

ISLAND LAKE ASSOCIATION
WELCOME PACKAGE

Table of Contents

Page 1: Table of Contents

Page 2: Welcome Letter

Page 3: Stewardship: Previous and Ongoing Actions

Page 4 & 5: Guidelines for Residents and Visitor's

Pages 6 - 11: Municipal and Association Waterside Management & Construction Regulations
Governing the Island Lake Zone

Pages 12 - 20 : Resources about protecting lakes & surrounding watershed

Page 12: "Cottages and Lakes" by Lisa Keller

Pages 13-14: "The Unique Hydrology of a small Gatineau Lake" by Jens Andresen

Page 15: "Living on a small Lake" by Jens Andresen

Pages 16-20: "Cottage Water Systems" by Max Burns

Pages 21 - 28: Resources on Pollutants and Invasive Species

Pages 21 - 22: "How to avoid toxic algae infestation"

Pages 23 - 24: "Giant Hogweed: Poisonous Invader"

Pages 25 - 26: "Purple Loosestrife: A Threat to Waterways and Wetlands"

Pages 27 - 28: "Help prevent the spread of Eurasian Water Milfoil"

WELCOME TO ISLAND LAKE

Dear Neighbour,

This package of information has been compiled as an introduction and resource to better acquaint you with our unique neighbourhood in the Gatineau Hills.

The woodlands and watershed of our neighbourhood offer us all a rare context for living with, exploring and learning from nature. It is a place to appreciate diverse woodlands, watch turtles nesting and hear frogs sing, and observe the daily lives of deer, herons and beavers. It is a place which offers the possibility of together maintaining an environment in which loons can successfully raise their young in a lake that remains pristine. Island Lake offers us a rare and exceptional wild setting in proximity to a vibrant village, and a large city with other amenities. It is what has drawn us all here. It is why we have invested our energy, time and money in building our homes here and creating our 'bit of paradise'. However, Island Lake is a fragile environment and deserves our careful nurturing if we are to preserve its unique characteristics and ultimately our investments.

Island Lake was spared most of the issues plaguing many older cottage lakes, since large scale development did not begin until the 1980's. However, the high density nature of development around the lake means extra care has to be taken to preserve the woodland lake ecology. We hope that you will take the time to become knowledgeable and aware of the information in this booklet and communicate with your neighbours before going ahead with any developments.

Please consult the Island Lake Association, Municipality of La Pêche and MRC des Collines websites, and your deed, for your current specific obligations with regard to your property and the Association.

- <https://islandlakeassociation.ca>
- <http://villelapêche.qc.ca>
- <http://mrcdescollinesdeloutaouais.qc.ca>

Please do not hesitate to reach out to the ILPOA Board with any questions via email at lacalileislandlake@gmail.com.

Sincerely,

The Island Lake Property Owners Association

STEWARDSHIP: PREVIOUS & ONGOING ACTIONS

As property owners in the Island Lake neighbourhood, we have a shared responsibility to be good stewards of our woodlands and surrounding watershed (lake, ponds and streams).

Stewardship implies taking care of a valuable resource and using it wisely, so that we can pass it on to others. It requires an understanding that our woodlands and watershed are interrelated parts of an ecosystem within the boundaries of the Island Lake neighbourhood. It also means recognizing and taking responsibility for our individual and collective human inter-relationship with and impact on our unique and fragile ecosystem.

The ILPOA Environment Committee has taken various steps over the years, and continues to do so, to achieve these shared stewardship objectives:

- Island Lake water testing started in 1990 and is done every two years -Island Lake Property Map created in 2006
- Environmental Information Packages distributed to community starting in 2004, including information on identifying invasive species.
- Joined the Lake Associations Group when it was first established
- Joined the Program of Septic Tank Inspection in 2007 and continue to do a group pumping every two years.
- Monitor the water level at the lake's outflow and intervene to clear debris to stabilize water level
- Monitor beaver activity and remove them if necessary.
- Reconfirmed that motor boats, including electrically-powered, are not allowed on the lake (in Timberlake servitudes)
- On occasion, have had the servitudes and municipal by-laws respected and enforced through municipal action, eg. the restoration of the beach with native vegetation, the stopping of dumping of sand into the lake and the stopping of the excavation of the quarry off Woodsmoke.
- Continue to try to eradicate hogweed and purple loosestrife and monitor for signs of other invasive species.

These are just some of the ongoing efforts to maintain and preserve the integrity of our lands and enjoyment of a healthy sustainable environment.

GUIDELINES FOR RESIDENTS AND VISITORS

The following guidelines will help safeguard our environment and make everyone's experience at Island Lake more enjoyable.

LAKE:

- Do not wash items, bathe or use phosphates (soap, detergent) in or near the lake.
- Use only local watercraft provided in order to prevent the spread of invasive species.
- Put away water toys and boats offshore when not in use as they add to visual clutter.
- Fishing requires a permit from the Province of Quebec. Never use live bait.
- Noise gets magnified across water. Please be aware of other people's presence on the lake and respect municipal bylaws prohibiting noise after 11:00 p.m. <http://www.villelapeche.qc.ca/downloads/Reglements/17-RM-04%20paix%20et%20bon%20ordre.pdf>
- Respect privacy by avoiding the use of drones.
- The private beaches at the south and east ends of Island Lake are for use only by those with deeded access to them, as well as the islands which the owners wish to preserve in a natural state for wildlife. Trails are also on private property. Please use only by invitation from owners.

WILDLIFE AND SAFETY:

- Waste disposal: All garbage and recycling must be placed in bins provided by the Municipality of La Pêche. Do not feed wildlife, especially bears.
- Enjoy the wildlife: Look, but don't touch. It is harmful and stressful to the wildlife when they are handled. For example, frog skin is damaged by human handling and it leaves them susceptible to disease and or death.
- Give our Loons a wide berth (and take your binoculars). Do not go too close to the small grassy islands in the lake, particularly in May/June when the loons are nesting.
- DRIVE CAUTIOUSLY on our road network. There are neighbours walking with their children and dogs and a number of places on our roads with blind turns and steep hills.

FIRES:

- Do not light an open fire. Fire can travel underground along pine roots and smoulder there for days so it may look like the fire is out but it can spring up well away from the original site.

- Use a proper fire pit but never use it if it is windy or there is a fire ban as it endangers our forests, homes and lives. Consult these sites for information: <http://sopfeu.qc.ca/en/> <http://www.villelapeche.qc.ca/downloads/Reglements/16-RM-05%20-%20anglais.pdf>
- Cigarettes are suspected of causing a large number of fires. Never throw your butts out the window. Even if your cigarette butt is extinguished, it does not biodegrade so ends up as roadside trash. They are harmful to birds as they bring them back to the nest where the toxins are released into the nesting site.

IN CASE OF EMERGENCY: CALL 911

- Fire Department: 819-456 2161 x extension 2290 or <http://www.villelapeche.qc.ca/en/municipal-services/fire-dep/fire-districts/>
- Police Department: 819-459-9911 or <https://sp.mrcdescollinesdeloutaouais.qc.ca/>
- Hydro Quebec: 1-800-790-2424 or <http://poweroutages.hydroquebec.com>

WATERSIDE MANAGEMENT AND CONSTRUCTION REGULATIONS GOVERNING THE ISLAND LAKE ZONE (Rv 702)

This is a summary of regulations governing Island Lake waterside management, docks and other structures from the Municipality of La Pêche Zoning By-Law 03-429 (decreed in April 2004) (Section A) and Timberlake lakefront deed servitudes (Section B).

It includes the recent Island Lake waterfront zoning modifications to the Municipal By-law from the 2008 Lake owners' petition (Rég.10-564, applicable from May 2010/decreed in April 2011).

For further details and illustrations, see complete By-Law (French or English), available on the Municipality of La Pêche website: [http://www.villelapeche.qc.ca/downloads/Reglement-de-Zonage-03-429-\(Texte-du-reglement\).pdf](http://www.villelapeche.qc.ca/downloads/Reglement-de-Zonage-03-429-(Texte-du-reglement).pdf). Municipal contact details below.+

Please Note: Where Municipal and Timberlake/ILPOA standards differ, with regard to clearing, shoreline protection and lake use, the more restrictive apply.

