Kawagama Lake Plan

"Preserve the Heritage"

Lake Plan

Published in 2004

"Preserve the Heritage"

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Sights and Sounds of

Our Lake

Mist rising in the early morning,
a canoe silently gliding by,
coffee on the dock, children splashing and swimming,
the westerly breezes on a hot afternoon,
sun sparkling on ripples,
the silhouette of pines and birches,
the purr of the motor on an afternoon boat ride,
skiers jumping the wake,
a magnificent sunset,
fishermen anticipating their evening catch,
the fun of a family campfire,
the mournful cry
of a lone loon in the late evening darkness . .

walking through the woods, spectacular fall colours
rafting loons as the cold weather sets in
the first wet snow of November
skiing through the woodland trails
snowmobiling across the lake on a sunny afternoon
the smell of wood smoke
the peculiar tinkle that lake ice makes before it
magically disappears
calls of returning loons and ducks,
the laughter of pileated woodpeckers,
the sight of fox, raccoon, deer, bear and moose
and the buzz of bugs
and
at last, the cheery voices of our cottage
neighbours and friends

. . . such are some of the memories of images,

sounds and experiences

on our lake that sustain us and enrich our busy lives

when we are absent from this haven

that we all treasure

so deeply!

This document, part one, is the **"Roadmap"**, designed to provide background, identified issues, and plans to address those issues and to point the way to the future.

Part two of the plan, the ***"living document"***, will appear each year in **Reflections** entitled **"Our Lake Plan... Keeping Our Lake Great"**,

It will include:

- **Project Plan** committee **achievements** from the preceding year,
- **Objectives** for the coming year
- **Articles** and helpful **tips.**

These two parts of the plan will help us to preserve the heritage and to guide the evolution of our lake community while respecting the values, the culture, and the natural environment that are important to us all.

Please keep The Lake Plan close by

... on the coffee table ... in the porch... any place

where family and friends can read and reread it.

Acknowledgements

Thanks to everyone who contributed to this publication.

Special thanks to . . .

- all the members who attended the Lake Plan Introductory presentation at the July 2002 Annual General Meeting and who voted solid support to undertake the project.

- many KLCA members for their generous financial support.

- the Steering Committee members who have met often during the past two years, have attended innumerable Public Meetings, and have undertaken portions of the research and data gathering.

- Consultants, Randy French and Jill Atwood of French Planning Services for consultation, facilitation, feedback and support.

- Bill MacKillican for heading up the Residential Survey, supervising the design, training the tabulation team, analyzing the data, and preparing of the report. The results provided a rich and powerful source of information.

  He also served as a representative on the Public Advisory Committee (PAC) of the Muskoka River Water Management Plan (MRWMP).

- Dysart and Algonquin Highlands Councils and Administration have been extremely positive and supportive, and provided resources, and generous grants.

  They sought and accepted input from us for their Official Plan and By law revisions. We are most appreciative of our continuing partnerships.

- Oliver Pastinak, Water Technologist with MNR, Bracebridge and to Bob Bergman, Fish Biologist with MNR, Bracebridge. for answering questions, sharing research, providing information, and helping us with the acquisition of maps.

- Kim Benner, Planner for the Muskoka River Water Management Plan, our coordinating link with the MRWMP.

- members of the Muskoka River Water Management Team with whom we have had a continuing dialogue for the past eighteen to twenty-four months. We have not always agreed, since some of the objectives of the constituencies differ significantly. We have always treated one another with dignity and respect and we have kept the communication lines open and cordial. We are hoping that we'll end up with compromises that will bring about satisfactory solutions for all parties.

- Chuck McDonald for leading the Lake Plan process, managing the collection of information, and writng and producing the document.

- Rob Heathcock for taking and maintaining notes and minutes of all meetings.

- Peter Tumey and Bob Campell for their writing.

- Bruce Lewis for locating sources for maps.

- Eric Millar for his leadership and commitment on the Water Levels issue.

- Gord Rosewarne for preparing and updating our navigation and road maps.

- Bruce Robertson and Brad Carnduff for managing the Lake Plan finances.

- Jan McDonald for editing and desk top publishing.

KLCA Lake Plan
Section 1-Introduction

Background

In October 2001, the KLCA Executive approved a study of lake planning to determine whether we should recommend to the membership that we undertake such a project. Input from four workshops and seminars and a consultation with Randy French of French Planning Services, during the time from September 2001 to May of 2002 convinced us that Kawagama needed a plan to ensure protection and preservation of the community's values and the natural environment.

These input sessions were wake-up calls; they all preached good stewardship, lake planning, headwater protection, sustainable development, preservation / protection / restoration of natural shoreline and cooperation with other stakeholders including other lake associations, local government, and commercial and industrial entities.

Other participants at the workshops and seminars were envious of us because we have very little commercial development, little or no pollution flowing into the lake since Algonquin Park protects us upstream, a substantial amount of Crown Land and other privately held undeveloped land surrounding us, and a fairly natural shoreline around most of the lake.

We aren't faced with a lot of remediation and restoration as some other large recreational lakes are.

Our task is
Preservation & Protection.

Development will continue ...

... but cottagers and residents have a unique opportunity to influence it positively so that development does not exceed the lakes capacity to sustain it without irreparable damage.

What we choose to do today will impact the lake for years to come. By protecting our environment, the water will as safe and clear, the trees will continue to flourish, the birds will return in the spring, the fish will survive, and the "cottage" will continue to be our special retreat and playground.

It is hoped that the Lake Plan and the Project Plans will guide our decisions and actions.

At the 2002 KLCA Annual General Meeting all members voted strongly in favour of:

- embarking on a lake planning project
- selecting and hiring a consultant to assist us
- leaving the membership fee at $ 30.00 in order to provide a $ 5.00 per member start on financing
- appealing to the membership for donations

Six Stages of Shoreline Development

Without a Lake Management Action Plan, our lake, like every large lake, will go from phase 1 to phase 6! Research shows that this progression usually occurs on desirable lakes within one to three generations!

Stage 1 *A* ***single road*** *is brought to the shoreline at a single access point. A few cottages are clustered at the access point.*

Stage 2 *A* ***marina*** *is built at the access point and water access lots are opened up.*
The shoreline is quickly developed to about 30%.

Stage 3 ***Road access is developed to almost all of the shoreline*** *and the shoreline develops to capacity* ***within 1 to 3 generations.***

Stage 4 ***Driveways, cottage additions, garages, boat houses, and docks are added.*** *Loss of habitat, reduction in nearby wildlife, loss of "dark skies" becomes increasingly evident.* ***Buildings dominate*** *the environment.*

Stage 5 ***Full density around the shoreline is achieved with loss of natural shoreline, declining water clarity and quality.***
More marinas, resorts, and golf courses are added.

Stage 6 ***Back lot development, infrastructure development and increased commercial development occurs.*** *The lake takes on the look of an* ***urban development.***

Adapted from a presentation by Karl Scheifer

Purpose of Lake Planning

A Lake Plan process will . . .

- **provide an intensive consultative process that considers the interests of all stakeholders on the lake,** including shoreline residents, cottagers, commercial operators, large land holders, crown land managers, local government and lake users (e.g. anglers, boaters).
- **develop a consensus** on a common vision for the lake.
- **identify elements that need to be protected** in order to maintain the character of the lake.
- **identify** land use, water, recreation and resource management **issues**
- **propose remedial action.**
- **create a document" to provide structure and a guide for our stewardship, education, communication and restoration plans to "Protect the Heritage".**

We need a Lake Plan because . . .

- **we owe it to our children and grand children** to be good stewards so that we pass on an unspoiled lake environment.
- Muskoka and **Haliburton** are the **playgrounds** for a rapidly growing **GTA** (Greater Toronto Area) which is projected to grow by 2,000,000 over the next two decades. This is going to **create enormous pressure** for development!
- we are the **last large and affordable lake in the region** and we are the largest lake in Haliburton county.
- we are a highly **desirable headwater lake** with **very good water quality.**
- we need to **establish "lake capacity"** for development before we exceed it resulting in loss of the character that attracted us to the lake in the first place.
- we need **tools to prevent development of a type that would exceed the lake's capacity** to sustain it.
- **we need a plan to provide focus and direction in our preservation efforts.**
- a Lake Plan would provide **continuity in our volunteer organization** in which roles and leadership change quite frequently.

Section 2 - Mission and Vision

Our Values and Beliefs

"Preserve the Heritage"

Our Vision Statement

We the members of the Kawagama Lake Community, share the following vision of the lake. We wish to ensure that current and future generations will enjoy:

The beauty of the natural environment: the sparkling water, the crisp, clean air, the unspoiled shoreline, the scenic vistas of islands, hills, and forests, backlit by sunrises, sunsets and rugged, wilderness topography.

Pristine water quality.

A tranquil ambiance that nourishes a sense of peace, quiet, privacy, and remoteness that promotes relaxation and regeneration.

A wide variety of recreational options that facilitate family fun and other social opportunities.

A traditional cottage atmosphere with modest cottages, low density and minimal commercial development that preserves the natural, social and historic character of the lake.

An environmental sensitivity that conveys a sense of caring, a desire to protect the environment and to show consideration for other lake users.

A diverse and sustainable natural heritage of plants, fish and wildlife.

A Lake is the Landscape's
most beautiful and expressive feature.
It is the earth's eye; looking into which the beholder measures the depth of his own nature.

Henry David Thoreau

We Believe that...

Information for the ***We Believe*** statements came from the Resident's Survey and two workshops.

- ***all of us have a responsibility to practise good stewardship*** *in all of our activities so that we do no permanent harm to our lake environment.*
- ***each of us has a right to use the lake environment in our own way*** *as long as our activities don't infringe on the right of others to enjoy it in their own way.*
- ***the majority of the community enjoy the natural look of our shoreline*** *and prefer that it feature trees and shrubs rather than man-made structures.*
- ***each property owner has a responsibility to install and maintain a sewage disposal system*** *that complies with all setbacks and requirements at the time of installation. Maintenance includes a pumpout every 3 to 5 years depending on level of use.*
- ***all construction, renovation, or alteration must comply with the by-laws*** *in effect at the time of building and that a* ***building permit must be obtained*** *for all projects to build or modify a structure with an area greater than 100 square feet.*
- ***all property owners have an obligation to maintain a natural margin*** *of native plants and shrubs at the shoreline to slow down leaching of contaminants into the lake.*
- ***property owners should consider leaving their lakefront yard as natural as possible*** *consistent with a pleasant view of the lake. Consider cutting windows in trees that hamper the view rather than cutting them down.*
- ***all of us who use power boats on the lake should:***
  - *be thoroughly familiar with the rules of navigation*
  - *observe all laws*
  - *operate safely at all times*
  - *be courteous to other boaters*
  - *minimize wakes that can cause shoreline erosion*

Section 3- Lake Description

We treasure . . .

Coffee on the dock early in the morning with the mist rising off the glassy smooth surface of Kawagama Lake, a fisherman in a small boat trolling quietly past hoping for the big strike, a cheery wave and greeting from a friendly canoeist passing by, children laughing and splashing in the warm, inshore water later in the morning. A picnic at midday in the family runabout drifting and rocking gently while the sun sparkles on the ripples stirred by the warm breeze. A short trip to the Bear Lake bluff in mid afternoon to admire the majesty of the magnificent rock face illuminated by the westering sun.

A little later, cumulonimbus clouds appear in the northwest as a late afternoon storm by-passes the lake harmlessly to the north, entertaining with distant flashes of lightning and rumbles of thunder. Then, a savoury dinner prepared on the barbecue, followed by a quiet evening on the dock watching the neighbour kids water skiing just before a magnificent sunset on the western horizon paints the sky with brilliant peach, fuschia, and magenta colours forming the backdrop for the silver lined clouds.

In late evening after the children or grand children have settled for the night the loons entertain with their mournful cries punctuated occasionally by the laughter of another pair.

Experiences like these shape the memories that sustain us when we are away from our lake.

Physical Description

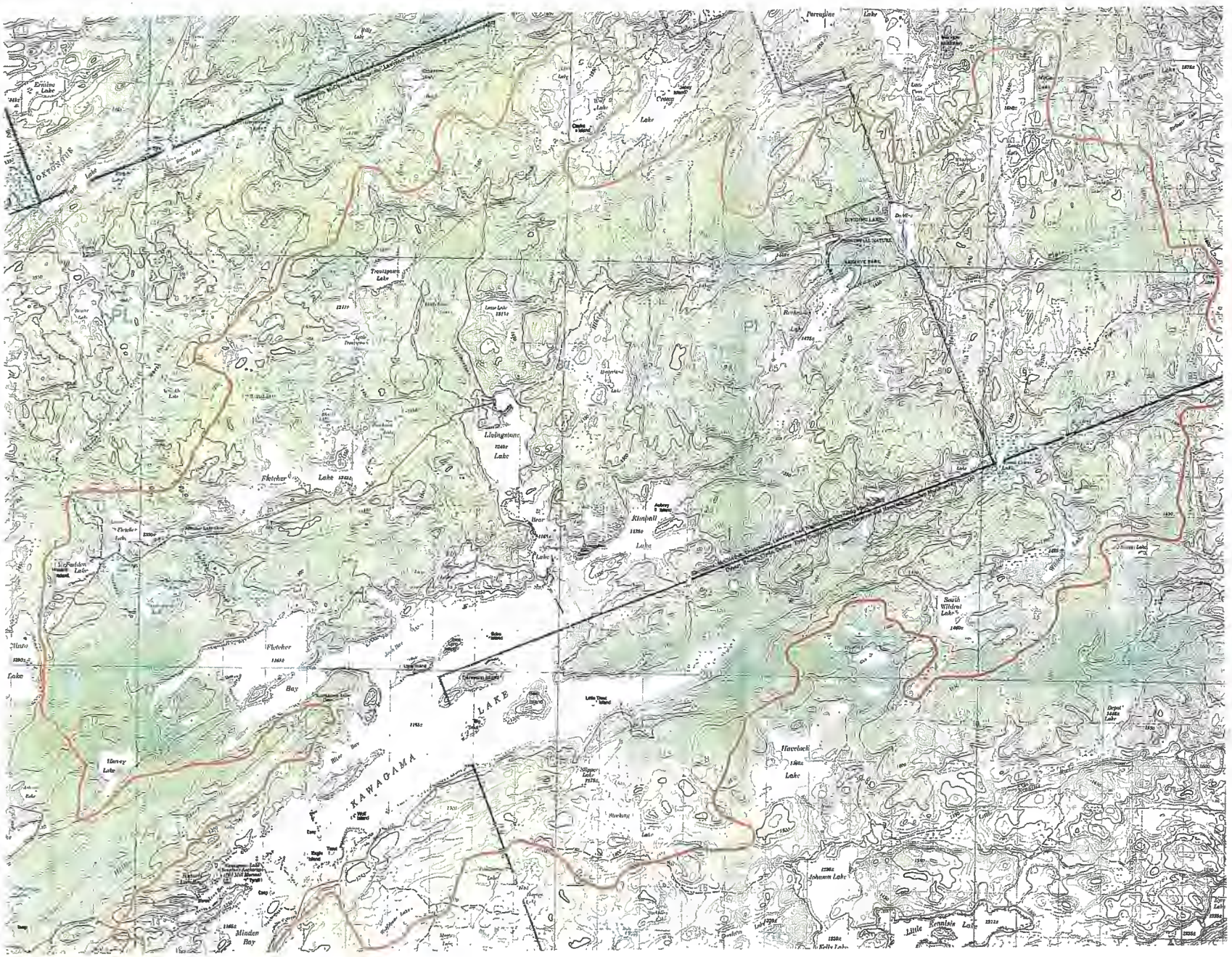
- **Kawagama is the largest lake in Haliburton County.** It is exceeded in size in this area only by the three Muskoka lakes and Lake of Bays.

