

# 2019 Manhole Rehabilitation Project (CIP 20702)





# Background

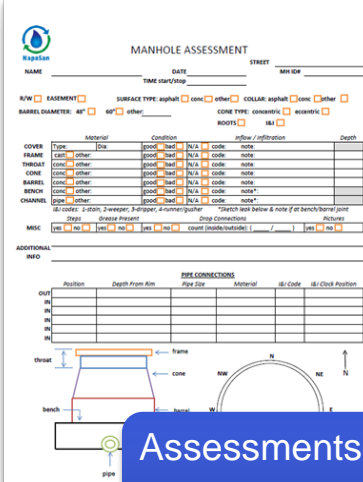
## Cost effectiveness for I&I reduction

- \$ 0.11 million / mgd average over four major projects
- \$ 2.08 million / mgd average on pipeline rehabilitation (mainlines & laterals)

## Other program benefits

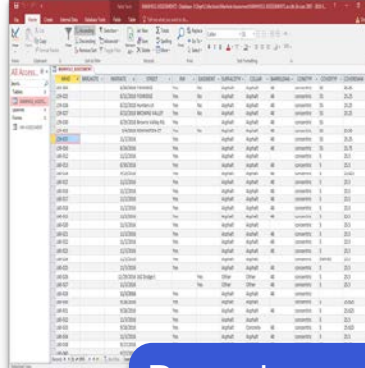
- Relative ease of condition assessment
- Independent of other projects
- Reduced project timeline compared to pipeline rehabilitation

