

SANITARY SEWER BACKWATER PREVENTION PROGRAM

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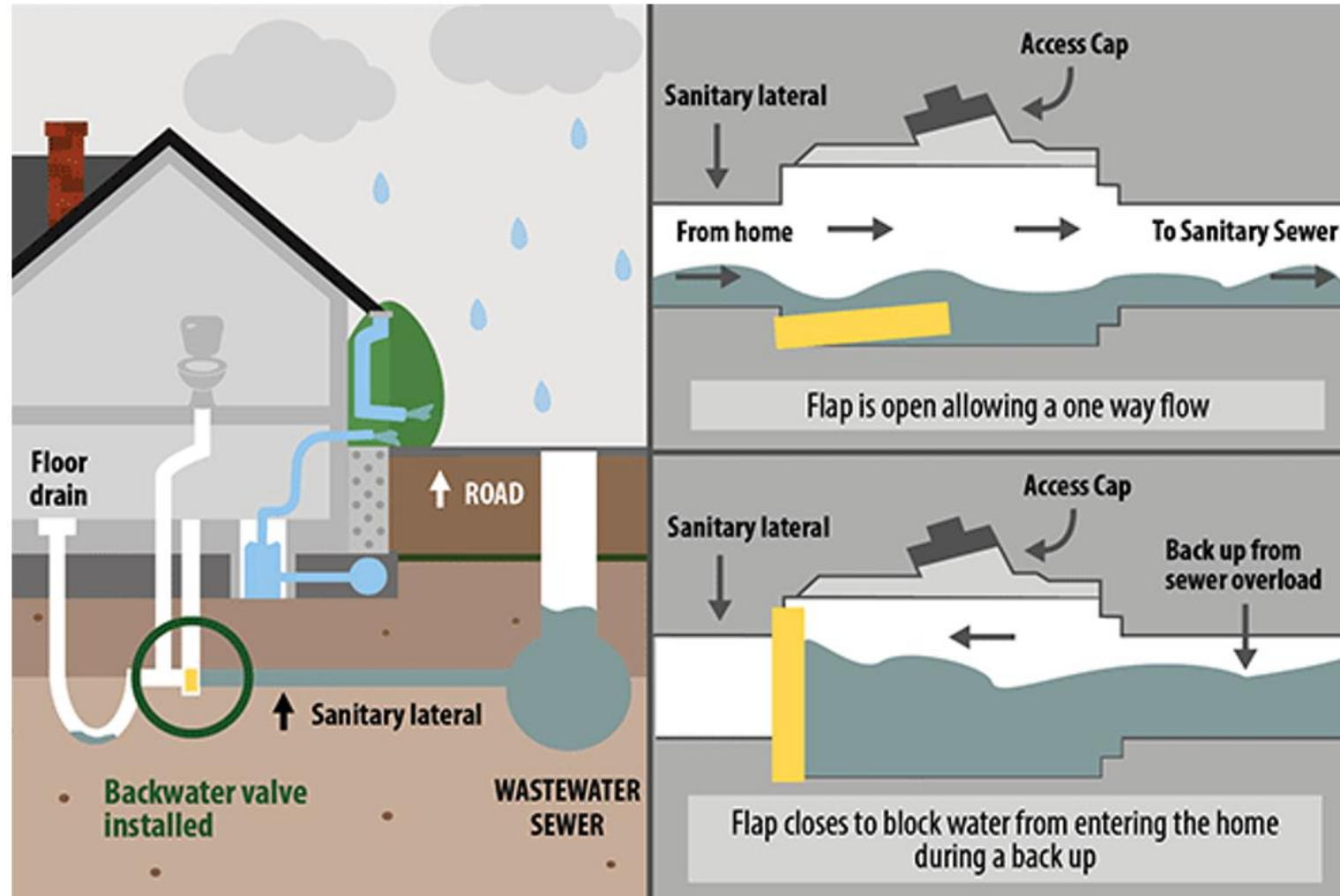
Department: Director, Environmental Services