Kawagama Lake statistics (supplied by MNR)

- Surface area of 32 sq. km. (2820 hectares or 6965 acres).
- Volume of 498,646 acre feet. (metric equivalent not available)
- Perimeter is 83.5 km. (51.8 miles).
- Maximum depth is 73.2 m (230 feet) and the average depth is 21.8 m (71.6 ft.)
- At high water the level is 355.6 metres (1,165 feet) above sea level
- Lake level is controlled by the MNR at the River Bay dam and has a maximum seasonal fluctuation of 1.57 metres (5.1 feet).
- Watershed is about 400 sq. km.
- One major river (East Hollow) and fourteen creeks drain into Kawagama.
- Twenty-two fairly large lakes with names recorded on the Topographical map and countless small lakes are drained into Kawagama by the river and creeks.
- Our lake is drained by the Hollow River flowing out of River Bay for 11 km. into Little Trading Bay or Johnny Cake Bay at Dorset after descending 40m. (131 ft.).

Bear Lake statistics (supplied by MNR)

- Surface area of 94.7 ha
- Volume of 905.4 m3x10 to the 4th power
- Perimeter (not available)
- Maximum depth is 36.6 m and the average depth is 9.4 m
- The high water level,dam control, watershed and drainage information listed above for Kawagama Lake also applies to Bear Lake.



Kawagama Lake

Watershed

Shoreline Development

	Dysart	Algonquin Highlands		Total
		Bear	Kawagama	
Total Number of Lots	121	62	717	900
◦ seasonal residents	64	53	651	767
◦ permanent	1	2	57	60
◦ vacant	56	8	9	73
◦ commercial	0	0	3	3
◦ beach/access points	1	1	1	3
◦ Crown land (%)	0	NA	NA	

These statistics were supplied by the Township Offices

Study Area

- The Lake Plan includes the waterfront areas directly accessible by water from Kawagama Lake and Bear Lake, although the report will generally refer to Kawagama.
- The Plan excludes the streams and rivers flowing into the Lakes and the upstream smaller lakes feeding them, so it does not encompass the entire watershed. The entire watershed is illustrated on the next page on **watershed map page 9b.**
- In total there are approximately 950 cottages encompassed in the study area.

Historical Influences

- Kawagama was the only major lake in the Muskoka/ Haliburton area not flooded by Lake Algonquin when the great glacier of the last ice age retreated between eleven and twelve thousand years ago.

- The first settlers were first nations people who set up camp on the western side of the Bear Lake Gap at the mouth of Bear Creek. They may have given the lake it's early name of Kahweambejewagamog - Lake of Many Echoes.

- The lake was known in the early years of the last century as Hollow Lake, probably because it was so deep.

- By 1945, the lake was officially renamed Kawagama, which may have been as the result of the Kawagama fishing lodge which operated on the lake in the early days or it may have been a simplification of Kahweambejewagamog.

- The earliest industry on the lake was logging (1880 to 1945). In the early 1880's, Mossom Boyd ran one of the largest operations on the lake. His mill was at Bobcaygeon on the Trent River system. In order to float his logs to his mill he planned to dam the Hollow River at River Bay in order to divert the outflow from Kawagama through the old glacial outflow from Minden Bay to Raven Lake. Other large timber companies got wind of his plans and were concerned about the reduction in flow that this would cause to the South Muskoka River system. They appealed to the Ontario Government to intervene, which it did, forcing Boyd to send his logs through the South Muskoka River system to Georgian Bay to have them sawn at competitors' mills reducing his efficiency and profit margin.

- By the late 1880's the J.D. Shier Co. held timber rights around Bear and Kimble Lakes and Mickle and Dyment held the timber rights around Kawagama and up the East River. The latter company established a lumber camp at the mouth of Bear Creek on the east side. One of the old log buildings still stands on the property very close to the creek bank. Both companies floated their logs down the Hollow River slide to Lake of Bays and towed them to Baysville for the journey down the South Muskoka River to their Bracebridge and Gravenhurst mills respectively.

- At some point during the logging era the out flow into the Black River at the south end of Minden Bay was dammed permanently to increase the flow down the Hollow River to improve the transport of timber to the mills.
- Some of the earliest settlers on the lake were employed by the logging companies. These included the Russells who built the original Mountain Trout House which was then located on the site where the new dining hall stands at Moorelands Camp. The Sawyers were another well known family of early settlers.

- Captain George Marsh's charter for the Huntsville and Lake of Bays Railway Co. also permitted him to build two portage railways - the one we know about from North Portage on Penn Lake to South Portage on Lake of Bays and another from Dorset to Hollow Lake. Can you imagine how different this lake would be today if Captain Marsh had considered it profitable to build this second railway?

Arriving at Mountain Trout House Landing 1938

- As the logging industry faded into history, hunting and fishing with attendant tourism replaced it. Some of the lodges and clubs include Mountain Trout House, Russell's Hotel, Willgold (more recently known as Bemaba Lodge), Bear Creek (using some of the Mickle and Dyment logging camp buildings),Timber Wolf Lodge, Kawagama,Tuscarora, Ohio, Jameston, Chimo, and Keervena Clubs. Most members and patrons were Americans.

- In 1924 a dam was built to control flow for power production at sites downstream. This dam replaced the old logging dam on River Bay raising the lake level nearly four metres flooding the entire shoreline including the location of a cemetery.

- Seasonal residential development progressed slowly during the '40's and '50's, probably because access was by water only. It took off during the '60's and 70's as access opened up with the development and extension of roads, and the mass production of affordable aluminum and fibreglass boats. The booming economy probably helped fuel the development surge.

- Compared to the 1960's and 70's development on the lake is definitely slowing for a number of reasons:
  - the most easily developed lands are already developed
  - there are fewer than 100 lots of record in Sherborne and a very few in Dysart.
  - there are restrictions on the number of lots that can be severed from large parcels and newly created lot sizes are larger than in the past
  - the law now requires that, where still possible, 25% of the shore line must remain as Crown Lands with public access.
- During the 1990's and 2000's back lot development along roadways, has increased.

Lake Character **The lake's history tended to define its character:**

- Seasonal residency developed rather recently as compared with other large lakes in the Muskoka / Haliburton region.
- Clear cutting by the logging industry in the late 1800's and early 1900's probably rendered the shoreline pretty unappealing.
- Access to the lake was definitely not easy with only one muddy road from Dorset to Russell's Landing and no navigable water access from Lake of Bays.
- Perimeter roads didn't develop until the late '60's and early '70's
- The early settlers were mostly here to serve the logging industry.
- Farming was largely unsuccessful, especially after the logging industry faded.
- The tourist industry that developed modestly was aimed at hunters and anglers rather than at wealthy tourists or seasonal home seekers.
- Water access in the early days tended to limit the size and type of cottages that were built leading to the generally modest and traditional type of buildings that do not dominate the shoreline or emphasize the man-made elements of the environment.
- The shoreline is generally natural looking, undisturbed, tree lined, with few boathouses or other shoreline structures apart from docks.
- The lake has only three commercial operations at present all of which are important to the community:
  - Mountain Trout House Marina (sales & service for small boats & snowmobiles)
  - Old Mill Marina (sales & service for small boats & snowmobiles)
  - Mooreland's Camp (Summer camp for underprivileged children from the GTA)
- Another commercial operation is proposed for the East Hollow River tract. An eco-tourism proposal to develop up to 500 yurt or small rental cabins on 9 acre wilderness sites is presently on hold.

Land Use Regulation

- Kawagama falls within two municipal jurisdictions, Algonquin Highlands and Dysart et al, both of which have been reviewing and revising their official plans and comprehensive by-laws. We continue to monitor this process carefully and to represent the respondents to the Residents' Survey as accurately as possible.

- In the opinion of the steering committee members, both municipalities are doing a good job of protecting the environment:
  - Both are conducting a septic reinspection program. We will include details of the results in the Lake Plan section of Reflections, when they become available.
  - Both are zoning creek margins and wetlands to provide environmental protection.
  - Both are increasing frontages, area, and setbacks for newly created lots. Algonquin Highlands will require frontages of 60 m (200 ft), setbacks of 30 m (100 ft) on Kawagama and an area of .4 ha (1 acre) for new lots or vacant lots of record. Dysart's Official Plan requires frontages of 150 m (450 ft), setbacks of 30 m (100 ft) and an area of 2 ha (4.9 acres) for new lots or vacant lots of record.
  - Both are requiring restoration of quarries and aggregate pits when operations are terminated.
  - Algonquin Highlands has applied for consent to build a new sewage lagoon at Pine Springs.
  - Algonquin Highlands has just begun a Waste Management study with public consultation.

Official Plans for both Municipalities have been passed.
By-laws for Algonquin Highlands have been written and passed but not implemented.
Dysart is about to begin the revision process for their By-laws.
We will continue to monitor these processes for both municipalities and will prepare a summary when appropriate for Reflections.

What Cottagers Need to Know About Algonquin Highlands Building By-law

Here is a handy summary of most of what you need to know when you are applying for a building permit.

Building Permits

- Building permits are required for new construction, additions, renovations, and any outbuilding with an area greater than 9 square metres (100 sq. ft.), boat houses and docks.
- If you require an accessory structure or a dock before the principal building has been completed, please contact the building department for regulations .
- Building permits can be obtained on Tuesday or Thursday from the Building Inspector at the Dorset Satellite Office of Algonquin Highlands. The permit cost will be determined by the Building Department. You will need to take with you a structural plan, a site plan and a Health Department approval for a septic system (if applicable).
- The building permit must be displayed during construction until the final inspection has taken place.

Lot Size Requirements for New Lots (Zoned SR-1, SR-2 or RR)

- Minimum lot area is 0.40 hectares
- Minimum lot frontage is 60 metres

Lot Coverage

- The maximum coverage for the principal building is 25% of the lot.
- The maximum coverage for the total of all accessory structures is 5% of the lot.
- The maximum coverage for all structures is 30% of the lot.

Building Height Restrictions

- Maximum height of the principal building is 10 metres.
- Maximum height of any accessory building is 6.0 metres
- Maximum height of a Sleeping Cabin is 5 metres.

Setbacks

- On newly created lots or vacant lots the minimum setback from High Water Mark on Kawagama is 30 metres
- Minimum setback from side lot lines is 6 metres on newly created lots or 3 metres on existing lots of record.
- Minimum setback from high water mark for septic systems is 15 metres (Ontario Building Code). Setback from a drilled well is also 15 metres. Setback from a dug well or spring is 30 metres.

Accessory Buildings

- One sleeping cabin may be erected as an accessory to a permitted dwelling provided that the total area does not exceed 40 square metres (430 sq. ft.), the height does not exceed 5 metres (16 ft.), it is not closer than 2 metres (6 ft.) to the main building and complies with the yard setbacks.
- Shoreline Structures, which include boathouse/ boat port, deck, dock, gazebo, pump house, storage shed, outdoor sauna, stairs and ramps, may be permitted provided that the maximum cumulative width of such structures does not exceed 30% of the shoreline to a maximum of 20 metres (65 ft.) of the shoreline. Further restrictions apply as noted below:
  - a pump house or dock must comply with the 6 metre side yard set back.
  - a gazebo, storage shed, or outdoor sauna must comply with the 6 metre side yard set back and must have a total floor area of 9 square metres or less.
  - a boat house/ boat port must comply with the 6 metre side lot line set back, must not exceed 5.5 metres in width, 4.5 metres in height (measured from deck to peak, nor have a roof pitch exceeding 6/12. The maximum projection into the water can not exceed 8 metres from the shoreline.

Additions to Legal Non-conforming Cottages

- A Building Permit may be obtained to add to any original cottage that is 15 metres or more from the high water mark as long as the addition does not encroach further on the setback.
- If the original building is less than 15 metres from the high water mark, the owner may apply to the Committee of Adjustment for a minor variance to add to the original building.

Rebuilds

- Contact the Building Department for clarification on demolishing and rebuilding any existing legal non-conforming building.

Natural Features

This is typical Haliburton county topography, with irregular shorelines creating many bays and inlets and some islands. Shoreline property is generally hilly,although there are some wetlands and some level areas. Shoreline is generally fairly heavily forested with trees up to 100 years old following the end of logging operations in the early 1900s. The shoreline is mostly sandy gravel, left when the glacier retreated about 12000 years ago when the last Ice Age ended with exposed granite points and outcroppings common on both the mainland shore and the islands. A thin topsoil layer has very gradually formed on top of the sandy soil and granite outcroppings around much of the lake during the millennium since the glacial retreat , except on much of the north shore where Canadian Shield granite predominates. In several areas, especially the north east of Bear Lake, this results in high cliffs. Kawagama is an especially deep lake, in keeping with the hilly topography around it, with depths up to 230 feet. Thus its earlier name "Hollow Lake."

Natural heritage features and areas provide ecological functions that are critical to the survival of all species - including humans.

The Kawagama Lake, Bear Lake, and Kimball Lake area is a relatively undeveloped region of Haliburton. Its location abutting Algonquin Park means that there are extensive forest regions with little of the developmental impacts found farther to the west in Muskoka. The presence of the Leslie M. Frost management area and the Haliburton Forest and Wildlife Preserve to the south also add to the remote and undisturbed nature of the watershed. The region around these lakes is characterized by mature mixed hardwood forests.

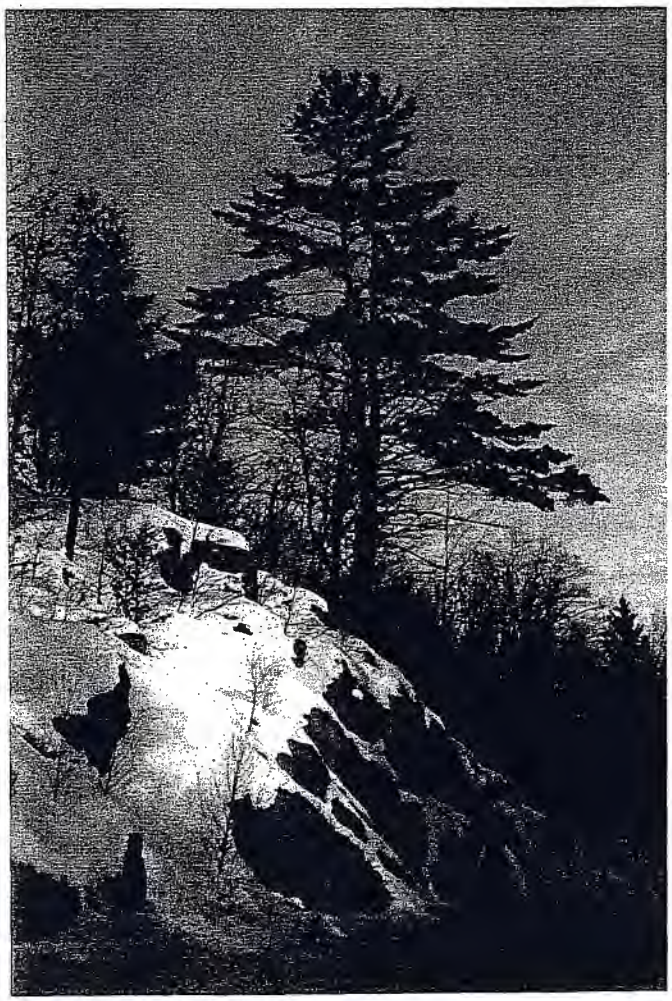
Two regions in the Kawagama Lake area are identified by the Natural Heritage Information Centre in their Natural Areas Report. One is the Dividing Lake Nature Reserve which abuts Algonquin Park in Livingstone Township. This area was identified as having Special Biological Features: the presence of old growth white pine associated with mature sugar maple , yellow birch and white elm. A second area is associated with the Kimball Lake area. This area is dominated by mature sugar maple up to 150 years old with a large stand of 200 year old hemlock and 170 year old black spruce.

In addition the MNR has identified the area between Kawagama Lake and Algonquin Park as an Enhanced Management Areas due to the remote access. The area southeast of Rockaway Lake to Dividing Lake is noted as particularly remote. The east end of Kawagama Lake is identified as a special study area because it may contain significant life science features.
The larger lakes in the area are all cold water fisheries with populations of lake trout and

smallmouth bass offering quality sport fishing opportunities. The lake regions also provide hunting opportunities for white-tailed deer, moose, and waterfowl.

