

KAMANISKEG AREA PROPERTY OWNERS ASSOCIATION

URGE YOU

TO POST THIS IN A CONSPICUOUS PLACE, AND FOLLOW THE RULES LISTED HERE

We like our nice clean lake . . . with a little bit of help and cooperation, we will be able to keep it this way.

1. Do not put anything into the water that wasn't already there.

2. DO NOT WASH ANYTHING IN THE LAKE. Do not

Hey! Remember this poster? The lake needs your help more than ever.

Madawaska valley just completed an in-depth study. The bottom line:

Water quality is good today but in danger. There are 7 sources pumping nutrients into the North Bay: 4 creeks, sewage treatment plant, Mask Island run-off & malfunctioning septics. The North Bay is particularly susceptible being shallow with low flow. All the recommendations require the community to take action & change our behaviour. Going forward, we need better monitoring to answer questions like How soon? How bad? Getting better? So, it is up to us to take action. See inside & visit www.kapoa.ca for more info. Minimally, follow this rule from the 70s...

Check your septic system annually for seepage.

Be positive

In your own mind that your system is not in any way faulty. We now have hundreds of cottages on the lake. If each one was not quite up to par, we would have an awful mess.

President's Message

We all owe great thanks to Madawaska Valley Council for supporting the Kamaniskeg Lake Source Characterization Study. It is the most comprehensive study completed to date and provides tremendous insight into the lake we all love.

The research shows that the water quality of the lake is threatened by people including us. Being the source of the town drinking water, home to the public beach and host of swimming and sailing lessons – this is an issue for our entire community. If we do not take action to fix the problems, it could impact the entire community: cost of cleaning the drinking water will continue to increase, the taste of the water will decrease and recreational use will be limited.

KAPOA is urging you to contact Madawaska Valley Council and request a special meeting to discuss water quality. We need to work together as a community. We need to educate everyone about the problem, risks and positive steps that can be taken to improve the situation. We need to consistently monitor the lake to measure improvements or deterioration. As property owners on the lake, we must take special care: get your septic system inspected and fix it if required, stop using phosphorus soaps and maintain a healthy shoreline.

KAPOA hopes to start a few initiatives focused on water quality this summer. We need your help. Please become a KAPOA volunteer.

- Sean Capstick



The Madawaska River was beautiful this winter. This photo was taken by KAPOA member Chad Beckwith Smith.

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Kamaniskeg Lake Source Characterization Study

Madawaska Valley has just released an in-depth study of Kamaniskeg Lake. ([Link to Final Report](#). [Link to Appendices](#). [Link to Figures](#).)

The purpose was to determine the causes of the impaired water quality detected at the municipal water treatment plant. Water quality in the north bay is currently experiencing elevated levels of colour, turbidity and nutrients that are challenging to treat at the Water Treatment Plant.

The Study uses historical, current and predictive information to help understand the water quality of the Lake. Extensive physical, chemical, and bacteriological data was collected through the study. Surface water and sediment samples were analyzed from 22 locations during the spring, summer and fall of 2009. The hydraulic conditions of the Lake were monitored and modeled by Environment Canada.

The research shows the primary contributors of nutrients to Kamaniskeg are the creeks and tributaries which drain the surrounding landscape, the septic systems along the shore of the Lake, and the Barry's Bay Waste Water Treatment Plant. It is well known that increases in nutrient concentrations, particularly phosphorus can lead to eutrophication. **Eutrophication can lead to a loss of enjoyment of the water for recreational, aesthetic and economic uses. The treatment of eutrophic water as a drinking source is costly, and the quality of treated water produced is reduced; often tasting organic.**

The research suggests that the main source of water quality impairment is the drainage from the surrounding landscape that enters the lake through several tributaries.

"... it is important that nutrient contributions be reduced as much as possible to prevent future water quality problems..."

More than 50% of the septic systems tested required repairs.

What is Eutrophication?

A eutrophic lake has high primary productivity due to excessive nutrients and is subject to algal blooms resulting in poor water quality. The bottom waters of these lakes are commonly deficient in oxygen and lack fish species like trout which require cold, well-oxygenated waters. Photo below is from ["Protecting Health of Canadian Lakes"](#).



