

## **Executive Summary for Time line of Actions**

**Prepared 3-9-2013**

**February 2005** - brought to Fire Comm. from BFD

**April 2005** - brought to Board of Selectmen

**June 2005** - brought to PZC

First introduction of 30,000 gal. min cistern

**August – November 2005** - under discussion with PZC and staff

Discussion of regulatory language and content included: gallon capacity of cisterns, threshold number of dwelling units, attached vs. detached dwellings, threshold size for commercial construction, and the authority to grant an exception for sprinklers.

**November 2005** - PZC public hearing process starts

**December 2005** - adoption by PZC

**January 2006** - regulation effective

**NOTE:** Also during 2005 the concept and draft content of the cistern regulations were brought to the EDC and one of its periodic Business Gatherings, this one held at the Villa Louisa Restaurant. Also on the agenda that evening was a presentation concerning the proposed sewer project.

## **Presentation Water Supply for Fire Protection**

### **Program Outline**

#### **Introduction of Presenters –**

**Project Summary** – Originated within the Dept. from Asst. Chief Assard, developed by the FMO and Fire Officers, reviewed by the Fire Commissioners

**Purpose Tonight** – To broaden the input to outside the fire service, to align the project with overall community planning, to develop a regulatory basis for the specific requirements

#### **Why Now?**

Growth potential of the Town

New zoning regulations, future sewers, economic need to attract desirable growth, quality of life

Life safety, property preservation, business recovery

Managed growth of fire suppression services

2003 survey of 500 communities by ISO found that: >70% of the respondents saw water supply as a top challenge to meet

## **What do you have before you?**

A proposed plan to establish a reliable year round readily available and safe to use water supply for fire fighting

## **Essential elements of the Proposal -**

Burden of water supply is on the developer

Less expensive to do upfront, Town not playing catch up w/ tax dollars, is a cost like roads, utilities, etc.

However, the cistern could be part of overall environmental solutions design i.e. capture site run off, roof leaders drain to, detention

Establish a water supply in the form of a cistern or dry hydrant

Provides an automatic sprinkler option, this is used in many communities to reduce road width, reduce distance between buildings, allow longer response times for apparatus

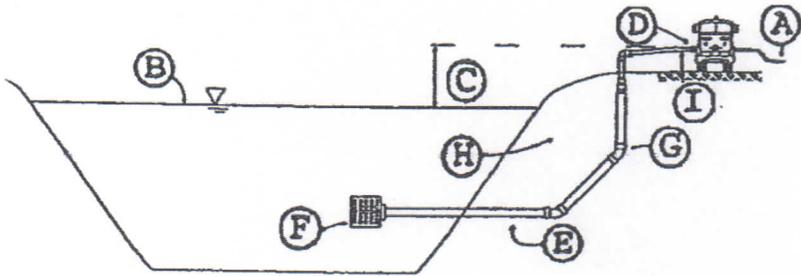
## **What Does Bolton Get?**

An improved level of life safety (civilian and firefighters)

A value added benefit attractive to developers and ultimate owners

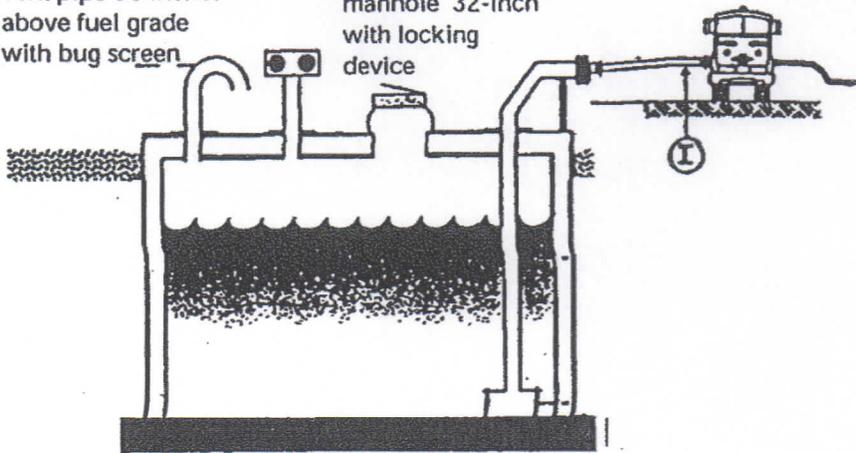
An opportunity for property owners to realize an insurance premium saving

An improved ISO rating, at least to a Class 8



vent pipe 36 inches  
above fuel grade  
with bug screen

manhole 32-inch  
with locking  
device



		<b>Costs</b>	
Tank Size	Cost		
10,000	\$1.25/gal		
>10,000	\$1.50/gal		Concrete
>10,000 poured in place	\$1.00/gal		
10,000	\$9,300		Fiberglass
30,000	\$24,000		

**Size**

10,000 gal approx 8' X 27'

30,000 gal approx 10' X 52'

## FAQs

### **How long does it take to put out a fire and how much water does it take?**

The initial knockdown of the fire may take only several minutes but could be 45 minutes or much more, and the overhaul of the building could take several hours. Water flow could be used to ventilate the building or direct dangerous fumes / vapors away from people and property.

Using the example in the concept of a 3600 square foot house, assuming 50% involvement and a time to extinguish of 30 minutes a total of 22,500 gallons of water would have been used.

One fire service hose line delivers from 125 to 250 gallons per minute, thus a flow of 250gpm for 30 minutes would use 7,500 gallons far exceeding what is available from Bolton's responding apparatus.

In the cases where water flow is used to ventilate or to disperse fumes / vapors the required flows would range from 150gpm to 750 gpm or more, thus in 10 minutes using 1,500 gallons to 7500 gallons.

### **Are there other alternatives?**

Yes, for example this proposal allows an exception if the buildings are fully sprinklered as per nationally recognized codes

Some communities have accepted money in lieu of on site improvements to allow the community to improve the water supply as it sees fit

Many communities require the extension of water lines and hydrants

Often commercial / industrial facilities will require not only a public water supply but the private on site storage of 350,000 to 500,000 gallons of water and a fire pump capable of delivering 1,000 gpm or more

## FAQs

### **Are we the first?**

No, but we can still be a leader

Similar programs are in place for example:

#### **Locally –**

Andover, Marlborough, Ashford, Brookfield, Ridgefield, Redding,  
Bethany, Middlefield, and Deep River

#### **Regionally –**

Princeton, MA. State of New Hampshire Dept of Resource and  
Economic Development

#### **Nationally –**

West Alexandar PA, Evergreen Col., San Francisco, Calif.