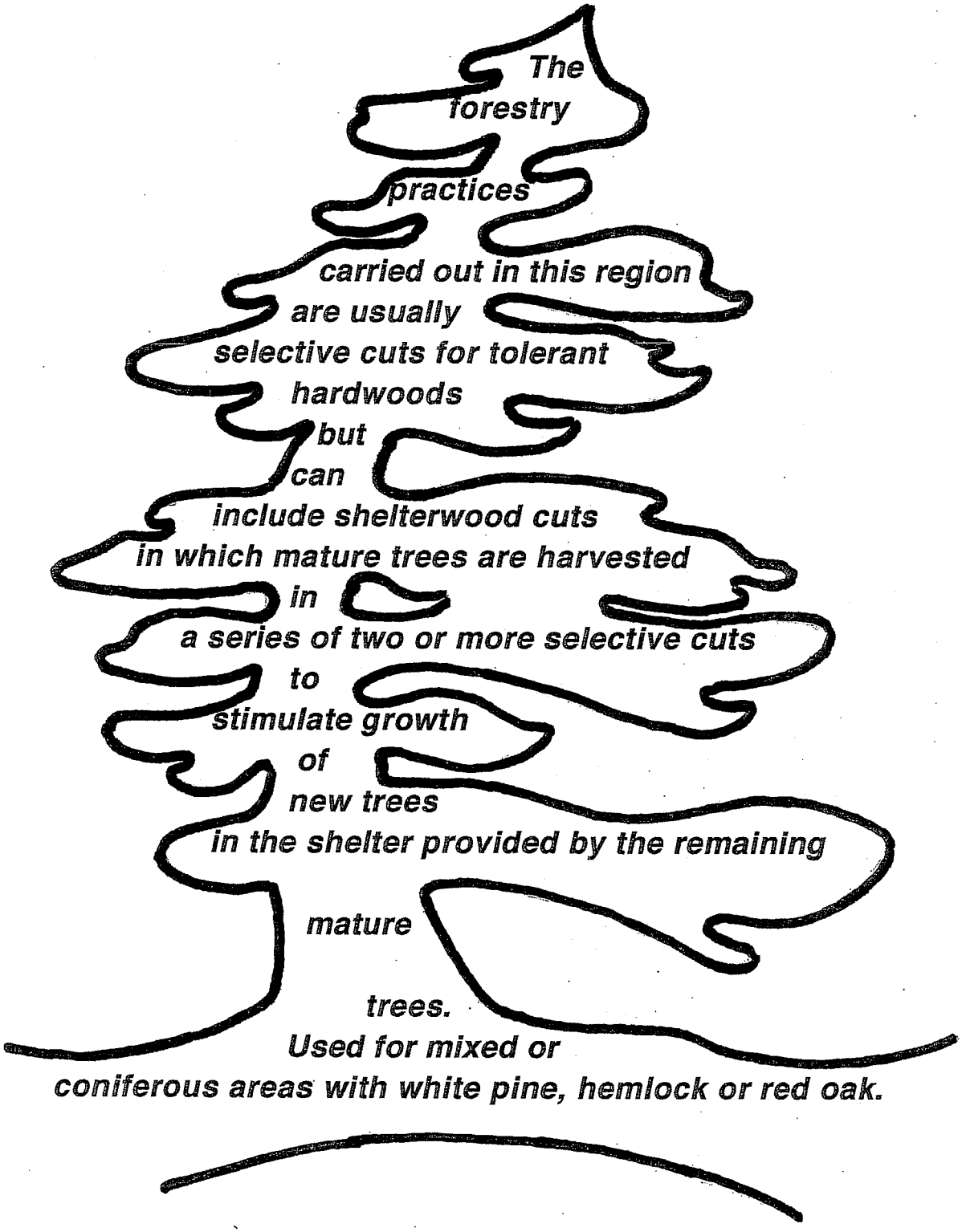
Vegetation

The Kawagama Lake watershed lies within the Great Lakes / St. Lawrence Forest region. This area is known as a mixed forest region and is a transitional zone between the coniferous boreal forest to the north and the southern deciduous forest region of eastern North America.The area is typically characterized by tolerant hardwood stands of sugar maple, american beech, yellow birch and red oak mixed with eastern white pine, red pine, eastern hemlock and white cedar. Boreal species such as white spruce and black spruce are also found along with the jack pine, aspen and white birch characteristic of the northern forests. Some landowners can point to a huge diversity of tree species on their properties, including specimens of sugar maple, american beech, yellow birch, white birch, white ash, basswood, ironwood, pin cherry, striped maple, hemlock, balsam fir, white cedar, white spruce, and white pine.



Almost all of the original forest cover has been removed through lumbering often on several occasions throughout the region's history. Some limited areas of the watershed contain old growth examples of maple, hemlock, spruce, and white pine. The Dividing Lake area which has been defined by the presence of scattered, ancient white pine trees has been recently affected by a windstorm which reportedly has toppled many of the larger trees. This points to the danger that any remnant forest faces when a single catastrophic event like a tornado can affect the characteristic of the area. Small stands are always more vulnerable than larger tracts.

The forests in this region are managed by Westwind Forest Stewardship Incorporated.


The
forestry
practices
carried out in this region
are usually
selective cuts for tolerant
hardwoods
but
can
include shelterwood cuts
in which mature trees are harvested
in
a series of two or more selective cuts
to
stimulate growth
of
new trees
in the shelter provided by the remaining
mature
trees.
Used for mixed or
coniferous areas with white pine, hemlock or red oak.

Wetlands

The Natural Heritage Information Centre defines wetlands as areas that are seasonally or permanently flooded by shallow water or which have the water table close to the surface. These areas all have hydric soils (water saturated) and water tolerant or hydrophyllic plants. Within this definition can be found a huge diversity of vegetation communities.

The NHIC identifies major types of wetlands communities as marshes, fens, bogs, and peat lands. Each community can be subdivided into various other types. For example, a marsh community series has Meadow Marsh, Shallow Marsh, Thicket Swamp, Deciduous mineral Swamp, plus five more swamp varieties within its larger classification. Each of the sub-communities has several different ecosites as further subdivisions.

Generally marshes are shallow wetlands with a variety of herbaceous plants while swamps are wetlands with significant tree cover. Bogs and fens are often associated with open wetlands in areas where decaying material has formed as peat rather than soil due to slow decomposition and high acidity (in bogs) or high alkalinity (in fens).

The wetlands scattered throughout the Kawagama Lake watershed are mainly shallow marsh and bog communities. The largest wetland area is found associated with the mouth of the Hollow River at the east end of the lake. This is a riverine marsh area with associated bog sites. It has not been identified as a provincially significant wetland but it is a vital resource to the health of the local lake environment. This wetland maintains and improves water quality, controls flooding, and provides habitat for a variety of fish and wildlife. It provides a number of recreational opportunities for lake residents including fishing, hunting and wildlife viewing.

It is fortunate that this wetland is found in one of the least developed areas in the watershed as this has led to its protection from many of the "improvements" that are often applied to wetlands in developed areas. Dredging, filling, and vegetation removal have not been serious impacts to date. Boating activity is also low due to the meandering river channel and the extensive number of stumps found in the area. Few cottages are found here and therefore much of the natural habitat remains undisturbed by the general "cleaning up" associated with many private properties.
Other smaller wetlands surround the entire lake area where small creeks flow into the main basin. Two marsh areas in Upper Fletcher Bay are accessible from the lake itself. One marsh is associated with the an outflow at the west end of the bay and another is found where a creek flows into the north shore of the bay.

A very accessible example of a bog community can be found at the head of the Bear Lake falls. The insectivorous pitcher plant and sundew can be easily seen in this area.

This small bog is associated with an open marsh and has many of the typical bog plants which are unique to this community type.

Fish Habitat

Kawagama Lake, Bear Lake and Kimball Lake support a wide variety of fish species.

Past Ministry of Natural Resource sampling has identified the following fish species in Kawagama Lake:

- Lake Trout
- Lake Whitefish
- White Sucker
- Brown Bullhead
- Red Shiner
- Short Head
- Red Horse
- Brook Trout
- Small mouth Bass
- Yellow Perch
- Burbot
- Blackriosed Shiner
- Bluntnosed Minnow
- Longnosed Dace
- Rainbow Trout
- Lake Herring
- Rock Bass
- Stickleback
- Common Shiner
- Iowa Darter

Brook trout were historically found in the main lake but have not been part of a typical catch for many years. These trout can still be found in the Hollow River below the dam but smallmouth bass are much more plentiful in the habitats formerly occupied by brook trout in this outflow. Smallmouth bass and lake trout are the predominant cold water sport fish in Kawagama Lake, Bear Lake and Kimball Lake today. Kimball Lake has received stocked lake trout on several occasions during the 1980's. Kawagama Lake is recognized by the MNR as a significant natural reproduction lake trout environment (Marquis species).

George Mackesy owner of
Mountain Trout House in 1950's

Smallmouth Bass Habitat

Kawagama Lake has a variety of habitat suited to smallmouth bass. Rocky structure abounds in many parts of the lake providing the crayfish, aquatic insect and minnow populations needed as forage for smallmouth bass. Deep, cold water provides the high oxygen content needed by the fish. The limiting factors are probably forage due to the low productivity of the oligotrophic (infertile) waters, and available spawning habitat. Smallmouth bass create nests in gravely deposits in shallow water areas near shore. These areas are also often found associated with cottage areas. Activities such as clearing of rock along shallow shorelines for crib construction or for swimming area improvements have led directly to the removal of bass spawning sites. Male smallmouth bass aggressively guard their nests containing eggs and fry following spawning in the spring and, since these nests are usually in shallow water, are very susceptible to disturbance from cottage shoreline activities. Untended nests are heavily affected by predation. The removal of woody debris from the shorelines also removes protective habitat for growing fry and leaves them open to increased predation. The maintenance of natural shorelines and the rehabilitation of developed shorelines into more natural states is needed to ensure a healthy smallmouth bass population in Kawagama Lake.

Lake Trout Habitat

Kawagama Lake is a cold water fishery that supports a naturally regenerating lake trout population. This is a significant resource since many lake trout lakes have had hatchery reared fish added at some point in their history. The lake trout is the marquis species in Kawagama Lake and is the target of much of the focused sport fishing. Lake trout are mainly found in the main lake basin and in Upper and Lower Fletcher Bay. The lake west of Moorelands Camp is generally too shallow to provide the deep cold water necessary for lake trout to be found year round. The Ontario Ministry of Environment Guide to Eating Ontario Sport Fish has consistently placed no limits on the consumption of lake trout from Kawagama Lake. This points to the high quality of the environment in this watershed.

A slot limit (a range of sizes within which fish must be released back into the lake) was imposed several years ago and is currently in place to reduce the impact of sport fishing on the lake trout population. This slot limit has been very effective at reducing the amount of the winter ice-fishing catch of lake trout on Kawagama Lake. There are, however, ongoing concerns over the health of the lake trout fishery in Kawagama Lake.

Lake trout typically spawn at shallow shoreline sites with an abundance of clean, coarse gravel. The water level management decisions resulting from the recommendations of the Muskoka River Water Management Plan could have impacts on lake trout reproductive success in Kawagama Lake. In fact, concerns have been raised in the past about the extent of the water level fluctuations between the fall and winter drawdown levels. The concerns centered on the possibility of exposure of spawning beds over the winter.

A Lake Trout Spawning Survey was conducted in the fall of 2003. Eighteen potential spawning shoals were identified. Only two of the potential shoals showed any spawning activity. Thirty percent of these eggs would be lost due to exposure to dry conditions or ice scouring during the winter drawdown.

A Lake Trout Spawning Survey was conducted during the fall of 2003 in Kawagama Lake to address these concerns. Lake trout spawning habitat was assessed and mapped with attention to substrate and water levels in potential spawning sites. Eighteen potential spawning shoals were identified. Only two of the potential shoals showed any spawning activity as demonstrated by the presence of eggs. Egg collection at these two sites showed that one shoal was the primary spawning location and accounted for the majority of spawning activity in Kawagama Lake. Based on an assessment of the water depth it was estimated that 30% of these eggs would be subject to exposure to dry conditions or ice scouring during the winter drawdown. The much less active secondary site was not subject to winter drawdown exposure. The full report of this Lake Trout Spawning Survey is expected in early summer. The preliminary work points to the extreme vulnerability of the lake trout fishery on Kawagama Lake. The early results of the study are already directing water level management decisions in the Muskoka River Water Management Plan. The final report will undoubtedly point to the need to protect these two remaining spawning shoals from any interference. Rehabilitation plans for the other 16 potential spawning shoals may be required. Failure to do so could lead to the loss of the fishery that defines Kawagama Lake.

Failure to protect the spawning shoals could lead to the loss of the fishery that defines Kawagama Lake.

Wildlife

The Kawagama Lake area provides significant habitat for a wide variety of wildlife due to its relatively undeveloped nature.

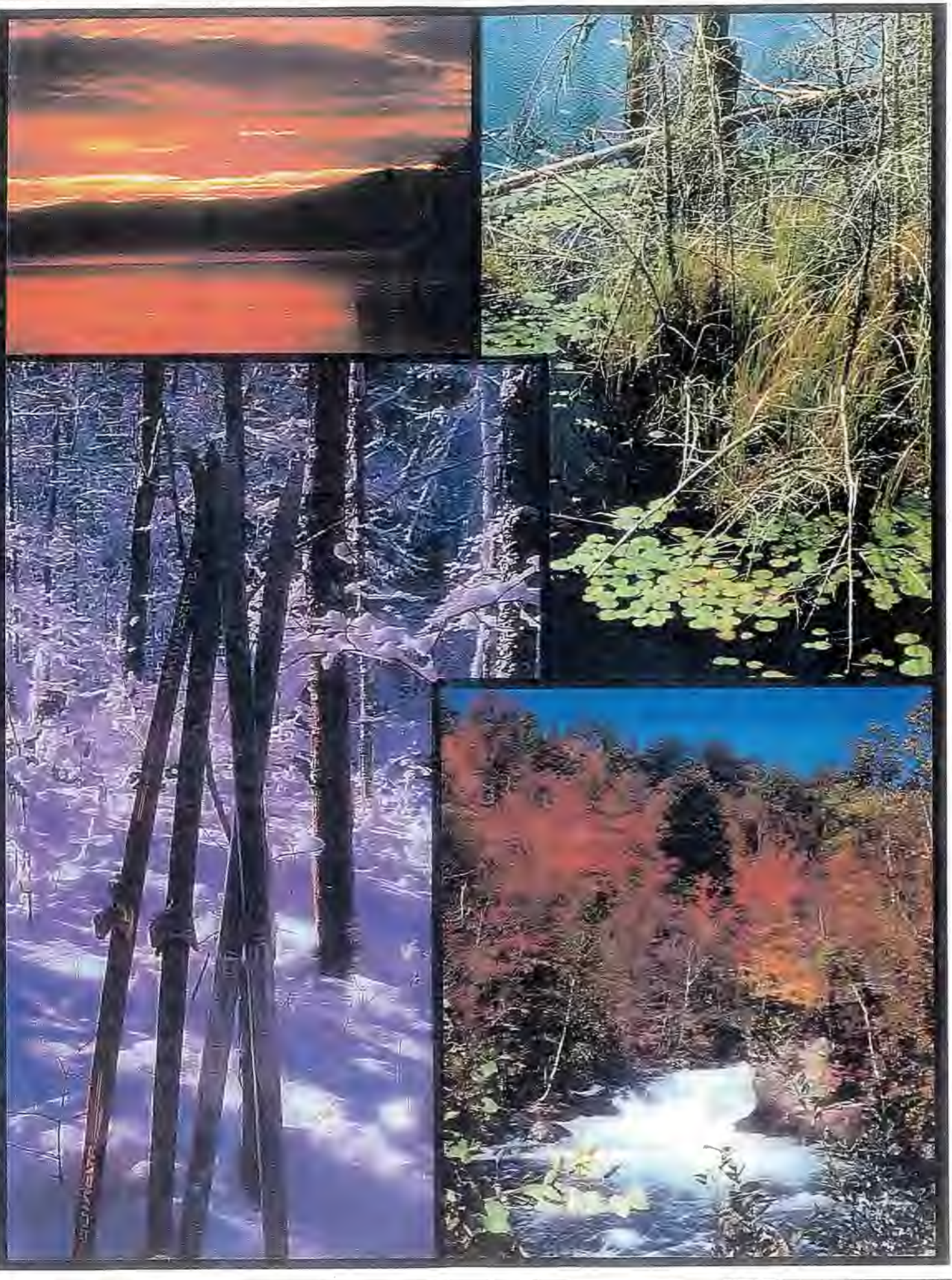
Significant wildlife habitat can be associated with remote areas, areas that seasonally concentrate wildlife, undisturbed natural areas, wetlands, areas that hold rare or endangered species, areas of high habitat diversity, or large areas holding wildlife representatives.