SECTION A: MUNICIPALITY OF LA PÊCHE BY-LAW 03-429

Chpt.19: Watershed & Wetlands Protection ("Protection du milieu riverain et des milieux humides")

WATERSIDE PROTECTION BELT

Terms The 30 meter wide WATERSIDE PROTECTION BELT includes the BANK (15 m. from the SHORELINE / high water line) and a BUFFER ZONE (15 to 30 m. from the shoreline.) The SHORE is between the shoreline and the lake. **Please refer to illustration Fig. 19.7.1 on the next page.**

Figures from Zoning By-Law (03-429)

Fig. 19.7.1: Waterside Protection Belt

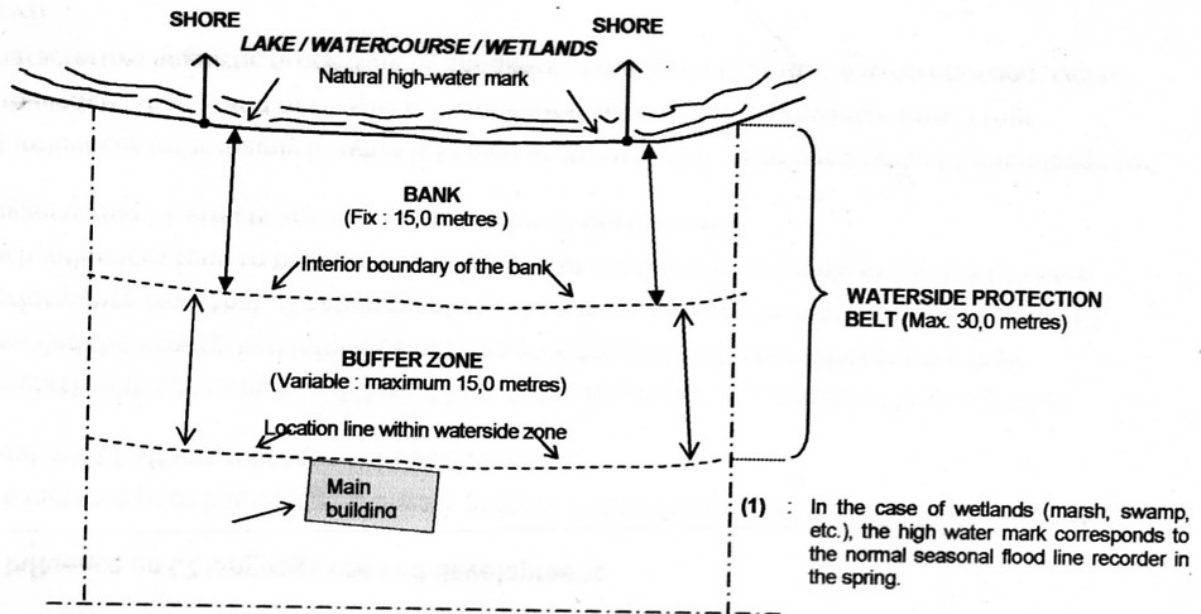
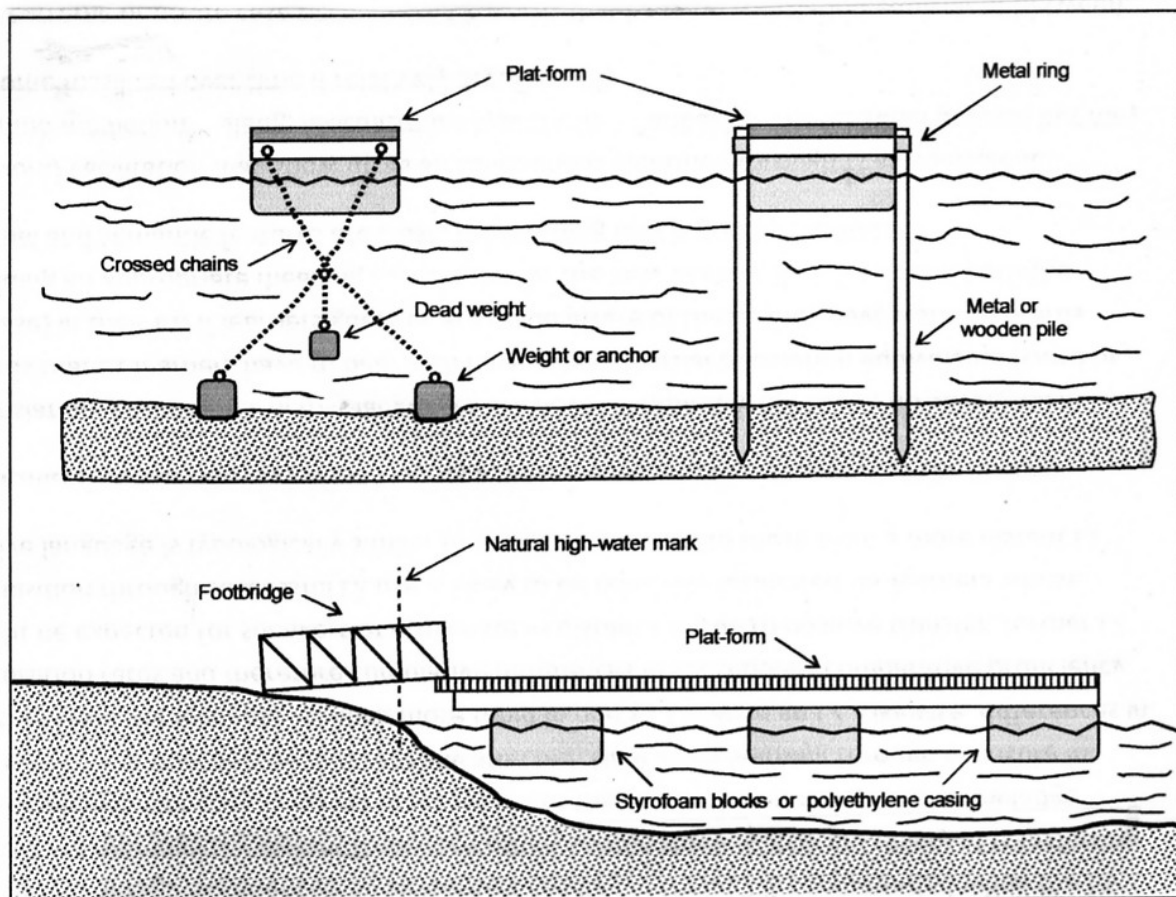


Fig. 19.12: Types of Docks



Main points from the By-law

Natural vegetation on the shore and in the waterside protection belt must be preserved to slow the run-off of surface water, allow its absorption and protect the natural landscape.

- No cutting of vegetation is allowed within 15 m. of the shoreline (bank) except for an opening or a “window” (see below) up to 5 m. wide leading to and perpendicular to the lake, contoured if the slope exceeds 10%.
- A) If the bank slope is less than 30%, a path of natural materials (sand, gravel or crushed stone; wood boundaries) max. 2 m. wide, is permitted within this opening. Vegetation on each side must be preserved or replanted to prevent erosion. (See Figure 19.15)
- B) If the bank slope is 30% or more, a 5 m. wide “window” or view is allowed in which trees may be pruned, but shrubs and small trees must be left in place, particularly at the bottom of the slope. For water access a path (of wood, sand, gravel or crushed stone) or a stairway (of wood), max. 2 m. wide, is allowed. Stairways can rest on the ground or be supported on driven vertical posts (no excavation or drilling.) (See Figure 19.16)
- Excavation, leveling, filling or modification of natural lake topography for personal use is prohibited. Similar work for public purposes requires Ministry of the Environment approval.
- Work in the entire waterside protection belt must not impede the natural flow of water or create a source of pollution.

The recent MRC des Collines Interim Control By-law 137-09, “Our Lakes: Our Wealth” aims at renaturalization of lake or watercourse shorelines and prohibits “any control of the vegetation” (e.g. mowing, clearing) within 5 m. of the shoreline.

DOCKS (also called wharves / piers)

A Municipal permit is required for any replacement or new dock, which must conform to current zoning requirements. (Contact details below)+

An owner may renovate a dock that was legal when built (i.e., with a Municipal permit if built since 2004) but that no longer conforms to current zoning. Renovation preserves the original structure and reuses at least 50% of the original material. ++

Docks must be constructed to let the water flow freely at all times, on pilings, posts or as floating platforms. (See Figure 19.12)

Only one dock per taxable unit is allowed.

All docks must be attached to shore. (2004 By-law)

Recent modifications to the 2004 By-law for zone Rv-702 (Island Lake) (Règ. 10-564)

- (1) Dock size: The maximum surface size for docks is now 8.81 square meters with a width (perpendicular to shore) of 1.2 to 2.4 meters.+++
- (2) Watercraft storage: A maximum of 2 watercraft may be stored on the bank or attached to a dock at any time.

++ Docks are considered impermanent and therefore are not “grandfathered” for footprint.

+++ By-law 03-429 specifies a min.5-m. ramp length for L or T shaped docks, which also applies. This is currently under review (2011) as part of a general By-Law review. Contact the Municipality for information.

BUILDINGS

A Municipal permit is required for all buildings except pump houses. All buildings must meet municipal standards.

Required setback of buildings from water courses is 30 m. (air distance); applicable to building footprint. (See By-Law text for exceptions, e.g., overhangs.)