Meeting Date: December 15, 2020

Overview

- Backwater Valves
- Backwater Prevention Programs
- RMWB Proposed Program
 - Grant Program
 - Education Program

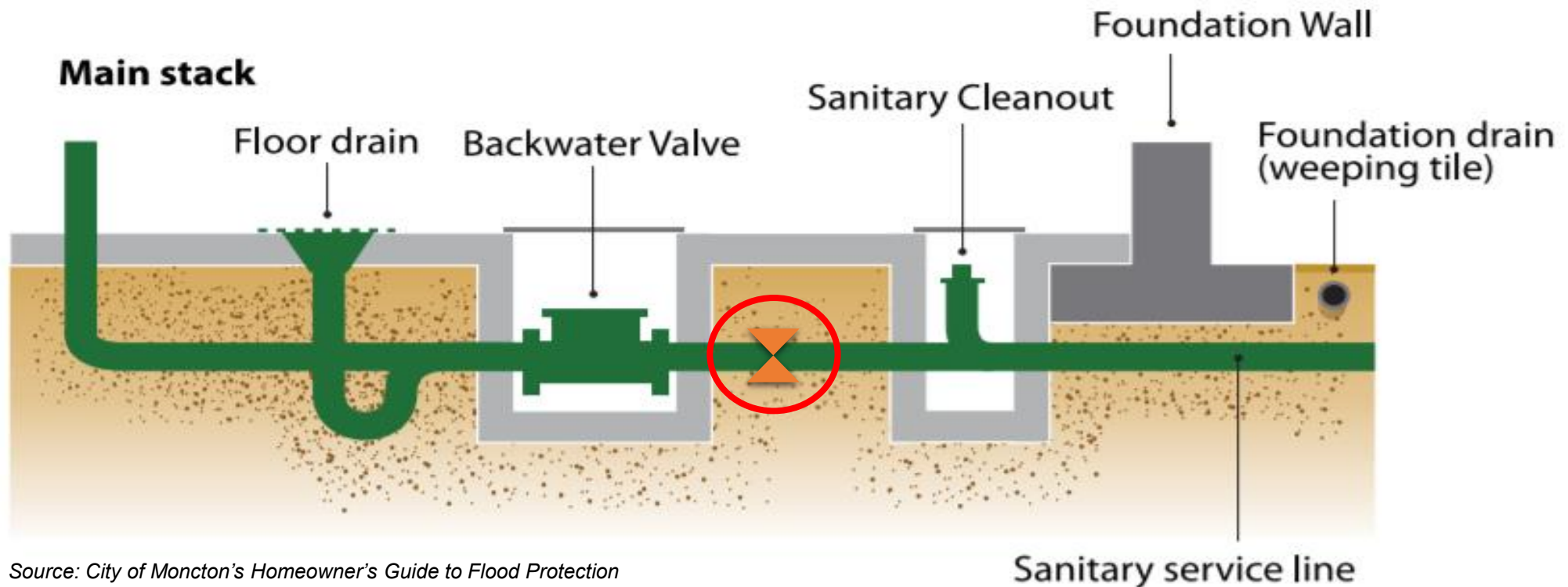
Backwater Valves – How They Work



Source: Halton Region
Backwater Valve
Installation Subsidy
Website

Backwater Valves Efficiency

- Effectiveness & Backup Manual Valves 



Backwater Valves

- Limitations:
 - Self-Flooding
- Required by Code

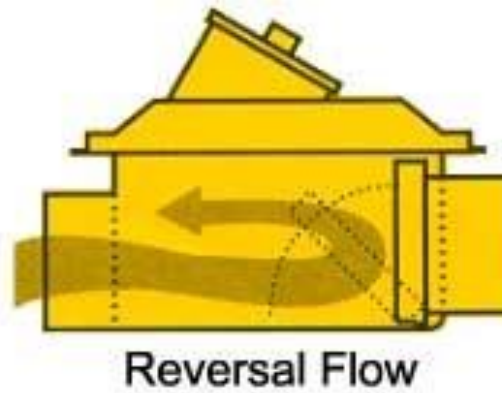


Backwater flow valve with plastic viewing cover.



