

# Program Recommendations

## Inflow and Infiltration (I/I) Study – Private Infrastructure City Project 2019-06

Completed in partnership with 



**CITY OF CHANHASSEN**

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# Objectives

- Approval of a City program to address I/I contribution from private property sources identified in residential districts from the 2019 study

(City staff have already adopted recommendations for public infrastructure improvements based on the initial report and the January 13<sup>th</sup> workshop presentation.)



# I/I Program Recommendations

Update Sewer Ordinance

Develop and Implement Public Education Program

Implement a Private Property Inspection (PPI) Program

- KEY: Need to identify what type of PPI in order to tailor the ordinance and education steps



# Private Property Inspection Programs

- **Sump Pump / Building Inspection Program**
  - Eagan, Forest Lake, and Minnetonka
- **Point-of-Sale Inspection Program**
  - Golden Valley and West Saint Paul
- **Voluntary In-Home Inspection Program**
  - Columbia Heights
- **Mainline Launch CCTV Inspection Program**
  - Saint Paul



# Sump Pump Inspection Program

- **Mandatory Inspection for Sump Pumps, Basement Connections**
  - Sump pumps are the most common connection and easiest to fix
  - Small time requirement for homeowners (< 30 minute inspection)
  - City Ordinance already in place from 1990's Sump Pump Program (would require minor updates)
    - 1990's Program inspected all homes resulting in 4,935 properties
    - 313 properties were found to have illicit sump pump connections
    - By 2003 all properties brought into compliance
  - Enforcement of existing ordinances
- **Program Limitations**
  - Miss potential foundation drains or service lateral leaks
  - Typically City funded inspections in order to ease public discontent
  - Requires follow-up inspections for full enforcement (i.e. - winter disconnects)
  - Can drag out and be inefficient to schedule if not made mandatory



# Point-of-Sale Inspection Program

- Inspection Prior to Transfer of Property
  - 2006 I/I Reduction Plan identified point-of-sale as I/I reduction strategy
  - Inspection of full system (service lateral, sump pump, etc.)
  - Typically the responsibility of existing homeowner (fix or place 125% into escrow)
  - Easier to schedule for the homeowner compared to other programs
  - Certification typically valid for 10 years after inspection
- Program Limitations
  - Requires extensive updates to City Ordinance
  - Only able to complete homes as they turn over
  - Requires City monitoring for full enforcement (MLS tracking, assessment req.)



# Voluntary Inspection Program

- Voluntary In-Home Inspection
  - Inspection of full system (service lateral, sump pump, etc.)
  - Typically City funded inspections to encourage buy-in
  - City Ordinance majority already in place (could also make mandatory)
- Program Limitations
  - Homeowners who know they are non-compliant typically don't volunteer
  - Average response rate is less than 30% of potential properties
  - Can drag out and be inefficient to schedule (i.e. - increased costs)



# Mainline Launch Inspection Program

- CCTV Lateral Inspection Conducted from City Mainline
  - Inspection of service lateral up to the foundation of the house
  - Minimal involvement of the homeowner
  - Easy to inspect (typically > 90% of properties)
  - City Ordinance could accommodate as is
  - Currently City offers free lateral/mainline launch inspection during road rehabilitation projects if sanitary sewer televising is necessary
- Program Limitations
  - Does not inspect for sump pumps or most foundation drains
  - Inspections typically 100% funded by City
  - Risk of lateral break on private side



# PPI Program Outcomes after Inspection

- Disconnection of Illicit Sump Pumps
  - Most cost effective method for reducing I/I, typically <\$1,000 per property
  - Requires follow-up inspection to ensure enforcement
- Disconnection of Illicit Foundation Drains
  - Intrusive to the homeowner, requires open cut excavation
  - Repair costs typically < \$3,000 per property
  - Approximately 733 parcels pre-date 1969 plumbing code revision – Sump Pump program would not have found via visual inspection these potential connections
- Necessary Repairs of “Defective” Private Laterals
  - Multiple funding options: full City, subsidized City, or full property owner
  - Depending on scope, lateral repairs could be upwards of \$10,000\*\* per property

\*\*Assumes repairs are done with trenchless methods



# Evaluation Criteria

Cost: Annual cost to implement/maintain the program

Public: The level of disruption and/or additional involvement required from residents and property owners

Ordinance: Level of effort necessary to update City ordinance or to educate the public to achieve the proper enforcement

Risk: Potential for not achieving an adequate reduction of I/I through the completion of the program

Time: How long the program would take for implementation



# Decision Matrix\*

Inspection Program	Cost		Public	Ordinance	Risk	Time
	Initial	Annual				
Sump Pump	Medium	Medium	High	Medium	Medium	High
Point-of-Sale	Medium	Low	Low	High	Low	High
Voluntary Inspection	High	High	Medium	Medium	High	Medium
Mainline Launch	Medium	Medium	Low	Low	High	Low
Status Quo (Do Nothing)	Low	Low	Low	Low	High	Low

\*See additional attachment for breakdown of each category and ranking

# Recommendations



- Point of Sale
- Mainline Launch



# Thank You



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