

DPU-W

Financial Planning Overview

Financial Planning Documents:

- Short Term (1-5 Years)
 - Annual Operating & Capital Budget
 - Rate Study
- Long Term (5+ Years)
 - Capital Improvement Plans
 - Wastewater Collections & Pumping
 - Water Distribution & Metering
 - Water Supply
 - Wastewater Treatment (Springbrook)

DPU-W Financial Planning Guidelines Attached

2020 & 2021 Efforts

- Capital Asset Evaluations
 - Water Distribution & Supply (2020)
 - Springbrook Facilities Plan (2021)
- Rate Study
 - Water Demand
 - Cost of Service
 - Allocation (Water vs Wastewater)
 - Customer Class Equity
 - Rate Design
 - Cash Reserve Targets
 - Capital Spending Needs



Tonight's Area of Emphasis



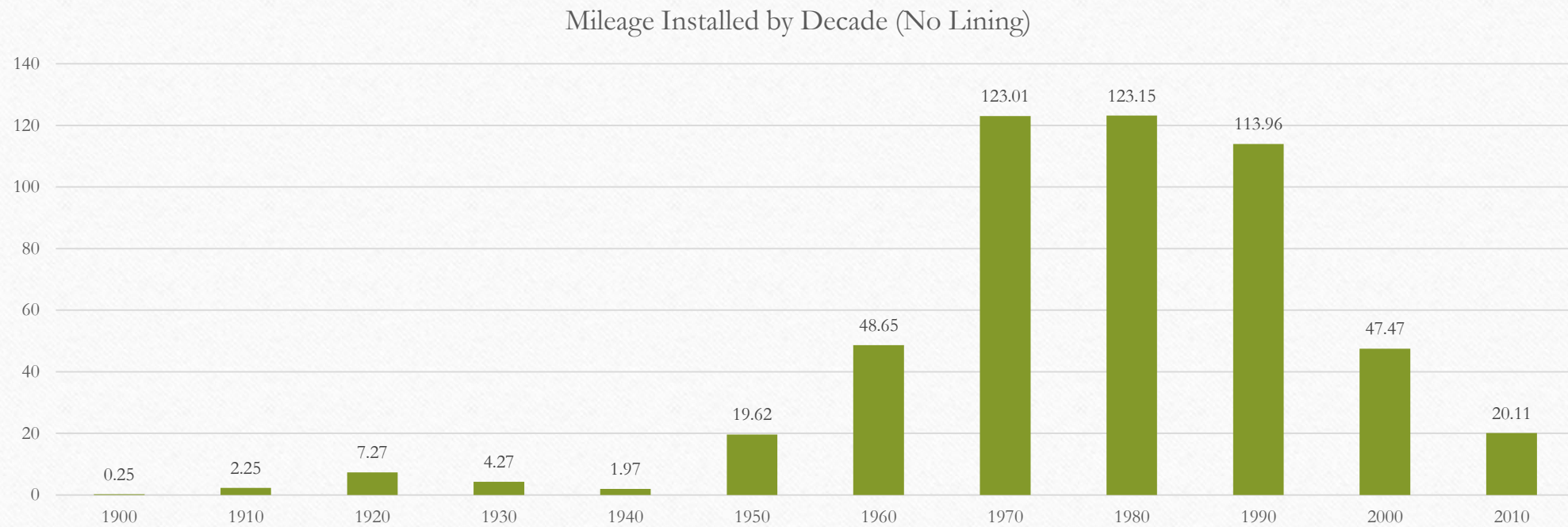
Capital Improvement Plans Review

- **Wastewater Collections & Pumping (Jan)**
- Water Distribution & Metering (Feb)
- Water Supply (Feb)
- Wastewater Treatment (March)