The two basins of this lake were separated by a plastic curtain. The lower basin received additions of carbon, nitrogen and phosphorus; the upper basin received carbon and nitrogen only. The bright green colour is from a surface scum of algae resulting from phosphorus additions.

Kamaniskeg Lake Source Characterization Study

(continued)

Water quality in the tributaries contains significantly greater concentrations of nutrients, suspended solids, colour, turbidity and bacteria than the receiving water within the lake. The 4 tributaries are:

- **Cybulski Creek:** Discharges into lake 350 meters west of the public beach. Connects Cybulski Lake, Drohan Lake & other lakes/ponds. Report estimates this creek contributes about 3x more phosphorus than existing waste water treatment plant (WWTP). High coli form concentrations in some samples indicate fecal contamination by humans or pets. It is having the largest impact of the 4 tributaries.
- **Carson Creek:** Passes under Kartuzy Road. Connects with Kulas, Buch and Trout Lake. Report estimates Carson contributes 50% more phosphorus than existing WWTP.
- **Biernacki Creek:** Passes under Siberia Road. Discharges on west side of causeway. Total phosphorus exceeded interim PWQOs 2 of 4 samples. Could be causing impairment at WTP due to location of outlet.
- **Muskrat Creek:** Originates in Muskrat Lake. Passes beneath Combermere Road. Tests show there is a significant source of nutrient contribution on waterway. Due to low flow volumes the impact to Kamaniskeg is minor. If water flows were to increase, Muskrat Creek would be considered a major contributor of nutrients.

"...Cybulski Creek passes by the municipal snow removal storage location...would contain sodium and chloride from road salt...and possibly other contaminants...of roadways and parking lots."

"Overland runoff from Mask Island may be having significant impact on the water quality ..."

"Based on...Hydraulic Study...modifications to the Mask Island causeway are not recommended."

Sampling Location	Average Loading (kg/d)		
	Nitrate	Total Phosphorus	Total Suspended Solids
Cybulski Creek	1.04	0.31	44.32
Biernacki Creek	0.14	0.01	1.39
Carson Creek	0.76	0.17	27.79
Muskrat Creek	0.17	0.01	0.56
Total Average Loading (kg/day) ¹	2.11	0.5	74.07
Annual (ice-free) Loading (kg) ²	513.97	121.85	18023.66

¹ Total average nutrient loading from tributaries during the study period.

² Based on average of eight (8) ice-free months

Kamaniskeg Lake Source Characterization Study

(continued)

Septic systems surrounding the lakeshore are likely having an impact on phosphorus concentrations in the Lake. The proximity of the septic systems to the lakeshore and the topography and geology of the surrounding landscape are not conducive to phosphorus retention.

Source	Total Phosphorus		Nitrate		Suspended Solids	
	kg/yr	%total	kg/yr	%total	kg/yr	%total
Tributaries₁	121.97	44%	513.97	2%	18023.66	93%
WWTP	83.95	31%	27057.45	98%	1449.05	7%
Septic Systems₂	68.4	25%	NA	NA	NA	NA

₁ Based on average of eight (8) ice-free months.

₂ based on the equation supplied by Dillon and Rigler 1975

Though water quality is presently good in Lake Kamaniskeg, it is important that nutrient contributions be reduced as much as possible in order to prevent potential future problems as a result of nutrient loading. Impacts of nutrient loading would likely be detected in the north bay of the Lake first due to reduced flushing rate as a result of the topographical layout of the Lake and a lack of significant inflow and outflow.

The report concludes with recommendations. Here is a summary:

- (1) Decrease loading of suspended solids. This will maintain water temperatures, protect fish habitat, decreasing nutrient inputs will slow excessive plant growth in shallow areas. Plant and maintain vegetative buffers. Leave shoreline vegetation intact. Follow best management practices during road construction and maintenance.
- (2) Decrease Nutrient Inputs from Septic Systems. Inspection, maintenance and pumping are critical. Use environmentally friendly products.
- (3) Decrease Nutrient Inputs from Livestock. Implement environmental best practices. Follow the Nutrient Management Act (2002). Discourage grazing of livestock on land directly upgradient of the Lake and tributaries.

