



ATAP Infrastructure Management Ltd.

Cross Connection Control (CCC) Awareness

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Overview

- What is a Cross Connection?
- What is Backflow?
- Levels of Hazard
- Why have a program?
- What does it involve?
- Types of protection
- How can ATAP assist



What is a Cross Connection?

“An actual or potential connection between a potable water system and anything that may/can cause pollution or contamination of the potable water”



What is Backflow?

- A flowing back or reversal of the normal direction of flow
- Backflow can happen due to:

back siphonage

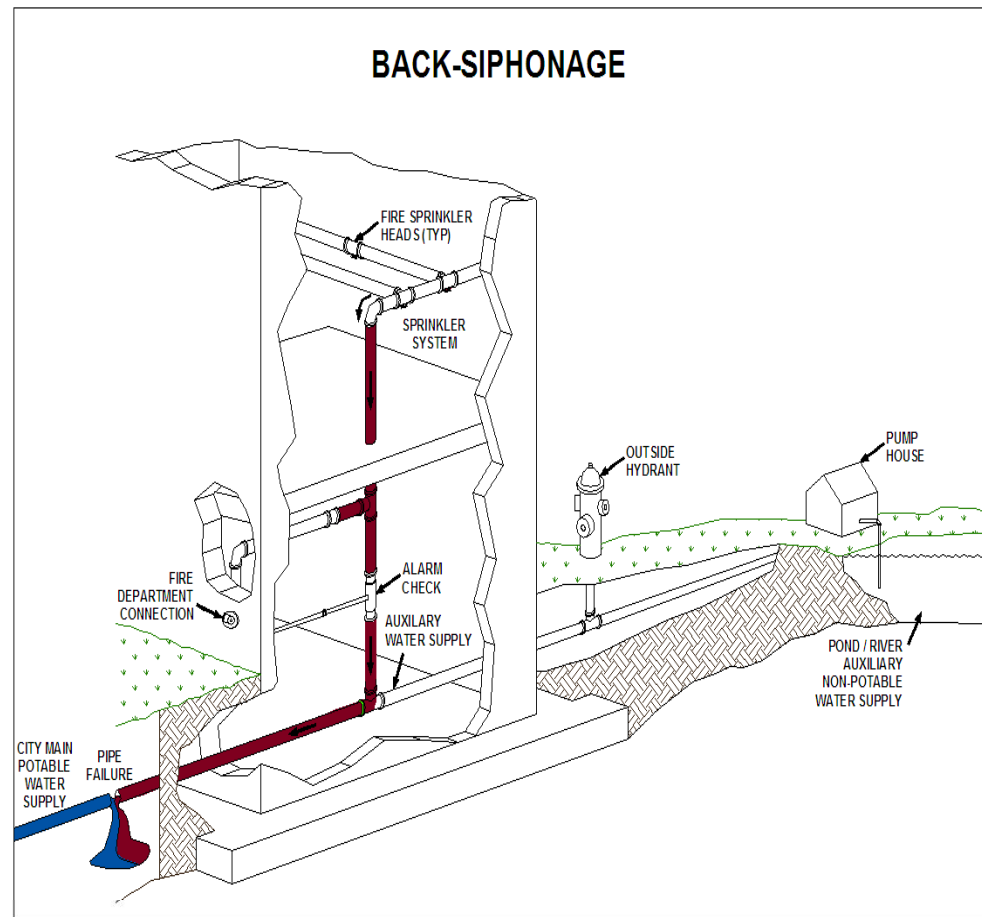
or

back pressure



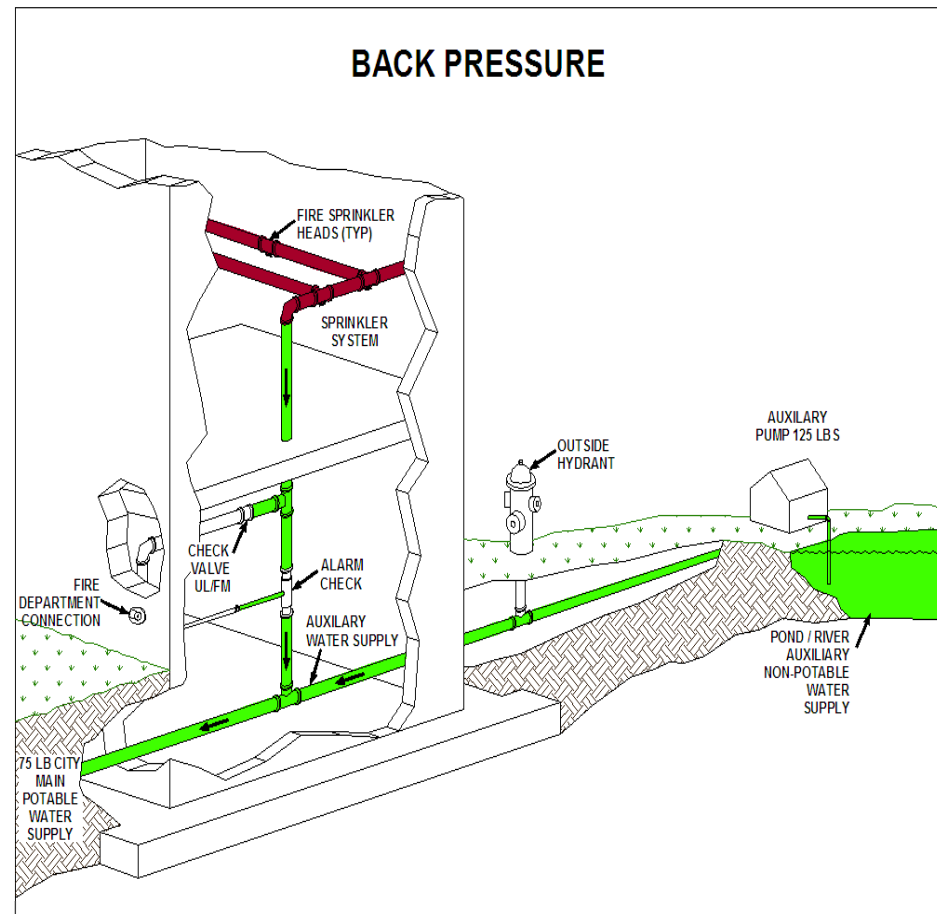
Back Siphonage

When there is negative or sub-atmospheric pressure in the water system



Back Pressure

When the pressure is greater than the water system supply pressure



Levels of Hazard

- *Minor* - a hazard that would constitute a nuisance with no chance of being a health hazard
- *Moderate* - a minor hazard with a low chance of becoming a severe hazard
- *Severe* - any connection to a substance that can cause a **DANGER TO HEALTH**



Why have a program?

- Provides extra level of protection
- Reduces liability
- Shows due diligence
- Provides increased consumer confidence
- Reduced system or business shutdowns



What does the program involve?

- Appropriate bylaw / ordinance / regulation
- Budget & policy
- Awareness / coordination
- Inspection / permit review requirements
- Tracking system / correspondence
- Incident response plan
- Quality control & program review



