



Proactive program protects water resources

Town of Kearney, Ontario

Green Municipal Fund Case Study

Sustainable Water Quality Study (GMEF 3205)

Date project completed: November 2005

Total project value: \$125,000

GMF grant: \$62,500

- Public stewardship group formed
- Water quality and septic systems assessed
- Public forum held on water quality
- Area lakes and trout populations monitored

OVERVIEW A desire to maintain its water quality and to provide for sustainable future growth prompted the Town of Kearney to study ways to protect the quality of the town's surface water and groundwater. Most of the town's privately owned septic systems were also tested for contamination or septic failure. A public stewardship foundation was established to advise the town on all of its water management activities. The study recommendations are recognized in the town's official plan and inform its environmental and economic development activities. Kearney's groundwater and surface water sources are regularly monitored.

PROJECT TEAM

Town of Kearney
Gartner Lee Limited

CONTEXT Kearney is a small community of fewer than 1,000 residents, situated at the headwaters of the Magnetawan River. The town serves as an access point for ecotourism in Algonquin Park. Timber harvesting is an important industry in the area, but water-based recreation and tourism are becoming increasingly important to its economic development.

Much of the town's water infrastructure consists of on-site septic systems, and the majority of its water supply comes from dug wells and surface water. Aging or poorly built septic systems could threaten the town's groundwater and surface water resources, human health, and the area's growing reliance on tourism-based businesses. These concerns prompted the town to adopt a proactive approach to watershed management.

APPROACH The Kearney Watershed Environmental Foundation (KWEF), an independent public stewardship group, was formed to advise town council, work with the town's environment committee, and assist with water management activities. A strategy was developed to assess Kearney's surface water and groundwater resources. The project team aimed to identify constraints to, and opportunities for, economic growth, while protecting the ecological integrity of the Magnetawan River. Scientists surveyed the quality of the surface water, synthesized background information, analyzed the terrain, assessed septic systems, and surveyed and analyzed the groundwater. The team held public meetings and reported on its progress. The project's phased-in approach enabled the results of each activity to guide the next.



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A public forum on water quality was held in June 2006 to inform residents about the study's findings. The KWEF received additional funding for other educational initiatives, including the distribution of 1,200 environmental awareness packages. Community volunteers hand-delivered these to ratepayers. Kearney's building inspector now distributes the package when signing off on any new building developments. Best practices brochures are also available from racks outside the town office.

RESULTS Assessment by scientists revealed that most of the town's septic systems were functioning properly and that the quality of the surface water was good. Of 321 septic systems inspected, 6.5 per cent were considered high risk for contaminating surface or groundwater. Some wells exceeded the parameters for nitrates, total coliform bacteria and *E. coli*.

Since little information exists on the bedrock and groundwater system, the team could not gather sufficient data to determine the precise distribution of soil, depth of the water table, bedrock characteristics, or identify a deep aquifer in the bedrock. The thin soils over the bedrock do not absorb contaminants released to the environment very well, allowing them to easily move overland to surface water, or to shallow groundwater, and threatening the environment and human health. Water well records were insufficient to develop an accurate picture of the groundwater quality. Abundant groundwater resources combined with a relatively low population density, however, suggested that there is room for additional users and development.

The Ministry of Natural Resources (MNR) also provided data on lake trout populations. As a result of the KWEF's efforts, 12 area lakes are now monitored for clarity and phosphorous under the Ministry of Environment's (MOE) Lake Partner Program.

The town's potential for generating hazardous waste was judged to be moderate to low. However, an inventory of 12 historic legacy sites was identified.

The town now has a baseline from which to monitor future development and is able to undertake public education activities to develop best practices. The town is incorporating the findings and recommendations into its 2007 official plan and bylaws.

LESSONS LEARNED Carol Adamthwaite, chair of the KWEF, noted that regular contact between the environmental committee, volunteers and scientists contributed to the overall understanding of water quality issues. "Now that we have a baseline, we will be able to respond quickly to any changes," she said.

Volunteers were an important part of the town's approach. "Residents' daily actions contribute to the health of the watershed, so using community volunteers sent an effective message," she said. "People saw that their neighbours felt strongly and were willing to give of their time."

NEXT STEPS Kearney is lobbying the Government of Ontario to take responsibility for its own septic permits and inspections. Adamthwaite noted that problematic systems are reported to the North Bay Mattawa Conservation Authority (NBMCA), but there have been delays and a lack of communication between the NBMCA and the Town of Kearney.

Kearney town council will consider a proposal from its environment committee for ongoing water testing.

With additional funding for educational initiatives, the KWEF is preparing two new brochures to augment its information package and is developing a website with environmental information and links (<www.kwef.ca>). The KWEF will also continue to work with the MOE and the MNR to collect other types of data.



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CONTACTS

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ADDITIONAL RESOURCES For other GMF projects of this type or category, or from this municipality, province or territory, please contact FCM's Capacity Building program, Water Campaign, at 613-907-6214 or at water@fcm.ca. For the complete project report, please visit the FCM Centre for Sustainable Community Development website at www.sustainablecommunities.fcm.ca.

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