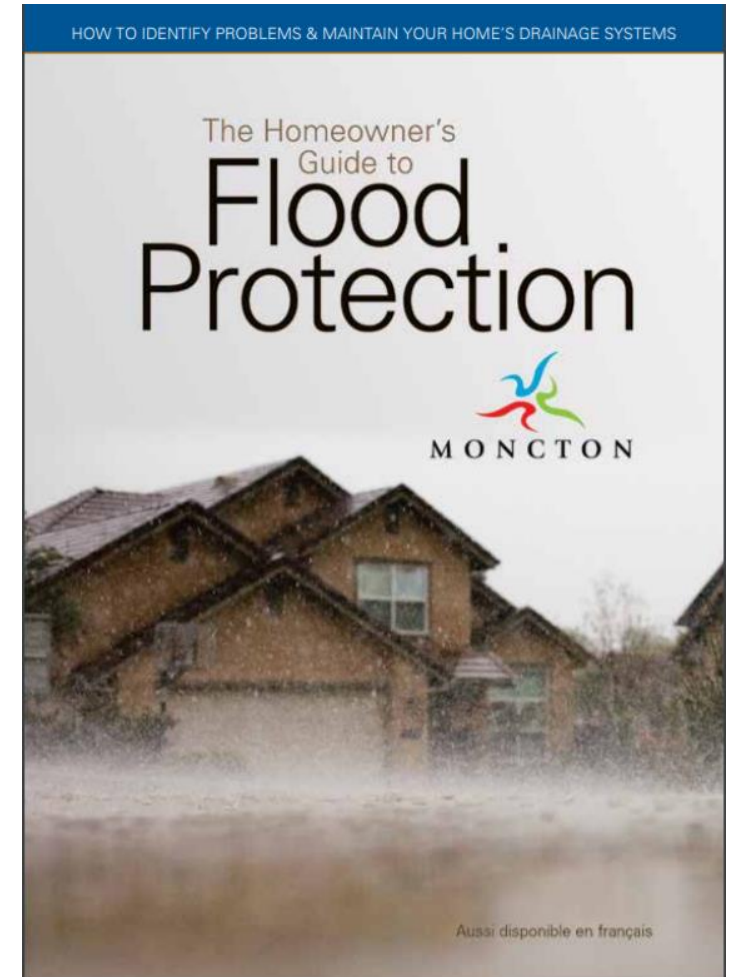
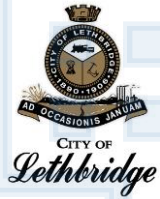
Floor plate cover for backwater valve.

