

# Managing Water in the Town of Kensington, Prince Edward Island

## Kensington Water Management Committee 2016

### Water and Community Values in Kensington

Water conservation on Prince Edward Island has grown to become an important local issue for communities in recent years. Prince Edward Island, unlike most regions, relies %100 on ground water for all residential, industrial, and institutional requirements. The level of concern for our water supply has risen as occasional problems have occurred.

- Over-extraction has occurred in watersheds servicing large urban centres, resulting in streams running dry prematurely.
- Rapid growth in the early 1990's of highly visible irrigation systems for agriculture created a public outcry that resulted in a moratorium on high capacity wells for irrigation, and heightened awareness of water general water use.
- In other regions, changing climate has compounded high extraction rates and created water shortages, demonstrating to Islanders the importance of good water management.

Our provincial government has reacted to these and other water issues and is in the process of creating a water act for Prince Edward Island. The Town of Kensington, in cooperation with the Kensington North Watersheds Association, has created a Water management committee to address water conservation and water safety issues.

*The Purpose for a Plan to Manage Water for the Town of Kensington:*

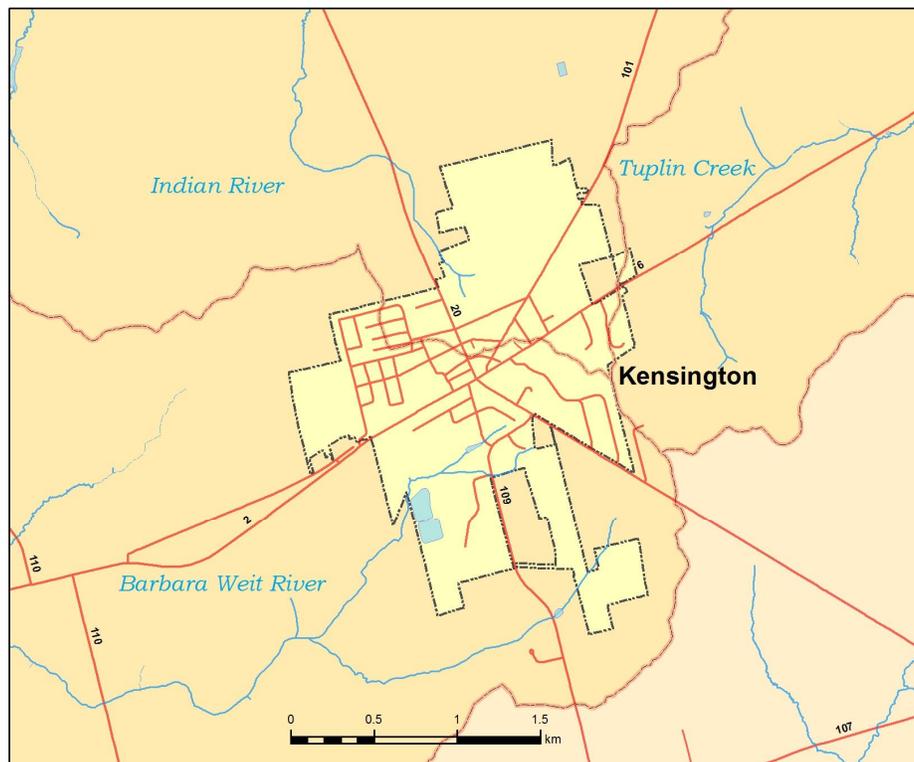
***The purpose of this plan is to develop and implement a long term strategy addressing water quality and quantity issues to protect both public and environmental health***

The Town of Kensington has not been put on alert for any specific reason pertaining to water conservation or water safety. Water use restrictions have not been required. Investments in infrastructure have been frequent and effective over the decades since a central water system was first installed in Kensington. Both water supply and sewage treatment infrastructure are kept up to date, and well within the regulatory framework. Standards for assessment and testing are based on the national Guidelines for Canadian Drinking Water Quality. Drinking water in Kensington is tested on a regular basis.

The work being done by the Town and the Water Management Committee is charting a course for the future that will minimize the risks of reduced water supply, ensure water quality, and minimize the town's impact on watershed ecology.