What Can You Do?

- (1) **Get your septic system inspected** & repaired if required. Septic systems should be pumped regularly.
- (2) **Stop using phosphorus soaps** and detergents especially dishwasher detergent with phosphorus.
- (3) **Request that Madawaska Valley hold a special meeting** about Kamaniskeg Water Quality.
- (4) **Request that Madawaska Valley begin a public education campaign** around phosphorus, shoreline management and best practices on agricultural land upgradient and upstream of Kamaniskeg Lake.
- (5) **Plant and maintain vegetative buffers** along shoreline.
- (6) **Do not fertilize** your lawn, garden or farm. Farmers follow the nutrient management act.
- (7) **Join KAPOA.** We want to continue monitoring the Lake and extend the program to Blackfish Bay. With more members, we will have a stronger voice within our municipal councils to focus on water quality initiatives and share the costs between more parties.

Wastewater Treatment Plant Upgrades

Construction on the upgrades to the Wastewater Treatment Plant began in December. These upgrades, discussed at the last KAPOA Annual General Meeting, are an important step in maintaining the water quality especially in the North Basin. The cost of the upgrades will be shared between the federal, provincial and municipal governments. The MOE has placed stringent discharge limits as part of the Certificate of Approval (CofA). However, issues still remain with regard to the treatment of septage and landfill leachate in the future.

Upgrades to the System

The existing system, built in 1974, is a single train, two stage treatment system that uses chlorine to disinfect discharge. The new plant will be a dual train Sequencing Batch Reactor (SBR), three stage system with sand filters and ultraviolet disinfection. The significant advantages to the new system include:

- **Improved reliability:** half the system can be taken off-line for maintenance
- **Improved treatment:** sand filters will improve phosphorus removal
- **Elimination of chlorine:** ultra-violet disinfection will avoid additional chemicals in lake
- **Tighter standards and enforcement:** with new CofA

The plant will continue to discharge through the exiting outfall in the North Basin.

New Certificate of Approval (CofA): Discharge Objectives and Limits

The new CofA places monthly limits on discharges into the lake. The plant is required to meet limits on the concentration and amount of contaminants in the discharge to the lake. These limits cannot be exceeded. Additionally, the new CofA specifies objectives which are lower than the limits. The plant was designed to meet these objectives under normal operating conditions. The objectives set the target concentration and amount of contaminants the plant will discharge under normal operating conditions. (See table on next page for specific objectives and limits). Both the new objectives and limits are much lower than before.

The previous CofA only controlled an annual concentration limit and did not protect the lake very well. It was only the low volumes and the effective control by the operators that prevented the wastewater treatment plant from causing a more significant impact on the lake.

Receiving Septage and Leachate

The new plant is approved to accept up to 12.7 cubic metres per day of septage (waste solids taken from septic tanks) and up to 21 cubic metres per day of landfill leachate (ground water taken from a landfill) and special receiving areas and storage tanks have been incorporated into the design. In addition to these limits, the plant cannot exceed a total flow of 1,250 cubic metres per day. The CofA does not place any limits on where the septage or leachate can be generated. This was an issue of significance to KAPOA members last year and we will be following up on the Municipality's plans for the receiving these wastes. Come to our Annual General Meeting on Saturday, July 17th for an update.

Wastewater Treatment Plant Upgrades

(continued)

	New Objectives	New Limits		Current Limits
Effluent Parameter	Monthly Average Concentration (milligrams per litre unless otherwise indicated)	Monthly Average Concentration (milligrams per litre unless otherwise indicated)	Monthly Waste Loading (kilograms per day unless otherwise indicated)	Yearly Average Concentration
CBOD5*	10	15	18.75	25
Total Suspended Solids	10	15	18.75	25
Total Phosphorus	0.1	0.2	0.25	1
Total Ammonia Nitrogen Summer (May to Oct) Winter (Nov to Apr)	1 3	Non-acutely lethal	Not applicable	Not controlled
E. Coli	100 organisms per 100 millilitres	200 organisms per 100 millilitres	Not applicable	200 organisms per 100 millilitres

The pH of the discharge must be maintained between 6.0 to 9.5, inclusive, at all times.