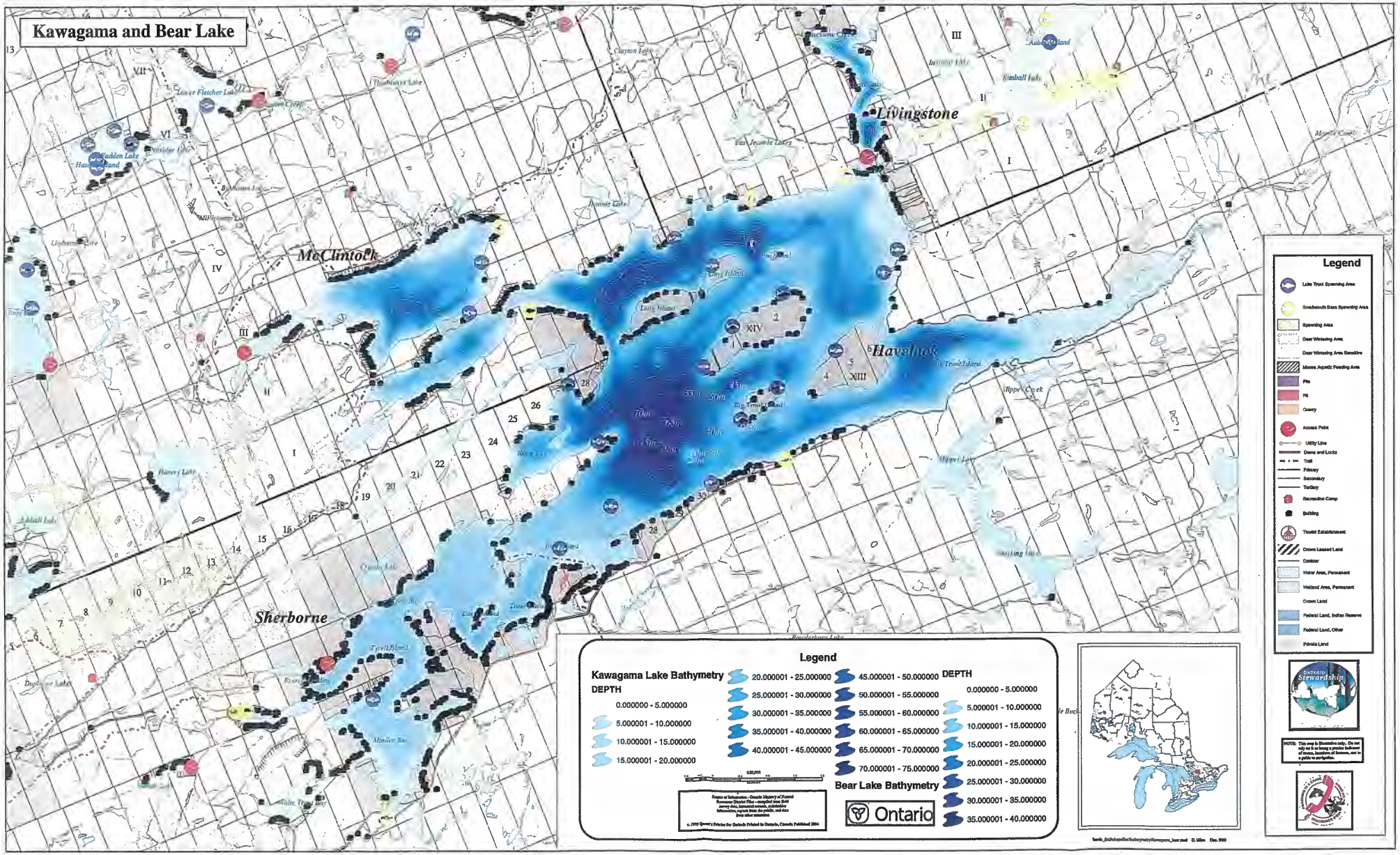
Areas of seasonal concentration of wildlife include winter deer yards, moose winter habitat, moose calving areas, colonial bird nesting sites, waterfowl stop over areas, and a variety of other specific habitat types. Scattered winter deer yard areas have been identified in the area surrounding Kawagama Lake. Several of these are west of Upper and Lower Fletcher Bay near Harvey Lake and Otter Lake. Several more are in the Leslie M. Frost Centre lands to the southeast of Kawagama Lake. The East River marsh area in Kawagama Lake and then south to Kennisis Lake has been identified as a moose early wintering area.

The area around Jeannie Lake north of Kawagama Lake has several sites identified with uncommon nesting bird species. These are sites of red-shouldered hawk nests. Red-shouldered hawks are very easily disturbed by human presence and thus areas supporting their nesting are considered important. Again it is the remote nature of the lake environment which is significant to the support of these species. Other raptor species found in the area include broad-winged hawks, red-tailed hawks, goshawks, osprey, and winter-visiting bald eagles. Turkey vultures are now joining the more common ravens which nest in cliff faces along the shore. Barred and Great-horned owls are also known in the area.

Waterfowl of several kinds are seasonal residents of Kawagama Lake. Nesting species include black ducks, mallards, wood ducks, common and hooded mergansers, and of course common loons. Loon nests are scarce on Kawagama Lake given its size. Minden Bay, Upper Fletcher Bay and the Eagle Island area have held loon nests in the past. The lake is also characteristically host to large concentrations of loons feeding and socializing through the late summer and early fall. Dozens are often seen in groups.

Much of the Kawagama Lake experience is associated with its feeling of accessible remoteness and with enjoyment of the wildlife it supports. Species uncommon in more developed areas such as otters and fishers can be sighted in and around the lake. The area is also significant for the blend of southern and northern species which are found here. White-tailed deer, cottontails, and coyotes share the environment with icons of the northern wilderness such as moose, snowshoe hares, and timber wolves. Chipmunks, black bears, beavers, muskrat, mink, ermine, long-tailed weasel, porcupine, red fox, raccoons, marten, plus countless mice, shrews, bats and voles: all share the Kawagama Lake watershed.




Kawagama and Bear Lake
McClintock
Livingstone
Haveliock
Sherborne
Legend
Kawagama Lake Bathymetry
DEPTH
0.000000 - 5.000000
5.000001 - 10.000000
10.000001 - 15.000000
15.000001 - 20.000000
20.000001 - 25.000000
25.000001 - 30.000000
30.000001 - 35.000000
35.000001 - 40.000000
40.000001 - 45.000000
45.000001 - 50.000000
50.000001 - 55.000000
55.000001 - 60.000000
60.000001 - 65.000000
65.000001 - 70.000000
70.000001 - 75.000000
Bear Lake Bathymetry
DEPTH
0.000000 - 5.000000
5.000001 - 10.000000
10.000001 - 15.000000
15.000001 - 20.000000
20.000001 - 25.000000
25.000001 - 30.000000
30.000001 - 35.000000
35.000001 - 40.000000
Ontario
Legend
Lake Trout Spawning Area
Smallmouth Bass Spawning Area
Spawning Area
Deer Wintering Area
Deer Wintering Area Sensitive
Moose Aquatic Feeding Area
Pits
Pit
Quarry
Access Point
Utility Line
Dams and Locks
Trail
Primary
Secondary
Tertiary
Recreation Camp
Building
Tourist Establishment
Crown Leased Land
Contour
Water Area, Permanent
Wetland Area, Permanent
Crown Land
Federal Land, Indian Reserve
Federal Land, Other
Private Land
Ontario Stewardship
NOTE: This map is illustrative only. Do not rely on it as being a precise indicator of routes, locations of features, nor as a guide to navigation.

Herptiles (reptiles and amphibians) have not been well recorded in the Kawagama Lake area. Often overlooked but still significant to the lake environment, reptiles and amphibians are found throughout the region. Reptiles reported in the area include the well-known snapping and painted turtles. Blandings, wood and spotted turtles have been reported in Algonquin Park and could be resident within this watershed as well. Snake species besides the common garter snake probably include brown, red- bellied, milk and smooth green snakes.

Amphibians in the watershed include frogs, toads, tree frogs and salamanders. The American toad is common to the area as are true frogs such as the green frog (often confused with the bullfrog), leopard frog and wood frog. Bullfrogs, though scarce, can still be heard in scattered wetlands on late spring and early summer evenings. Pickerel and mink frogs have been reported in Algonquin Park and could also be found in the Kawagama Lake watershed. Tree frogs such as the large Eastern Gray Tree frog and the tiny spring peeper can both be found in the area. A spring breeding survey during which frog calls are monitored could lead to confirmation of chorus frogs and others currently without direct recorded sightings.

Red-backed salamanders are very common in the Kawagama Lake area and can often be discovered with a little searching under damp logs and rocks. Blue-spotted salamanders and the larger yellow-spotted salamander have both been recorded in the watershed. Large egg masses of the yellow-spotted salamander can often be found in vernal ponds in the early spring. Unfortunately these eggs are highly susceptible to the acidic conditions in the snow melt which produces these ponds. Two-lined salamanders and red-spotted newts are also likely inhabitants of the watershed.

Invading Species

Any watershed supporting human activity will be affected by a variety of non-native species of vegetation or wildlife. Landowners often plant a variety of non-native trees, shrubs, and herbaceous plants while landscaping. Some of these garden plants have become widely distributed and have displaced native species. When this displacement occurs the new species is often classified as an invading species. Purple loose strife is an ornamental garden plant which has spread through many wetlands in Ontario. The bright pink floral stalks are not yet seen in the area marshes. Other notorious invading species include Zebra mussels, spiny water fleas, and two fish (ruffe and round gobies).

The Kawagama Lake basin was sampled a few years ago for the presence of zebra mussels and spiny water fleas. Zebra mussels have colonized most of the Great Lakes

and can be seen growing in thick mats on almost all solid substrate. When these mussels grow on the rocks forming the spawning shoals of lake trout, they can seriously impede reproductive success.

The good news was the absence of any evidence of zebra mussels.
The bad news was the presence of spiny water fleas.

Spiny water fleas are small crustaceans usually seen as gelatinous clumps which collect on trolled fishing lines and downrigger cables. These water fleas are less palatable to small fish due to their long spiny tails. Their effect on larger fish species is unknown. The impact of their presence on native aquatic crustaceans is also unknown.

Warning signs have been posted at both marinas and at the traditional boat launching sites around Kawagama Lake and Bear Lake. The signs ask boaters to be aware of the common pathways that invading species follow to infect new waters.

Physical Elements

Soils

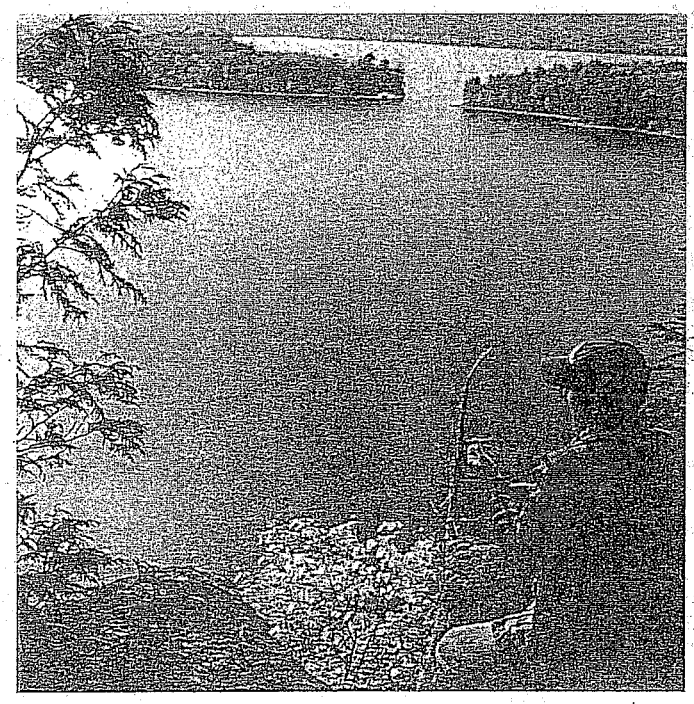
Soils in the Kawagama Lake watershed are characterized by a number of features including mode of deposition, surface material, drainage class, and soil profile.
The mode of deposition is classified as morainal which is associated with the effects of glacial action. The area has mainly a mineral soil surface material Sand, gravel and pebbles left by the melting glacier). These soil types are recognized as a rapid drainage class. Many small sand and gravel pits can be found scattered throughout the watershed as a result of these soil characteristics. The soil profile is that of a humo-ferric podzolic type which is commonly found under coniferous, mixed, and deciduous forest vegetation. This soil profile has a low fertility and these soils are typically shallow, stony and strongly acid.
The western half of the lake has a coarse sandy nature near many parts of the shoreline and this can lead to shoreline erosion where the overlying vegetation has been removed. A sandy, erosion-prone area can also be found at the northeast end of the lake.

There are frequent granite bedrock outcroppings throughout the watershed with the northern portion of the lake having much of the shoreline composed of steep bedrock formations.

Narrow Waterbodies

Kawagama Lake has a variety of narrow waterways associated with the myriad of bays found on the lake. Narrow waterways are often focal points in a lake with significant use especially when extensive shoreline development has led to a high cottage population. Many of these waterways are found in the more developed parts of the lake area. In the western end of Kawagama lake these include the entrances to Loon Bay, White Trout Bay, and Porcupine Bay. Wolf Creek and the narrows at Eagle Island are located in the central lake area. The approach to the dam at River Bay and the narrows between Upper and Lower Fletcher Bays are also narrow waterways. The narrows to Bear lake is one of the most congested waterways on summer weekends with significant two-way boat traffic. Much less travelled due to the shallow water is the connection to Kimball Lake.

These constriction points are often the areas where friction is greatest among lake users. High boat traffic combined with wake issues and close travel to private properties are accompanied by issues of dock and boathouse intrusion into narrow waterways. Consideration is needed by all parties in these areas.



Floodplains

Flooding problems are not a major concern in the Kawagama Lake area. Limited inflow, steep shorelines, an extremely deep lake basin plus a steep sided river valley in the major outflow prevent any serious problems of flooding. The large wetland area at the East River also helps to prevent flooding issues.