## Background – Water Management

### The Watersheds of the Town of Kensington



*Kensington lies on the heights of land between three watersheds; the Barbara Weit River, Tuplin Creek and Indian River.*

### Wells servicing Kensington's central water system

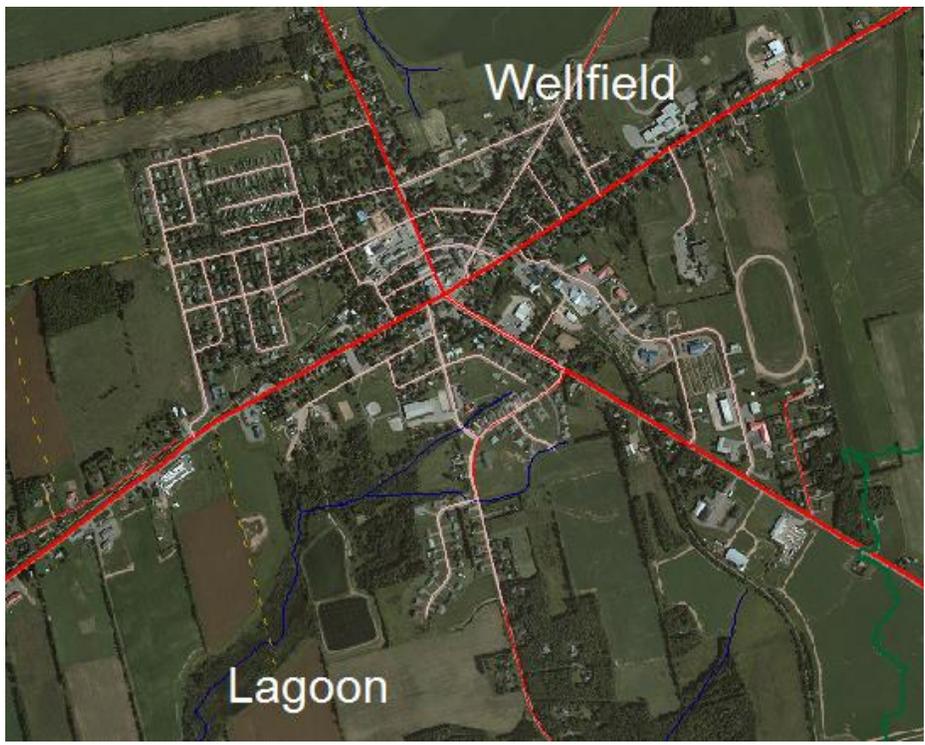
The inception of a central water and sewage system resulted in the retirement of private wells and septic systems within the town's limits. Currently there are very few private wells and no active septic systems. The well field for the town, containing all four of its wells, is along Woodleigh Drive (Rte. 101, Irishtown Rd.) beside residences and Kensington Intermediate Senior High School.



*Well Head Locations and contour lines*

The water extracted for the town comes primarily from the Indian River watershed, although seepage likely occurs from Tuplin Creek and the Barbara Weit River into the well field zone.

The waste treatment plant is located in the Barbara Weit watershed.



*Town of Kensington Well Field and Lagoon*

## Water Management Committee Activities, Year 1

1. A committee was created with staff from the Town of Kensington and the Kensington North Watersheds Association, plus several residents of the town. The committee chair is Gordon Jenkins, retired Groundwater Tech, IT Planner, Compliance Officer, PEI Dept. of Environment. Two committee meetings were held in 2014. The project is following a model for changing behaviours on environmental issues, created by Doug MacKenzie-Mohr. His book, *Fostering Sustainable Behaviour*, has been used to guide the project.

2. Surveying Residents of Kensington.

A survey was created and distributed to town residents via an insert in the monthly Water and Sewer bill. The survey went out to 600 billing addresses. Fifty replies were received, making the results statically significant. Submitted surveys were entered into a draw for ten rain barrels.

The survey may be biased toward those who are sympathetic to the concept of water conservation, as those who are indifferent may not bother replying to the survey.

Observations of the survey results included:

- Most respondents own their homes, 39% are two person households,
  - One third identify their property as having a small lawn with no garden, which likely has a large influence on out-of-doors water usage,
  - A surprising 52% have installed low water consumption toilet fixtures, and 58% have installed water efficient shower heads or faucets,
  - Also surprising, about 50% did not have clear knowledge that they knew where Kensington's water came from,
  - An assortment of mainly positive and encouraging comments accompanied the surveys.
3. Kensington Intermediate Senior High – has been identified (resulting from a water exercise with the Grade 8 science class by Kensington North staff) as proprietors of extremely inefficient toilet fixtures and urinals. Toilet fixtures are high pressure 25 litre flushes. Urinals trickle continually, year round.
  4. Chairperson Gordon regularly stressed the importance of water quality, from his experience with the Dept. of Environment. Although it was not part of our original mandate, we have identified several water quality issues that could be addressed, and they appear to go hand-in-hand with our water conservation discussions. Gordon cited the shallow clay layer of soil that causes rapid horizontal movement of water in the Kensington region that could cause contamination of an area from a toxic spill in a neighboring area.

Action items could include sponsoring a public toxic chemical collection day, plus other public awareness activities. This idea was eventually discarded, as the cost of a special collection would not be borne by Island Waste Management. Depending on the turnout, the collection could cost several thousands of dollars in hazardous waste collection fees. The investigation into hazardous waste collection did result in establishing a partnership with Island Waste Management on the creation of a pamphlet addressing hazardous waste collection in the Kensington area.