The CofA requires that a performance report be prepared annually that describes the operation of the plant.

*CBOD (Carbonaceous biochemical oxygen demand) testing is widely used as an indication of the pollutant removal from wastewater.



Wow!! What a Turnout!

KAPOA Regatta 2009

More than 200 people came to Hinderland to compete in the 38th annual KAPOA Regatta. It was a beautiful, fun-filled day! The feedback has been tremendous. It is very promising to see more and more young families come out and enjoy this great annual event at Hinderland.

Events ran smoothly from the tough competition in the Sand Castle building to the Sailing, Swimming and Canoe Races. This year 60+ kids took part in the tug-o-war.

I would like to take moment to thank you the volunteers for their vital assistance and sponsors for their support in making the regatta such a success. Thanks to:

- **Bill Cahoon:** sailing coordinator
- **John Michalecki:** photography
- **Nancy Steepe:** running the BBQ
- **Glenelda St. Amand:** Membership
- **Vince Steepe:** Membership
- **Lynne Maclean and Eva Black:** sand castle competition judges
- **Lynne Maclean:** 50/50 ticket sales
- **Dianne Stuart:** Signage, set-up, results tabulation
- **Judy Hurren:** Results tabulation
- **Chris Pyz and family:** generous donations for the BBQ
- **Cathy Pitts:** generous donations to the BBQ
- **Paddler Co-op:** kayak demonstrations
- **Madawaska Kanu Centre:** generous prize and water bottles donations
- **Jim Beecroft and Tom Supra:** tremendous assistance at the finish line all day!
- **Kerra Wylie, Michel Horne and Gerald Naud:** assistance in the water

Special thanks to key folks without whom this day couldn't have happened:

- **Sean Capstick and Mike (Shank) Petrachenko:** corralling participants on dock
- **Mike Steepe:** set-up and break down, event assistance and tug-o-war
- **George St. Amand:** Set-up and break down, BBQ and transportation
- **Bob Millar:** vehicle and equipment transportation, dock set-up
- **Paul Stach:** dock set-up/break down and transportation assistance and a very special thanks for grading and cleaning the beach to get ready for the regatta.

Georgeen St. Amand, 2009 Regatta Director

P.S. We are in need of a 2010 Regatta Director. The day will not occur unless a volunteer steps up. Don't be afraid, Georgeen has done great work documenting the job and will help with the transition.

A Few Photos...

More at www.kapoa.ca



New KAPOA Website

www.kapoa.ca

Good communication is key to a strong community. With high-speed internet now in both Barry's Bay and Combermere and wireless high-speed access with Satellite and 3G available on many parts of the Lake, it is time for a new, improved KAPOA website.

Check it out: www.kapoa.ca

The website is packed with information important to the Kamaniskeg Lake community. A few things we think you will like:

- (1) Links to news stories important to the Lake – see the municipal pages.
- (2) Information on issues important to our community including water quality and taxation.
- (3) Photos and history...check out the regatta page for great photos and a list of all the most outstanding competitors starting in 1971.

Most importantly, the website is now easy to update. So, visit it regularly to follow our community.

Also, if you or any one you know is interested in advertising...we will have sponsored ad spots in the near future.

