

# Storm Flooding Event October 29 to 30, 2017

Presentation to Residents from Ward 18  
March 28, 2018

# Overview of Flood and Infrastructure Management

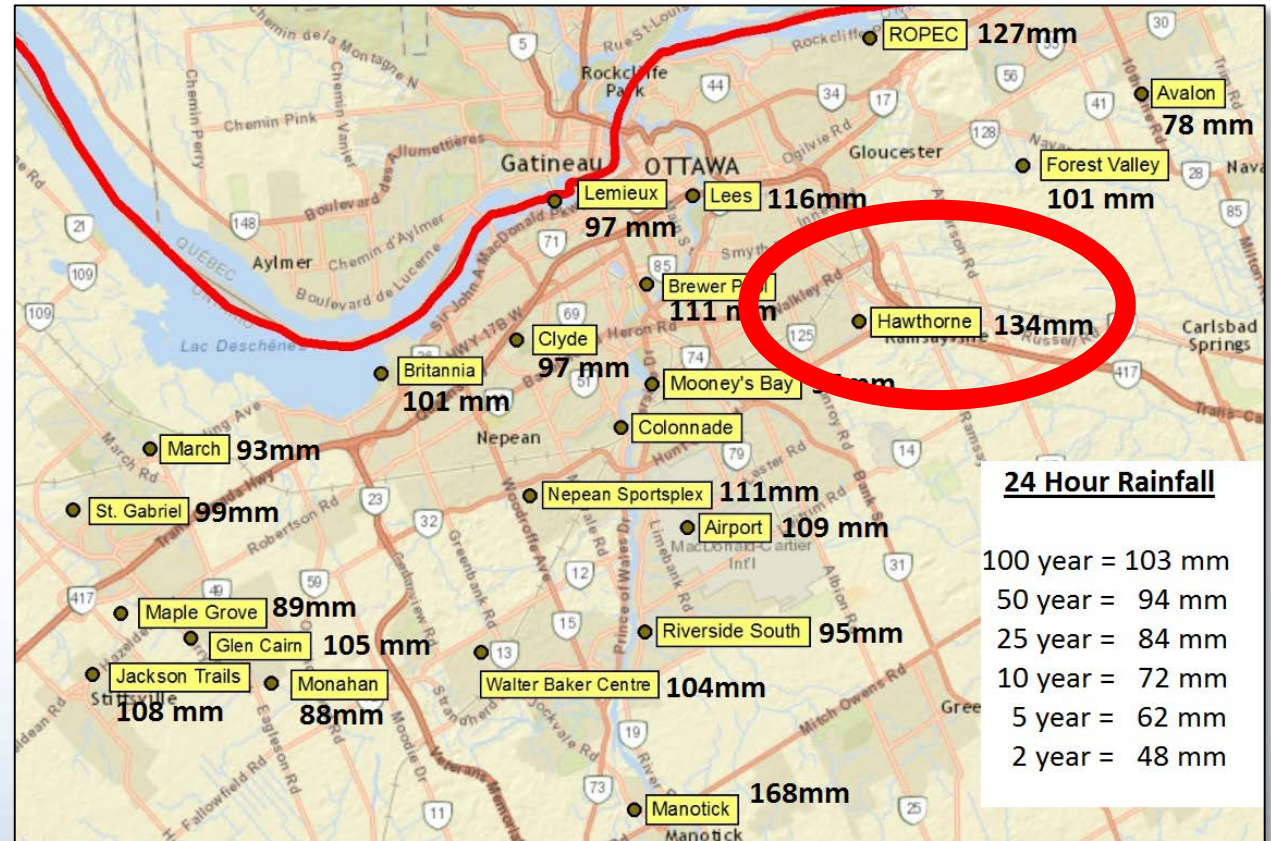
# Information about your flood event

- How it happened
- What is the City doing
- What homeowners can do
- Opportunity to ask questions of City staff