Social Elements

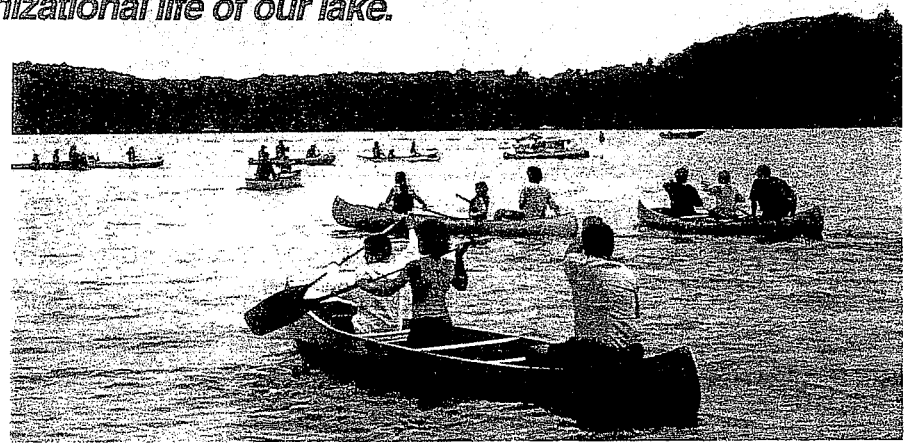
Most of us come to the cottage to escape busy urban environments for a while, to rest, to recreate, to enjoy social experiences with family members and friends, to enjoy peace, quiet, and the natural beauty of the lake and its surroundings. It is the place we come to "to get away from it all" for a while. While social elements are often difficult to deal with, they are often the most important influences (for better or for worse) on our experiences at the lake. While there is a remarkable similarity in the social values that our community shares, as revealed by the Residents' Survey and the Workshop, we do not all hold the same values. Some people from urban settings bring urban designs and landscape ideas and activities to the lake and often these values are in conflict with the natural environment, aesthetics and landscape that is the character of our lake and its surroundings.

The Dorset area is highly valued as a retirement destination. Our Kawagama membership reflects this! There are 60 permanent residents on the lake.

Residents desire and require "the comforts of home" and usually renovate their cottage into a year round home or build a new more modern structure. Balancing the modern needs of a home and a natural environment of a cottage is a growing reality of our lake community's social development.

Many young families are purchasing property or visiting family cottages. They have grown up in a society that is fast paced and views the cottage experience in a modern way. Their families will be the generations that will strongly impact our lake. Their ideas and involvement as volunteers and leaders is valued and vital to the well being of our lake environment.

Please encourage all family members to take an active part in the social and organizational life of our lake.



Landscape and Aesthetics

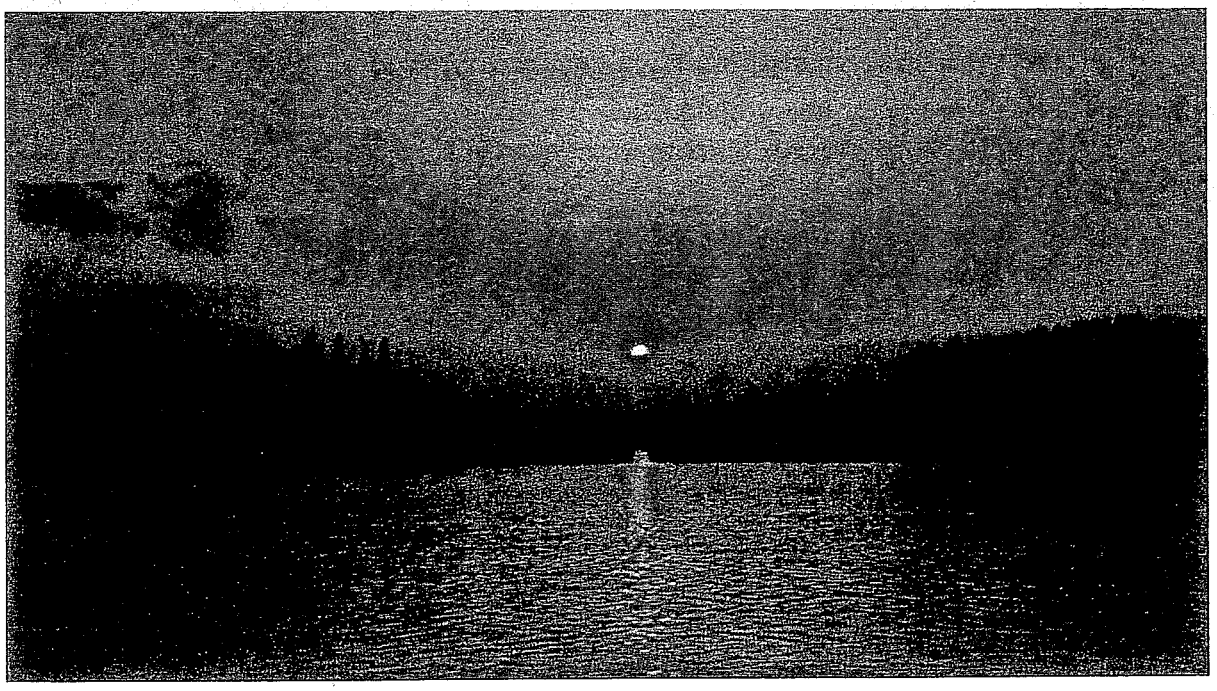
The most important landscape features are the shoreline and the treeline.

The Residential Survey revealed that the most important value among respondents was peace, quiet and natural beauty. "Natural Beauty" incorporates features such as natural shoreline vegetation, the treeline, the skyline, the relatively un-built appearance of the shoreline with man-made structures blending in unobtrusively as well as the natural beauty, views, and a balance of landscape types (bush, wetlands, open water, and rocky points).

Aesthetic values vary widely from person to person and often depend on the context of a person's lifestyle. Some prefer the "urban park-like setting" that is characterized by manicured lawns and gardens, while others prefer the wilderness or natural setting with few man-made structures in evidence.

The two most important landscape lines to be protected are the shoreline and the treeline. When viewing the opposite side of the lake, our eyes are immediately drawn to these two lines and anything that stands out on these lines can greatly impact the natural character. The main source of impact on these areas is the construction of buildings, associated out buildings and utilities that require the removal of natural vegetation.

We are very fortunate on Kawagama that most of our buildings blend in well with the natural environment. It will be important in the future, too, that consideration be given for building scale, landscaping and exterior lighting to help to preserve the wilderness feel that is so highly valued by our community of cottagers.



Cultural and Historic Sites

In spite of a fairly well established logging and pioneering history, as highlighted in the history section, there are relatively few historical buildings, structures or artifacts remaining. A few sites and buildings worthy of note include

- The site of the **first nations trading encampment** just west of the Bear Creek narrows.
- The old log structure (recently modified with an addition) that was part of the Mickle and Dyment logging operation located on the east bank of the Bear Creek Narrows.
- The **East Hollow River** flows into Kawagama at the east end of the lake. It is the largest river supplying the lake. The former **logging settlement of Fletcher,** was once located near the entrance to Kawagama Lake.
- The landing and boat ramp at the end of the Kawagama Lake Road, County Road 8, provides another public access point to the lake and is used by the fire department to provide quick access to the water access only properties on the islands and the eastern part of the lake.
- The **log cabin on Wolf Island which was originally built in the 1930's as a church** and was moved to Wolf Island much later.
- **Bemaba Lodge**, originally known as **Willgold**, is located on the South Shore behind Eagle Island.
- The **Russell homestead** is the gray log cabin currently owned by Mr. R. Grills on Minden Bay just north of the former Pathfinder Camp and Laurentian Lodge.
- **Blind Dam** is located at the southernmost point in Minden Bay and was built to shut off the flow into the **Black River system** to increase the flow down the Hollow River during the logging days.
- **Mountain Trout House Marina**, is located at Russell's Landing at the west end of the lake.
- **Old Mill Marina**, formerly the site of a steam powered lumber mill.
- **Moorelands Camp**, operates to serve underprivileged children from the GTA was formerly the site of the original **Mountain Trout House Lodge.**
- The gray cottage above **Fishpole Point** is one of the oldest cottages on the lake.
- **River Bay Dam**, built in 1920 on the site of the old logging dam, is operated by the MNR to control water levels in Kawagama to balance the social, recreational, environmental, and economic (power production) needs of the stakeholders.
- The landing at the west end of upper Fletcher Bay permits public access to the lake.

See Roads and Historic Features Map

ROAD MAP & HISTORIC SITES

Boating Use

Boating is the second most popular recreational activity (after swimming) enjoyed by 87% of our cottagers according to the Residents' Survey taken in the summer of 2002. There are approximately 4.0 boats per residence for an extrapolated total of 3,804 boats on the lake. Boating noise,speed, racing, and wakes were identified as major concerns by two thirds of respondents to the Survey with 192 respondents taking the time to write comments about the negative impacts of boating behaviours. As a direct result a number of initiatives have already been taken to address the concerns and a Boating Safety Committee has been established.

Recreational Opportunities

There is an endless variety of recreational opportunities available to our shoreline residents both on the lake including swimming, boating, sport fishing, hiking, cross country skiing, snowmobiling, photography, painting, and reading. In addition there are plenty of other activities available within a short drive including golf, fine and casual dining, museums and a pioneer village, good shopping, summer stock theatre, downhill skiing ... the opportunities are limited only by our imaginations!

Noise and Lighting

Peace and tranquillity is highly rated as one of the essential elements of life on Kawagama Lake. Noise impacts on the enjoyment of the natural setting and, although lighting was identified as a problem by only 3% of Survey respondents, property owners are encouraged to keep outside lighting to a minimum in order to preserve "dark skies" which make it possible to enjoy the stars on any cloudless night, and the northern lights on a few late summer and early fall evenings - an option not available to us back in our urban environments. Low voltage path lighting, motion detector controlled flood lighting directed downward toward the centre of the property are great ideas to help to maintain dark skies.

Social Opportunities

The relaxed pace of life at the lake tends to encourage family and neighbourhood social gatherings. In addition, the KLCA organizes the annual regatta on a lake wide basis and is offering an increasing number of educational opportunities including the input portion of the Annual General Meeting, and the Boating Safety Workshop. Others are being considered for the future.

Section 4 - Issues and Concerns

1. Boating Safety, Education, & Courtesy

Boating is an intensive activity on the lake, both from a recreational and necessity point of view. It is a necessity to the 29% of cottagers who have water access only. It is a pleasant recreational opportunity for 87% of cottagers, according to the survey.

There are a lot of boats on the lake. Survey respondents have 544 motor boats, 20 PWCs, and 721 non-motorized boats, for a total of 1285 or an average of 4.0 per cottage. Prorating this to total cottagers would mean 3804 boats are docked on the lake...fortunately not all on the water at the same time.

Please refer to the complete Residents' Survey Report in Reflections 2003 for the actual number of boats of each type.

Unfortunately boating also was recorded as the main concern of cottagers:

Boat Noise	66%	PWCs	65%
Boat racing	64%	Boat speed	59%
Boat wake	55%		

Boating was also the second concern in the write-in comments, with 85 cottagers (44%) complaining about the impact of boating on them. Of particular note was the objection to PWCs, with 65% of cottagers concerned with them, but they represent less than 4% of motorized boats! There is also a trend to higher-powered boats, with 27% having more than 100 hp, and 5% over 200 hp. On the other end of the spectrum, a lot of cottagers can enjoy wind power, with 86 sailboats reported (prorates to 255) and 88 wind surfers (prorates to 260). Perhaps there is an opportunity for a sailing club.

2. Water Levels

Our lake has always experienced a significant variation in level during the course of the year. This is of increasing concern to cottagers, with 44% of them expressing some degree of concern, and 19% identifying it as a significant problem for them. In addition 18 cottagers wrote in specific concerns with regard to water levels, some with regard to it being too high, and others that it is too low.

3. Development

Development was ranked third among issues and concerns identified on the Residents' Survey, with 25% expressing concern about new building. But many other concerns were noted that are a byproduct of development such as day noise (35%), vegetation removal (33%), night noise (22%), lights (12%) Write-in comments are probably a better measure of the concern here, as 70% expressed concern about development in the future.

Surely their future worries are valid. Cottagers are spending more time at the lake. Gone are the days when it was a summer retreat for a few weeks. Average occupancy is now 123 days per year, and only 43% of that is in the summer (53 days). The balance is divided almost equally through the other three seasons...26 days in the fall, 20 in the winter, and 24 in the spring. More time at the cottage increases the pressure for more cottage. The number of permanent residents has increased to a level of 13%, as retirees opt to live here full time. An additional 6% plan to move here permanently, and another 22% are considering it but are undecided. Against this change in occupancy, 30% indicated they plan to build additional living space in the foreseeable future. And this excludes any totally new development.

Cottagers are seeing changes all around them. Changes noticed on the lake in the past five years were reported in the survey as:

New buildings	73%	Dock construction	61%
Building additions	60%	Shoreline structures	55%
Boathouses	35%	Lawns to water edge	34%

4. Water Quality

Our survey showed that Kawagama cottagers appreciate the high quality of the water, with 90% rating it good to excellent. They value the clear, clean water highly, rating it second only to the natural unspoiled beauty of the lake, and 52% writing in comments on how much they value it. However 25% of cottagers are concerned about water quality in the future, and whether we will be able to retain the quality we enjoy today.

Since Kawagama is a deep headwater lake protected upstream by Algonquin Park, it has been protected from pollution. The water remains clear and largely free from contaminants. Secchi disk readings have shown clear water ranging from 4.5 to 10 metres in depth depending on where the samplings were

conducted. Phosphorous loadings have been consistently low and dissolved oxygen levels are considered by MNR to be excellent.

There has been a modest reduction in clarity in recent years which may be partly attributable to very warm summers promoting algae blooms, and perhaps to increased development pressure with accompanying human impacts. This is especially true in shallower areas such as Minden Bay.

5. Maintenance of Natural Habitat

Although there was very little concern expressed for the preservation of natural habitat, appreciation of the wide variety of fish and wildlife was a value expressed often in written comments and at the Residents Workshop. If we are to maintain a healthy fishery and continue to see deer, moose, bears, and smaller wildlife on a frequent basis, we need to learn more about preserving natural habitat. We need to compile additional information on streams, wetlands, loon habitat and other environmentally sensitive areas on the lake. Monitoring the health of the watershed is a long term goal that should be implemented.

6. Maintenance of Natural Shorelines

Again, little concern was expressed because we do enjoy very natural shorelines around the lake and the natural shorelines are clearly a value held by most cottagers. Again if we are to preserve the wilderness feel, we are going to have to learn more about how to preserve it and how important it is to maintain a healthy "Ribbon of Life" along the shoreline to maintain spawning beds and habitat for all kinds of fish, other aquatic life, and small mammals.

7. Communication

Good communication is essential to the maintenance of a healthy lake and a healthy social community. Reflections will continue to feature articles to inform&educate our members. Our website www.klca.org is another valuable communication tool.

The most appropriate
preservation and remediation tools
are considered to be :
Land Use Planning,
Education, Communication, and Stewardship

Section 5 - Plans of Action

The Lake Plan Steering Committee identified the most urgent issues based on the Residents' Survey Summary, the Residents' Workshop Summary, and the Stakeholders' Workshop Summary and developed short term objectives and plans of action to address these.

> Much has already been achieved on these initial projects and is reported in the **Our Lake Plan - " Keeping Our Lake Great"** section of **Reflections 2004** entitled **Steering Committee and Project Committee Activities Achievements to Date**. These five objectives are continuing projects which will give shape and direction to the KLCA as it evolves in the near future.

Four more Projects have been identified since the Lake Planning process was begun. **These nine project plans should not be considered to be the only outgrowth of the Lake Planning exercise.**

Outcomes for each Project Plan should be evaluated annually and new objectives established as necessary. Several Committees have already been established to implement objectives and others will soon be initiated or expanded. Some of these will be long term, such as Boating, Water Quality, and Communication; others will have a shorter mandate as deemed appropriate.

Some of our projects will be very successful when we have full control of all of the parameters while,
inevitably, others will fall short because we do not have full control.

Project Plans

The Steering Committee regards this set of nine Project Plans as the most important element of the Kawagama Lake Plan!

Objectives:

1) Provide a process for each project committee to follow, to ensure uniformity among all the committees for setting annual objectives for the coming year and for reporting achievements for the year just past.

   These are due each spring by April 30 for reporting to the executive and for publishing in the Lake Plan section of Reflections.

2) Ensure that, as much as possible, the Lake Plan remains a long range road map.