KAPOA Membership

We need to explain and apologize to some long standing members who did not receive a newsletter in the mail last year. **Once again, KAPOA was on the verge of folding.**

At the beginning of 2009, KAPOA had 55 paid memberships and 5 active volunteers/executives (not including Regatta volunteers). We opted to invest our few resources increasing the quality and quantity of our communication via email and the web. We also worked with the community newspapers to get broad coverage regarding our issues. Electronically, we sent out 2 newsletters (May and July) and 4 bulletins. A few issues (including leachate processing, declining water quality and taxation) caught the community's attention and more volunteers offered to help. We had 70+members attend the AGM. Bob Millar and Tom McKennell got active and suddenly we had 133 members. However, we still have a long way to go to have a strong voice to represent our community. **We still desperately need volunteers. Please pay your 2010 dues immediately. See page 11.**

**It is estimated that there are
400 properties on Kamaniskeg Waterways
that means in 2009 we had only 33%
participation.
Our goal is to have 75% participation.**



IT'S THE LAW!
ALL BOATERS NEED THE CARD, NOW!

Get your Pleasure Craft Operators Card. As of September 15, 2009, it's the law. Consequences of getting caught without the card include a minimum \$250 fine. Visit: www.BoatSmartExam.com. KAPOA members receive a \$10.00 discount online with BOATsmart! Enter Discount Code: FOCA 219

New Municipal Complex in Hastings Highlands

Construction of the new 16,000 square foot Municipal Complex in Maynooth is well-underway. Photos are from mid-February. The following article was pieced together [from Hastings Highlands Newsletter](#). For more info, contact the municipality.



The new Complex will house the municipal offices (6800 sq. Ft.), library (5600 sq. Ft.), multi-purpose room (3600 sq. Ft.) and storage space (2400 sq. Ft.). The new complex is being built to accommodate changes and growth anticipated until 2080.

The new Municipal Complex is an important step in the Revitalization of Maynooth, an economic development program. Maynooth, as the geographic center of the municipality, is in need of a face-lift, an economic

stimulus to revitalize the 'down-town' core. It needs to become a business center to promote Hastings Highlands—as a vacation spot, a business opportunity, a preferred area to live, to work or raise a family. Just like the successful outdoor Market this year attracted many buyers and visitors, Hastings Highlands Council is confident that the Town Hall complex will become a major attraction for residents and visitors. (According to Bancroft This Week, since publishing the newsletter, Hastings Highlands is planning/has submitted many new funding applications including Maynooth Railway Station reconstruction, infrastructure improvements to Logger's Field and Maynooth façades improvements. The new KAPOA website lists recent news stories about Hastings Highlands. Visit <http://www.kapoa.ca/hastings-highlands>).

The new Municipal Complex is expected to cost up to \$4.566M with the feds, the province and the municipality each contributing 1/3 of funds. The municipality will borrow ~\$1.5M to cover their portion.

New services will include expanded library services, larger council chambers and gym room with a stage (for details, see [municipal newsletter](#)). The gym will be used by Maynooth Public School students who currently have no gym. As a result, the school board will contribute to the operating costs of the gym.



Mayor Ron Emond has generously placed his 4 yr. municipal earnings in a trust to be applied to the gym; his gift will amount to \$80,000. Ron has also been in contact with Corporate Sponsors to raise an additional \$20,000.

In early March, the project was 30% complete & costs were on track. As of Jan.31, labour totalled 6,064 local man hrs with 162 hrs for non-local tradesmen.

KAPOA Welcomes New Members

Join us today!

Clip and send this completed form (or PDF version from website)

**With annual membership dues of \$20 to:
KAPOA, Box 297 Barry's Bay, ON K0J 1B0**

Name/Names You Would Like to Appear on Your Membership:

Home Address (designate a primary contact for your group)

City _____

Province/State _____

Country _____

Postal/Zip Code _____

Phone: _____

email: _____

Cottage Address (designate a primary contact for your group)

'Street' Address/RR#/911 Number _____

Postal Code _____

Phone # _____

Good News! 'Ripples' is available by email to each person in your cottage ownership group. List the email addresses of those in your group who would like to receive 'Ripples' by email

Name #1: _____ Email: _____

Name #2: _____ Email: _____

Name #3: _____ Email: _____

Check one that applies: I am a new member ☐ I am a returning member ☐

Membership Benefits YOU!