# How it happened

## Facts about the October rainfall event

- Flooding occurred throughout the city
  - It doesn't rain the same way everywhere, in the same event
  - This neighbourhood was one of the hardest hit



# How it happened

## Facts about the October rainfall event

- Very large volume of rain in your neighbourhood
  - Wettest 7 days on record
  - Big spike in the rainfall event: 134 mm of rain in the worst 24-hour period
    - Almost as large as Hurricane Frances (2004)
    - Peak rainfall inundated the sanitary sewer between 6:30 and 10:30 am
  - High winds, leaf fall
  - Not a common event, however, not unprecedented

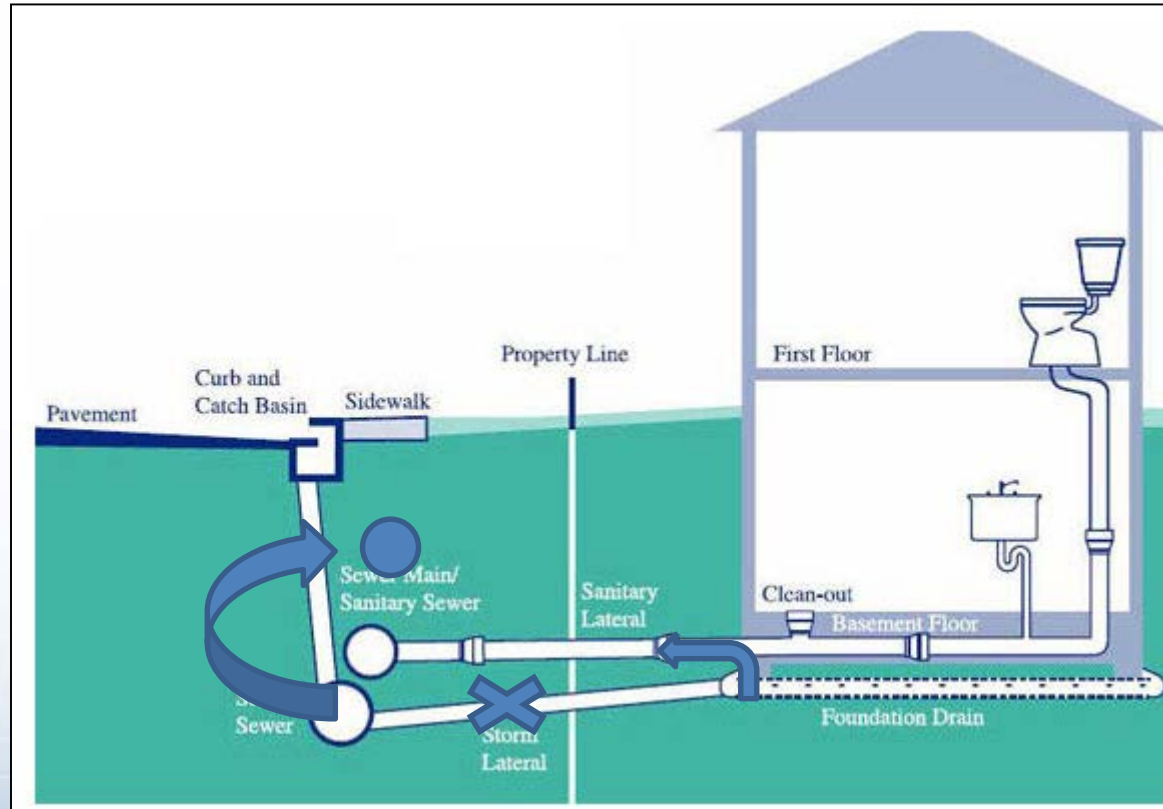


# How it happened

Sewer system type is referred to as partially separated

- Evolution of sewer and road design over time.
- Your neighbourhood is predominantly partially separated
- Even the newest neighbourhoods can flood
- There is no flood-proof home however, there are things that can be done to lower flood risk