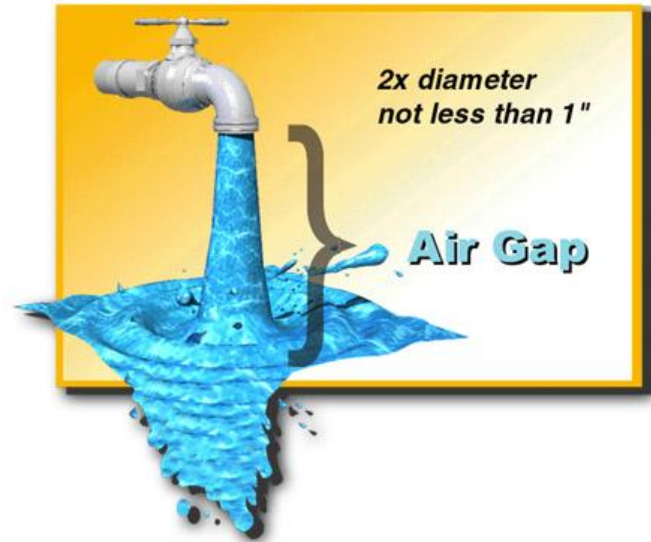
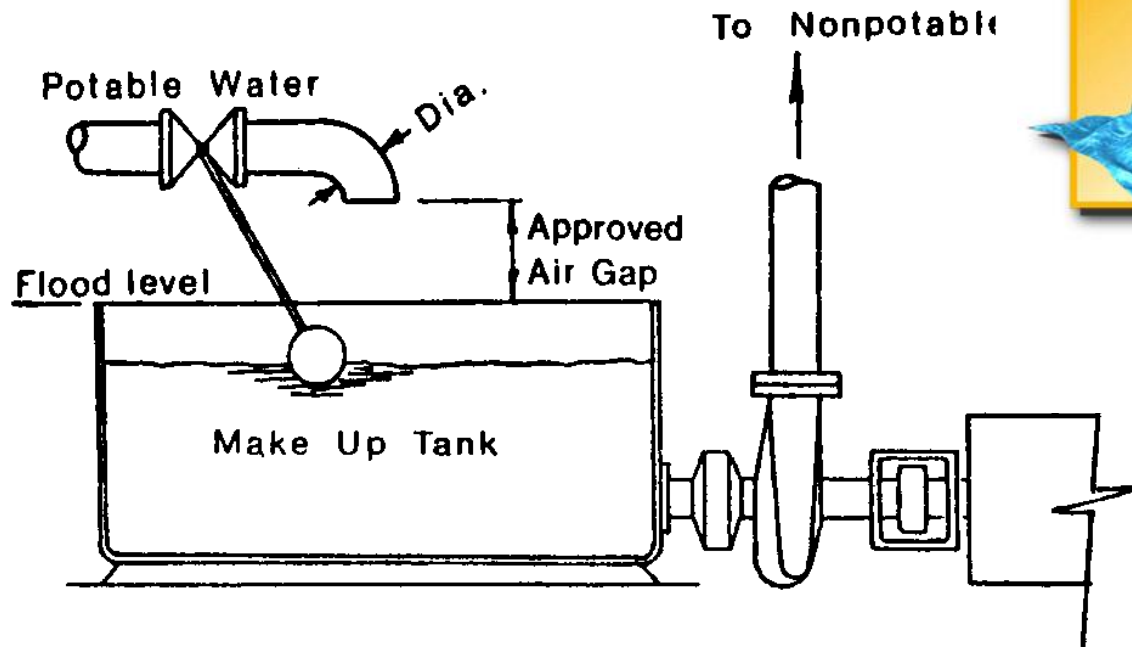
Types of Protection

- Air Gap
- Backflow Preventers
 - various units and designs - degree of hazard