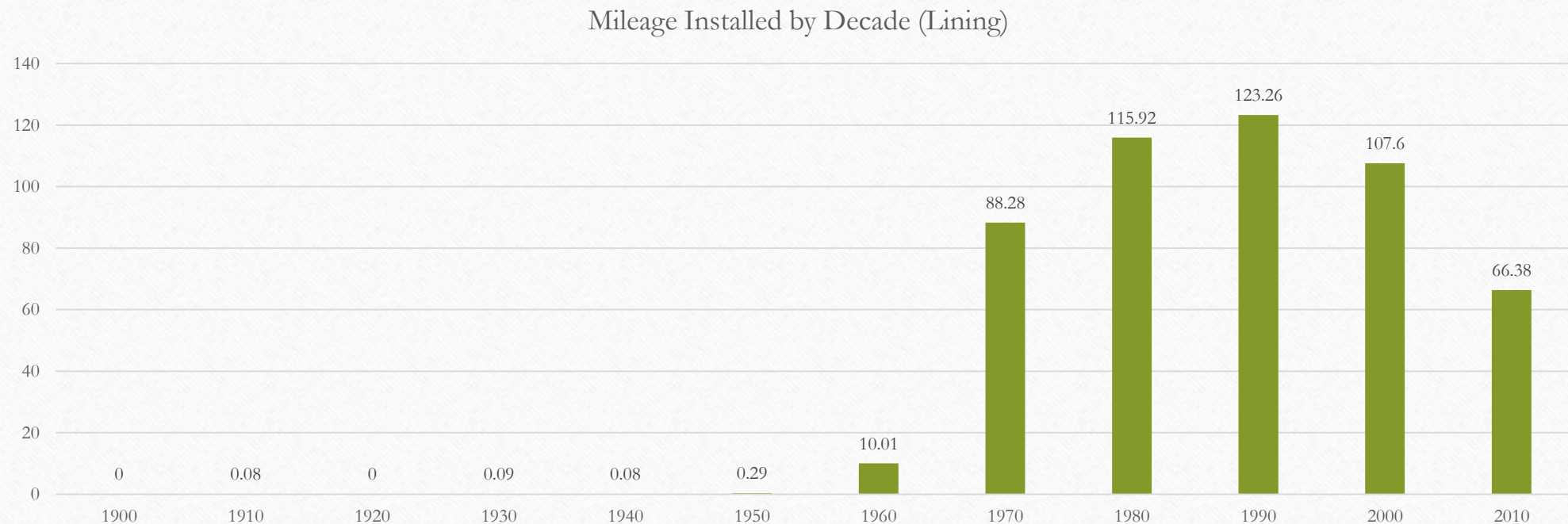
Collection System Capital Improvements

Past, Present & Future

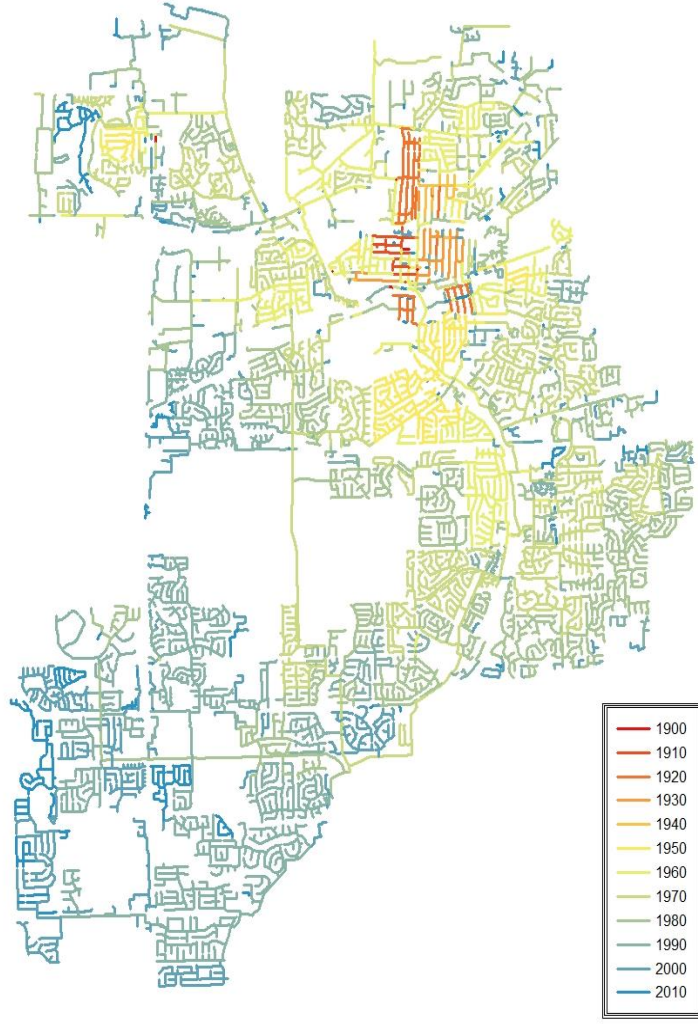
Sanitary Sewer Installed by Decade



Rehab year installed- lining creates a new “year installed” and extends the service life of the pipe