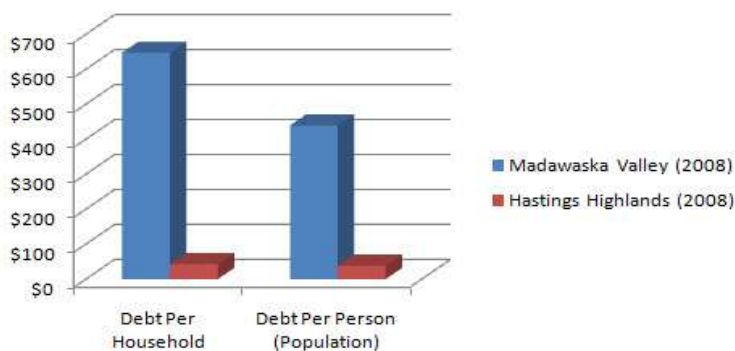
All families sharing a single cottage are covered under one yearly membership fee

- Everyone in your cottage joins in cottage traditions like the annual KAPOA Regatta
- KAPOA's Executive acts on your behalf when issues relating to Lake Kamaniskog arise with the local municipality
- You receive 'Ripples' – the KAPOA Newsletter and email bulletins
- www.kapoa.ca – a comprehensive resource of Kamaniskog Lake with lots of fun and history
- KAPOA is a member FOCA - Federation of Ontario Cottagers' Association. FOCA provides information on programs and services. Visit FOCA at www.foca.on.ca for more information

Municipal Metrics

Municipality	Households (2006 Census)	Population (2006 Census)	Population Density per Square Kilometre (2006 Census)	Total Debt	Reserves	Annual Debt Financing (Interest + Capital Repayment)	Total Municipal Operating Costs
Madawaska Valley (2008)	2,974	4,381	6.5	\$1,923,314	\$3,903,174	\$81,931	\$5,056,230
Hastings Highlands (2008)	3,671	4,033	4.2	\$154,176	\$2,104,860	\$130,589	\$4,900,000

Municipal Debt

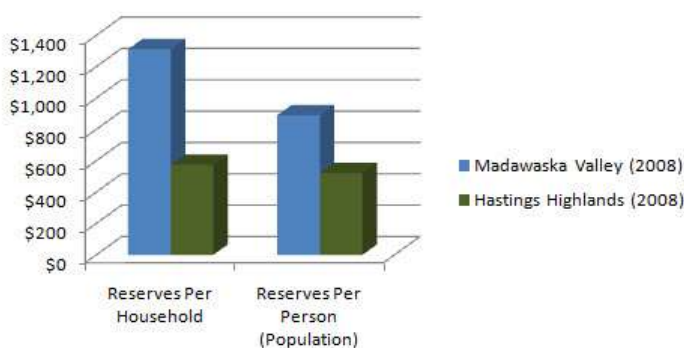


This chart shows debt per household as well as debt per capita. In 2008, Hastings Highlands was virtually debt free.

Lake Kamaniskeg is split between 2 municipalities Hastings Highlands and Madawaska Valley.

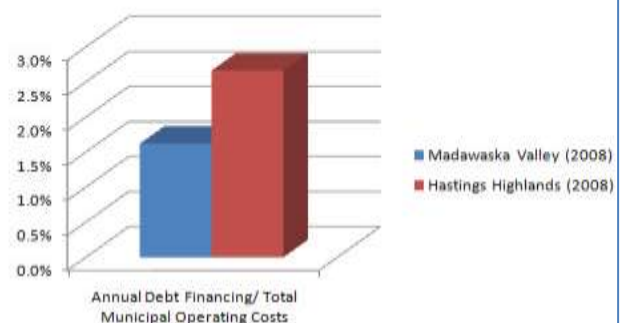
The summary spreadsheet and the charts have been prepared using data from the [Municipal Performance Measurement Program](#) as well as the [2006 StatsCan Census](#).

Reserves



Reserves represent a degree of security. They are the funds the municipality has set aside to fund capital projects and emergencies.

Debt Financing



Annual debt financing is annual interest payments plus capital repayment. In 2008, Hastings Highlands retired about \$120,000 of long term debt. It was this large repayment that raised the 2008 debt financing number.