Construction on bank (0-15 m. from shoreline): no buildings of any kind are allowed.

Construction in buffer zone (15-30 m. from shoreline): allowed with a permit

- a single small gazebo or shed
- a small patio or deck annexed to house

(See By-law text for size, location and other specifications).

SEWAGE AND DRAIN FIELDS

Refer to Municipal regulations. (Not covered in Chapter 19 of the Zoning By-Law.)

NOTES: +Municipal contact for permits, inquiries or complaints:

Municipality of La Pêche Office: 1, route Principale Ouest, La Pêche (Masham), QC, J0X-2W0

Email: reception@villelapeche.qc.ca / Reception: 819-456-2161, ext. 0.

Environment technician: 819-456-2161, ext. 2275

SECTION B: TIMBERLAKE DEED SERVITUDES

For further details and to review the ILPOA deed servitudes document in its entirety, please visit the Island Lake Association website: islandlakeassociation.ca. Questions regarding servitudes can be forwarded to the ILPOA Board of Directors via email at: lacalileislandlake@gmail.com.

Common servitudes concerning these topics in a sample of 8 original Island Lake lakefront deeds provided by owners are summarized below and are thought to be in most if not all such deeds. The deeds include agreement by initial buyers to include the servitudes in property transfers, with personal liability for damages caused by not doing so.

WATERFRONT PROTECTION & LAKE USE

No cutting of live trees is permitted unless to clear building space for an approved dwelling or outbuildings. Clearing will be for the cottage site only plus 20 feet outward from the walls of the cottage or outbuildings* (dead trees or underbrush excepted.)

No parking lots may be built within 100 feet of lakeshore, and no cars may be parked within 75 feet of lakeshore.*

Only one canoe or similar device from one lot may be used at one time on the lake. Motor boats and any similar craft with engines may not be used on the lake.*

DOCKS (wharves, piers)

Only one wharf may be built per lot.

BUILDINGS

No structure other than a wharf may be built within 75 feet of the lakeshore.*

All sites for residences must be approved by Timberlake.

A maximum of a single detached one-family dwelling for residential purposes with outbuildings normal to a cottage may be built on a lot. Timberlake must approve plans.

No dwelling or structure may be closer than 50 feet to any lot line.*

Building height may not exceed 16 feet from the ground level of the structure.*

Timberlake retains the right to approve colours, paints or stains of any structure or craft visible from any lot on the lake.

SEWAGE AND DRAIN FIELDS

No latrine, outhouse, sink outlet, bathroom or waste disposal ... shall have an outlet, leakage, part or end of its disposal system within 75 feet of the lake or any stream that leads into it unless approved by appropriate sanitary engineers and in compliance with provincial & municipal sanitary requirements.

OTHER

No business, commerce, etc., advertising or anything that constitutes a nuisance is permitted. Fences must be within boundary limits of a lot, not over 200 feet long, made of wood, and painted only with wood stain.

NOTES

**except with written permission from Timberlake. Such permission will not be unreasonably withheld.*

RESOURCES ABOUT PROTECTING LAKES AND SURROUNDING WATERSHED

“COTTAGES AND LAKES” by Lisa Keller, Cottage Life, 2004

BY LISA KELLER

When Ottawa resident Marilyn Halls bought her cottage on Lake Chauncey in the Gatineau Hills, she thought she'd found a peaceful and pristine retreat. The small but deep mountain lake, located about a 45-minute drive from the city, has no motorized vehicles on it.

"I got a piece of heaven," Halls says, a sentiment shared by her neighbours. "And we'd all like to keep it that way."

Four years and almost \$10,000 later — the cost of a new septic system — she's doing her best to live by that tenet. Halls says she knew when she bought the cottage that the "system" — a rotting 40-gallon oil drum — was inadequate. She was committed to fixing the problem, but had no idea what it would take. Built on a few inches of poor soil over bedrock, Hall's cottage, like so many others across Canada, also rests on a slope down to the water.

She had to pay to bring in a jack hammer to smash up the rock sufficiently to bury a septic system uphill from the cottage. And because rock is a poor effluent filter, she needed a state-of-the-art system that filters the sewage through sand, gravel and a layer of moss that must be replaced every eight years. Cost of main-

tenance: about \$1,000. Sometimes, it's hard to be green. Still, other lakeside residents are following her example, and the local municipality is inspecting systems in the area, all in an effort to keep Lake Chauncey healthy and clean.

The same goes in cottage country across Canada, as a burgeoning awareness of environmental issues drives cottagers and campers to examine their habits. But with summer 2004 here, and weary city-dwellers once again descending in hordes upon the country's lakes, rivers and streams, it's clear we still have a lesson or two to learn.

Frances Pick, a professor of aquatic ecology with the University of Ottawa's biology department, says cottagers invariably affect their surroundings, often without knowing it, in four different ways:

1. By adding chemical and nutritive runoff to lakes, originating from lawn fertilizer and pesticide, boating activities, and human sewage seeping from inadequate septic fields; and by encouraging erosion through excessive clearing of land.
2. By destroying habitat for flora and fauna when removing trees, bushes, shrubs and aquatic plant life from the shoreland, the narrow strip where land and water meet.
3. By introducing non-native species.
4. By over-fishing.

"Removing woody debris is very bad for the ecology of the lake. Dead logs are important for providing habitat," Pick says. She also points to larger numbers of cars and pavement in rural areas as a troublesome and growing cause of ani-

mal morbidity.

"Snakes in cottage country are really taking a beating," she laments. "There's a tremendous amount of road kill. People used to go to the lake at the beginning of the summer, and come home in the fall. We drive so much more now."

Pick says illuminating examples of the effect of increasing road-kill numbers are the rarity of the black snake, and the five-lined skink, Ontario's only lizard. She bemoans the paving-over of rural dirt roads, and urges cottagers to limit pavement, which draws animals to its warmth, on their own properties.

Experts say the key to lessening human impact on lake environments is the adoption of a non-interventionist attitude. But for many, that's easier said than done.

It's most obvious in a sight duplicated over and over, lake after lake: The Lawn. Cottagers seem to love lawns, for a variety of reasons. Many desire a clear play space for children and pets. Others just like an unimpeded view of the water. And, of course, almost everyone wants a smooth, preferably sandy, weed-free en-

vironment. Animals naturally drawn to shoreline areas must adapt or leave.

Iwachewski says stricter laws governing septic tank set-back distances and a better educated public are helping solve the problem of sewage runoff. But in other areas, such as physical disruption of habitat, we're just not getting the message.

"One of the first things people do is remove weeds," Iwachewski notes. "There are a lot of species that rely on aquatic vegetation for cover, for food and for reproduction. Aquatic vegetation moderates wave action, provides sheltered areas for young fish. It's a nursery area."

The removal of shoreline and underwater vegetation also drives away amphibians and nesting waterfowl. Particularly sensitive species such as mink and martin disappear from areas not perfectly suited to their needs, Iwachewski says.

Ironically, while humans drive away many native species by polluting the environment and destroying habitat, we also tend to add new species, deliberately

No truly pristine lakes exist anywhere anymore. Every square metre of our planet is being affected by airborne pollution

trance into the lake.

But cultivating lawns and clearing "messy" water's-edge growth is the last thing cottagers should be doing. "You get permanent alteration of the shoreline's physical structure, you get lawns instead of ferns and shrubs. What you see is an elimination or marginalization of those communities that existed before," says Ed Iwachewski, the manager for northern forest ecosystem research with the Ontario Ministry of Natural Resources.

"Those communities" were the lakes' original inhabitants and plants, there before humans started building, boating and basking in the sun. When cottagers muscle their way in, aquatic insects, am-

phibians, waterfowl and animals naturally drawn to shoreline areas must adapt or leave.

Perhaps the best known invader is the zebra mussel, introduced to Canada from its native Baltic Sea habitat around 1985. Zebra mussels are super-efficient water-filterers, removing plankton — a food source for other animals — at furious rates, wiping out native clam populations, and inflicting razor-sharp cuts to the feet or paws of anyone or anything attempting to walk on them.

(2004) See **COTTAGE LIFE**

“LIVING ON A SMALL LAKE” by Jens Andreson, 1999

I would like to share with you some environmental concerns which arise when more than 20 owners and many deeded access holders share lake frontage on a very small lake. We therefore, as well, share responsibility for the environmental well-being of a very fragile ecosystem. Some of us grew up in a time when environmental concerns were largely unknown and therefore not understood or appreciated. But, the last 20 years have opened most people eyes to an awareness of natural principles which when followed can serve to protect and preserve the natural setting which is so attractive to all of us around Island Lake. Certainly governments at all levels have enacted laws based on these principles. For further reference, please see the Municipality of LaPêche Bylaws, which govern human usage of lake shorelines.

