

# Information Item: Interceptor Program Management

Adam Gordon, Interceptor Engineering Manager  
Bert Tracy, Interceptor Business Unit Manager

Environment Committee: September 28, 2021





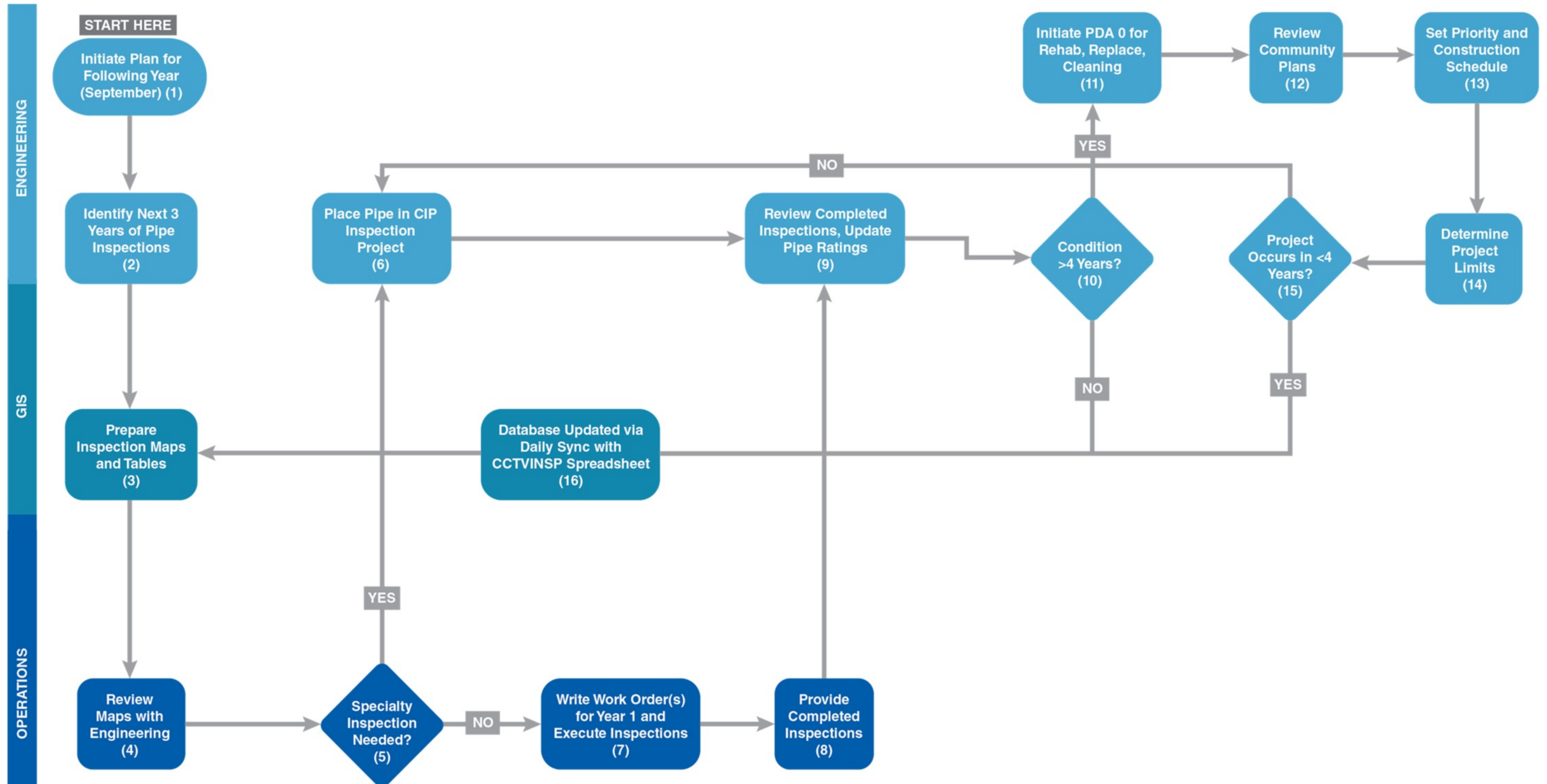
# Agenda

- Program Planning
- Condition Assessment
- Maintenance Scheduling
- Capital Improvement Program
- Performance Measurement