- Program
- Positive pressure (20 psi)



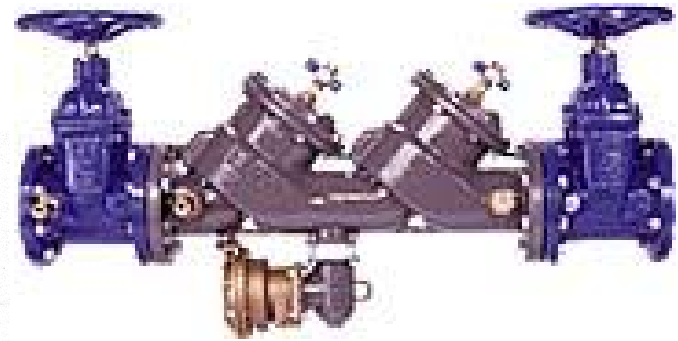
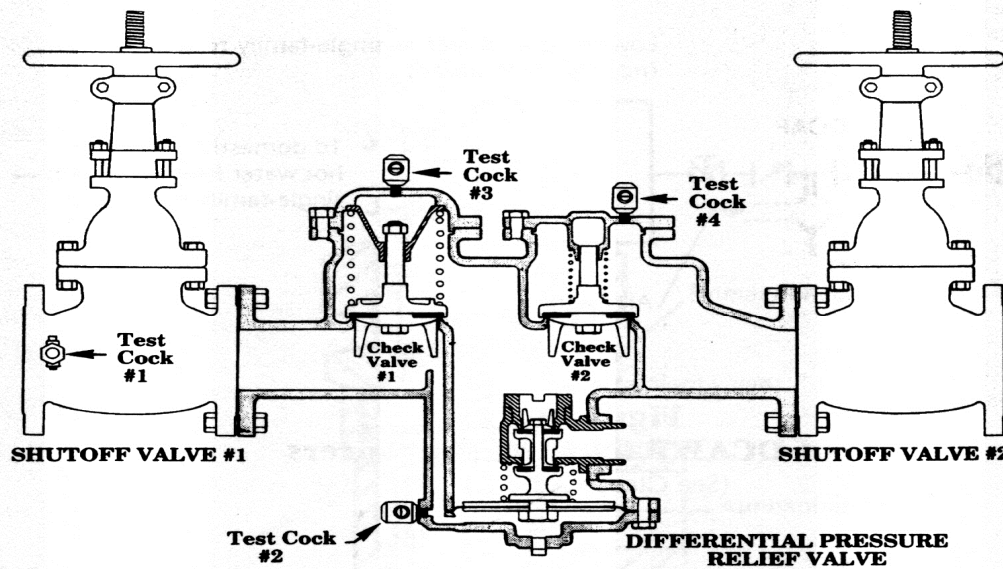
Non-Testable BFP