Lakes degrade mainly for the following reasons:

1. Removal of shoreline vegetation
2. Erosion
3. Pollution

Removal of Shoreline Vegetation

The shoreline woody vegetation on our lake is the key to maintaining the health of the lake. It anchors the shore and provides a shady protected habitat for spawning for all life in the lake. Municipal Bylaws therefore strongly restrict any modifications of natural shorelines. Several permits may be required. Thirty years ago cottagers often ripped out the natural shoreline vegetation and dumped sand to create an artificial "beach" for their families. Such beaches are an ecological desert. Later they wondered why the quality of the water and aquatic life deteriorated. Today, restoration plans have been adopted for many of these lakes. The so-called "beach" at the southern end of Island Lake is in fact a restored area enforced and supervised by the Municipality which is slowly returning to a natural state.

Erosion

Shoreline erosion caused by the removal of natural vegetation as far as 30m from the lakeshore and runoff from drainage ditches serves to increase nutrient levels in the lake. These nutrients are tied to increased aquatic plant growth including algae. In sufficient quantities such nutrients lead to eutrophication (aging) of the lake whereby oxygen levels are reduced and the whole ecology of the lake suffers. Even pathways from dwellings to the lakeshore can contribute to erosion and must be carefully sited. It is important to remember that the rate of turnover in the lake is very slow unlike that in a river. Any problem created in the lake will take a long time to flush out. The breaking of the beaver dam holding back the feeder lake on the Five Lakes property would therefore be an ecological disaster.

Pollution

Human habitation inevitably produces some pollution of the local environment. The challenge for all of us is to be observant and strive to limit the cumulative impact of small changes compounded by our relatively dense population. Some of my main pollution concerns are summarized below:

1. **Septic system** location, as regulated by the Municipality, meets only minimum requirements which may be marginal for

protecting the lake environment. Any gradual slow leakage by the septic fields will add unwanted nutrients to the lake. Twenty dwellings on such a small, fragile lake as ours constitute a large potential for leakage. Careful monitoring is extremely important.

2. The use of **fertilizers and herbicides** on lawns and gardens will likely result in the leaching of excess chemicals and nutrients into the lake causing havoc with natural systems. It is far more responsible to use natural lawn care and garden techniques to prevent residues affecting the lake.

3. **Waste oil** from automobile parking areas or accidental spills should be carefully cleaned up and monitored to ensure that runoff does not carry residues into the lake. **Pressure treated lumber** is loaded with a chemical preservative (a carcinogen) and should not be used where it will leach into the lake (especially for docks or steps leading to the water).

Trees

There is something incongruous about the fact that a tree takes decades to grow to a reasonable size and we can cut it down in less than 5 minutes thanks to chain saws. Trees around Island Lake represent third growth forest. The primary forest was cut in the late 19th century and the second growth was cut in the 1950s. It has taken 50 years to achieve the forest which we treasure. In reality it represents a much poorer growth than the original vegetation. Removal of trees within 30m of the shoreline should be very carefully considered and clearing of trees for house construction should be minimized (30-50 m from the lake) as much as possible. Trees whose root systems are covered by fill near your house will rot and die within a few years. The health of trees is tied to maintaining the natural humus cover under the trees ideally as far as the drip line.

"THE UNIQUE HYDROLOGY OF A SMALL GATINEAU LAKE"

by Jens Andresen, 2000

The Unique Hydrology of a Small Gatineau Lake by Jens Andresen

Island Lake owes its origins to the immense erosive power of the last Ice Age, which ended locally about 10,000 years ago. Massive ice sheets scooped out deep depressions throughout the Gatineau Hills. Parts of the lake are between 50 and 110 feet in depth. People are always surprised to find a lake on top of a "mountain". Island Lake receives its water from 3 sources: the beaver dam controlled lake (part of the Five Lakes Club), subsurface springs, and annual precipitation and runoff. The outlet of the lake remained stable for centuries, with minor changes due to beaver dams, because it flowed over a rock shelf.

A few years ago Mr. Quain (Timberlake Construction) decided to lower the rock shelf with equipment with a view to building a dam with which to artificially control the lake level. Although the dam was never completed (it contravenes Ministry of Environment regulations), the net result has been to create greater fluctuations of the lake level. These fluctuations have to be monitored carefully because they may have negative impacts on the native shoreline vegetation which is vital to life and water quality in the lake. Loss of the beaver dams on the Five Lakes property would be a catastrophic event for Island Lake. They should also be monitored.

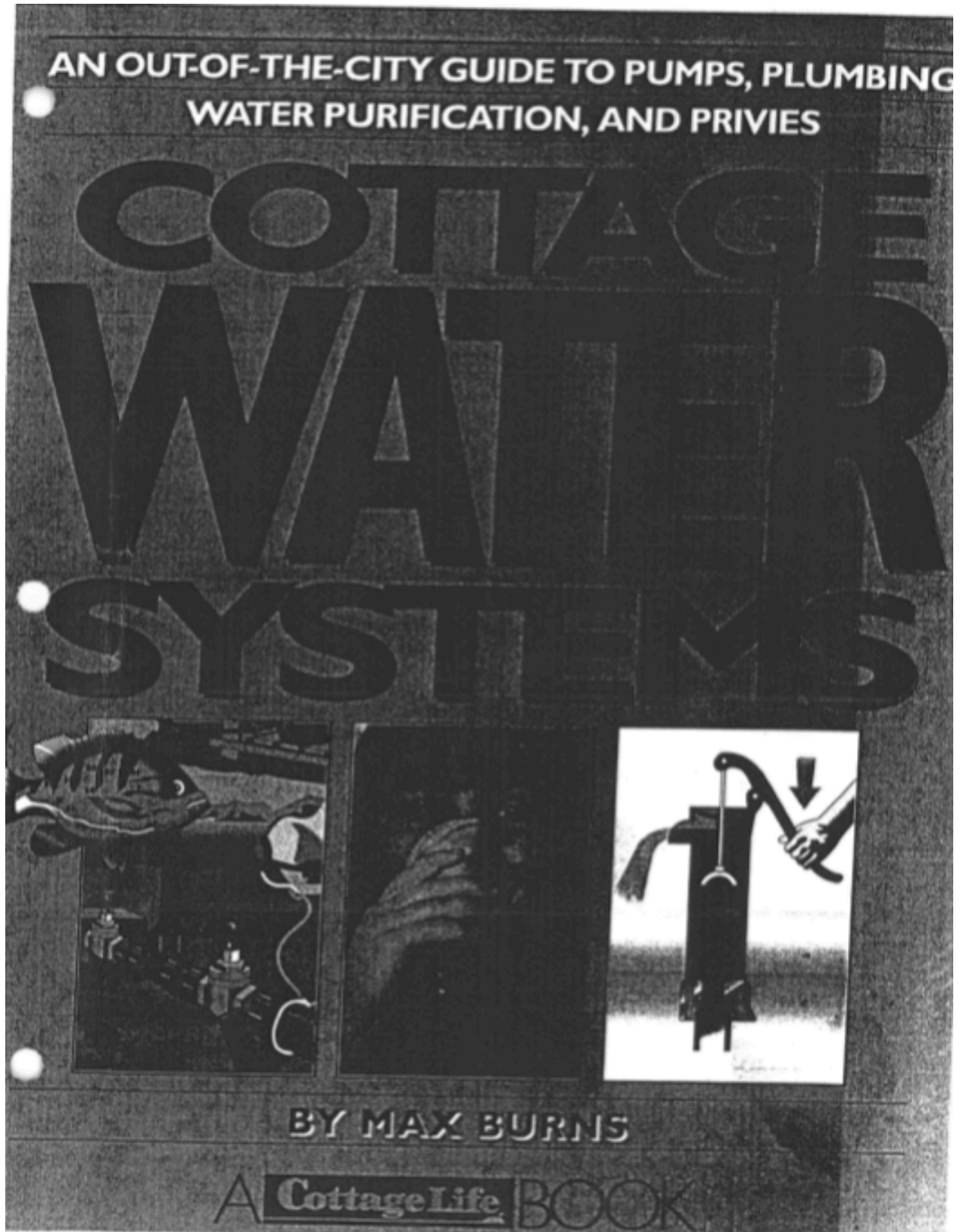
The present water quality of the lake (in 2000) is fairly good. Testing in 1997 (by Claire Miquet) has revealed that coliform counts are very low and the water is safe for swimming. Trace elements and metals are also well within safe limits. The pH was 6.3. Lake water quality can fluctuate quickly, however, depending on rates of erosion and beaver fecal matter. Lakes in the Gatineau Hills represent very fragile aquatic ecosystems, and Island Lake is no exception. Granitic rocks are naturally acidic as are coniferous needles (especially those of white pines) and the very thin soil layer offers little buffering capacity in the event of acid precipitation. The soil residue of the last 10,000 years was further disturbed by indiscriminate logging in the late 19th century and again in the 1950s. A normal lake has a pH of 6.8, attained through rock and soil buffering of natural rain, which has a pH of 5.6. Damage to the tiny, largely unobservable bottom of the aquatic food chain begins at a pH of about 6.3. The acidity of the lake merits monitoring.