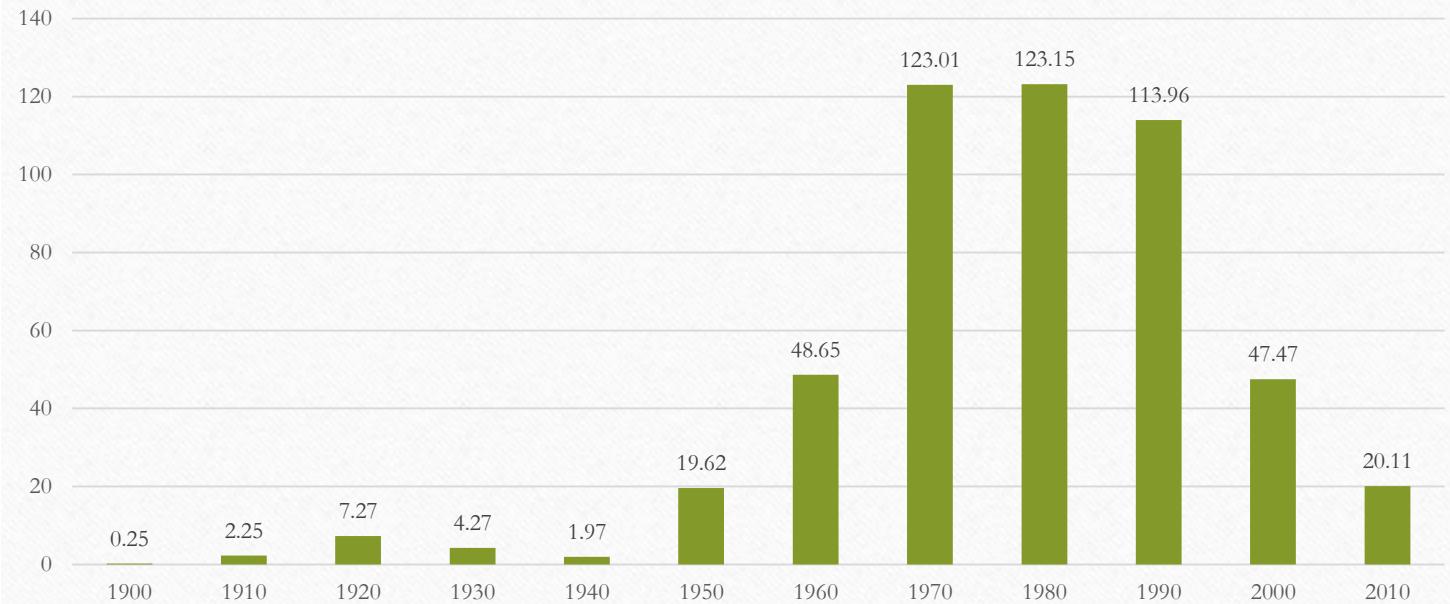


Decade of Sanitary Main Installation

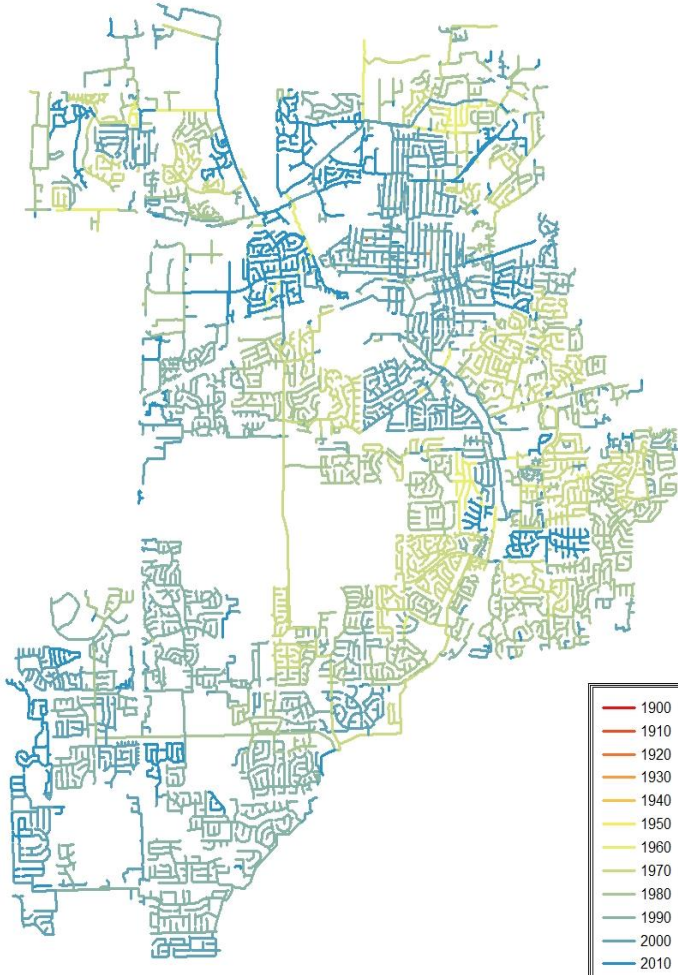


Sanitary sewer installed by decade

Mileage Installed by Decade (No Lining)