Air Gap - AG



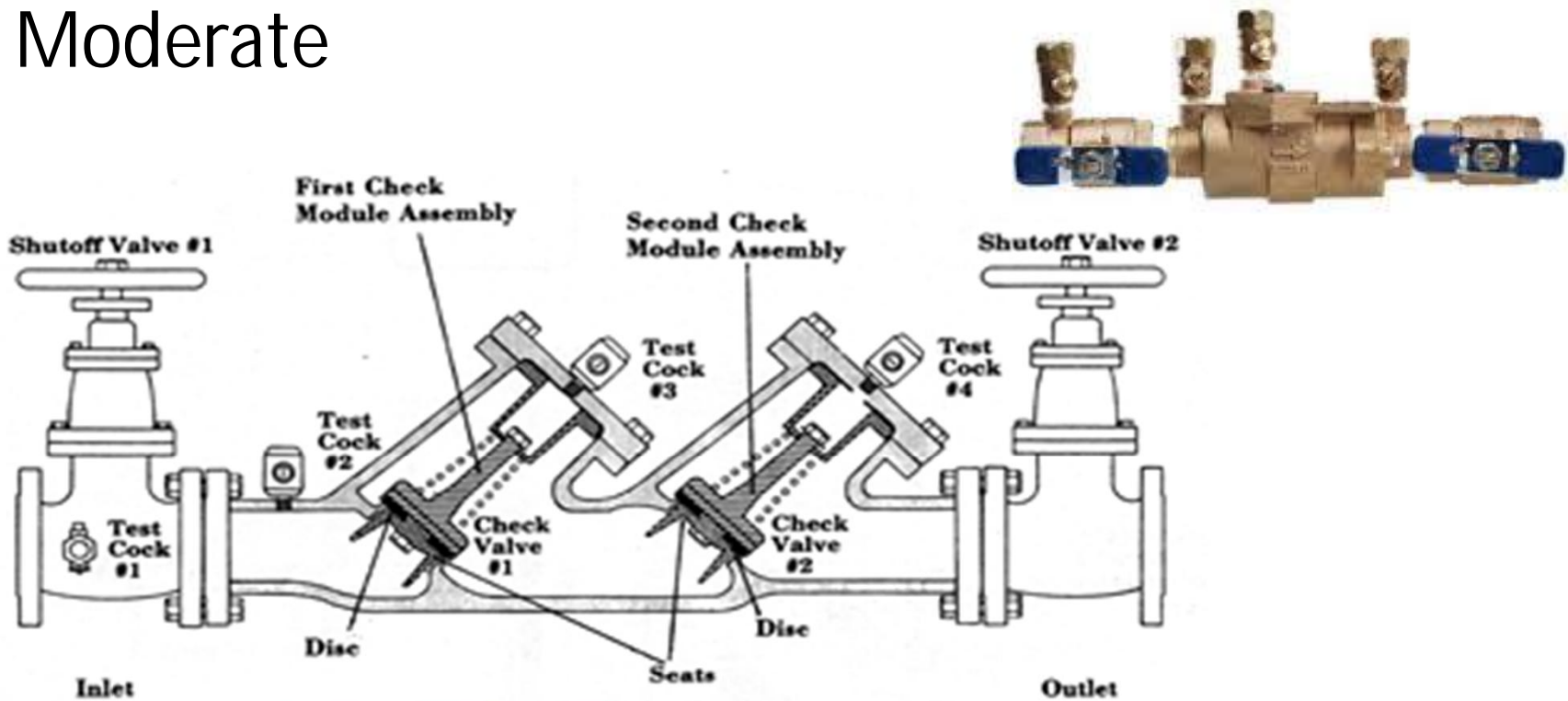
Testable Backflow Prevention Device

Reduced Pressure Principle Backflow Prevention Device - RP - Severe



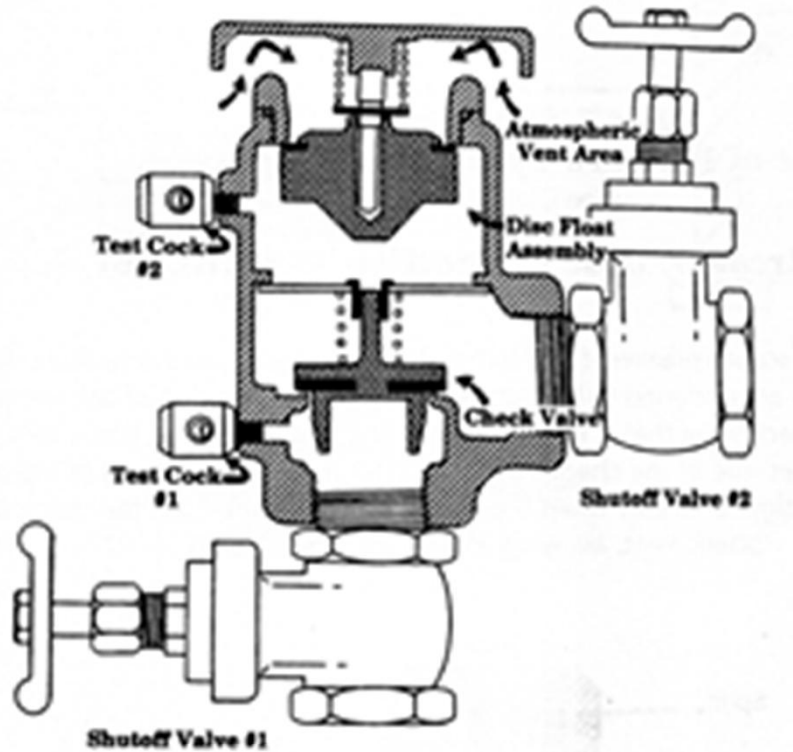
Testable Backflow Prevention Device

Double Check Valve Assembly - DCVA -
Moderate



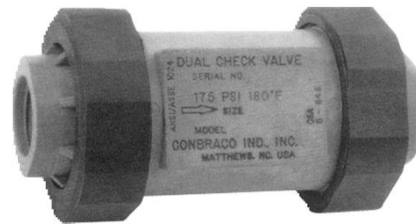
Testable Backflow Prevention Device

Pressure Vacuum Breaker - PVB



Non-Testable BFP

- Dual Check (DuC)



- Hose Connection Vacuum Breaker (HCVB)