(SEPT. PH 6.3) J.A.

Gatineau Lakes are naturally low in organic matter and life is therefore thinly distributed (oligotrophic lakes). Thus the water in Island Lake is quite clear and visibility extends to 10-15 feet. Any addition of significant amounts of plant nutrients must be guarded against because it alters the equilibrium of the ecosystem and leads to the growth of weeds and algae which lowers water quality for fish and people. Sources of nutrients include erosion from roads, shorelines, and even pathways down to the lake. Springtime is especially critical with the extra meltwater runoff. Another source is the use of artificial fertilizers (and pesticides) on lawns. The slow leaching of these chemicals is probably inevitable. While septic fields and their location may be approved by the municipality extra care over and above their minimum standards should be taken to safeguard the future of the lake. (According to the Municipality of Lapêche Bylaw, septic tanks must be pumped out every 2 years). As more houses are built on the lots bordering the lake, the risk increases, and it may become very difficult to safeguard the current quality of the lake. Many lakes in the Wakefield area much larger than Island Lake have succumbed to the impact of human settlement and today have low water quality, few fish, algae blooms and dense weed growth.

The undisturbed natural shoreline 100 feet back from the lake acts as a filter to trap pollutants before they can enter the lake. Most trees are from 50 to 100 years old and should be left undisturbed. The root systems of trees are quite fragile and many lie near the surface. A minimum radius of 10' around the base of a tree (ideally extending out to the drip edge of the tree) should not be disturbed or buried. If it is, the tree may appear healthy, but will die within a few years.

“COTTAGE WATER SYSTEMS” by Max Burns



el, rather than in individual trenches. Material costs are greater, but the size of the bed can be reduced by a third to a half that of a conventional bed, and maintenance costs are no greater than those of a conventional system. (Clearances for both aerobic tanks and filter beds remain the same as those for conventional septic systems, as does the frequency of tank pumpouts.)

HOLDING TANKS

The holding tank is a temporary parking zone for sewage; there is no provision for filtering. When the tank is full, the sewage must be pumped out. Some municipalities are reluctant to approve holding tanks since the sewage is usually trucked to a local treatment facility which may already be operating at or near capacity. Others will only approve a holding tank if the owner can provide proof of an approved method of disposal, which usually means a signed contract with a certified hauler of sewage. However, some jurisdictions, like Saskatchewan, require that any cottage located within 450 m (1,500 ft.) of the high-water mark of any surface water shared with an urban municipality or recreational area *must* use a holding tank. Holding tanks are also used extensively in areas that experience extreme winter temperatures, like the northern Canadian Prairies or the Northwest Territories, as absorption areas in such climates may not be able to retain enough heat for decomposition to take place. And a holding tank is sometimes the only sewage-system alternative where no space exists for an absorption area or the slope of the land exceeds what is permitted locally for contour-style absorption trenches.

Every holding tank must be equipped with an alarm to alert owners to impending pumpouts (What's brown and sounds like a bell? DUNNNNNG!), which, depending on use, can be a frequent expense.

WHY SYSTEMS FAIL

So which is the best system? It's not the *type* of system so much as its *condition*. Odds are, the best system is the one that is both new

and properly maintained. Two major faults exist with any septic system that relies on Mother Earth to soak up its sins: natural obsolescence and an inability to deal with nutrients. Yet the biggest problem with septic systems is our attitude towards them – out of sight, out of mind. If the system occasionally gets a bit smelly or messy on the surface, Mother Earth will take care of it as soon as the weekend crowd leaves the cottage, right? Wrong.

The sad reality is that any absorption area will eventually fail. The lifespan of a system used year round is estimated to be 10–15 years; a system subjected only to seasonal use would in theory last longer. All absorption areas are destined to failure because the effluent flowing out from even a properly maintained septic tank carries some sludge through the exit pipe with it. The turbidity in this effluent tends to separate out at its earliest convenience, which in a new leaching bed corresponds to the first metre (3 ft.) or so of perforated pipe. The sludge coagulates in the gravel and plugs the pipe's holes. Over the years, the flow of sludge particles slowly moves down the pipe's length, gradually plugging up the gravel and holes along more and more of the pipe. When the effluent can no longer find speedy access to the surrounding soil, it will pond.

Ponding is a pleasant way of saying that liquid sewage is coming to the surface. Ponding pushes the oxygen out of the bed, and hence the aerobic bacteria die. When this happens – even if just once – the system is no longer doing what it was designed to do. This process of self-destruction is greatly hastened by a failure to pump out the tank regularly. That's because as solids build up in the tank, there is less space for incoming sewage, and therefore less time for sludge and scum to settle out before the sewage seeps into the absorption area. Robbed of this opportunity, the sewage will quickly plug the bed and destroy it. And clogged distribution pipes are more likely to freeze, which means more ponding. Also, gases given off by sewage left in the tank for long periods of time will dete-

erate tank baffles, which in turn allows the sewage to run straight through to the absorption area and your yard. Regardless of cause, when the absorption area or tank is kaput your only recourse is to bite the bullet and have either or both replaced.

REGULAR PUMPOUTS ARE THE KEY

Due to their owner's ignorance, stubbornness, false economy, or whatever other rationalization or excuse, septic tanks are rarely pumped out when they need to be. It may be helpful to think of the septic tank as a large flow-through chamber pot: you still have to empty it, but because of its size and design, not quite as often. On average, a tank should be pumped out about once every three years – more often if the system is old or undersized for the load. The best time for a pumpout is early summer after the high ground-water levels of spring have subsided. This gives the entire summer and autumn for the bacterial action to re-establish itself. (Bacteria, like most cottagers, prefer warmer weather.) Emptying any sewage tank (septic or holding) in the fall may not allow enough time for decomposition to begin in earnest before winter's coldest temperatures take hold, putting the contents of the tank at risk of freezing, which not only stops the treatment process but could also seriously damage the tank.

Even if a pumped-out septic tank sneaks through the winter without turning into an indoor rink, it may still encounter problems. Because our contributions to a tank's contents are usually minimal in the off-season, an empty tank in the fall is still an empty or near-empty tank in the spring. Buoyed by water-soaked soil, the tank may float and could actually pop out of the ground (the lighter plastic tanks being more susceptible to this "welcome back to the cottage" surprise), which explains why early spring is also not a good time for a pumpout.

Some jurisdictions have, or are considering, legislation to enforce regular cleanouts and inspections, laws which will inevitably become universal. An inspection is the only way to

determine if the need for a pumpout is imminent, and a licensed contractor is the best person to carry out this task. Most jurisdictions advise against owner/operator trips to the inside of a tank because every year, some unsuspecting home handyperson succumbs to the gases of his or her own effluent. Only anaerobic bacteria find honour in death by the septic tank.

A pumpout is not an expensive luxury, usually less than what you would pay for sewage taxes back in the city. But too many folks call the "honey wagon" only after things start to smell or the ground gets soggy over the septic field. By then, it's too late; your system is plugged. And contrary to the hyperbole of some advertising, no amount of additives can save it.

THE ISSUE OF SEPTIC ADDITIVES

The common element of these "miracle" septic savers is the assertion that the product will keep your system trouble-free and odour-free, or words to that effect. Some even leave no question in the consumer's mind that the product in question will stop the pumper truck. Maybe, if you pour the stuff into the truck's fuel tank rather than your septic tank.

Every jurisdiction in North America contacted regarding these additives advises against their use; but faced with the reality of a failed system, some cottagers continue to pour this stuff, and their money, down the drain. Most of the products *do* activate bacterial growth in the tank, as claimed. But according to all the biologists I contacted, simply adding more sewage does the same thing. Any product that claims to do more – like unclog pipes, for instance – could be in the hazardous-chemical category, in which case, it should *definitely not* go into any septic system because you can bet your long-term disability fund that it too will eventually end up in the water supply.

Another "additive" I was made aware of just a few years ago, one which seems to have some history behind it judging from the age of the person espousing its virtues, is to "Shoot two squirrels and dump 'em into the tank before you use it. Gets the bugs working." I

tem that will not easily decompose. This includes cigarette butts, cooking fats, greases, disposable diapers, paper towels, and facial tissues. Put them in the garbage. To determine if your preferred brand of TP will decompose readily, place a few sheets in a jar half full of water. Cap the jar and shake it vigorously. If the TP breaks up into little pieces, it's suitable for use with a private septic system.