Source: Institute for Catastrophic Loss Reduction



Backwater Prevention Programs Types

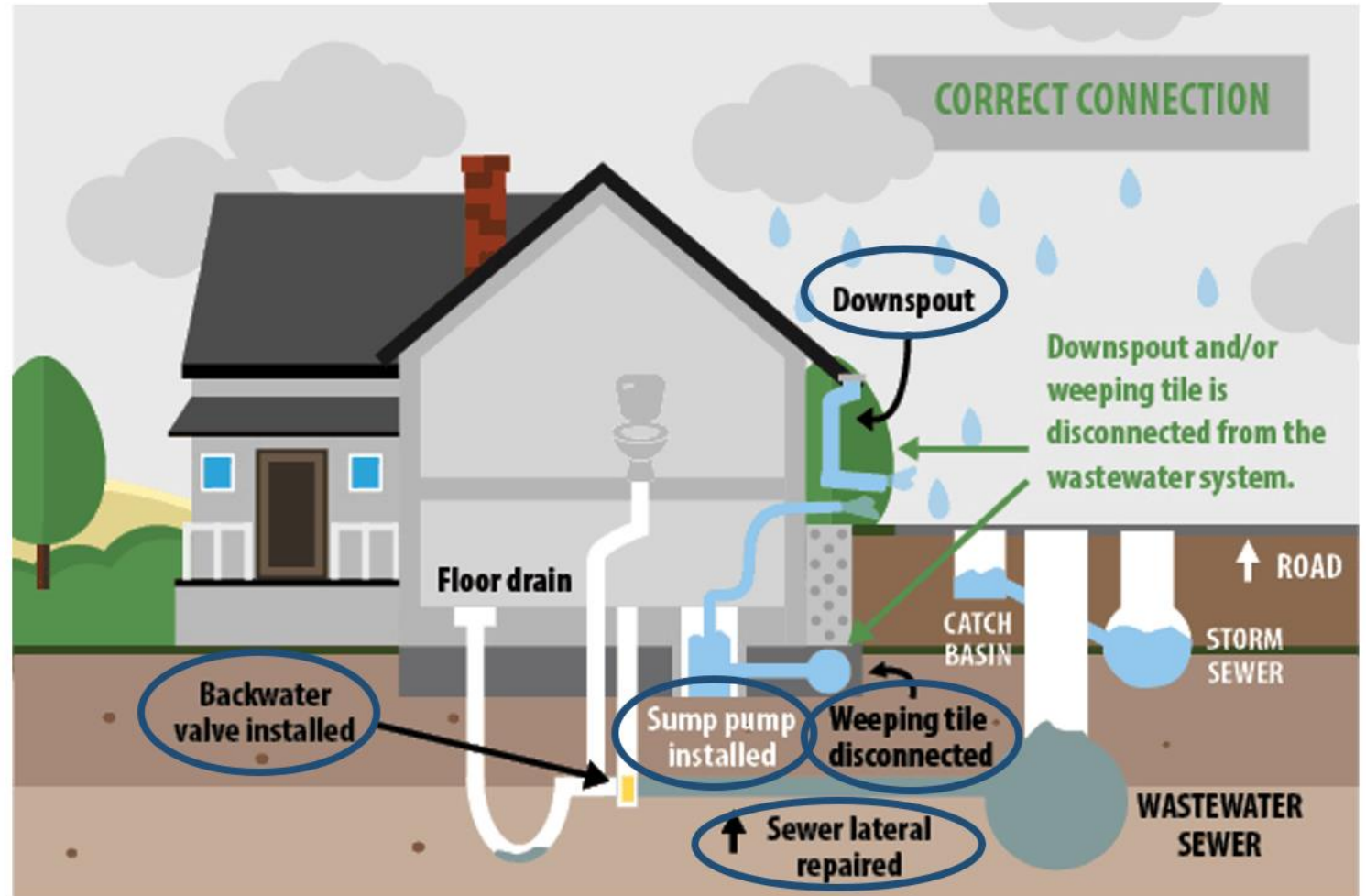
- Role of the Municipality
- Program Pillars
 - Education
 - Financial Assistance



Backwater Prevention Programs Initiatives

What Can Be Covered

- Backwater valve installation
- Downspout disconnection
- Weeping tile disconnection
- Sump pump installation
- Sanitary service repairs