5. A logo for the Water Management Committee was created.



### **Water Management Committee Activities, Year 2**

1. A personal survey was created by Kensington North staff. The purpose was to gather additional information, and to engage clients in a discussion on water issues. A partnership was formed with Island Waste Management, whose artist created a pamphlet for the survey.

Additional pamphlets were created on water efficient appliances and low water use gardening (xeriscaping). These documents may be viewed on our website at [http://knwsa.com/p\\_kwmc.htm](http://knwsa.com/p_kwmc.htm)

2. The survey was conducted with 50 home owners. Thirty five water efficient showerheads were distributed to survey participants. Many participants also permitted a committee sign to be posted on their lawns.
3. Survey results demonstrated that residents:
  - are moving toward owning water efficient appliances,
  - are interested in techniques to reduce water usage in the garden,
  - are gaining awareness on household hazardous waste,
  - are not aware of well field protection plans.
4. The committee, town staff and Kensington North staff prepared a presentation for the public hearings held by the PEI Environmental Advisory Council on the proposed Water Act

for PEI. The presentation to the council was made by Rowan Caseley, the mayor of Kensington. The presentation can be viewed on the PEI Water Act website:

[http://www.gov.pe.ca/photos/original/cle\\_Kensington.pdf](http://www.gov.pe.ca/photos/original/cle_Kensington.pdf)

### Securing Kensington’s Water for the Future

1. The committee feels that there is time to develop a water conservation plan for the Town, that there is no immediate time pressure to do so, and that work toward the creation of a water conservation plan should continue. The issues that will need to be studied and debated for an effective water conservation plan for the Town of Kensington, and their potential responsibilities, are as follows:

Issue	Responsibility
Improving and extending the life of existing infrastructure	Town Council, Town Manager
Improving emergency preparedness	Town Council, Town Manager, Water Management Committee
Educating customer about the value of water, water safety, water conservation	Water Management Committee
Protecting future water resources	Water Management Committee, Watershed Association
Creating by-laws and regulations, performing strategic planning focusing on water management	Town Council

2. The committee feels that there is a greater sense of urgency to create a well field protection plan. Funding to create such a plan is being actively sought, by the Town Manager and Kensington North staff. *A Strategy to Create a Well Field Protection Plan* has been created by Committee Chair Gordon Jenkins:

- Create an inventory list of natural capacity:
  - Geology,
  - Lithology,
  - Slopes, etc.
- Create an Inventory list of human influences:
  - Roads,
  - Land use (residential, commercial, industrial, recreational, agricultural, forestry, other),

- Property ownership,
- Septic tanks and fields existing and abandoned,
- Existing private, industrial, and commercial wells,
- “As built” map of water and sewage (domestic and storm),
- Any other above and below ground town assets and liabilities.

3. Analysis of threats, create a plan manage suppression water from a high-risk fire and process it prior to environmental release.

With the assistance of DOE and this inventory seek out a second well field site which could be developed over time and would go a long way in ensuring a water supply for the town for the foreseeable future.

Devise an acceptable business policy for the town where certain unacceptable activities are not allowed in drawdown zones.

This would require direct Town input may create the need for by-law creation.

Example:

- Heating with petroleum not permitted in new construction in drawdown zones,
- All petroleum storage shall require provincial certification within the 25 year perimeter,
- New construction will require water absorption roadways, rain gutter septic systems, etc., to maximize rainfall recharge potential in drawdown zone.

4. Mapping Requirement

All the inventory information will be appropriately mapped, thus providing a way for policy makers, managers, custodians have the tools they need to make the right decisions. When it is seen on a map it is “common sense” that rules, i.e. a potential hazard in the wrong place.

This would be the foundation of the well field protection plan which is really a working document for planning and emergencies.

With this completed the town would be on sound footing in making good and lasting municipal policy.

## Future Activities

Future activities for this committee and staff from the Town of Kensington and KNWSA may include:

1. A quarterly newsletter on water management issues will be an important tool. A newsletter could contain content such as:
  - “Did you know...” the location of wells, how the Town re-invests in infrastructure, how efforts are continuous to maintain water safety, etc,
  - List of “Top 5 conservation tips” or similar,
  - Means of engaging youth,
  - Hazardous material disposal tips, reminders, etc.
2. A project to match households that lack means to dispose of their Household Hazardous Waste and volunteers to pick up HHW and deliver it to the New London waste management facility
3. Continued waste management education component with the Grade 6 Environment Day
4. Continued fund raising efforts to secure support for education and awareness activities
5. Keep our Water Management Committee informed and active on water management issues.