



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

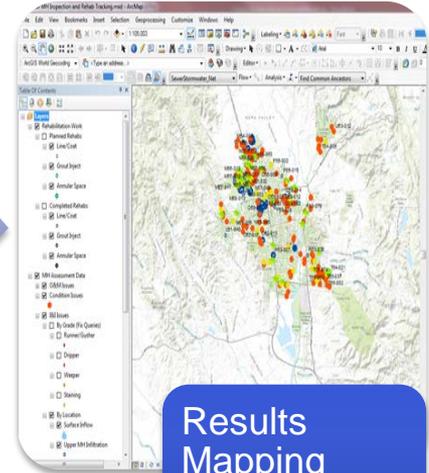
Assessments

- Each time a MH cover is opened



Record Database

- Linked to assets in GIS



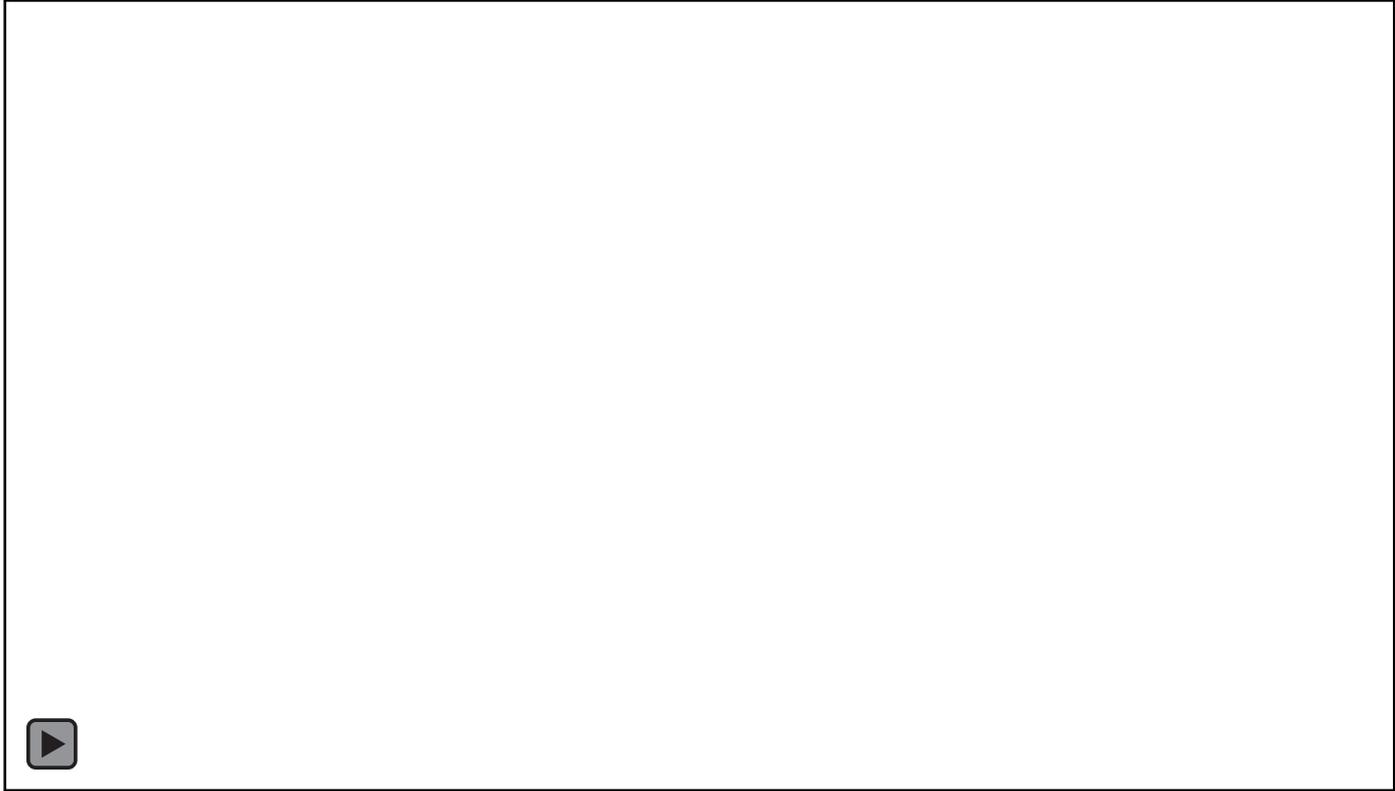
Results Mapping

- Can be used to target specific issues or areas

Process developed in-house by Collections and Engineering staff



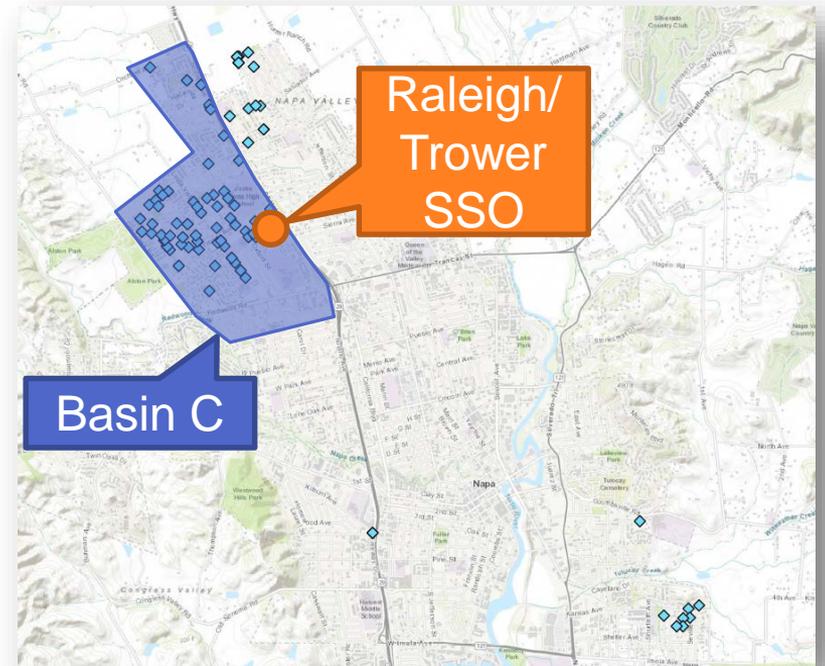
Groundwater Infiltration



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)	26
Full Manhole Coating	66

- 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	\$182,120.00
2	Nor-Cal Pipeline Services	\$196,710.00



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.