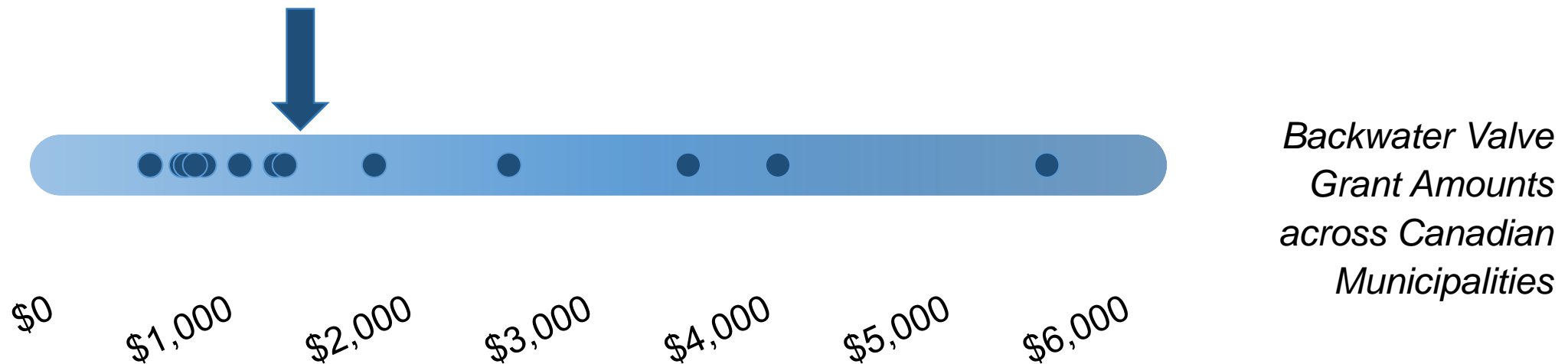


Source: Halton Region Basement Flooding Website

Backwater Prevention Programs Grant Range

Program Subsidy Amounts across Canada

- Flood Prevention Programs: \$500 to \$5,500
- Backwater Valve Grants form a portion
 - Average of \$1,500



Backwater Prevention Programs Lessons Learned

Lessons Learned

1. Subsidy Amounts
2. Program Participation
3. Communication

1. Subsidy Amounts

- Grant relative to actual cost

↗ Grant = ↗ Costs



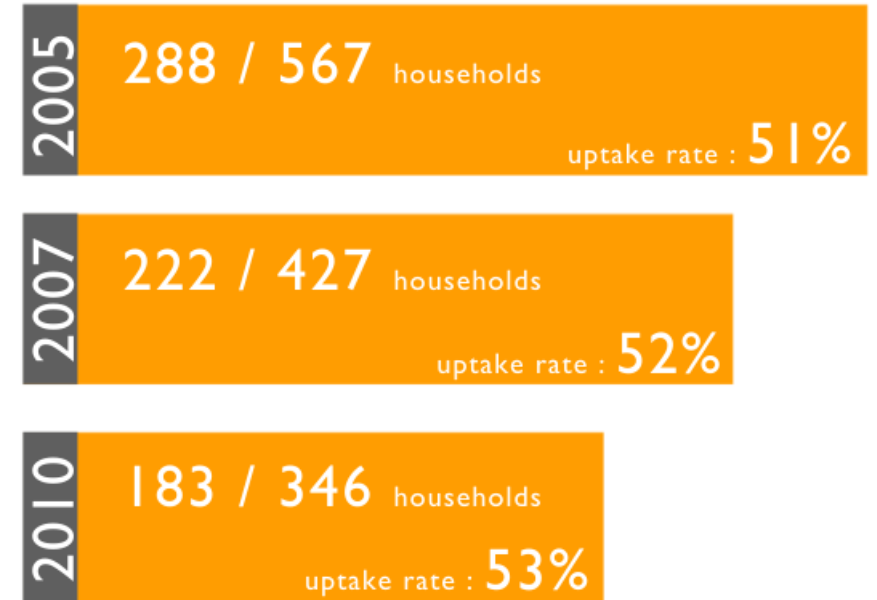
Retrofitting a backwater valve requires the breaking of concrete flooring in basement, disconnection of foundation drainage from sanitary sewer connections and may require re-grading of sewer connections, adding to the expense of backwater valve retrofits.

Source: Institute for Catastrophic Loss Reduction.

Backwater Prevention Programs - Participation

2. Program Participation

- Participation rates often low
- Strategies to improve uptake are:
 - Increased financial incentives
 - Offering programs immediately following flood events



Source: ICLR – Saskatoon's Flood Protection Program after each flooding event.