Absorption areas are great level playing fields for croquet or badminton matches, but the only vehicle that should ever cross the area is a lawn mower – and that means no lawn tractors. Keep everything from boat trailers to delivery vans away (including winter toys like snowmobiles). The weight of vehicles can crush absorption-area pipes or knock them out of level, and will compress the soil and snow above the pipes or pits. This reduces the natural insulation, which puts the system at risk of freezing. (See Chapter 12.) Fence the absorption area off if necessary, perhaps with a nutrient-hungry hedge, to keep innocent or deliberate trespassers away.

THE NUTRIENT NEWS

As users of septic systems, our contribution to pollution is a double-edged sword: pathogens and nutrients – each coming from the same source, each doing its own damage. (See Chapter 5.) Septic systems were never designed to remove nutrients, nutrient overload not being widely recognized as a problem much before the '70s. Anything we do that has a deleterious effect on our septic system only exacerbates the problem, increasing the nutrient load in our waterways and ground water. Fortunately, there are some simple things we can do to reduce nutrient loading from septic systems.

Number one on the list is get that darn tank pumped out! Frequent pumpouts are the single most effective way to prevent an absorption area from clogging, extending the life of the area, which in turn allows the nutrients more opportunity to be taken up into vegetation before reaching the waterways. It may be the most important thing you can do as a cottager to protect your environment,

investment, and family. Use phosphate-free cleaners. Soaps and detergents with phosphates are one source of phosphorus, the nutrient most waterways are in short supply of, and the one needed for aquatic plant life to begin flourishing – which starts the eutrophication process that can lead to a dead lake. (See Chapter 5.) Keep the clearing of your lot to an *absolute* minimum. The more trees and vegetation you have between your septic system and the lake, the better the chance that the nutrients are going to be taken up in land-based biosystems rather than exported into the lake.

A healthy lawn or ground cover is important over the absorption area, but don't fertilize it – let the septic system do it. For those who pride themselves on a well-manicured yard, a vegetation buffer zone between the septic and the lake doesn't have to resemble untamed bush. Plant shrubs and trim them into an impressive shape – like your favourite aunt. The important thing is that vegetation is in place to take up the nutrients before they reach the waters. (Trees should be kept about 3 m–6 m or 10 ft.–20 ft. away from the perimeter of the absorption area so that root structures will not interfere with the distribution pipes, tiles, or seepage pits.)

THE OWNER/OPERATOR INSPECTION

A quick walk onto your septic system's absorption area can sometimes reveal potential problems. During August when lawns turn a bit brown, the nutrients leaching out of distribution pipes cause the grass above them to grow green. If this occurs within the first few feet of a leaching bed, chances are that the bed is functioning correctly, the sewage percolating into the soil through unrestricted holes or gaps in the pipes.

But if the green stretches to the end of the bed, it's possible that the flow has become restricted, and instead of the sewage seeping out as soon as it reaches the leaching bed, the full length of the pipes is required to distribute it. If this is the case, get the system inspected by a licensed contractor or the sewage police. If the leaching bed is wet, you don't need an inspection, you need a new system.

Your nose can also help evaluate the system's state of health. Sometimes, sewage odours from vent pipes can waft over the absorption area during a downdraft. If the foul odour persists, try taking a bath. If that doesn't solve the problem, head out to the absorption area and look for ponding. If effluent is seeping to the surface, chances are it's going to raise a stink.

BIGGER IS BETTER

When a new system is deemed necessary, one of the best things you can do is put in the biggest tank that will fit into the available space, while still getting it pumped out on a regular basis. This gives the solids more space to separate out from the sewage, resulting in less crud getting into the absorption area. And while you are at it, go for a bigger absorption area too. Without question, a bigger septic system is going to last longer and have less impact on the environment. The costs of going bigger when you're putting in a new system are substantially less than the costs of replacing a spent system. For approximately \$100 extra, I was able to install a tank double the required size at our cottage, and for a few dollars more, the absorption area was increased by one third, all the while maintaining at least double the minimum setbacks. It makes both economic and environmental sense to overbuild, and it also lessens the odds of future cottage additions overtaxing the system.

If someone began taking swacks at your cottage or boat with a sledgehammer, naturally you would be a mite upset. Yet research in some jurisdictions has shown that up to 70% of us who own septic systems are participating, by operating faulty systems (sometimes knowingly), in the destruction of the cottage-country waterways that mean so much to us all. Obviously, where our sewage ends up is more important than any building, boat, or other symbol of the cottage experience – for without the lakes and rivers, the other elements of the picture are worthless.

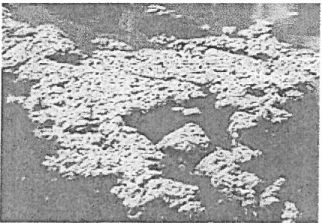
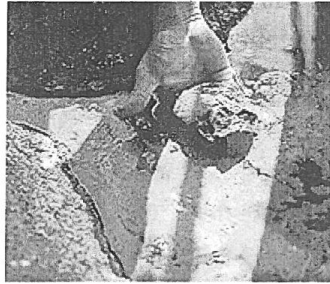
RESOURCES ON POLLUTANTS AND INVASIVE SPECIES

“TOXIC ALGAE INFESTATION: HOW TO AVOID IT?”

As a custodian of Island Lake: Protect it's environment and safeguard your health and financial investment

Toxic algae infestation: how to avoid it?

The phosphates found in many house cleaning products are largely responsible for environmental issues like the proliferation of toxic blue-green algae in lakes. The blue-green algae found in waterways are microscopic organisms that in the right conditions can proliferate and form a bloom, emitting toxins that are a potential health hazard for humans and animals.



Prevention is the best solution

The blue-green algae problem is complex. The best solution to the problem is to act directly at the source: avoid sending too much phosphorus into the water. Here are some actions for us all:

- Restore natural vegetation along shorelines. Vegetation acts as a natural filter and uses phosphorus in the soil for its growth. It also helps prevent erosion of soil, which releases a lot of phosphorus. Protect and take good care of the **15m width** of vegetation from the shoreline (also required by law);
- Keep your **shoreline opening** to a minimum -the municipal regulation allows **up to 2m**;
- Choose landscaping designs that minimize upkeep and limit the use of compost and manure in your gardens and avoid fertilizers all together;
- Use phosphate-free soaps and cleaning products in your household;
- Be sure your septic system is properly maintained and installed.

Septic systems are designed to treat human waste, and do so only partially – they do not treat phosphates or other chemicals. So don't pour those down the drain. Whatever you put into your septic system over time will seep into the ground, and depending where your system is – will migrate into the lake. Collect all your hazardous and unfit waste in separate containers and bring them to the annual Municipal collection site. What's more, you can forego using certain chemical products altogether by replacing them with environmentally friendly products that will also reduce your exposure to health hazards. Visit: www.lesstoxicguide.ca (click on "Household Cleaners" for an excellent guide to alternatives and an understanding of the health risks of many products available on the grocery shelves)

Rethink your habits and change your practices.
Set yourself a goal and rid your household of products that hurt our environment.

A special focus on dishwasher detergents: most contain phosphates

The phosphates present in dishwasher detergent can vary enormously - from less than 1% to more than 10%. They are a serious contributor to phosphates in lakes, and are currently not regulated. **Some brands in order of increasing phosphate presence:**

<ul style="list-style-type: none">• Palmolive gel 1.6%• ElectraSol gel 3.7%• Wal-Mart gel 4.0%• Pure Power gel 4.0%• Sunlight gel 4.3%• ElectraSol powder 4.5%• Sunlight powder 4.5%• Cascade liquid 5.0%• Cascade Complete liquid 5.0%• All powder 5.1%	<ul style="list-style-type: none">• Pure Power powder 5.3%• Hannaford powder 5.3%• Shaw's powder 6.0%• Wal-Mart powder 6.3%• Cascade PureRinse powder 6.4%• Cascade Action tablets 8.0%• ElectraSol tablets 8.7%• Sunlight tablets 8.7%• ElectraSol gel and tablets 8.7%
---	--

Some products are phosphate-free and advertise themselves as such.

If the label does not say "phosphate-free," then the product probably contains phosphates.

Buy the brands that are phosphate-free. These costs quite a bit more, but \$20-\$30 more per year per household is nothing next to the million dollars it would cost us to restore our lake – and there are no guarantees we could do it with that.