3) Provide flexibility and ownership for each committee to select it's own objectives in keeping with the issues and concerns from the membership and other stakeholders.

For a listing of the 2004 Project Plan Committee membership please see Acknowledgments in the Lake Plan section in Reflections 2004.

1. Boating Safety, Education & Courtesy

Objective

Significantly improved Boating safety, boating courtesy and consideration for others by all boat operators.

Description

This is an education/ communication project to stimulate cooperation, to promote courtesy, to promote safe boating habits and to reduce offensive noise levels.

Action Plan

1 Establish and maintain membership on a Boating Safety, Education and Courtesy Committee chaired by a person appointed or elected by the Committee to serve as Chair.

2 The Chair of the Committee is expected to arrange a minimum of one committee meeting each year in order to:

- identify Issues and Concerns recognized by the committee, the executive, and/ or the membership each year by March 1.
- prepare suitable objectives and action plans to address identified issues and concerns and forward to the Communications Committee Chair by April 30 for discussion and approval by the Executive and for inclusion in the Lake Plan Section of Reflections..
- prepare a report on achievements for the preceding year for Reflections and forward to the Communications Chair by April 30 of each year.

3 Inform and Educate Boaters regarding Boating Safety and Courtesy.

4 Prepare a Boating Code of Conduct for all lake users to be available at both Marinas and at Realty Offices .

5 Plan initiatives to protect the environment (e.g. Encourage cottagers to consider replacing two stroke motors with four stroke engines / Make environmental protection information widely available).

Contacts

KLCA Boating Safety, Education and Courtesy Committee Chair
O.P.P. Water Safety Officer (Minden OPP Detachment)
Neighbouring Lake Associations
FOCA Federation of Ontario Cottage Associations

2. Lake Levels

Objectives

1 Effective liaison with the Plan Coordinator of the Muskoka Water Management Plan (MRWMP) or other designated officer to monitor and report implementation and local effects of the final MRWMP Water Management Plan.

2 Effective liaison with the MNR Water Technologist to monitor and report effects of the new management plan.

3 Effective Communication with the membership to inform and educate with respect to the new Management Plan.

Action Plan

1. The Chair of this committee may establish and maintain membership on a lake levels committee to assist with the duties if deemed helpful or necessary.

2 The Chair of the Committee is expected to:

- arrange a minimum of one committee meeting each year, if a committee has been organized.
- identify Issues and Concerns recognized by the committee, the executive, and/ or the membership each year by March 1.
- prepare suitable objectives and action plans to address identified issues and concerns and forward to the Communications Committee Chair by April 30 for discussion and approval by the Executive and for inclusion in the Lake Plan Section of Reflections..
- prepare a report on achievements for the preceding year for Reflections and forward to the Communications Chair by April 30 of each year.

3 Maintain effective liaison with the management Plan Coordinator or other designated officer.

4 Maintain effective liaison with the MNR Water Technologist to ensure good communication with respect to the effects of the new plan.

5 Develop and execute an plan to communicate to the members the background, process and rationale that resulted in the new plan and the reasons why we were not completely successful in achieving all of our objectives for the plan.

6 Continue to monitor the management of whatever rule curves are ultimately established.

Contacts

KLCA Lake Levels Chair

Standing Advisory Committee to the MRWMP

MNR Water Technologist

Plan Coordinator for MRWMP (MNR Bracebridge Office)

3. Development

Objective

Continuous interaction and communication with both municipalities as they review and revise their Official Plans and Comprehensive Zoning By-laws in order to ensure adequate environmental protection and development controls consistent with the values of the majority of Kawagama Lake cottagers and residents.

Description

The KLCA seeks to maintain the current positive, mutually respectful and cooperative relationship that exists with both Councils and their Administrations. We'll continue to communicate regularly, to attend their public meetings and presentations on draft plans, and to prepare written responses.

We'll also share openly results of surveys and workshops and will continue to invite them to workshops, open meetings and the KLCA Annual General meeting in order to promote good communication and mutual understanding.

Action Plan

1. Establish and maintain membership on a Development Committee chaired by a person appointed or elected by the Committee to serve as Chair.

2 The Chair of the Committee is expected to arrange a minimum of one committee meeting each year in order to:
   - identify Issues and Concerns recognized by the committee, the executive, and/ or the membership each year by March 1.
   - prepare suitable objectives and action plans to address identified issues and concerns and forward to the Communications Committee Chair by April 30, for discussion and approval by the Executive and for inclusion in the Lake Plan Section of Reflections..
   - prepare a report on achievements for the preceding year for Reflections and forward to the Communications Chair by April 30 of each year.

3 Monitor the implementation of the Algonquin Highlands Official Plan.

4 Monitor the development of the By-laws by Dysart et al

5 Ensure protection of Shoreline Crown Lands.

6 Monitor minor variance applications on the lake.

7 Monitor Algonquin Highlands' Waste Management Plan development with input as appropriate.

Contacts

KLCA Development Committee Chair
Algonquin Highlands Councillors
Algonquin Highlands CAO
Dysart Councillor
Dysart Planner

4. Communication

Objective

An effective, efficient, low cost communication system that takes full advantage of modern technology but retains a comfortable, friendly, welcoming, neighbourly feel appropriate to a relaxed cottage environment.

Description

The system will include the familiar February Newsletter, the annual yearbook Reflections, in its familiar format but with a new section to report Lake Plan progress and initiatives, our e-mail capability (klca@vianet.ca) and our website (www.klca.org). KLCA executive members have been assigned to respond to messages and maintain the website information.

For members who don't have access to e-mail or website, all information on the website will be published in Reflections or the Newsletter.

Action Plan

1 Establish and maintain membership on a Communication Committee chaired by a person appointed or elected by the Committee to serve as Chair.

2 The Chair of the Committee is expected to arrange a minimum of one committee meeting each year in order to:
- identify Issues and Concerns recognized by the committee, the executive, and/ or the membership each year by March 1.
- prepare suitable objectives and action plans to address identified issues and concerns and forward to the Communications Committee Chair by April 30

for discussion and approval by the Executive and for inclusion in the Lake Plan Section of Reflections..

- prepare a report on achievements for the preceding year for Reflections and forward to the Communications Chair by April 30 of each year.

3 Maintain liaison between the website management company and our KLCA site manager to ensure that information on the website is up to date and that appropriate training in site management is current.

4 Maintain liaison with the Membership Manager(s) to ensure that our mailing lists are always up to date and accurate.

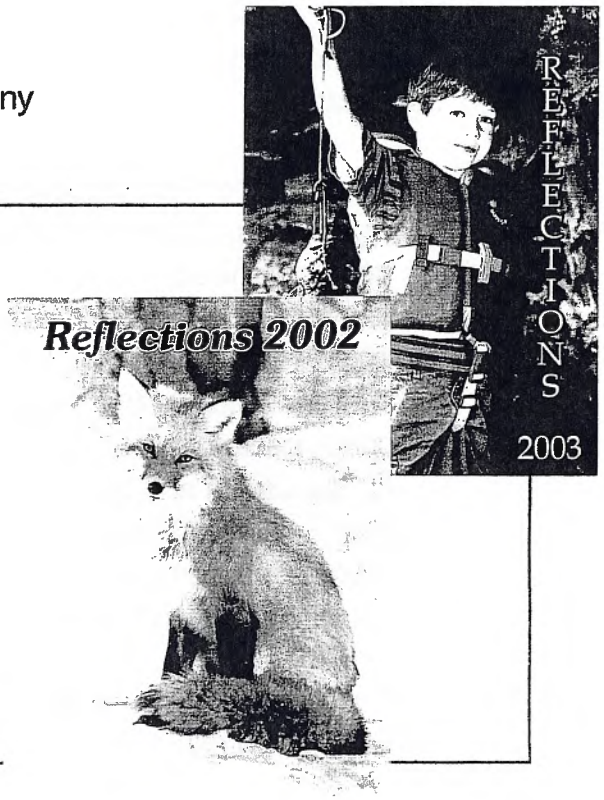
5 Publish the Newsletter with Membership Renewal information by February 28 annually.

6 Publish the KLCA Yearbook Reflections annually by July 1 for pickup and distribution during the summer.

Contacts

KLCA Director of Communications Committee Chair
KLCA Website Manager
Membership managers
Owner & Manager of the Website Company

klca@vianet.ca
www.klca.org



5. Resourcing

Objective

The Kawagama Lake Plan Steering Committee will have adequate resources in both people and money to develop and implement plans to ensure enjoyment of the lake both in the near future and by future generations.

Description

Identification of personnel requirements to address the development and implementation of the Lake Plan and ongoing KLCA activities.

- Develop a process to recruit and maintain a cadre of volunteers to fulfill those requirements.
- Identify and work to fulfill skill requirements.
- Strive to include representation from all areas of the lake.
- Assist in determining financial requirements, and find sources to fund them.

Action Plan

1. The Chair of the Resourcing Committee may establish and maintain membership on a Resourcing Committee to assist with the duties if deemed helpful or necessary.

2 The Chair of the Committee is expected to:

- arrange a minimum of one committee meeting each year, if a committee has been organized.
- identify Issues and Concerns recognized by the committee, the executive, and/ or the membership each year by March 1.
- prepare suitable objectives and action plans to address identified issues and concerns and forward to the Communications Committee Chair by April 30 for discussion and approval by the Executive and for inclusion in the Lake Plan Section of Reflections..
- prepare a report on achievements for the preceding year for Reflections and forward to the Communications Chair by April 30 of each year.

3 Expand the data base of active and potential volunteers including skills, vocation, interests, e-mail addresses and location on the lake.

4 Resource the new committees. (e.g. Natural Shorelines)
5 Match volunteers to fill vacancies that occur or newly created roles.

6 Identify all cottage road association presidents or contacts as a useful communication link. We are also organizing a communication network with a cadré of volunteers set up along road association and geographical lines to ensure that every section of the shoreline is served.

7 Assist in establishing financial requirements and budgets for defined projects.

8 Pursue multiple sources of funding if and when circumstances require.

Contact

KLCA Resourcing Chair

6. Lake Water Quality

Objective

Protection of Kawagama Lake water quality.

Description

Active participation in water quality data gathering programs and promotion of good lake stewardship and education initiatives.

Action Plan

1. Establish and maintain membership on a Lake Water Quality Committee chaired by a person appointed or elected by the Committee to serve as Chair.

2 The Chair of the Committee is expected to arrange a minimum of one committee meeting each year in order to:
- identify Issues and Concerns recognized by the committee, the executive, and/ or the membership each year by March 1.
- prepare suitable objectives and action plans to address identified issues and concerns and forward to the Communications Committee Chair by April 30 for discussion and approval by the Executive and for inclusion in the Lake Plan Section of Reflections..
- prepare a report on achievements for the preceding year for Reflections and forward to the Communications Chair by April 30 of each year.

3 Monitor the activities of the Muskoka Watershed Council.

4 Continue to participate annually in the Great Ontario Dip-in and the Lake Partners' program which monitors water clarity and phosphorous enrichment providing a year by year comparison dating back over a decade or more.

5 Gather available data on Kawagama Lake water quality trends and indicators over the period for which such data is available and prepare a report to the membership for inclusion in Reflections 2004.

6 Consider participation in new programs being initiated by the Muskoka Watershed Council to monitor water quality and bacterial levels.

7 Obtain Septic Reinspection reports for the two municipalities and prepare a short report for inclusion in Reflections 2004.

8 Work with local councils and MNR to establish criteria to define Lake Capacity.

Contacts

KLCA Lake Water Quality Committee Chair
KLCA's Lake Partners Program representative
MNR Fisheries Biologist (MNR Bracebridge Office)
Member of the Public Advisory Committee of the MRWMP
Muskoka Watershed Council
CAO of Algonquin Highlands (for Septic Re-inspection report)

7. Fisheries

Objective

The protection and preservation of fish species which are naturally occurring, particularly lake trout, together with the protection and preservation of spawning beds and habitat for such species.

The real objective is to ensure a naturally reproducing fish population particularly with respect to lake trout with a focussed effort on dramatically reducing the trout fry mortality rate estimated in 2003 to be 26%. The principal approach is to evaluate present water management practices and establish practices which will be more conducive to survival for trout fry in Kawagama Lake thereby turning around the now recognized decline in the lake trout population of Kawagama Lake.

1. Establish and maintain membership on a Fisheries Committee chaired by a person appointed or elected by the Committee to serve as Chair.

2. The Chair is to arrange a minimum of one meeting annually.

3. The Committee is to endeavor to identify issues and concerns with regard to fish population based upon observation, experience and studies with the issues to be prioritized no later than March 1st of each year.

4. Prepare suitable objectives based on the Committee's established priority issues and to develop an action plan to address those issues, which action plan is to be forwarded to the Communications Committee Chair no later than April 30th for discussion and approval by the executive and for inclusion in the Lake Plan Section of Reflections.

5. Prepare a report on actions and achievements by the Committee in the preceding year for publication in Reflections which report is to be completed and submitted by April 30th of each year.

6. Establish direct lines of communication with the MNR and to gather the data they have on the health and the reproduction status with respect to fisheries on Kawagama Lake, in particular, the lake trout population.
7. Identify the location of the lake trout spawning beds with particular emphasis on the Kawagama Lake Trout Spawning Survey Report (2003).

8. Cooperate with the MNR and apply pressure, through the KLCA Executive, to the MNR in order to encourage development and implementation of a project to preserve and enhance the primary spawning beds with a particular effort to restore or reintroduce the spawning beds which appeared (in the 2003 Spawning Survey Report) to be no longer used by Kawagama's Lake Trout population.

9. Identify and adopt such other strategies as might be introduced, in order to improve the survival rate of newly hatched trout fry.

10. Work in conjunction with water level monitors and managers, to maintain water levels at the optimum depths in order to provide an environment most conducive to the survival of newly hatched trout fry with a view to preserving the natural species of lake trout and to minimize the destruction of trout fry arising out of the manipulation of lake levels without regard to the impact on this species which is so important to our lake.

11. Remember that at all times we cottagers are privileged to share the waters of Kawagama Lake with its naturally occurring species and to do our utmost to minimize negative impact on all of those species.

Contacts

KLCA Fisheries Chair
MNR Fisheries Biologist (MNR, Bracebridge Office)

All cottagers and residents should know that anyone between the ages of 18 and 65 requires a fishing license in order to fish in the lake.
There is a slot limit for Lake Trout which means that any Lake Trout caught between 40 and 55 cm (roughly 15 to 22 inches) must be returned to the lake.

8. Environmental Quality and Natural Shorelines

Objective

Preservation of the environment and natural shorelines.

Description

All of the information that we have gathered from shoreline residents indicates that , next to pristine water quality, we value the natural, wilderness appearance of the shoreline vistas around the lake with cottages of modest size fitting into the natural environment unobtrusively rather than dominating the vista. In addition to holding this value, we all need to understand the impact of replacing natural shoreline vegetation with urban style lawns and shore line break walls. This is an education matter and is the focus of this plan of action.

Action Plan

1. Establish and maintain membership on an Environmental Quality and Natural Shorelines Committee chaired by a person appointed or elected by the Committee to serve as Chair.

2 The Chair of the Committee is expected to arrange a minimum of one committee meeting each year in order to:
   - identify Issues and Concerns recognized by the committee, the executive, and/ or the membership each year by March 1.
   - prepare suitable objectives and action plans to address identified issues and concerns and forward to the Communications Committee Chair by April 30 for discussion and approval by the Executive and for inclusion in the Lake Plan Section of Reflections..
   - prepare a report on achievements for the preceding year for Reflections and forward to the Communications Chair by April 30 of each year.

3 Monitor and report on the logging and forestry plans and practices in the watershed and inform the executive and the membership from time to time, as appropriate, through a brief report to be printed in Reflections.

4 Develop or obtain literature from existing sources to provide information to cottagers about the following:
   - The by-laws governing shoreline structures (including docks, boathouses, pump houses, decks and gazebos).