3. Communication and Engagement

- Public education is key
- Leverage existing processes

RMWB Proposed Backwater Prevention Program

- Grant Program
 - RMWB provided grant for property owners to install backwater valves, and manual valves in flood prone areas
- Education Program
 - Resources and information made available by the RMWB to the community regarding flood protection measures for private properties
- Overarching Council Policy

Grant Program - Eligibility

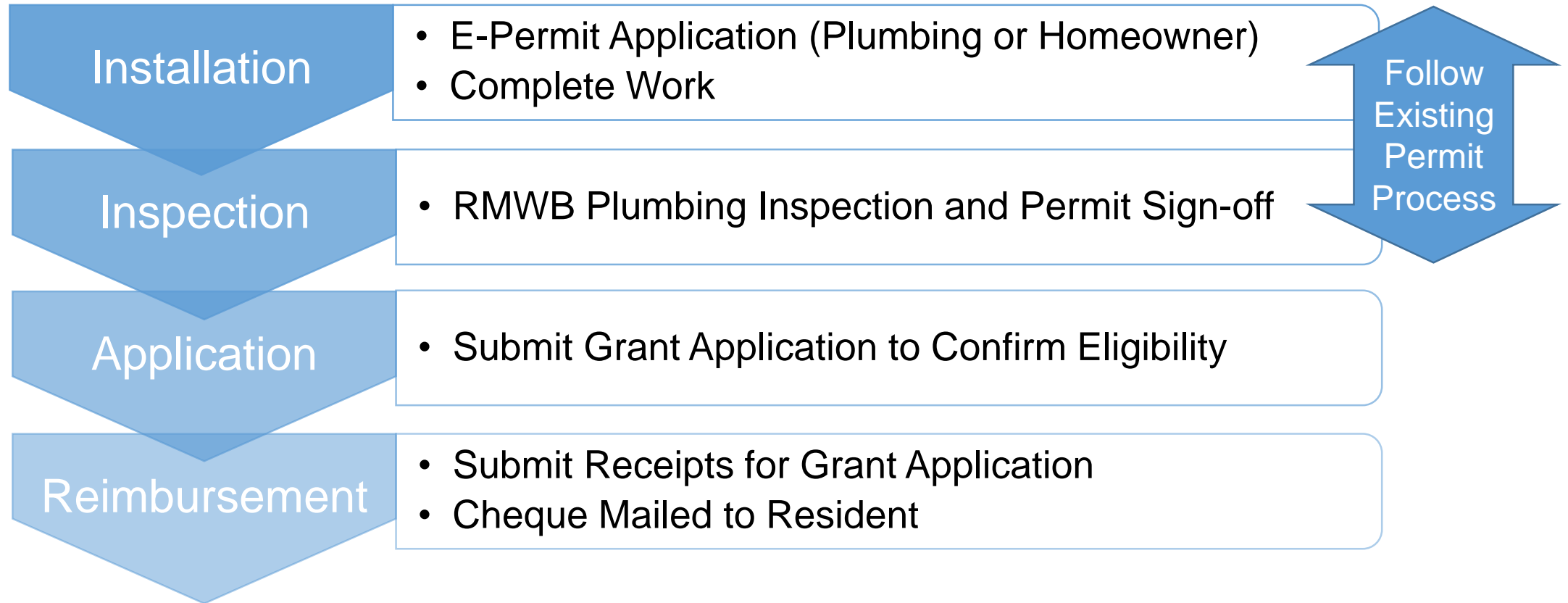
Eligibility

- Residential/single service
- Connected to RMWB piped sewer system
- No backwater valve currently installed
- Applicant is the homeowner or has approval from the homeowner
- Municipal fees and taxes current



Grant Program - Administration

How it Works



Grant Program - Schedule

Timing

- Program to start March 1, 2021
- Installations completed after May 1, 2020
- Program to run on an annual basis
- Property located within the Fort McMurray Urban Service Area, Fort McKay, or Fort Chipewyan
- Funding will be provided on a first-come, first-served basis, but priority in 2021 will be given to areas prone to overland flooding



Grant Program – Amounts

- Anticipated Homeowner Costs
 - Materials: \$300-\$1200
 - Labour: \$1000-\$4000
 - Range of likely costs incurred: \$1500-\$5500
- Grant
 - Up to \$1500 for the installation of a backwater valve
 - Up to \$150 for the installation of a manual valve (flood prone areas)