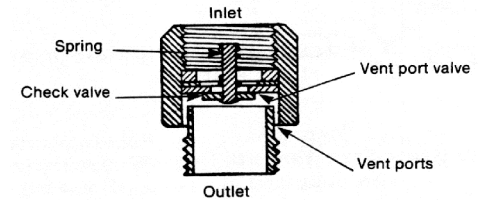
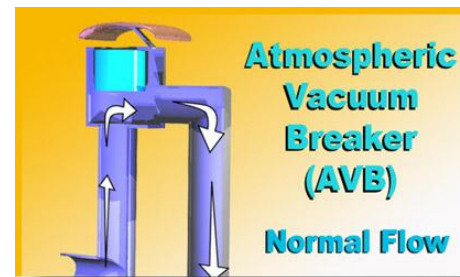
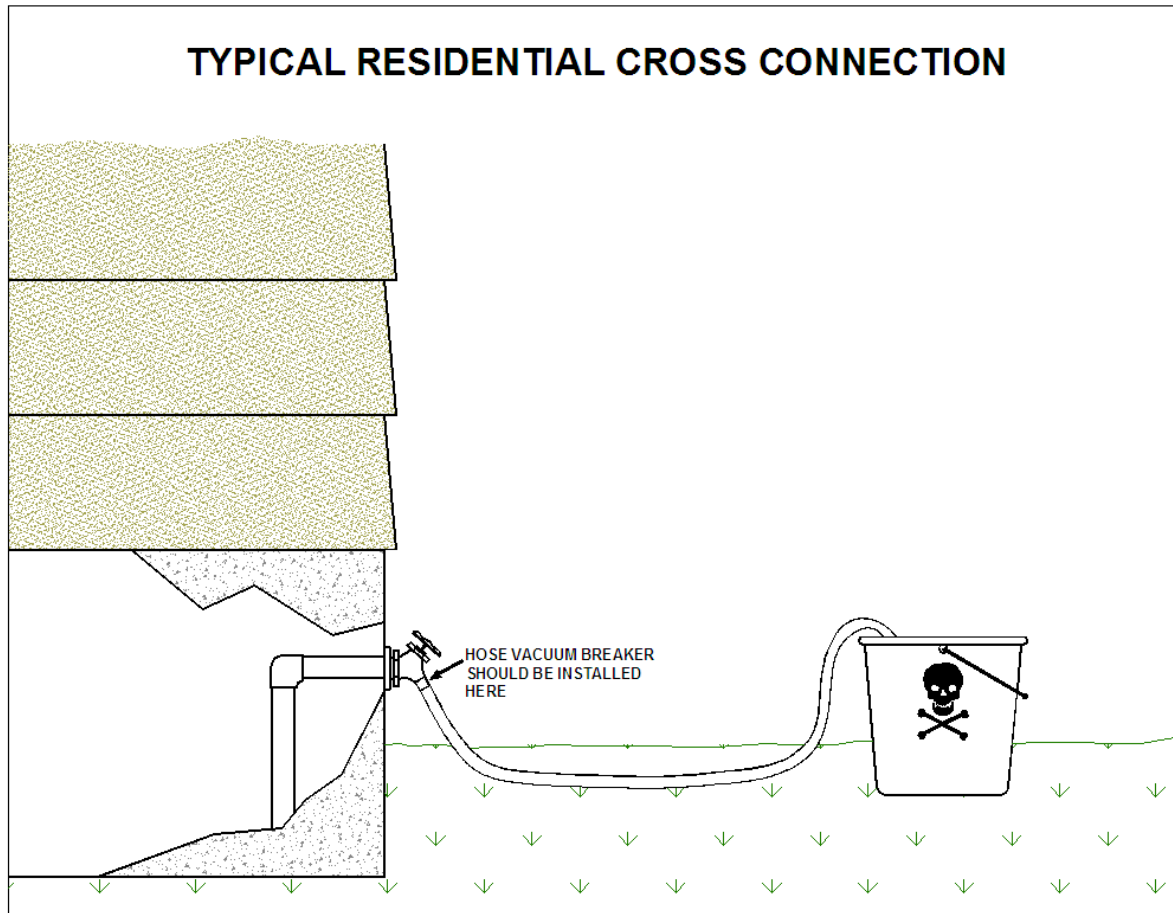


Figure 7
Hose Connection Type Vacuum Breaker
(See Clause 3.3.5.1.)

- Atmospheric Vacuum Breaker (AVB)