A few phosphate-free brands – buy these

<ul style="list-style-type: none">• BioVert liquid (Quebec brand)*• Bi-O-Kleen powder• Citrus Magic gel• Ecover*	<ul style="list-style-type: none">• Nature Clean*• Seventh Generation powder• Shaklee Basic-D powder• Sun & Earth tablets
---	---

*Phosphate-free brands are available locally at:

IGA, Farm Point: Bio Vert dishwasher gel – 1.8 L = \$9.99

Loblaws (St-Raymond blvd – near promenade des Allumetières)

- Nature Clean – dishwasher powder – 1.8 kg = \$8.99 (42 loads)

La Boîte à Grains – 581 blvd. St-Joseph, Hull, 819-771-3000

- Ecover – automatic dishwasher tablets – box of 25 tabs (500g) = \$8.49
- Nature Clean: dishwasher gel 1.8 L = \$10.99 *or* dishwasher powder 600g = \$5.29

You can also try a **simple recipe as a substitute** to store bought products: try mixing an **equal part of borax and baking soda** and use about 2 tablespoons in your dishwasher's detergent holder per load (store the mix in a tightly sealed container so it doesn't absorb moisture). If you have hard water, double the amount of baking soda in your mixture. For either mixture, use vinegar in the rinse cycle.

Let's Do it !...

**Rethink your habits and change your practices.
Set yourself a goal and rid your household of products that hurt our environment.**

“GIANT HOGWOOD: Poisonous Invader”

Giant Hogweed (*Heracleum mantegazzianum*) – Poisonous Invader



Giant hogweed [*Heracleum mantegazzianum*], a highly invasive plant species that is both dangerous to human health and has negative environmental impacts, has been spreading rapidly in Domaine Woodsmoke over the past few years. It is the subject of eradication campaigns in (among others) many Western European countries British Columbia and a number of U.S. northeastern and western states. Recently it has been the subject of a safety warning for Ontario highway workers. Because of its unique size and impressive white flower head the plant was originally introduced to Great Britain from the Caucasus in the 19th century and later brought to North America as a showpiece in arboreta and Victorian gardens

Giant hogweed is a perennial herb with tuberous root stalks. It survives from one growing season to another both by forming root tubers and through seeds. Flowers produce numerous (up to 10,000), half inch, winged, flattened oval seeds in late summer. When dry, these seeds can be widely spread by animals, surface runoff, wind and car. Seeds can remain viable in the soil for many years. Giant hogweed grows in a wide range of habitats but prefers rich, damp soil such as in roadside ditches and other moist disturbed areas.

Ecological Impacts

Colonies of giant hogweed become very dense because of the plant's prolific seed production and rapid growth rate, crowding out native plants that need direct sunlight to grow. The loss of beneficial native plants reduces an area's utility for wildlife habitat. When smaller stream bank plants are displaced, erosion and silting increase.

Human Health Risks

Spread of this plant in settled areas is viewed as an incipient public health hazard. Moist skin contact with giant hogweed sap from a broken stem or crushed leaf, root, flower or seed, followed by skin exposure to sunlight may lead to severe burns and blistering as well as long-term discolouration and scarring. The greatest risk is getting sap in one's eyes. (Seek medical help immediately!) The plant's watery sap contains a glucoside that sensitizes the skin to ultraviolet radiation. Affected areas may remain hypersensitive to sunlight.

The only known antidote to contact with the sap is to immediately wash skin thoroughly with soap and water, removing the sap and hopefully preventing any reaction with subsequent exposure to sunlight. The best prevention measure is to wear long sleeves and long pants

when contact with the plant is a possibility. Thoroughly wash all clothing that has been in contact with plants.

Control

Giant hogweed is very difficult to eradicate. Seeds of the giant hogweed have viability longer than 7 years, and its perennial tuberous root systems also spread the plant. Eradication efforts are most successful with plants in their first years of growth before flowering. Eradication programs generally incorporate a combination of physical removal and chemical control. Highway eradication programs often use herbicides containing glyphosate,= (e.g., "Roundup"), but this also kills surrounding plant life and remains in the soil. It should not be an option around flowing water bodies. Non-chemical methods may require many seasons of effort to control the plant. Wear waterproof gloves, long sleeves and eye protection (glasses or goggles.)

1. Methods include digging out individual plants. Removing the entire rootstalk is best but not always feasible. This should be done with young plants before they spread, as it is a very difficult process where the plant has spread by root growth.
2. If you only have a few plants in a small area, you can cut them down to ground level and cover the soil with black plastic. This will keep the plants from regrowing and prevent new giant hogweed seedlings from emerging. Keep an eye on the site the next year to make sure that seedlings don't poke through the black plastic.
3. Cutting and using line trimmers can remove a standing crop and starve the rootstalk. A long, sharp serrated knife is the best tool for cutting hogweed stalks or leaves. Do not use a "weed-whacker" or brush-cutter blade because the sap could be splattered on you as stems are cut. Unfortunately, unless performed numerous times during a season, mowing only serves to stimulate budding on the rootstalk. Carefully cut off all buds and flower heads and place in trash bags. If seeds have formed, be especially careful to avoid shedding of seeds onto ground during the cutting and bagging process. Ideally, do this prior to seed formation, because more mature seeds tend to shed easily. Shedding seeds should be contained within as small an area as possible.
4. Disposal: Stems and leaves can be left on site or composted IF there is no risk of human contact. Seed heads should be disposed of separately by burning or sealing in plastic bags to rot. It is crucial to prevent dispersal of seeds to other areas. **Have** several large plastic trash bags ready in preparation for disposing of hogweed flowers and seeds. Clear trash bags are best if you plan to "solarize" the contents but dark bags are suitable as well. Double or triple bag the plant parts to prevent ripping of bags by cut stems. Seal trash bags tightly. To "solarize", place bags in a secure location where they will be exposed to direct sunlight to give flowers and seeds a heat treatment for 1 week or more. This should help destroy seed viability. Then dispose of trash bags in the garbage.
5. Maintenance: You also need to prevent giant hogweed plants from flowering again and to eliminate hogweed seedlings from developing further. This can be accomplished by carefully digging out the roots and allowing plants to thoroughly dry before disposal.

http://www.mass.gov/agr/pestalert/GHW_brochure.pdf (British Columbia)
www.hort.uconn.edu/CIPWG/giant_hogweed.html (Connecticut)
<http://www.royaloakcommunity.com/index.php?pageId=12119> (Michigan)
http://www.dec.ny.gov/docs/lands_forests_pdf/ghfactnyseagrant.pdf (New York)

“PURPLE LOOSESTRIFE: A Threat to Waterways and Wetlands”

Purple Loosestrife

PURPLE LOOSESTRIFE

**A SERIOUS THREAT TO THUNDER BAY AREA WETLANDS &
WATERWAYS**

[History](#) | [Impacts](#) | [LRCA Action](#) | [Loosestrife-Eating Beetles](#) |

[Control Options](#) | [Do Not Plant](#) | [Identification](#) | [Reporting Form](#)



HISTORY - THE ARRIVAL FROM EUROPE

Purple loosestrife (*Lythrum salicaria*) is not a native species; it was introduced to North America in the early 1800's from Eurasia. Settlers imported plants for their gardens and seeds were present in soil used for ballast on ships.

Since those early beginnings, purple loosestrife has found its way into wetlands in nearly every Province and State in North America. In 1990, Purple Loosestrife was first documented in the Thunder Bay area. Since that time it has been found in several locations in the City and surrounding municipalities.

WETLAND DESTRUCTION

Lythrum is a very hardy perennial plant that can outgrow cattails, sedges, rushes and the other native aquatic plants on which wildlife depends. The roots of loosestrife form a dense mat that blocks other plants from growing up. Eventually, it chokes out the other vegetation and soon becomes the dominant species. In marshes where a loosestrife seed source is present, the plant can be expected to colonize exposed areas in high densities with great speed.

A change in the diversity and type of plant species threatens the hundreds of species of plants, birds, mammals, reptiles, insects, fish and amphibians that rely on healthy wetland habitat for their survival. For example, cattail stands are home to Muskrats and a variety of nesting birds, such as Marsh Wrens. Purple loosestrife does not provide the necessary shelter and food sources.

The dense loosestrife roots also clog water channels in the marsh. These are places where fish would come in to spawn, ducks would feed, nutrients would flow and insects could hide and feed along the edges.

Thousands of hectares of wetlands, marshes, pastures and riparian meadows are affected in North America each year, with an economic impact of millions of dollars. Roadside and agricultural drainage ditches can be affected, resulting in extra costs for more-frequent cleaning.

CONTROL OF LOOSESTRIFE

There are several management techniques for controlling purple loosestrife. The L.R.C.A. recommends hand pulling as the most effective method where appropriate. Herbicides are not recommended, as they will effect other species.

Hand pulling:

- Effective and selective
- Best done while plant is in flower (i.e. July and August) and before it goes to seed

<http://www.lakeheadca.com/lstrife.htm>

2008-09-08

- Loosen soil with garden fork or shovel; grasp plant firmly near the base and pull evenly to avoid detachment
- Plants should be dried, burned or put in garbages and disposed of in a sanitary landfill where there is no chance of spreading
- Check annually for new plants



- In 2006 and 2007, Ontario Rangers from Sleeping Giant Provincial Park, Nipigon and Thunder Bay removed over 12-tonnes of Purple Loosestrife from patches along Oliver Road in Oliver Paipoonge and Lakeshore Drive in Shuniah Township. Large patches remain in each area.