# Partial vs full separation



# How it happened

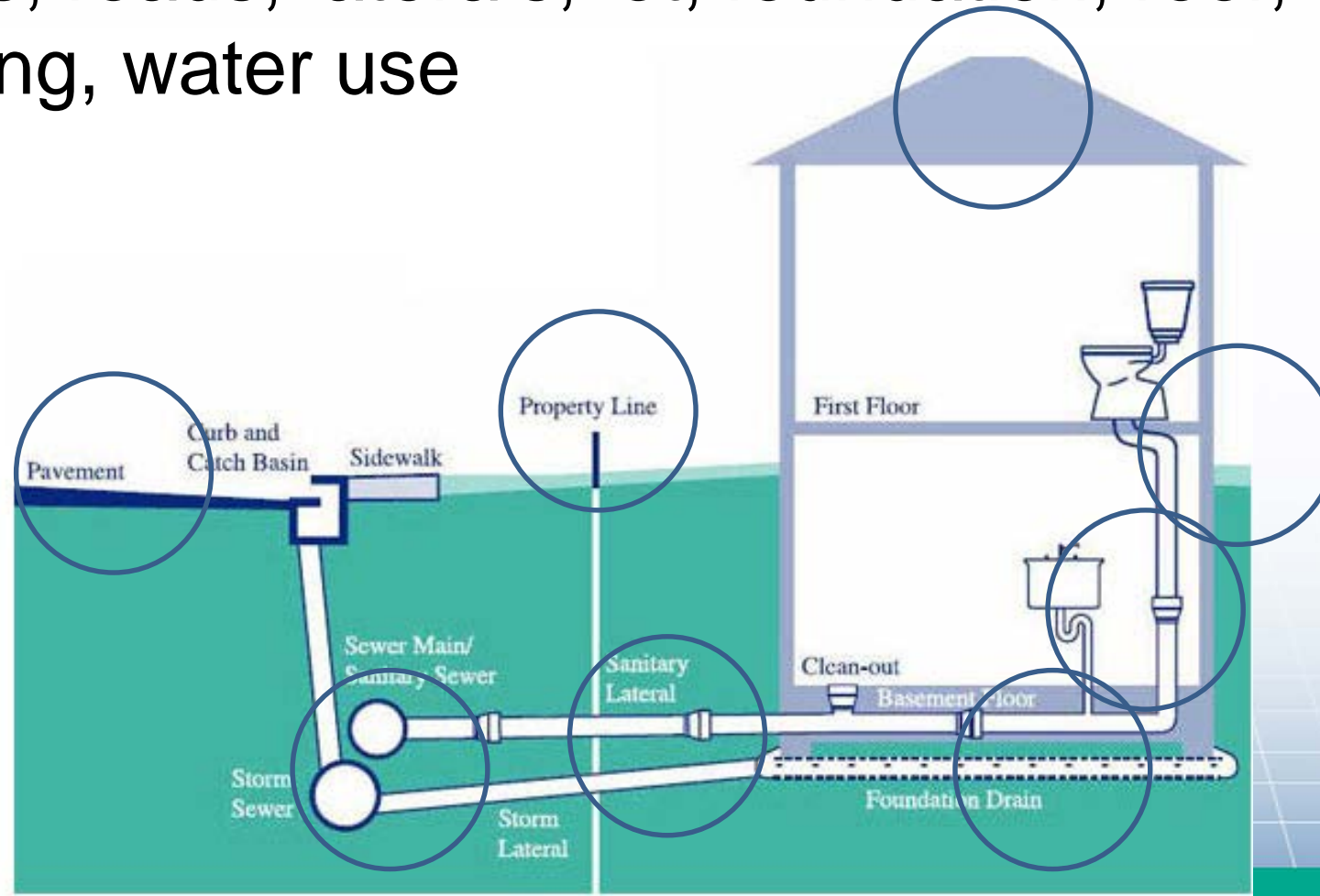
## Why did some homes flood and not others?

