

Town of Markham’s Backflow Prevention Program:

The Backflow Prevention Program is being delivered in phases over an 8 year period to approximately 2600 ICI (industrial, commercial and institutional) and multi-residential properties across the Town:

- *Phase I* (2009-2011) of the program (856 properties) includes approximately 560 properties ranked as a *Severe Hazard backflow risk*.
- *Phase II* (2012-2014) of the program (900 properties) is intended to be delivered to properties ranked as *unknown Hazard backflow risk*.
- *Phase III* (2015-2016) of the program (844 properties) is planned to be delivered to properties ranked as *moderate or minor Hazard backflow risk*.

Phase IV (2017 onward) of the program (unknown amount) will be applied to single residential properties with connections to private fire protection or lawn sprinkler systems or with any auxiliary water supply.

Once the phased properties are brought into compliance with the By-law, ongoing administration of the program is required in order to implement re-surveying of cross connections at properties and annual testing requirements of existing backflow preventers.

The Town’s Backflow Prevention Program is a “full program” requiring applicable property owners to install backflow preventers based on combining premise, zone, and source protection to ensure that both the public and private potable water supply systems are protected from potential contamination caused by backflow incidents. The program contains the following requirements as the responsibility of the property owners:

1. Every 5 years, complete an “Information Request Form” with requested information and submit it to the Town;
2. Every 5 years, carry out a Cross Connection Control Survey by a *qualified person* and submit it to the Town;
3. Annually, inspect and test backflow preventers installed on the property by a *qualified person* and submit it to the Town;
4. Take corrective actions on **all** deficiencies found through the “5-year cycle” cross connection control survey and annual preventer testing activities.

The Town has developed a comprehensive strategy to implement the Program and enforce the By-law for safeguarding the Town’s drinking water system. The strategy consists of the following components:

- Public education and stakeholders engagement;
- Tracked correspondence and excellent customer service;
- Inter-departmental collaboration with identified roles and responsibilities;

Attachment “B” – Markham’s Backflow Prevention Program

- Effective records management;
- Administration of *qualified persons* permitted doing backflow prevention work;
- Progressive enforcement to attain compliance
- Detailed policy and best practice development
- Continued program improvement

Current Status of Backflow Prevention Program:

1. Compliance Rates:

The first phase of the Backflow Prevention Program has been rolled out to 33 % (856 properties) of the ICI & Multi-residential properties across the Town of Markham. This includes 560 Phase I *high risk* properties, 58 Town owned facilities and 238 Voluntary properties;

To date, overall compliance rates of Phase I program attained as below:

- 88.2% (755 Properties) at full compliant stage;
- 11.6% (99 Properties) at partial compliant stage;
- Almost 0.2% (2 properties) at non-compliant stage

Progressive enforcement is being undertaken to bring remaining property owners into full compliance with Backflow Prevention By-law. The Phase I program will be completed in early 2012 with continued maintenance required thereafter. The Phase II Program applying to 900 ICI & Multi-residential properties will commence in early 2012.

2. Correspondence & Customer Service:

- To attain compliance from the property owners, three notices are sent out to each property by registered mail with a specific timeframe. For partially responded customers, another notice is sent. The number of notices to each property depends on the response level from property owner and varies from 1 to 4. A total of 2400 notices were sent out to the Phase I property owners to date.
- A total of 780 customer service requests answered through phone calls or emails.
- A total of 2380 submissions (survey and testing reports) have been reviewed and entered into database to date.

3. Administration of Qualified Persons:

220 *qualified persons* (100 plumbing companies) have been registered with the Town and their qualifications have been administered by the Town.

4. By-law Enforcement:

For properties with no response and no submission within specific timeframe, the Waterworks Division forwards their files to the Clerk’s Department for initiating legal proceedings. To date, 30 properties have been forwarded to the Clerk’s department. Among

of them, 29 properties have been withdrawn charges due to their becoming fully compliant after receipt of summons. The 30th property is working towards full compliance.

5. Records Management:

Specialized computer software (BPMS software) has been purchased and customized for Markham (with the Vendor) to manage a large number of records generated from this program. BPMS software is able to keep track all correspondence with each property owner and can generate a compliance report for each property as well as statistical data for the program.

6. Public Education & stakeholders engagement:

Two public information sessions were held for phase I property owners. A brochure is being developed in 2011 to provide information regarding the Program requirements and Compliance with the By-law.