Cutting:

- Used to contain large populations of loosestrife, by reducing stem numbers and seed production
- Care must be taken to gather up the cuttings
- Repeated cuts are required to eliminate the plant from the site

Biological Control:

- A long-term solution that will not completely eradicate, just reduce density of loosestrife
- Involves releasing European insects that are predators of loosestrife
- Thorough scientific screening of potential species has resulted in a few being approved for release
- LRCA released *Galerucella* beetles at two sites near Thunder Bay in 1997 and at three sites near the Kam River in 2003. In 2007 beetles were released along the Thunder Bay Expressway near Dawson Road.
- At a release site east of Thunder Bay, the beetles dramatically reduced loosestrife plants to short withered stems within a few years.



Herbicides:

- In most areas is not permitted for general usage
- Must be used with extreme caution, because herbicides are non-selective and will hurt the nearby vegetation

Do not plant any form of Purple Loosestrife

Purple loosestrife is available for sale. Do not buy it or plant it in your yard. New plants can grow from pieces or from the seeds of loosestrife. Although it is beautiful looking, even sterile hybrids of loosestrife can cross-pollinate with wild Purple loosestrife to produce seeds. If you have loosestrife in your garden, please pull it out and do not share it with friends.

[How to Identify Purple Loosestrife](#)

CONFIRMED SIGHTINGS

Citizen and staff reports indicate that the main growing sites are:

- Along the Kam River between James St. and Old Fort William
- Montreal St. and Neebing Ave.
- Along Oliver Road, west of the City
- Lakeshore Drive in Shuniah, between Amethyst Harbour Rd. and Birch Beach Rd.
- Several smaller sites scattered across the watershed

<http://www.lakehead.ca.com/lstrife.htm>

2008-09-08

“Help prevent the spread of EURASIAN WATER MILFOIL”

HELP STOP THE SPREAD OF EURASIAN WATER MILFOIL

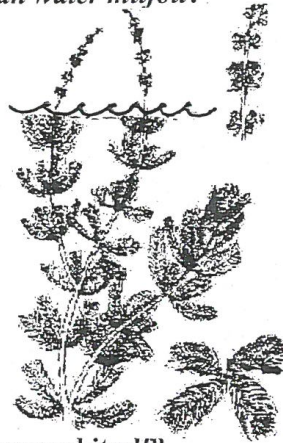
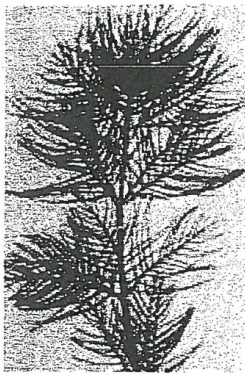
Do you reside or spend the summer at Notre-Dame Lake?

Are you also a fan of aquatic sports and activities?

**In order to continue enjoying these activities, your assistance is essential
to protect the quality of our waters**

For 2 years now, buoys have been installed near the bay's outgoing stretch of land (“presqu'île” area). The purpose of these buoys is to mark the presence of an exotic plant called *Eurasian water milfoil*. From year to year, this aquatic plant has been spreading with fervor. It was hardly visible 3 years ago in Lake Notre-Dame yet today this exotic plant has spread to become a huge field, measuring several tens of square meters! The *Eurasian water milfoil* plant is also present in several other bodies of water. You are likely to catch a glimpse of this plant along with the first signs of spring. When water temperatures reach a mere 4° degrees Celsius, the *Eurasian water milfoil* begins to grow (before any other aquatic plant!).

So... what is *Eurasian water milfoil*?



Originating from Europe, the *Eurasian water milfoil* is an invasive aquatic plant that grows an average of 1 to 4 meters in height. However, it has been known to grow as much as 10 meters! This plant forms a very dense carpet on water surfaces. According to Environment Canada, “the plant not only has an impact on existing native plants by largely displacing them, and possibly on fish populations by interfering with spawning, but also on human use of the habitats, for recreational use, for water transportation, or for water reservoir use.”

How does this plant spread itself?

Once the *Eurasian water milfoil* plant is introduced into a new body of water, it has the potential to cover the entire surface area. It can reproduce itself in two ways:

- Stems that have been accidentally cut or torn off plants will sink to the bottom, settle and easily survive if conditions are favorable.
- During spring season, stems will grow their own roots and naturally detach themselves from the mother plant. These stems fall to the bottom soon afterwards and colonize unaffected areas.

Each piece of stem can produce a whole score of new seedlings which makes it possible for the *Eurasian water milfoil* to spread itself aggressively. Engine-propelled vessels contribute significantly to the spread of the milfoil – *plant-infested areas can easily grow to four times their original size in only one year!* Such is the case with Lake Schryer in the Outaouais region between 1997 and 1998.

Is the *Eurasian water milfoil* truly a nuisance? Here's the lowdown:

- The *milfoil* plant can adversely affect fishing and fish populations.
- It can retard or block motorboats, seadoos and propeller blades, and lead to overheating and possibly burning out boat engines.
- It impedes swimmers and increases the risk of drowning.
- It makes waterfront properties less attractive to potential buyers, and thus decreases property values.

How can we slow down the growth of the *Eurasian water milfoil* plant?

- Avoid infected areas in order to decrease the risk of fragmentation (i.e. cutting) of this plant. Do not wander, swim or navigate boats through infested areas that are already carpeted with this plant. Do not circulate in shallow waters either. This plant may already be present but is not yet visible to you! Stay in deep waters!
- Prevent large influxes of soil and sediment from entering the lake (i.e. restore water banks and maintain natural plant growth along water edges, shoreline roads and waterfront properties).
- Reduce contaminants (from septic tanks, manure fertilizers and chemical pesticides).
- Under no circumstances should gray water be diverted from the septic system

Are there other ways to prevent the spread of this plant?

Over the years, many methods have been developed in order to limit the spread of the *Eurasian water milfoil* or even eliminate it completely. To some degree, all the interventions listed below disturb the natural environment and carry varying success rates. It is important to carefully analyze all the options we have to date. These options include lowering lake water levels (temporarily) to expose and kill the roots with freezing weather conditions, installing a fine screen on the bottom of the lake which inhibits plant growth, removing the plant mechanically, weeding, treating the plant biologically or chemically, using a Speece Cone, windmill, or other aerator.

For your information, several members of the two lake associations have already come together to create a committee which is currently studying the ecological impact of the various intervention methods in lakes infested by Eurasian water milfoil across Canada and the United States. With the help of experts in aquatic biology, this committee hopes to identify intervention method(s) that are more suitable for Lake Notre Dame. Furthermore, we hope to set up an association for the purpose of protecting Lake Notre Dame and its environment. Your assistance is essential!

We cordially invite you to join us by contacting any one of the people.

- | | | |
|--|----------------|-------------------|
| ➤ Jacqueline Lambert-Madore/ Kees Metselaar: | (819) 459-8843 | jackees@sprint.ca |
| ➤ Yves Dorval: | (819) 459-1052 | sevy@magma.ca |
| ➤ Carole Doré: | (819) 459-3092 | ccdore@yahoo.com |

What can I do in the meantime? Follow these instructions.

- Eliminate the use of fertilizers and chemical pesticides
- Make sure your septic system is up to code and emptied according to Municipal by-laws
- Do not use soap, shampoo or any detergent directly in the lake
- Avoid infested areas marked by special buoys (they are not navigational markers! Stay clear.)
- Use engine or pedal boats in deep waters only, where this plant is not likely present.
- Wash all boats, propellers, anchors and trailer hitches before and after use.
- Rinse all boating equipment before entering other bodies of water.
- Don't throw plant cuttings back into the water after removing them from your boat, propeller, etc.

Where can I find more information? Here are a few Internet sites for you to browse.

Center for Aquatic and Invasive Plants:	http://aquat1.ifas.ufl.edu/seagrant/myrspi2.html
FAPEL :	http://www.fapel.org
Environment Canada:	http://www.cws-scf.ec.gc.ca/publications/inv.p1_f.cfm
Eco-Guide International:	http://www.lake2000.com
Amis de la Terre/Myriophylle	http://www.amisdelaterre.be

Thank you for reading this package and learning more about the Island Lake neighbourhood and how to protect the shared watershed and woodlands.

Feel free to reach out to Island Lake Property Owners Association Board members or your neighbours with questions to help you get to know the Island Lake neighbourhood better!

**For more resources about Island Lake environmental stewardship actions, our Association, and our Neighbourhood, please visit:
<https://islandlakeassociation.ca>**