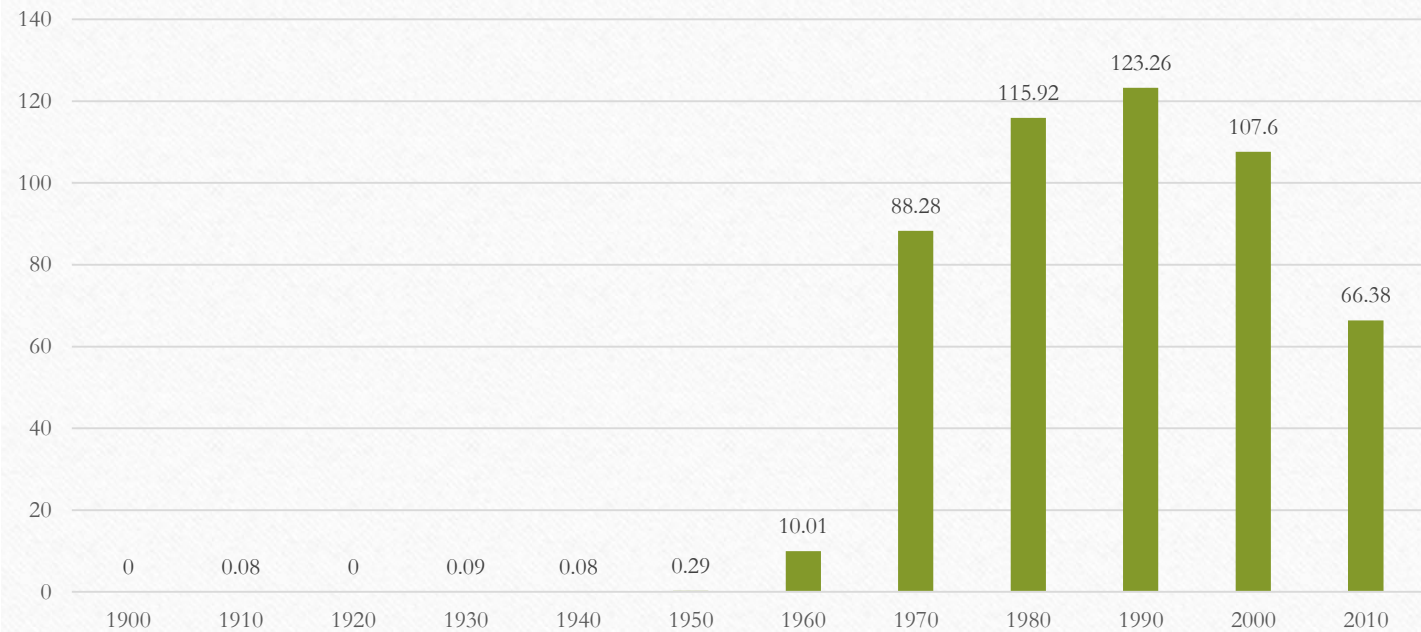


Decade of Sanitary Main Installation with Lining



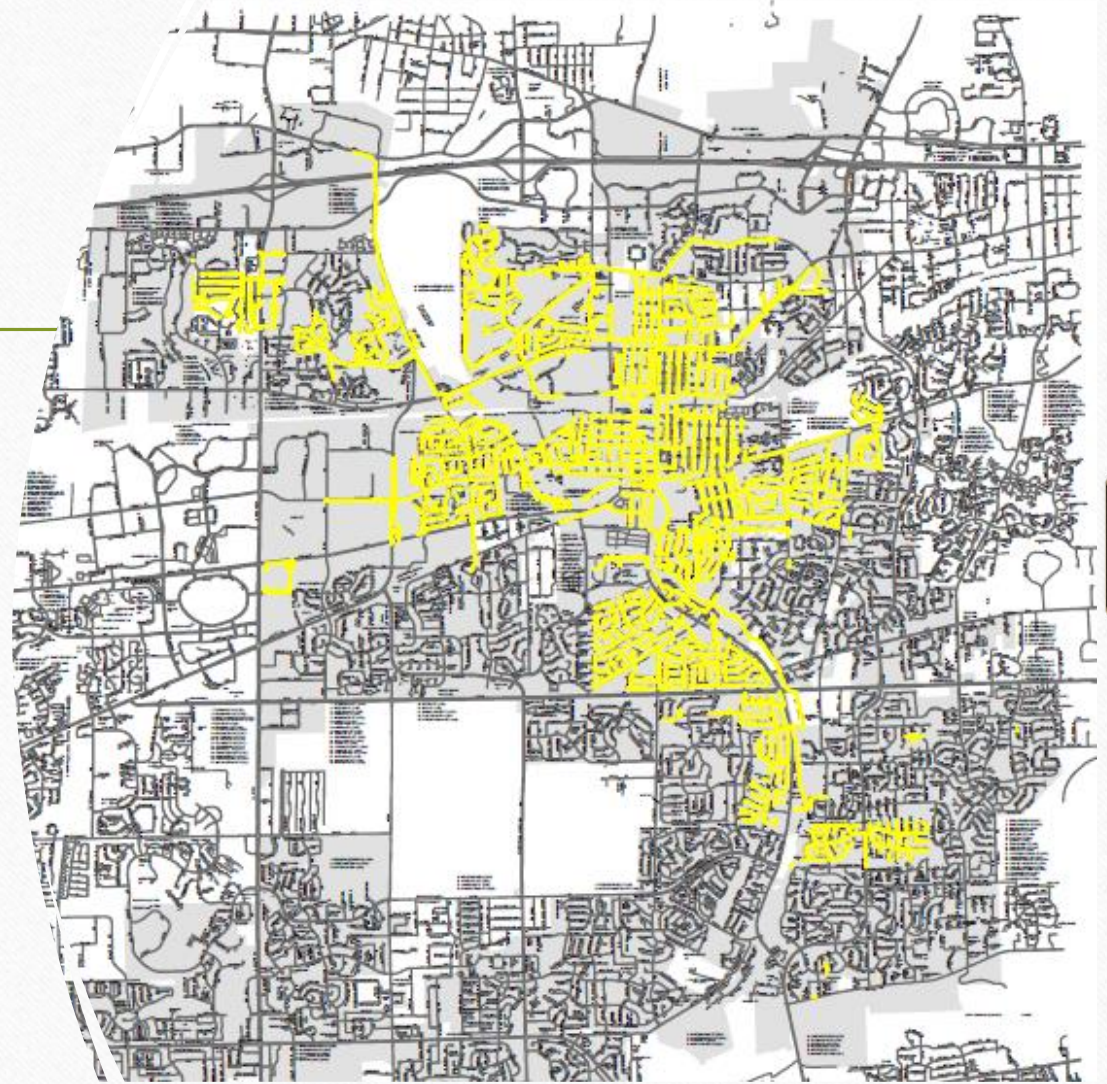
Rehab year installed- lining creates a new “year installed” and extends the service life of the pipe

Mileage Installed by Decade (Lining)



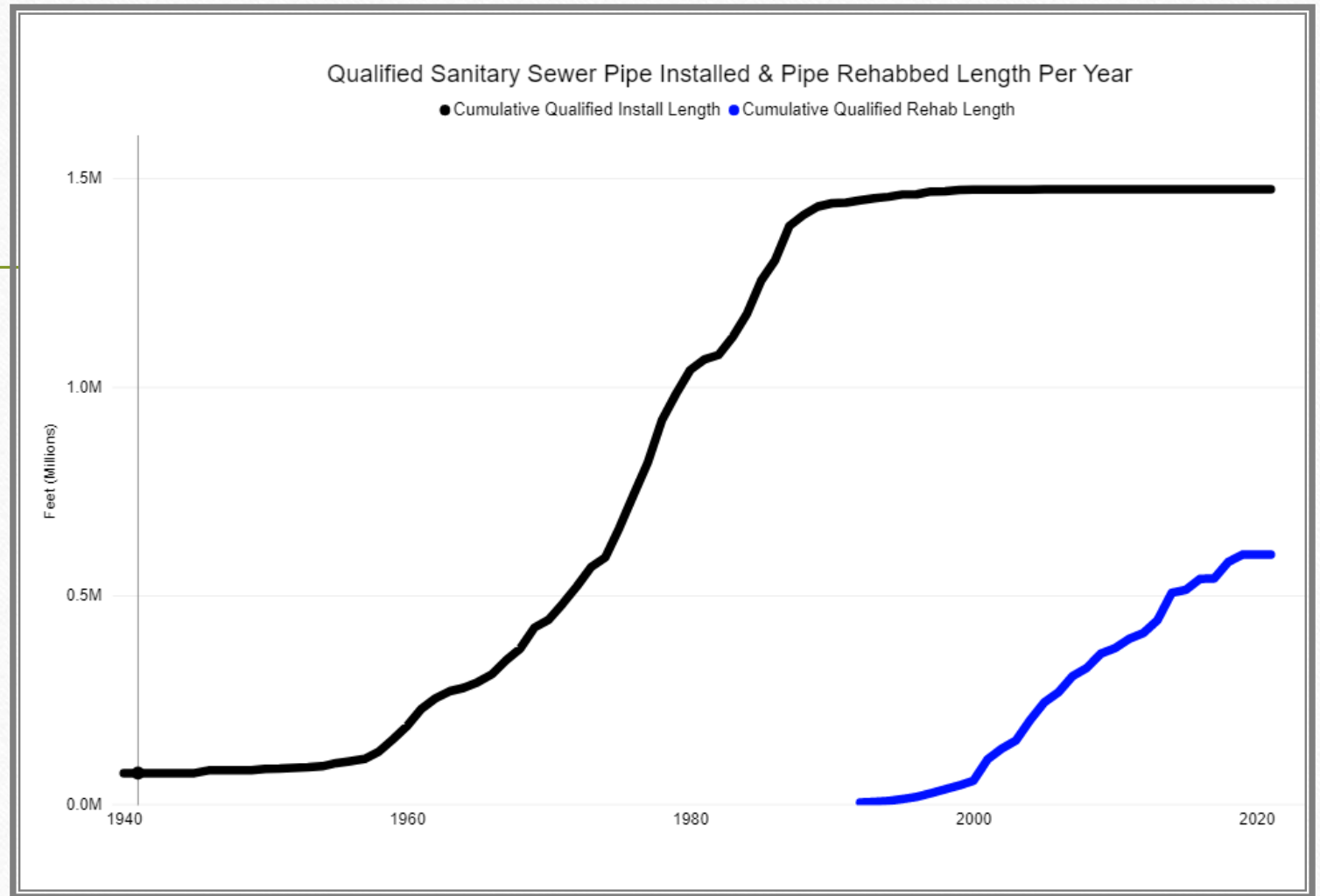
Cured In Place Pipe (CIPP) in the system