- Local factors
  - sewer size, depth, condition
  - not all foundations connected to sanitary sewer
- Some homes have backwater valves installed and in good working order
- Surface flooding - areas where the property is lower than the surrounding properties and/or roads
- Private property factors
  - Low lying land and property grading
  - Driveway slopes and reverse slope driveways
  - Lateral problems / root intrusion
  - Downspout discharge location



# How does a home flood?

- Sewers, roads, laterals, lot, foundation, roof, windows, plumbing, water use



# What is the city doing?

## Operations and Maintenance

- Sewer Cleaning
  - high pressure sewer cleaning is performed every 5 years as part of a City wide maintenance program. This cleaning was last completed in the Alta Vista ward in 2016 in advance of CCTV inspection.
  - Lines with known deficiencies in this area (i.e. grease buildup, root infiltration) are cleaned every 3 months.
- CCTV inspections
  - Closed circuit televised inspections are periodically performed on all City sewers

# What is the city doing?

- Valley Drive storm sewer
- Other infrastructure projects
  - Plan/implement Bank Street sewer improvements
  - Manage inflow to the storm sewers
  - Initiate sanitary sewer renewal and upgrades
  - Replace maintenance hole covers



# What is the city doing?

## Studying the neighbourhood

- Did this event tell us anything new?
- Are there additional solutions?
  - inlet controls, pipe upgrades, inspections for infiltration





# What you can do

- Install residential protective plumbing (like a backwater valve)
- Remove leaves on your property
- If you see water pooling on the grates at the edge of the road:
  - Consider removing leaves to allow water to drain
  - Make sure it is safe to do so and cars can see you