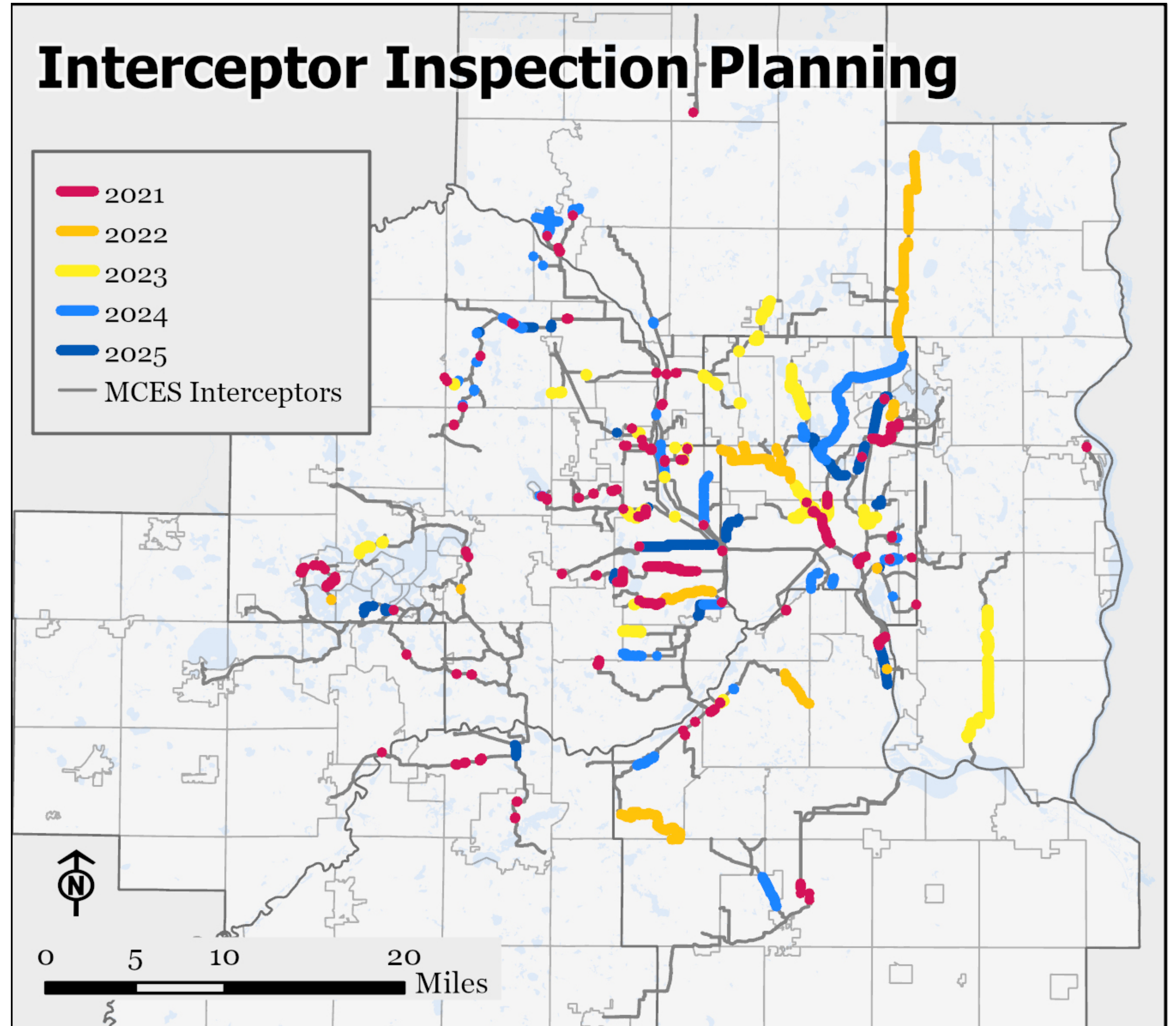
# Gravity Interceptor Program



This workflow diagram outlines the annual process for the Gravity Interceptor Program. Each process box contains a footnote reference number. Additional information for each process can be found in the Gravity Interceptor Program Manual.