- Lining focused on VCP, ACP, and Truss pipe materials
 - Total of 249 Miles of these material types in System
 - Currently 101 Miles of these material types have been lined.



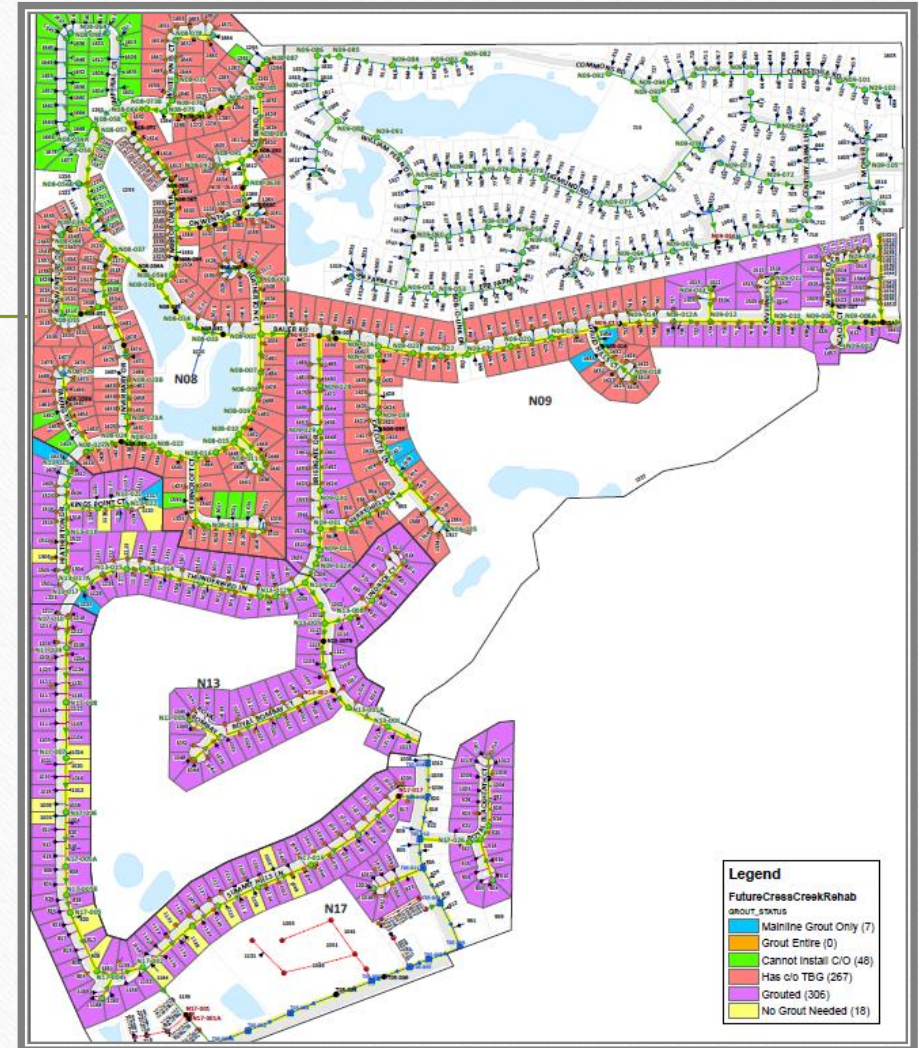
Rehabilitated pipe by decade- closing the gap

- This is the progress made by CIPP lining
 - 1990's = 10.57 Miles
 - 2000's = 60.18 Miles
 - 2010's = 46.27 Miles



Important I&I program components

- Sanitary sewer lining
- Manhole rehab
 - Manhole replacement
 - Manhole lining
 - Upper structure lining
- Lateral rehab
 - Grouting
 - Lateral lining