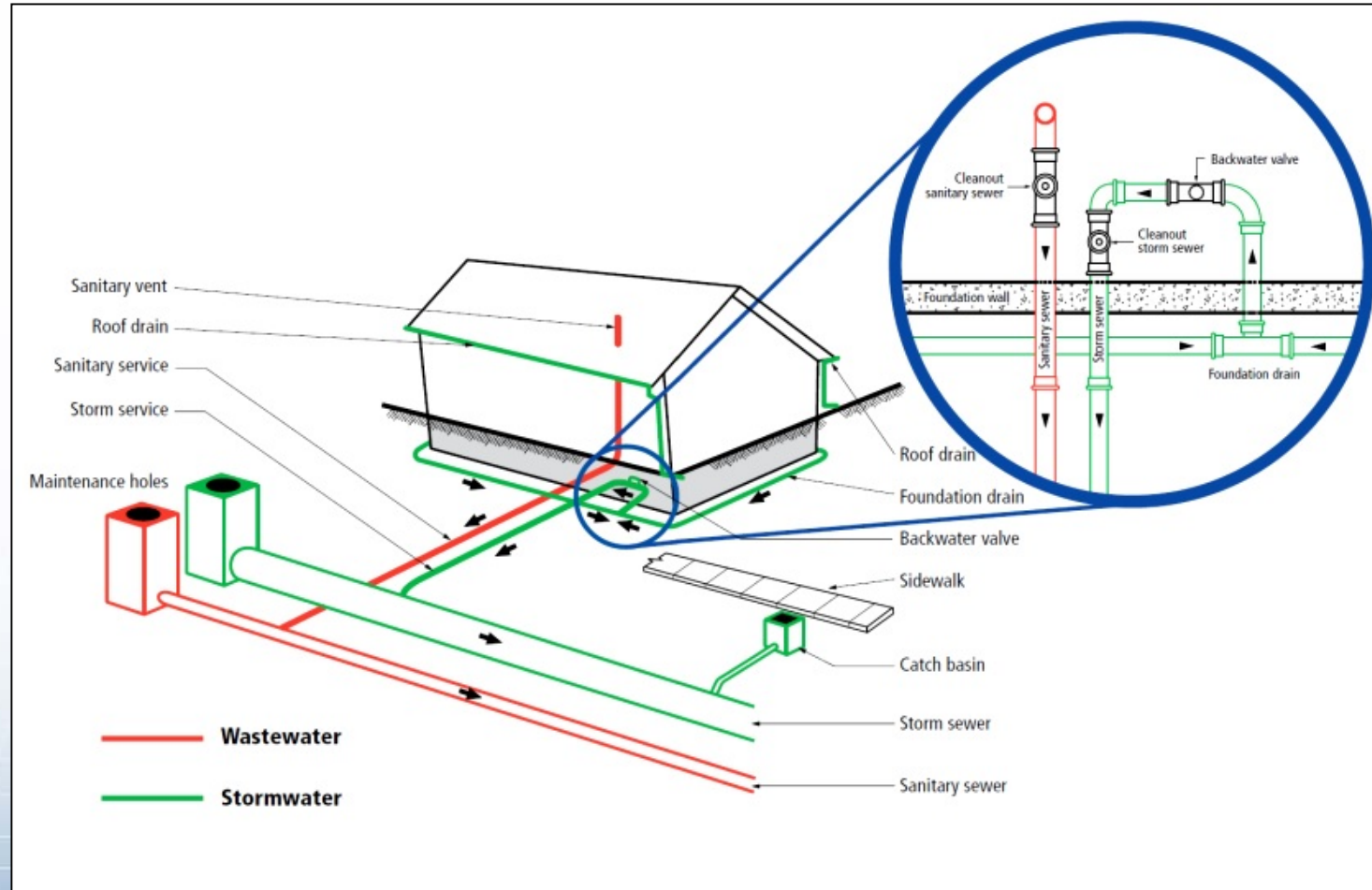
# What you can do

- Make lateral repairs as needed on private property
- Review property for surface drainage improvements (grading, downspouts, etc.)
- Limit water use during very large events
- Report accurately ASAP after any flooding event





# What is a backwater valve?



# What is a backwater valve?



# What to do if you are flooded

Reporting basement flooding to 311 is critical!

- In addition to your councillor and insurance claim

<https://ottawa.ca/en/city-hall/your-city-government/claims-city>

# What to do if you are flooded

First Response to basement flooding after receiving 3-1-1 service request:

- Arrive on site, check sanitary manholes upstream and downstream for blockage and/or surcharging
- If suspected blockage: enter home, inspect sanitary cleanout, arrange for rod & CCTV inspection, provide Sewer Backup/Basement Flooding brochure
- If surcharge: document, provide sewer backup/basement flooding brochure

# What to do to reduce your risk

## Residential Protective Plumbing Program

- To prevent flooding due to City sewer surcharges, the City offers rebates for new installations of sanitary and storm backwater valves and sump pumps with backup power for homes built prior to 2004 (storm), and 2012 (sanitary)
- Learn more on [ottawa.ca/rppp](http://ottawa.ca/rppp)

# What to do to reduce your risk

- Inspect your lateral
  - Hire a licenced plumber to complete a TV inspection your plumbing and lateral
- Lateral Repair Program
  - If you have City tree roots infiltrating your lateral, the City will line your lateral or add you to an annual flushing program to remove the roots



# Recap...

- Very large rainfall caused flooding in all parts of the city
- Weather and sewer system factors contributed to your neighbourhood flooding
- The City is doing work to mitigate flooding event
  - A sustained, long term commitment
- There are things you can do to further reduce your flood risk

# Valley Drive Storm Trunk Renewal



- One of the main infrastructure spines for stormwater drainage for the Elmvale-Eastway-Riverview neighbourhood in the Alta-Vista Ward.
- CSP built in 1950's and 1960's- end of design life
- Improving hydraulics while replacing sewer- 2100mm dia. +/-9m deep
- Sanitary replacement and watermain work as well as full road reconstruction
- New sidewalk
- Phase 1 (St Laurent & Foley) scheduled to begin construction summer 2018

# Questions?