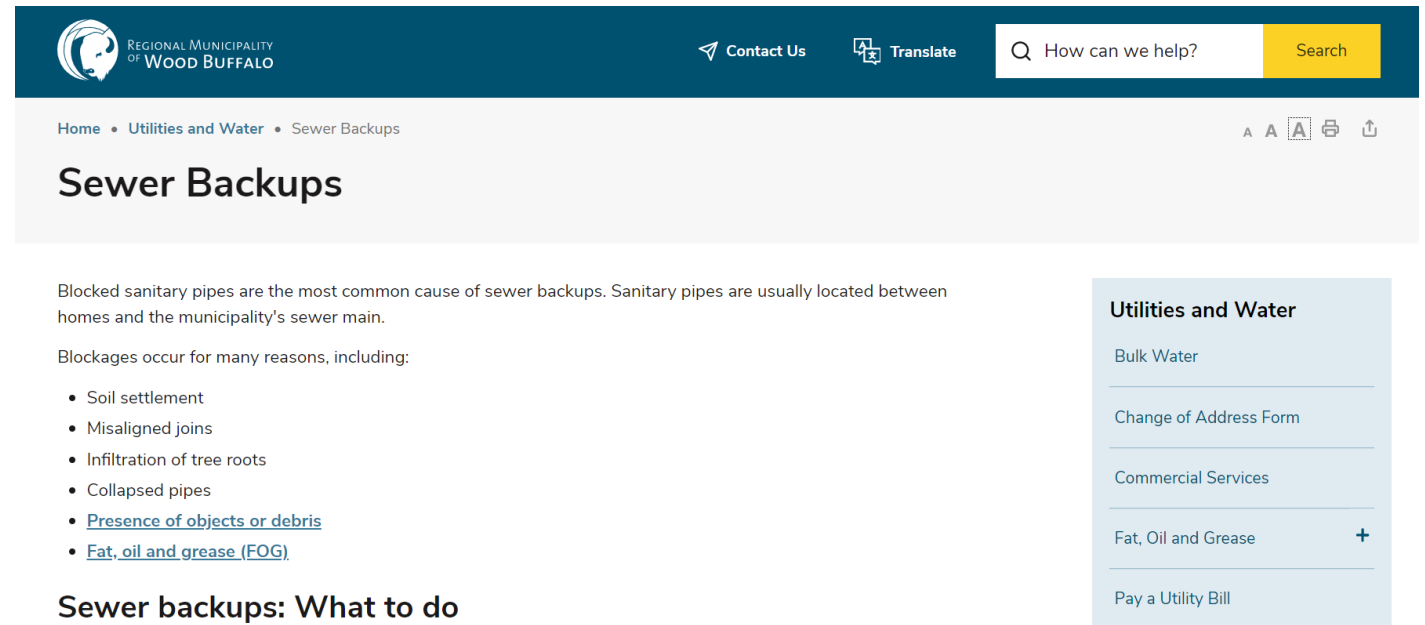
Grant Program - Funding

- Financial Impact
 - Program funding is first-come, first-served
 - Eligible expenses are reimbursed after work is complete

Program Year	Annual Budget (max.)	Funding Source
Year 1 (2021)	\$1 million	Emerging Issues Reserve Fund
Subsequent Years (2022+)	\$275,000	Operating Budget

Education Program

- Critical to provide citizens with information on how they can reduce the risk of flood damage on their own property
- Supports the success of the Grant Program
- Variety of approaches:
 - Web page update
 - Link resources
 - Media
 - Mail



Next Steps

- Accept Applications for the Grant Program Starting March 1, 2021
- Public Media Release for Grant Program
- Develop and Roll-out Education Program in Q1 2021
- Ongoing Program Administration

Recommended Motions

- THAT the Sanitary Sewer Backwater Prevention Program – Policy OPE-50, as outlined in Attachment 2, be approved, to come into effect March 1, 2021; and
- THAT \$1,000,000 be allocated from the Emerging Issues Reserve to fund the Backwater Prevention Program.

Questions?