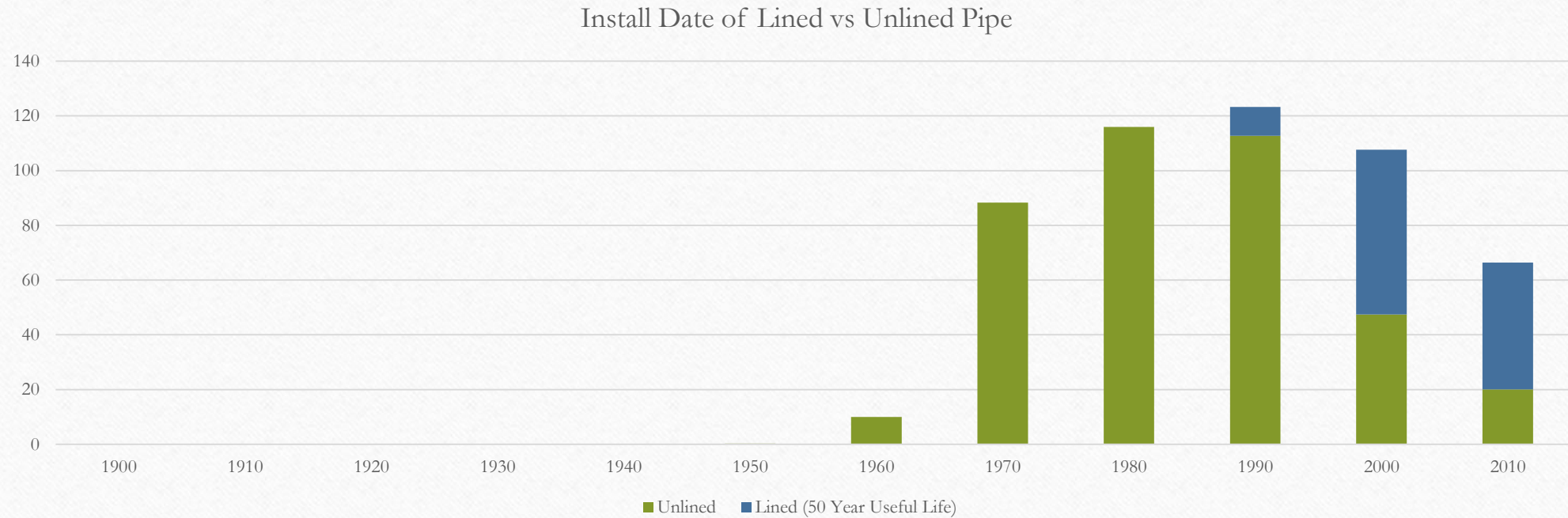


Useful Life of Sanitary Sewer Assets

- Different pipe materials have different useful lifespans.
- CIPP lining is used to extend the service life of the original pipe material.

	Useful Life	Mileage in System	Percent of System
ACP	50	0.04	0.01%
Cast Iron	75	0.2	0.04%
Concrete Pipe	75	3.09	0.57%
Ductile	75	21.17	3.89%
Polyethylene	75	0.4	0.07%
PVC	75	232.62	42.80%
Reinforced Concrete	75	15.02	2.76%
Reinforced Plastic	50	8.22	1.51%
Vitrified Clay	50	145.37	26.74%
CIPP	50	117.1	21.54%
Fold in Form	30	0.32	0.06%

Useful Life of Sanitary Sewer Assets

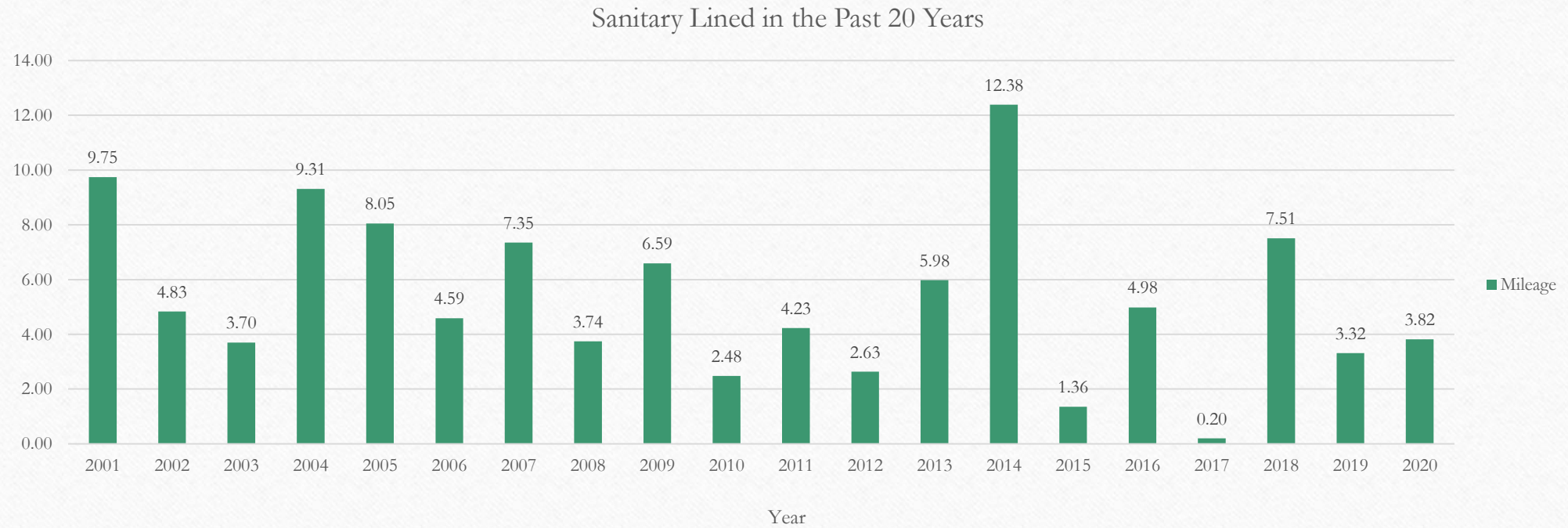


How do we identify/target areas for rehabilitation?