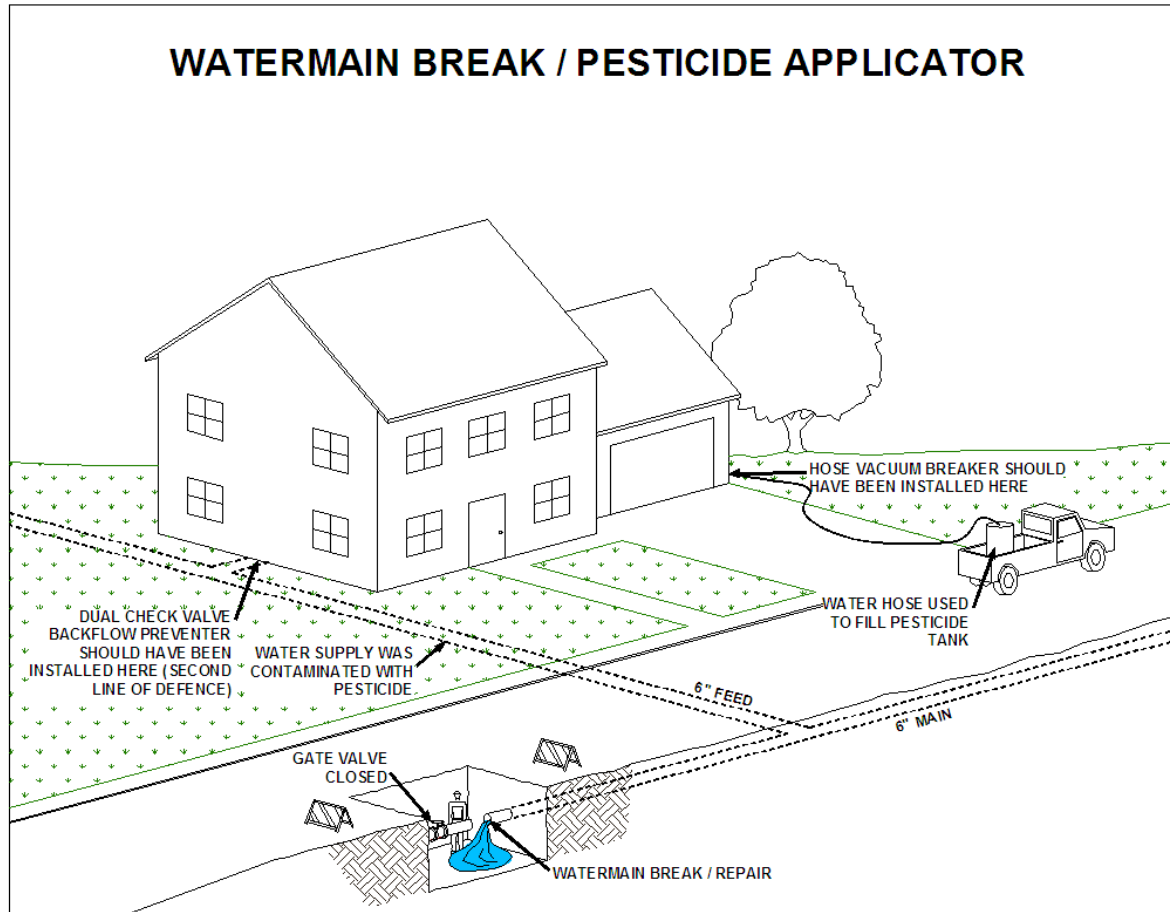


Typical Incident



Typical Incident

WATERMAIN BREAK / PESTICIDE APPLICATOR



Incident

THE GUELPH MERCURY

Friday, August 29, 1997 Delivering the news to Guelph and Wellington County Volume 150 No. 58 \$1.00

Nun attack/ A2 Guelph centre on cutting edge of food technology/ A3 Royals win/ B1



Half of Guelph goes without drinking water

Chemical leaks into water supply causing tap water contamination

BY ANDREW BRUCE
The Guelph Mercury

Word slowly crept through the City of Guelph Thursday that people in the northern half of the community should not drink tap water because of the possibility an

around the Autocom plant and spent the day flushing the water out of fire hydrants and into the sewer system, leading to the sewage treatment plant.

Renosol 1515, a petroleum-based chemical, is mixed with water at Autocom - at a concentration of five per cent chemical - and some time overnight there had been a failure of a back-flow prevention device that keeps the mixture out of the city water system, the health unit said.

Mid-morning Thursday the city contacted CJOY and Magic FM 106.1 to tell residents north of the CN railway tracks, which essentially

resident, didn't know there was a warning about the tap water until a reporter contacted her.

"I'm very shocked, surprised," she said. One of her three children drank a glass of water and she was also upset that the family's new puppy drank water all day long.

Fatt was disturbed that she was in the dark on the possibility of water contamination.

Robert Thompson, director of the health protection division at the health unit, said there is little else that can be done to notify people, short of going into neighbourhoods with loud speakers.

While the contamination,



ATAP Can Assist With:

- Preparing awareness documentation for Council and the public
- Preparing bylaws to implement CCC program
- Budget and policy development
- System development of survey and inspection process
- Database development
- Staff training
- Eliminating start up and research time



Questions?



Thank You

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