- The importance of the shoreline as fish and wildlife habitat.
- The importance of leaving most of the substrate of the littoral zone undisturbed (the rocks, logs and debris in the shallow water close to the shore).
- The importance of leaving the riparian zone (beach or bank) unaltered.
- The importance of maintaining a buffer zone to slow run-off to the lake.
- Encourage cottagers to maintain "dark skies" by using:
- Other subjects that will help to enhance and protect natural shorelines and natural habitat

5 Submit your educational materials to the publications editor for Reflections by April 30.

6 Consider presenting or arranging interesting and entertaining workshop presentations on Shoreline Preservation on approval by the KLCA Executive.

Contacts

KLCA Environmental Quality and Natural Shorelines Committee Chair
FOCA office, publications or website


LEGEND:
SPEED MARKER
HAND BUOY
R INDICATES STARBOARD
G INDICATES PORT
K14 INDICATES MARKER No.
INDICATES ILLUMINATED MARKER OR BUOY
FIXED MARKER
3 INDICATES BOTTOM DEPTH OF 3 METERS
INDICATES CURRENT FLOW UPSTREAM
SECONDARY ROUTE
PREFERRED ROUTE
TO LIVINGSTON LAKE
UPSTREAM
SPEED ZONE 10 KM/HR
K15
K16
K14
BEAR LAKE
BEAR MOUNTAIN
SPEED ZONE 10 KM/HR
K19
K20
KH LIGHT STATION Mo(A)6S
KH
TO KIMBALL LAKE
UPPER FLETCHER BAY
ROCK HAVEN
DUCK BAY
NOTE: CAUTION OLD BRIDGE ABUTMENTS IN NARROWS
JEANNIE BAY
BEAR LAKE BRIDGE
NOTE: GO SLOW NO WAKE IN CHANNEL
LOWER FLETCHER BAY
DAM
LOG BOOM
LONG Is
EAST LONG Is
ECHO Is
HOLLOW RIVER
NOTE: CAUTION FAST CURRENT LARGE ROCKS LOG BOOM
K4
UPSTREAM
DENNISON Is
RIVER BAY
FISH POLE Pt
K2
UPSTREAM
BIG TROUT Is
BEAR Is
UTTLE TROUT Is
EAST RIVER BAY
UPSTREAM
BRB
KB
F1(2)5S
SERPENT'S ROCK
MOORLANDS CAMP
K4
WOLF Is
EAGLE Is
TROUT Is
K6
NOTE: CAUTION NUMEROUS STUMPS SHALLOW AREA
UPSTREAM
K5
KC
(F1)4S
TYRELL Is
KD
KB
BAY
LOON
WO
SPEED ZONE 10KM/HR
KE
KF
RGR
F1(2+1)8S
PORCUPINE BAY
K7
K12
K10
K11
WHITE TROUT
SPEED ZONE 10KM/HR
N
NAVIGATION MAP
ONE MILE
1 KILOMETER

9. Navigation System

Objective

A well maintained, modern, effective, easily understood navigation system on Kawagama and Bear Lakes to ensure safe navigation throughout the navigation season from the Victoria Day weekend through the Thanksgiving weekend.

Description

The KLCA has long operated a navigation system on these lakes which has been steadily and regularly updated by a group of dedicated volunteers. The system was changed over from the Cardinal System to the more modern and more readily understood Lateral System within the last decade. Each year more of the buoys are converted to solar powered, lighted markers to increase visibility and ease of use. The intention is to maintain and continue to gradually improve the system as need, resources, and volunteer time become available.

Action Plan

1 Establish and maintain membership on a Navigation Committee chaired by a person appointed or elected by the Committee to serve as Chair.

2 The Chair of the Committee is expected to arrange a minimum of one committee meeting each year in order to:

- identify Issues and Concerns recognized by the committee, the executive, and/ or the membership each year by March 1.
- prepare suitable objectives and action plans to address identified issues and concerns and forward to the Communications Committee Chair by April 30 for discussion and approval by the Executive and for inclusion in the Lake Plan Section of Reflections..
- prepare a report on achievements for the preceding year for Reflections and forward to the Communications Chair by April 30 of each year.

3 The Navigation Committee Chair will set projects and directions with the group including the training of one or more committee members in the design, construction and maintenance of the buoys with particular attention to the new solar powered, lighted buoys.

4 The Committee will continue to maintain and place marker buoys during the navigation season from Victoria Day weekend through the Thanksgiving weekend.

Contacts

KLCA Navigation Committee Chair

O.P.P. Water Safety Officer (Minden OPP Detachment)

Appendices

Our Heritage

On Kawagama Lake We Value....

.... A Traditional Cottage Atmosphere
.... Modest Cottages hidden in the trees
.... Our Natural Environment
.... Our Water Quality

You Can Help Protect It....

... Practise Good Stewardship
... Keep your Shoreline Natural
... Don't Cut Trees Down, Cut Windows Instead
... If you Must have a Lawn, Keep it away from the Lake
... Don't Fertilize your Lawn..
... Get Building Permits for any Alterations or Additions
... Observe Set-Back By-Laws
... Use Phosphorous-Free Detergents
... Make Sure your Septic System doesn't pollute
... Pump your Septic Tank every 3-5 years
... Replace Two-Stroke Motors with Four-Stroke Motors
... Keep Gas and Chemicals Out of the Lake

We also Value Consideration for Others...

... Obey Boating Laws and Navigation Regulations
... Boat with Care to prevent Noise, Speed or Wake impact
... No Wake near Shore or Docks
... Go Slowly in all Narrow Channels
... Stay Away from Swimmers
... Assist anyone in Trouble
... Watch Out for Loons and Ducks on the Lake
... Avoid Noise Pollution that Impacts Others:

Remembers Noise Carries Across Water... Especially at Night

• Night Parties • Outside Stereos • Barking Dogs

... Make Sure Your Lighting Doesn't Impact Neighbours

• Use Low Intensity Lights • Use Motion Sensor Lighting
• No Unnecessary Outdoor Lights
• Point Spotlights Downward toward the Centre of Property

KLCA SURVEY RESULTS
A Brief Summary

One of the first tasks of the Lake Plan Steering Committee involved the development and administration of a questionnaire to gather information from all of the people having cottages or homes on the lake. That questionnaire was mailed to 950 cottagers on August 27, 2002. The return rate was excellent - 57% from 570 paid up members and 41% overall. The response indicates a high level of interest in the future of Kawagama Lake.

WHAT DO COTTAGERS VALUE?

- **Natural unspoiled beauty:** forests, wildlife, **fresh air,** natural shoreline, wilderness, scenery, rugged topography, sunsets and sunrises, dark skies, changing seasons, etc.
- **Water:** clean, clear, pristine, large
- **Tranquility:** peace and quiet, remoteness, privacy, opportunities to relax
- **Recreation:** boating, fishing, canoeing, swimming, snowmobile, socializing, etc.
- **Development:** true cottage atmosphere, lack of monster cottages, minimal commercialization, planning for the future by local governments.
- **Caring attitudes:** most care about the lake, the environment, and neighbours' enjoyment.

ISSUES AND CONCERNS

The cottagers of Kawagama have spoken clearly on a number of issues that suggest the need for action by their association.Some of these are listed below:

- **Development:** e.g. rate, density, size of buildings, violations, controls, frontages, boathouses, capacity, shoreline changes, commercialization.
- **Boating and PWC's:** noise, speed, racing, wakes and careless driving too close to shore
- **Fluctuating water levels:** fall draw down too early, boating difficulties in fall season, erosion, range of level fluctuation.
- **Septic systems:** many questions re: current standards, enforcement, permits, reinspections, public knowledge, faulty systems, setbacks, etc.
- **Other items:** need for education programs, need for committees to monitor development, meet with the councils, taxation, power outages, etc.

THE FULL REPORT

The full 12 page report was printed in Reflections 2003. Copies were sent to those who donated to the Lake plan and to those who assisted with the tabulation of of survey returns. Copies can be mailed to any member who includes a self addressed, stamped (96 cents postage) business envelope with his/her request.

Development Controls

Learning About Development Controls Affecting Kawagama Lake

The Official Plans & By-laws

Kawagama Lake is influenced by two different municipalities, Algonquin Highlands and Dysart et al. Both municipalities have recently reviewed and revised their Official Plans. Algonquin Highlands has reviewed and revised their comprehensive By-laws but have been unable to implement them as of press time pending the outcome of an appeal to the Ontario Municipal Board. Dysart is about to begin the review and revision of their By-Laws.
Both Municipalities have used professional consulting firms to guide them through the process. Your Lake Plan Steering Committee has been very involved in monitoring these processes in order to achieve the objective that we set which reflected the values and concerns of the shoreline residents of the lake.

Our stated objective is "*continuous interaction and communication with both municipalities as they review and revise their Official Plans and Comprehensive Zoning By-laws, which is currently ongoing, to ensure adequate environmental protection and development controls consistent with the values of the majority of Kawagama Lake cottagers and residents.*"

We have sought to maintain the current positive, respectful, trusting and cooperative relationships that exist with both Councils and their Administrations. We have communicated regularly, have attended their public meetings and presentations on draft plans, and have prepared written responses.

We have also shared openly results of surveys and workshops with both Councils and have invited them to workshops and open meetings of the lake Plan Steering Committee in order to promote good communication and mutual understanding. Both Councils listen to us and respond appropriately.

The following two summaries were taken from their websites in March 2003:

Municipality of Dysart et al Official Plan Highlights

These are selected highlights of the Public Review Draft of the new Official Plan. Please refer to the January 2003 Draft Plan for accurate information on the proposed policies.

The present Official Plan dates back to 1975 and has served the Municipality well. The new Planwould not reinvent the wheel. It continues many elements of the present Plan, with changes and additions to update the Plan, make it work better, conform with current Provincial and County planning policies, and respond to public concerns. Therefore, the highlights chosen here are not intended to be a complete summary of the Draft Plan. They focus instead on significant changes from the present Plan, that would be most likely to

affect the Municipality's residents and property owners. Generally, these changes would not affect existing development unless a new development approval is required.

The Waterfront

- Shoreline Areas would be renamed Waterfront Areas.
- Conservation Areas would be combined into the Waterfront Areas.
- Residences would not be allowed on islands smaller than 1 hectare (2.5 acres).
- New lots and other major new development in Waterfront Areas would require a site evaluation report.
- "Areas of use limitation" would be defined to include lands with steep or eroding slopes, lands with little or no soil cover, and wetlands. Development in these areas would require a site evaluation report, which would be simpler for small developments than for large ones. Development on lots 2 hectares (4.9 acres) or larger would be exempted from a site evaluation report.
- New lots and other major new development would be prohibited on nine highly sensitive lake trout lakes, unless conditions are met that ensure that there would be no increase in phosphorus inputs to the lakes. The status of 17 more lakes is being reviewed; these would be similarly protected on an interim basis, and some may be added to the highly-sensitive list.
- Council would be able to require boating capacity studies and trophic state (phosphorus input) capacity studies where new development might have undue impacts. The present Plan's appendix listing lake capacities based on lake surface area would be deleted.
- All development except docks would have to be set back 30 metres (98 feet) from shore on lots located on cold water lakes and created since 1997. Setbacks would be 20 metres (66 feet) everywhere else in the Municipality.
- Owners would be encouraged to leave their setback lands undisturbed, except as needed to provide views and access to water and remove dead trees. Council would be able to require this in some cases.
- Golf courses and ski hills would not be permitted in Waterfront Areas.
- The Municipality will provide reasonable planning support to lake associations interested in developing lake character plans. These plans could be considered for incorporation into the Official Plan.

Wetlands

- The Municipality's one provincially significant wetland (Elephant Lake) would be shown on Schedule B. Development would be allowed in or near it only if a natural heritage evaluation shows the wetland would not be affected.
- A study now under way is expected to identify additional important wetlands. These would be protected as "other potentially significant wetlands" and shown on Schedule B.

Interim policies are proposed to protect these until the study results are available. Council may require a natural heritage evaluation where development is proposed in or near these wetlands.

Other Natural Heritage

- Development would not be permitted in endangered or threatened species habitat (only one site known in the Municipality at present).
- Critical fish habitat, deer yards, and bird nesting colonies would be shown on Schedule B. Development would be allowed in or near these features only if a natural heritage evaluation shows the feature would not be affected.
- Deer yards cover large areas of the Municipality. Council would be able to exempt applicants for small scale development from a natural heritage evaluation in exchange for larger lots and site disturbance restrictions.

Archaeological Resources

- In areas near known archaeological sites or otherwise having high archaeological potential, Council may require archaeological assessments before development.

Resource Protection

- Various resource features are shown on Schedule B: mine hazards, waste disposal sites, existing pits and quarries, and areas of aggregate potential. Special policies would ensure that any new nearby development is not affected by incompatible impacts, and that active or potential resource uses are protected from incompatible nearby development.
- Lots could not be created in Hazardous Lands Areas (floodplains).

Consents (Severances)

- There would be a ceiling on the number of lots that could ever be severed from any currently existing lot. The ceiling would be three lots, plus if the lot is larger than 40 hectares (99 acres), one lot per 40 hectares or part thereof. This limit would not apply to plans of subdivision.

Private Roads

- Where new development is allowed on private roads, the owners would have to form a road association, assume all risks, and maintain liability insurance.

Parks and Trails

- The Municipality would try to protect the integrity of the Hydro One corridor and of existing portages and recreational trails.
- Algonquin Provincial Park and the Park's management plan would be recognized in a special designation.

Plan Review

- The Plan would be fully reviewed every five years. **www.county.haliburton.on.ca**

Algonquin Highlands By-law Highlights

The following information was edited from a notice of the second public meeting on the draft by-laws which had been revised as a result of the first public meeting back in July 2002. The information contained is a pretty good summary of the intent of the new by-laws.

"The new Zoning By-law that will apply to the entire Municipality which is intended to replace By-law # 85-7 (former Township of Stanhope Zoning By-law) and By-law # 98-08 (former Township of Sherborne et al Zoning By-law). The proposed Zoning By-law will affect all lands within the Township.

The purpose of the proposed Zoning By-law is to prohibit the use of land and the erection of buildings and structures except for such purposes as are set out in this Zoning By-law and to regulate the type of construction, height, bulk, location, size, floor area, spacing, character and use of buildings or structures on the lands covered by this By-law. The Zoning By-law is intended to conform with and implement the policies contained within the Township's Official Plan.

The majority of the provisions in the new by-law will be similar to the provisions in By-law # 85-7 and # 98-08. A number of "housekeeping" changes are proposed, to simplify the wording and use of the Zoning By-law.

The Zoning By-law contains a number of new definitions and provides additional regulations for such uses as boathouses, sleeping cabins, home industries, home occupations, and tourist establishments.

Additional information relating to the proposed Zoning By-law, including a copy of the proposed Zoning By-law, is available for inspection at the Township Office during regular office hours (9:00 am to 5:00 pm).

Once Council has received all of the information that it feels is required, it may defer, reject or approve the Zoning By-law or may approve the Zoning By-law with amendments.

Dated at the Township of Algonquin Highlands on the 3rd day of March, 2003."

Gerald Bain

C.A.O./ Clerk-Treasurer of Township of Algonquin Highlands

Boating Information

Answers to Common Navigation Questions

Our thanks to Constable Harry Rawluk of the OPP who responded to a series of questions that we put to him recently concerning matters that cottagers often ask about. We found his answers very clear and most helpful. We hope they will help other members as well.

Q What should we tell cottagers who want speed restrictions in passages between islands and mainland narrower than 30 metres?

A The Boating Restriction Regulations are very clear on this. Vessel speed is limited to 10 km/ hr within 30 metres of the shore line. In the situation you described, there does not have to be an application to get a speed restriction, it is already prescribed by the regulations.
In this case a regulatory sign can be installed on the shoreline advising boaters that they must not exceed the 10 km/ hr speed limit.