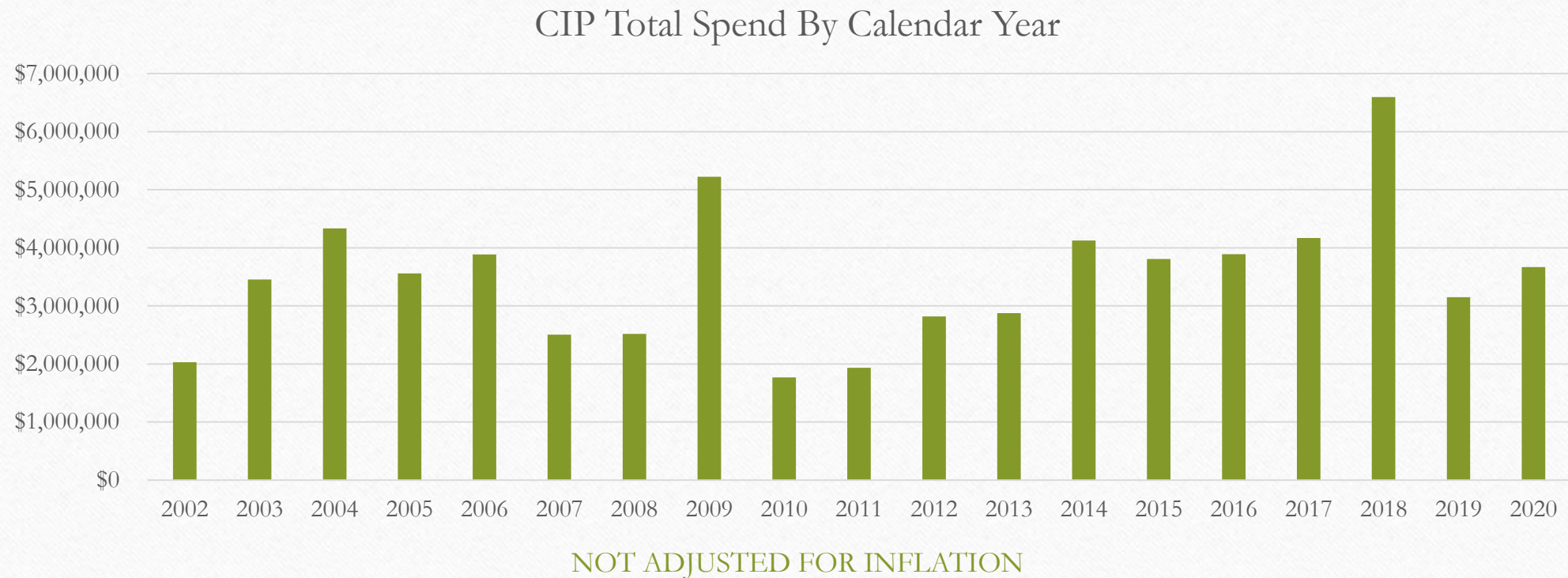
- Risk based approach
 - Probability and Consequence of failure factors
- Assessment techniques (flow monitoring, smoke testing, CCTV inspection)
- Daily maintenance and condition observations of the system (jet flushing, customer service calls, manhole inspection)



What have we been doing?



