waste like oil, paint, solvents, and batteries in local hazardous waste depots. Take advantage of the Toxic Taxi (call 311)

> *The Association has worked with the City to establish summer garbage schedules. Monday pickup of garbage and blue box, the Monday after the long weekend in May. Tuesday schedule starts the Tuesday after Thanksgiving weekend.*

Be a Good Boater. Do repairs and fill gas away from the water. Use spill-prevention equipment. Cover ground where maintenance is done and use drip pans during engine work. Use non-toxic bilge cleaners or bilge clothes. Dispose of waste oil at hazardous waste depots. Drain water from motor, live well, transom wells, while on land and immediately after leaving the lake.
Inspect outdoor articles and boating gear before moving to another location.
Wash equipment and inspect your boat, trailer and equipment and remove plants/animals before leaving the lake or returning from another lake.
Empty bait buckets on land. Never release live bait caught in one lake into another water body.

Prevent the Introduction of Invasive Species to Our Lake. Invasive plants can monopolize land and nutrients, choking off native vegetation. Invasive animals can compete for food and space. Usually there are no forms of control once invasion has taken place. Prevention is worth a ton of cure. Visit www.invadingspecies.com Learn to recognize invaders. Our first line of defence against invasive species is to know what they look like and know the signs of invasion. Before planting choose native or non-invasive plants.

Burn dry seasoned wood to avoid toxic chemicals getting into the air. Buy locally and DON'T relocate your wood from other areas. Burning household garbage will put toxic chemicals into the air.

History of Fairbank Lake Camp Owners' Association Inc.

1961 – A group of campers organized the building of Mason Road off Park Road
1962 – 1966 – A group of camp owners organized to develop roads at the east end of the lake.
June 27, 1970 – The present association was established. The first meeting was held at the camp grounds at the Provincial Park. The primary purpose was the protection of water quality of our lake. At the time, 1961, the lakes in the Region of Sudbury were found to be affected by acid rain from the mining process of smelting ore.
1970 – The first Annual picnic for camp owners.
April 1981 – Fairbank Lake Camp Owners' became incorporated.
1985 – The adoption of our Secondary Plan within the Official Sudbury Plan was approved. We are the only lake to have such a plan. In 2008, the Secondary Plan has been accepted almost in the entirety within the Official Plan for the City of Greater Sudbury.
2000 – Memories of Fairbank Lake and Surrounding Area was published and sold to all who were interested.

Association Executive

Front Row: Dave Lindsay, Arnie Rittari, Louise Baker, Trudy McAuliffe

Back Row: Terry Monaghan, Marg Harkins, Brian Burton, Dale Muirhead

ACTIVITIES OF THE ASSOCIATION

All activities of the association are done solely by volunteer members. Your contributions by paying membership fees have allowed the association to take measures to protect our lake.

Annual Meeting and Election of Officers

The Annual General Meeting is held on the third Thursday in April at 7:00pm. The location is at Fielding Memorial Park

Annual Camp Owners' Picnic

The picnic is held on the second Saturday in August from 1:00pm to 4:pm at the Provincial Park Campground. In case of rain it is held on Sunday at the same time. Games for the adults and children, raffle tables and book exchanges are part of the day with lots of hotdogs and corn. It's a time each year to rebuild acquaintances and make new ones.

Phosphorous Testing

The Association started phosphorous testing and clarity by Secchi Disk in 1995, in cooperation with the Ministry of Environment, Lake Partnership Program.

FOCA Membership

We have been a member of the Federation of Ontario Cottagers Association since 1978.

Newsletter

We mail out bi-annual newsletters to all camp owners in the spring and paid-up members in the fall each year. If you have an interesting article you would like included in the newsletter, please contact: Louise Baker at 866-5301.

Lake Stewardship

Lake Stewardship was established in 2002-2003. The committee's aim is to provide education materials and projects to continue to protect our lake. In 2009, we completed a four year project to introduce shrub seedlings, to paid-up members, encouraging the establishment of buffer zones. This was completed with the assistance of a $500.00 grant per year from the Water Quality Program at the City of Greater Sudbury. The grant was supplemented by the association.

Neighbourhood Watch and Membership

All new camp owners on the lake are given a welcome letter, handouts, and a copy of the City of Greater Sudbury Official Plan. Trudy McAuliffe has led the Neighbourhood watch #141 since 1993. It was initiated as a result of increased break and entries. It is a citizen involvement program where citizens, in cooperation with the local law enforcement directly participate in detection and prevention of crime. A good neighbour is one of the most effective crime prevention tools ever invented. The neighbourhood watch on our lake is divided into six zones, each having a zone leader. To confirm which zone you are in and your zone leader, contact Trudy McAuliffe. If you see anyone or anything suspicious please report to the police at 911, call your zone leader or Trudy at 866-2840.

Social Gathering After the Adopt-a-Road Clean-up

Channel and Hazard Markers

The initial placement of channel and hazard markers started in 2005. In 2009, replacement of the markers with solar operated ones was completed. Each year the placement and removal of markers is done by volunteers of the association. It is your responsibility, as well, to advise guests of the location of the markers and shoals when boating on the lake.

Terry Monaghan & Dale Muirhead

Brian Burton & Tom McAuliffe

Adopt-A-Road Clean Up

This event is held each year in April or early May. Volunteers from both ends of the lake clean all the roads around Fairbank Lake and Regional Road 4 to the Crean Hill turn off. A social gathering is held to celebrate our accomplishments after.

This booklet is the result of a $500.00 Grant from the City of Greater Sudbury's Lake Water Quality Program and is supplemented by The Fairbank Lake Camp Owners' Association. The production has been completed by the Lake Stewardship Committee: Dave Lindsay, Chairman, Margaret Harkins, Louise Baker, Karen Spec, Karen Hinds and Ginny Burton.

We hope that this will result in keeping of "OUR LAKE" healthy for future generations to enjoy.

Completed and Published in August 2009