The Federation of Ontario Cottage Associations sells large, laminated signs that read:

Notice Speed Limit, 10 km/ h, within 30 metres of shore applies to this body of water, Canada Shipping Act Boating Restriction Regulations, Maximum Penalty: $500

To order by cheque or VISA contact the FOCA office, 239 McRae Dr Toronto ON M4G 1T7 or Phone (416) 429-0444 ($12 each tax included + $5 shipping & handling

Q What should we tell cottagers who are plagued by people cutting the corner entering or exiting one of our bays so that they are passing their docks less than 30 metres from shore?

A If the offending vessel is less than 30 metres from the shoreline, the person observing the offence must be able to provide the police with an accurate description of the vessel (registration numbers, type, size, color, outboard vs inboard etc) and the operator (physical description, name if known). It is also helpful to provide the police with information where the vessel can be located on the lake. Police will attempt to locate the vessel/operator and investigate. The person reporting the offence must be prepared to attend court if charges are preferred as only they can give evidence of the offence and not the police officer.

Two offences would be considered in this case. The first is obviouslyspeeding, the second is "careless operation of a vessel" (Small VesselRegulations). Careless operation deals with vessels travelling in a way that could adversely affect the safety of people or property considering weather, boat traffic, hazards or potential hazards, or the number of people around the boat. It also deals with operating a vessel without consideration for other people or for the factors listed previously.

The bottom line is that as much information will be required by the police from the person viewing the offence. Warnings may be issued in lieu of charges.

Note: A regulatory sign, as described in the foregoing question could be tried on the shoreline advising boaters that they must not exceed the 10 km/hr speed limit. The Federation of Ontario Cottage Associations sells large,laminated signs that read:

"Notice Speed Limit, 10 km/h, within 30 metres of shore applies to this body of water, Canada Shipping Act Boating Restriction Regulations, Maximum Penalty: $500

Q Does the 10 km/hr restriction apply in a navigable creek less than 30 metres wide and .5 km long?

A The Boating Restriction Regulations state that the 10 km/hr speed restriction within 30 metres of the shoreline does not apply in rivers of less than 100 metres in width. The only way that speed can be regulated on these bodies of waters is if they are specified on Schedule IV of the Boating Restriction Regulations. This is the case for the Muskoka River as it passes through the Huntsville chain of lakes and for the Muskoka River at Baysville between lake of Bays and the Baysville dam. So the answer is no!

Q Is water skiing permissible from one's cottage dock in such a creek?

A In the previous question it was pointed out that there are no speed restrictions in rivers of less than 100 metres in width. There is nothing that prohibits water skiing from taking place in this location. Of course the operator would have to be concerned regarding other users of the river and consider the careless operation of vessel section.

Q Are we correct in our understanding that we cannot place a speed limiting buoy in a narrow, navigable stream and that to place any such buoy increases our liability exposure significantly?

A If we are talking about a "river" less than 30 metres in width and it is not covered in Schedule 4 of the Boating Restriction Regulation, then these

regulatory signs cannot be posted either on shore or on buoys. HOWEVER you can post signs on shore that "ask" operators to drive in a responsible manner. For example: *Please, keep this a no-wake zone* or *Please, No Wake.*
If the sign was worded "NO WAKE - OPERATORS SUBJECT TO FINES" the sign infers that a restriction exists, the sign in incorrect and is in fact illegal to put up.

Placing buoys in a navigable body of water would certainly increase the liability of whomever installed the buoy. There are very stringent guidelines that apply to the construction for markers placed in the water.

Q Will O.P.P. follow up on complaints concerning repeat offenders if the complainant has the registration number of the boat?

A Of course. And not only for repeat offenders but for first time offenders if a complainant makes a report. The registration number helps to identify the vessel, unfortunately when the number is checked it leads us back, in most cases to the closest Canada Customs office that the boat owner lives near and not the cottage address. Again it is extremely helpful if the complainant can provide information in regards to the mooring location of the vessel and make the report as soon as possible.

P.S. Constable Mark McMaster of the Minden Detachment adds that if a cottager has observed an illegal boating activity and has recorded the registration number, a description of the boat and its operator and phones the Minden OPP Detachment quickly with this information, he will send a warning letter to the registered operator which opens an occurence file and strengthens the OPP's case in court in the event of another infraction if they lay a charge based on this second offence.

Mini-posters are available from the Federation of Ontario Cottage Associations entitled "RIDE WITH RESPECT". The mini-poster deals with responsible operation of a PWC. They are available (free) by contacting your local OPP detachment. A copy can also be downloaded from www.cottagelife.com.

More information can be found on the Canadian Coast Guard web-site.
www.ccg-gcc.gc.ca.

AMENDMENTS TO SMALL VESSEL REGULATIONS

OTTAWA, ON – Parry Sound-Muskoka M.P., the Honourable Andy Mitchell, is pleased to confirm that the Government of Canada has made new amendments to the *Small Vessel Regulations* to reduce boat noise and improve the quality of life for shore property occupants and all others who use Canada's waterways. The new regulations were published in the Canada Gazette on February 12th, 2003 and will come into effect after a waiting period of 30 days.

These changes follow commitments Mr. Mitchell made during a meeting with concerned constituents in September 2001.

"These regulations are of great importance to our region, where a great deal of pleasure boating takes place during the summer months," said Mr. Mitchell. "With their implementation, residents and visitors alike will be able to better enjoy Parry Sound-Muskoka's beautiful shorelines and waterways."

Complaints about noise generated by high-powered pleasure craft have increased significantly over the past few years. Concerns have been aggravated by the growing number of large, noisy craft, such as "cigarette boats".

Provisions to reduce the offending noise originating from small vessels were introduced in amendments to the *Small Vessel Regulations* on April 1, 1999, but these provisions were difficult to enforce. Any component present in the exhaust system – like a sock – could be considered a "noise abatement mechanism", even if its effectiveness in reducing noise was insignificant.

These new amendments will make the regulations easier to enforce. They offer a clear definition of what is meant by the word "muffler", and also establish rules surrounding the use of muffler cut-outs or by-passes when the vessel is in operation. As there may be a few boats that require a small conversion to become compliant with the new regulations, owners will have thirty days before they come into effect.

For detailed information on the recent amendments to the *Small Vessel Regulations*, individuals may contact Jean Pontbriand at the Canadian Coast Guard's Office of Boating Safety, at the address provided below:

Mr. Jean Pontbriand, Office of Boating Safety, Canadian Coast Guard, Dep't. of Fisheries and Oceans, 5th Floor, 200 Kent Street, Ottawa, ON, K1A 0E6. Telephone: (613) 998-1433 Fax: (613) 996-8902

The new regulations may be viewed in their entirety on the Canada Gazette website at http://canadagazette.gc.ca/index-e.html.

For more information please contact: Lisa Turriff, *Special Assistant, Communications* **(613) 996-3434**

Quick References

Need a New Outboard Motor?

A little research quickly reveals that there is now an alternative to the old familiar two-stroke engine that has been the mainstay of cottage power boating since the 1940's. All of the old line outboard motor manufacturers are now offering four-stroke engines in addition to their two-stroke offerings and Honda offers a full line of four stroke engines only.

With information and advice from Marina sales staff and the help of Environment Canada test results on marine engines reported in their article "Smoke on the Water" excerpted by FOCA and further abbreviated by us we were able to prepare a brief synopsis that may help you when it comes time to replace "old reliable".

- Two-stroke outboards are lighter in weight and cheaper than comparably sized four-stroke outboards.
- Four-stroke engines are significantly quieter than comparably sized two-stroke engines.
- Four-stroke outboards are significantly cheaper to operate as their fuel economy is much better and you don't inject lubricating oil with the fuel or add it to the gas as you must with two-stroke engines. You quickly save in lower fuel and oil costs the premium that you paid for the more costly four-stroke engine.
- The design of two-stroke engines causes 25% to 40% of the fuel to be discharged with the exhaust gases into the water and, later, into the air. This accounts for the pronounced difference in fuel economy between the two designs.
- Four-stroke engines do not smoke or leave an oil slick on the water.
- A 9.9 hp two-stroke outboard produced 50% more carbon monoxide than a 9.9 hp four-stroke outboard.
- The two-stroke engine emitted 15 times more unburned hydrocarbons than the four-stroke engine.
- The two-strokes emitted five times as much oil and grease as the four-strokes.
- The two-strokes emitted 12 times as much BTEX (benzene, toluene, ethylbenzene, and xylenes). These are nasty carcinogenic or mutagenic (cancer or mutation causing) aromatic hydrocarbons formed during the combustion process.

Maybe the 2-stroke Engine will survive with radical re-design!

- The new emissions legislation for 2006 will require challenging re-design of two-stroke engines. Bombardier has developed a large two stroke engine under its Evinrude brand that will be marketed for 2003 that complies fully with 2006 requirements. A full range is likely to follow during 2004 and 2005.

Transport Canada says that ***a 70hp two stroke outboard motor emitted the same mass of hydrocarbon pollution in one hour as a new car does in 8000 km!***

KLCA Tips for..Protecting Our Lake

- **Leave your lakefront yard and shoreline as natural as possible.**

- **Ensure that your septic system is up to date and functioning properly. Have your septic tank pumped every three years.**

- **Don't put anything down your toilet that you haven't eaten first.**

- **Hand wash the dishes (most liquid detergents for hand washing dishes contain no phosphates).**

- **If you use an automatic dishwasher, use phosphate free *Nature Clean Natural Dishwasher Powder or Seventh Generation Gel.***
  (Robinson's General Store has Nature Clean products and Muskoka Natural Food Market has Seventh Generation products)
  If you don't use one of the above products, choose one of the liquid automatic dishwasher detergents
  They contain 2/3 less phosphate than the powders.

- **If you use a dishwasher rinse the dishes first in hot water before loading.**

- **Wait until the dishwasher is full before running it. Use only a tablespoon of dishwasher liquid detergent.**

- **Laundry detergents are phosphate free! Don't do all your washing on one day. This overloads the septic system.**

- **If you have a lawn consider letting it go natural. Consider not fertilizing it. If you must, do so only once per year (all of the chemicals leach into the lake).**

Facts about West Nile Fever

(As of May, 2003)

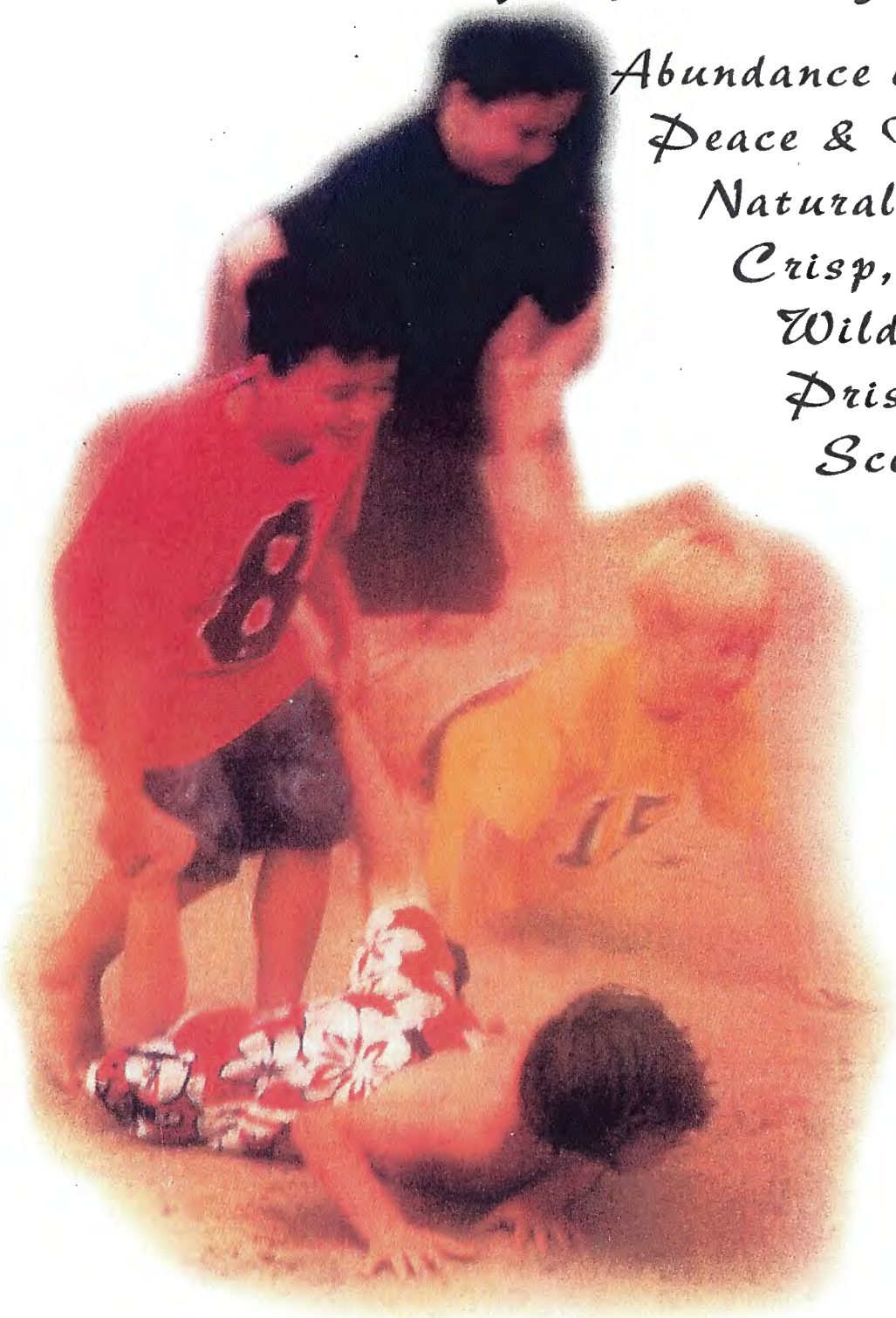
We are indebted to the experts and reputable publications listed at the bottom for the facts included in this brief fact sheet.

- 80% of people bitten by a mosquito carrying the West Nile Fever virus show no symptoms at all.
- 19% show symptoms similar to a mild flu and recover with no after effects.
- 1% may develop serious problems such as encephalitis or meningitis.
- Your risk of being killed on a trip to the cottage is much greater while travelling on the highway than from West Nile Fever!
- Only eight species of mosquitoes are known to carry the virus (there are about 55 species of mosquitoes in Ontario).
- Culex pipiens is the main carrier of the West Nile virus and it is largely an urban and suburban species which prefers birds and will only bite humans if there are not birds nearby.
- None of the eight carriers thrives north of the corridor between between Sarnia and Toronto. Culex restuans could carry the virus in cottage country but the species is not numerous here and won't bite humans unless there are no birds available.
- One of the DEET insect repellents (now limited to 30% or less of the DEET ingredient) will protect 100% for one half hour and 95% for one hour. Most will protect for up to five hours.
- Citronella repellents rubbed on the skin work quite well for shorter periods of time.
- Repellents have to be on your body or on your clothing to be effective which is why citronella candles and insect coils are not very effective.
- The bottom line is that you are more at risk when you return to your home in the south than you are while you are at the cottage.
- Both at home and at the cottage, all of the experts advise that we eliminate all sources of stagnant water including litter clogged eaves troughs, bird baths, empty tin cans, old tires, wheel barrows, buckets, bilge water in boats, etc.

Sources: The War on Bugs, Kirsten MacLeod, Cottage Life, May 2003, p 55
The Little Mosquito with the Very Big Bite, Joseph Hall, The Toronto Star, May 3, 2003, p A12

Experts: Robbin Lindsay, Entomologist at Health Canada's Nat'l Microbiology Lab
Doug Currie, Curator of Entomology at the Royal Ontario Museum

Shared Desire to Protect Kawagama for Future Generations



Abundance of Wildlife
Peace & Tranquility
Natural Shorelines
Crisp, Clean Air
Wilderness Feel
Pristine Water
Scenic Vistas
Serenity

Recreation & Restoration

Fun with Family & Friends