Past Investment in the Collection System



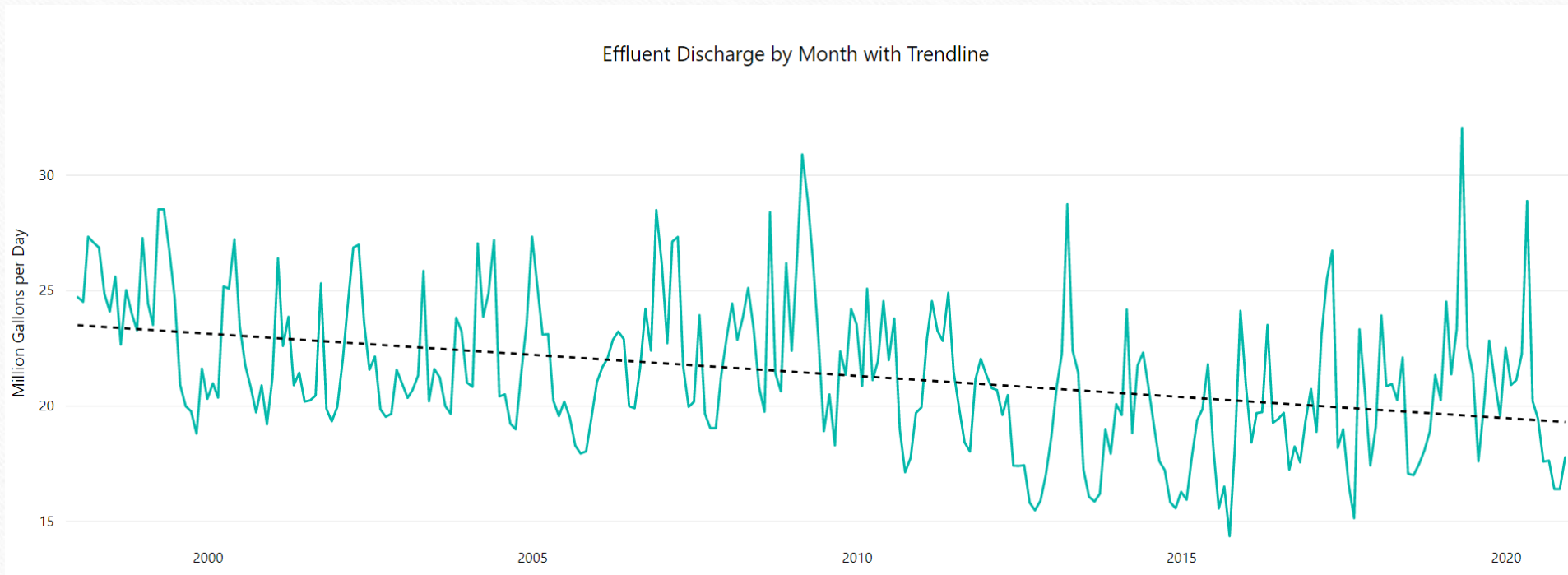
Results highlight flow reductions

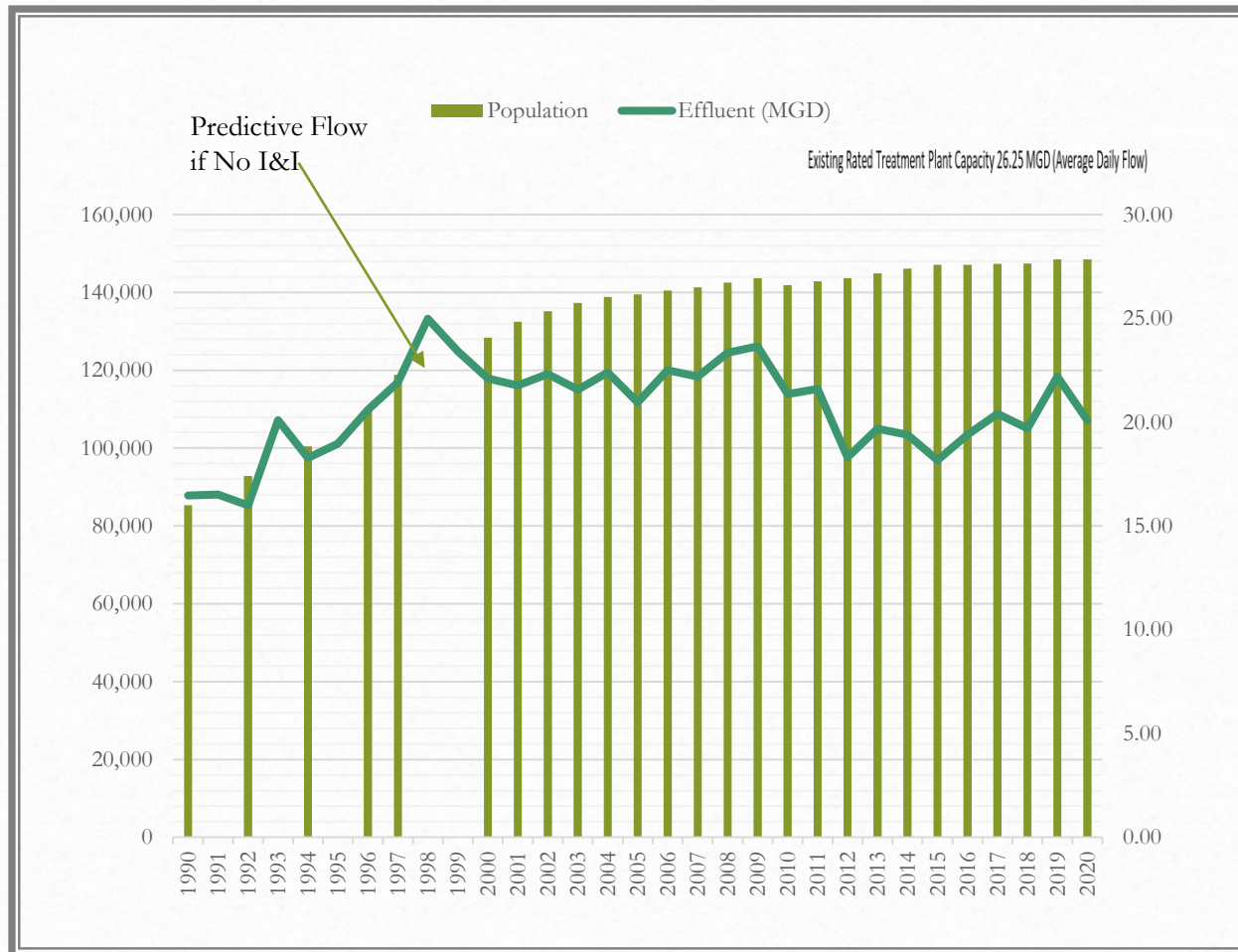
- Reduced SSO's and basement backups
- Reduced Customer Service Calls. 2007: Responded to 600 Calls. 2019: Responded to 295 Calls. Yearly Saving Of \$61,000
 - Less Time on Customer Service means crews can spend more time on I/I work which reduces the chance of main line Back-ups.
- Reduced Sewer Maintenance Cost. Yearly Root Cutting is now Jet Flushing only every four years. \$64,513 Yearly Savings.
- Reduced Chance Of Injuries. Priceless.

Results highlight flow reductions Cont.

- Reduced Pumping Cost. Reduces the cost of operating a wastewater pump station.
- Reduced Electricity Cost.
- Reduced Maintenance Required
- Reduced By-Pass Pumping needed due to high flows.
- Treatment Plant Flow. Current flow Is 19.75 MGD. Plant capacity is 26.75 MGD.
 - Contributed to delay in plant expansion. Plant expansion cost in 1998 estimated at \$9M.

Flows to SWRC are trending down

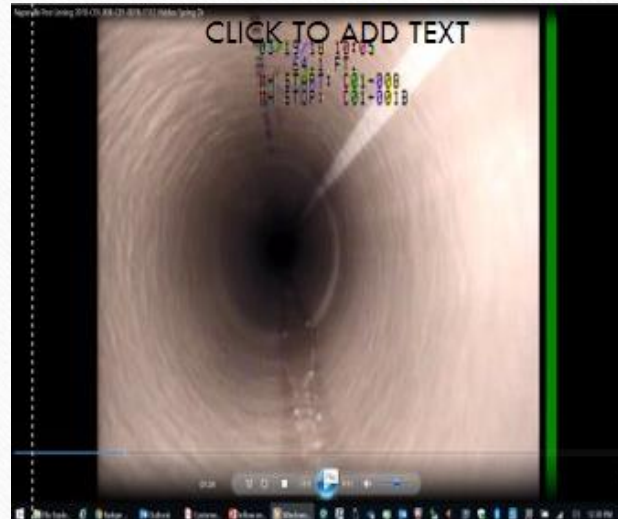




I&I reduction
efforts
and water
conservation are
attenuating the
effects of
increasing
population on
plant flow.

10-year Wastewater Collection System CIP

City of Naperville 10-Year Wastewater Collection System Rehabilitation Plan	
Year	Estimated Total Yearly Cost
2019 (Actual)	\$4,093,789.00
2020 (Actual)	\$4,892,000.00
2021	\$4,708,000.00
2022	\$4,553,000.00
2023	\$4,538,000.00
2024	\$4,538,000.00
2025	\$4,813,000.00
2026	\$5,813,000.00
2027	\$4,813,000.00
2028	\$4,813,000.00



Submitted to IEPA Annually

Continued investment is essential.

- Maintain regulatory compliance (NPDES Permit)
- Ensure efficient system performance and operations
- Provide excellent customer service
- Provide exceptional value to our customers
- Ensure sustainable asset management



Next Steps: 3-4 Months

- Review Water Distribution/Supply Asset Evaluation
- Review Wastewater Treatment (Springbrook) Asset Evaluation
- Review Water Rate Study Assumptions

Questions?