# Condition Assessment / Data Collection



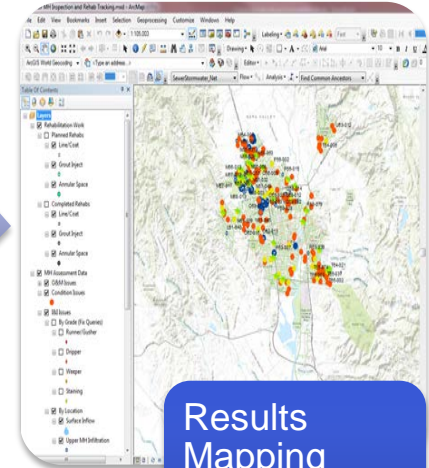
## Assessments

- Each time a MH cover is opened

## Record Database

- Linked to assets in GIS



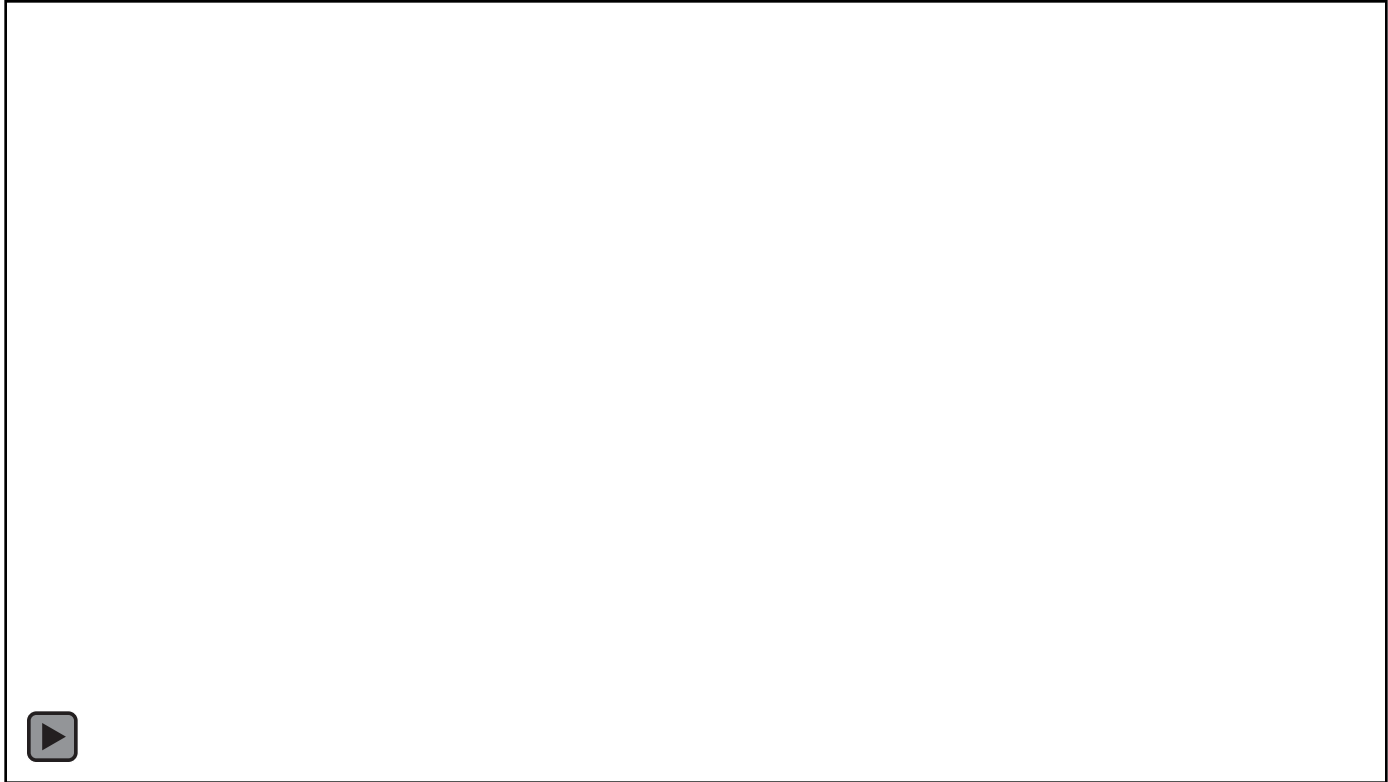
## Results Mapping

- Can be used to target specific issues or areas

Process developed in-house by Collections and Engineering staff



# Groundwater Infiltration

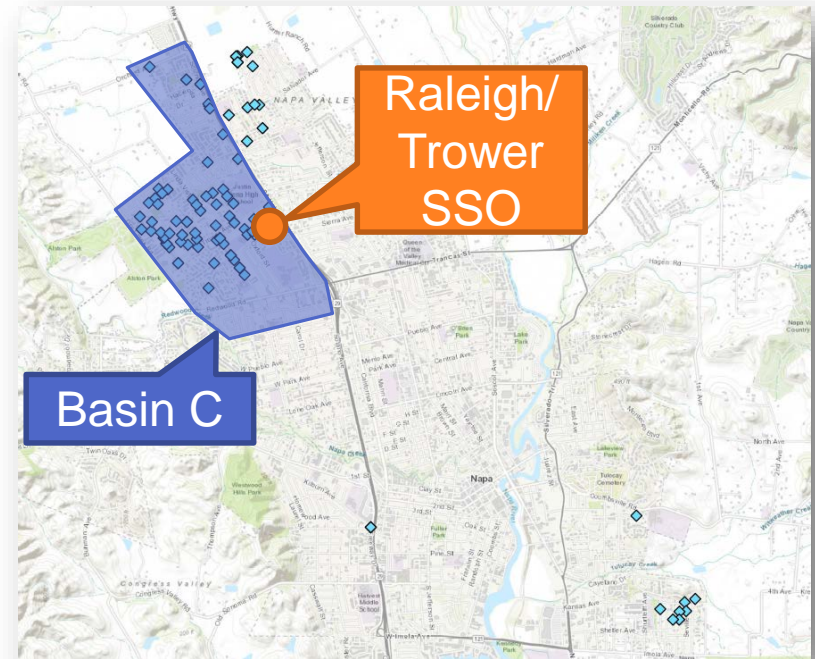




# 2019 Project Details

## MH's Selected

- Severe infiltration observed during winter 2018/19
- Basin C – should reduce likelihood of overflow at Raleigh/Trower (worst of winter 2018/19)
- Away from planned pipeline rehabilitation





# Project Overview

## General Project Scope

Item	Quantity (MH's)
Chemical grout injection at active leaks (at channel and pipe connections)	<b>26</b>
Full Manhole Coating	<b>66</b>

- District staff will perform construction management and inspection services for the project



# Project Financials

Bid Date/Time: 9/12/2019, 2:00 PM

**Engineers Estimate**   **\$185,000.00**

	Bidder	Total Bid
1	H&R Plumbing and Drain Cleaning	<b>\$182,120.00</b>
2	Nor-Cal Pipeline Services	<b>\$196,710.00</b>



# Anticipated Schedule

Milestone	Date
Notice to Proceed	October 2019
Begin Construction	November 2019
Complete Construction	April 2020
Accept Completion	May 2020



# Recommendation

Award construction contract for the 2019 Manhole Rehabilitation Project (CIP 20702) to H&R Plumbing and Drain Cleaning, Inc. for the bid amount of \$182,120 and authorize the General Manager to execute the Agreement with the Contractor and issue the Notice to Proceed, when appropriate.