# Interceptor Inspection Planning



# Interceptor Programs

2020

- Gravity Interceptor

2021

- Cathodic Protection
- Meters
- Siphons and Forcemains

2022

- Lift Stations
- Odor Control



# Gravity Pipe System Condition Assessment



## Condition Grading System

Rating	Status
5	Immediate Attention
4	Poor
3	Fair
2	Good
1	Excellent



# Interceptor Services Business Unit Closed Circuit Television (CCTV) Operations

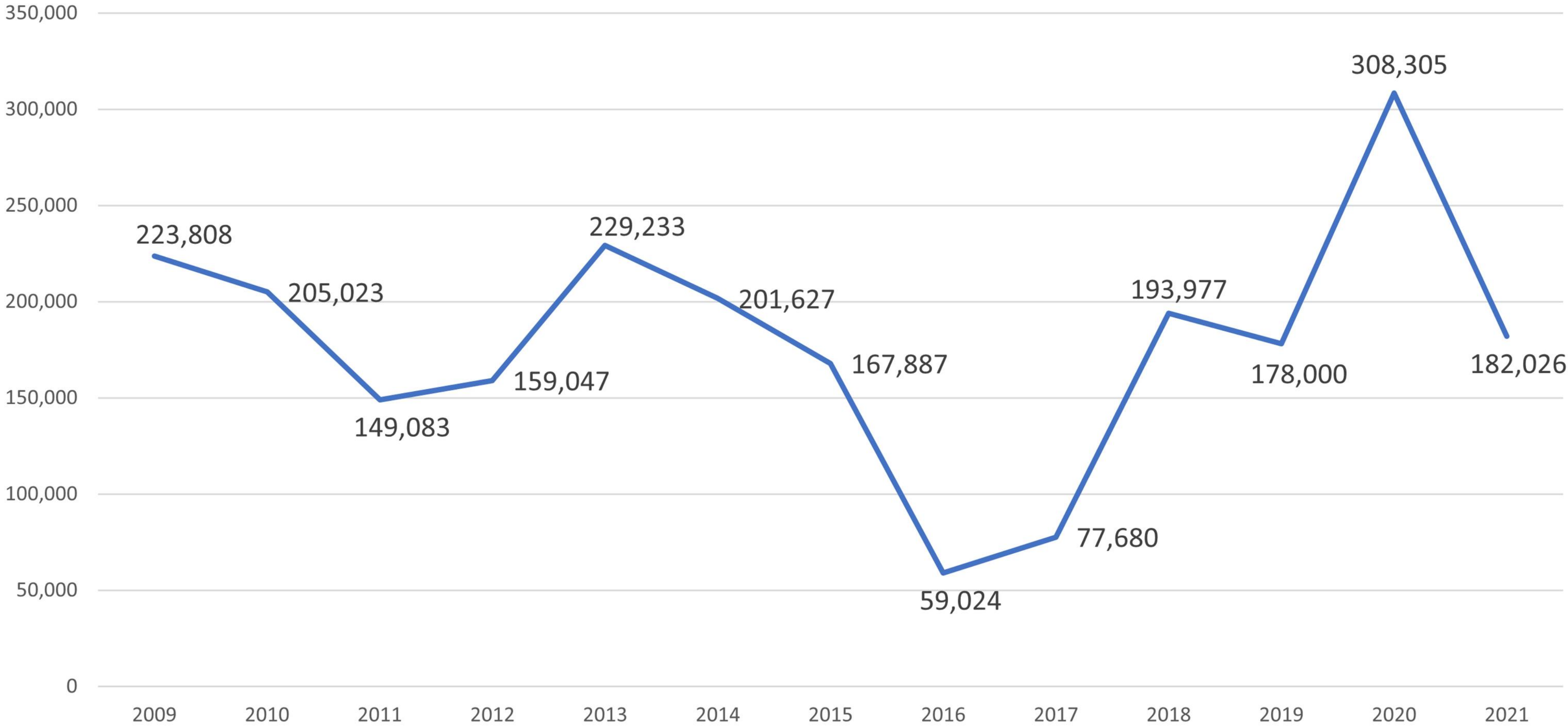
- MH Inspection and CCTV Inspection
  - 2020 Record High- 308,305 Feet
- 2021 Goal – 185,000
- 2021 Implemented
  - Warranty Inspections
  - Small Pipe Cleaning
- Miscellaneous
  - Old Regulator Site Inspections (3)
  - Vortex Inspections (16)
  - CCTV MH & Shaft Inspections
  - Reactive CCTV Inspections
  - Inflow & Infiltration (I/I) Vented MH Cover Replacement (116)
  - MH & Structure Repair





# In-House CCTV Footage

ISBU CCTV Footage





# ISBU Maintenance Scheduling

- 2014
  - Approximately 3,100 Work Orders completed
  - Other work was reactive and completed via WAM Functions
- 2020
  - Approximately 17,000 Work Orders completed
  - 15,500 Planned Preventative Maintenance Work Orders
  - 1,500 Reactive Work Orders
- ISBU Area Crew's 2020
  - 3 Crews
  - 18 Service Workers
  - 60 Lift Stations
  - 197 Pumps
  - 220 Meters





# Pipe Cleaning Crew - 2020

## Pipe Cleaning Crew

- Implemented and completed the first year of a 5-year Small Diameter Pipe Cleaning Program and Sweet Street Maintenance Program.
  - This crew cleaned 49,562 feet (9.4 miles) of pipe that has not been routinely cleaned or maintained since its installation.
  - Began and completed an Annual Manhole Odor Control Maintenance Program.





# Contracted Cleaning Services

Used for large diameter or deep tunnels

Year	Cleaned (Feet)	Debris Tons
2018	3,944	345
2019	11,254	2,441
2020	3,907	101
2021	6,310	1,381





# Vactor Crew - 2020

## Vactor Crew

- Completed over 950 Work Orders
  - Lift Station Cleaning/Maintenance
  - Relief Structure Inspection and Maintenance
  - Siphon and Outfall Inspection/Maintenance
- Removed and replaced over 9,300 ft. (approximately 372,000 pounds) of Odor Control Media.
- Supported and trained two new crew members.





# 2020 Maintenance at ISBU

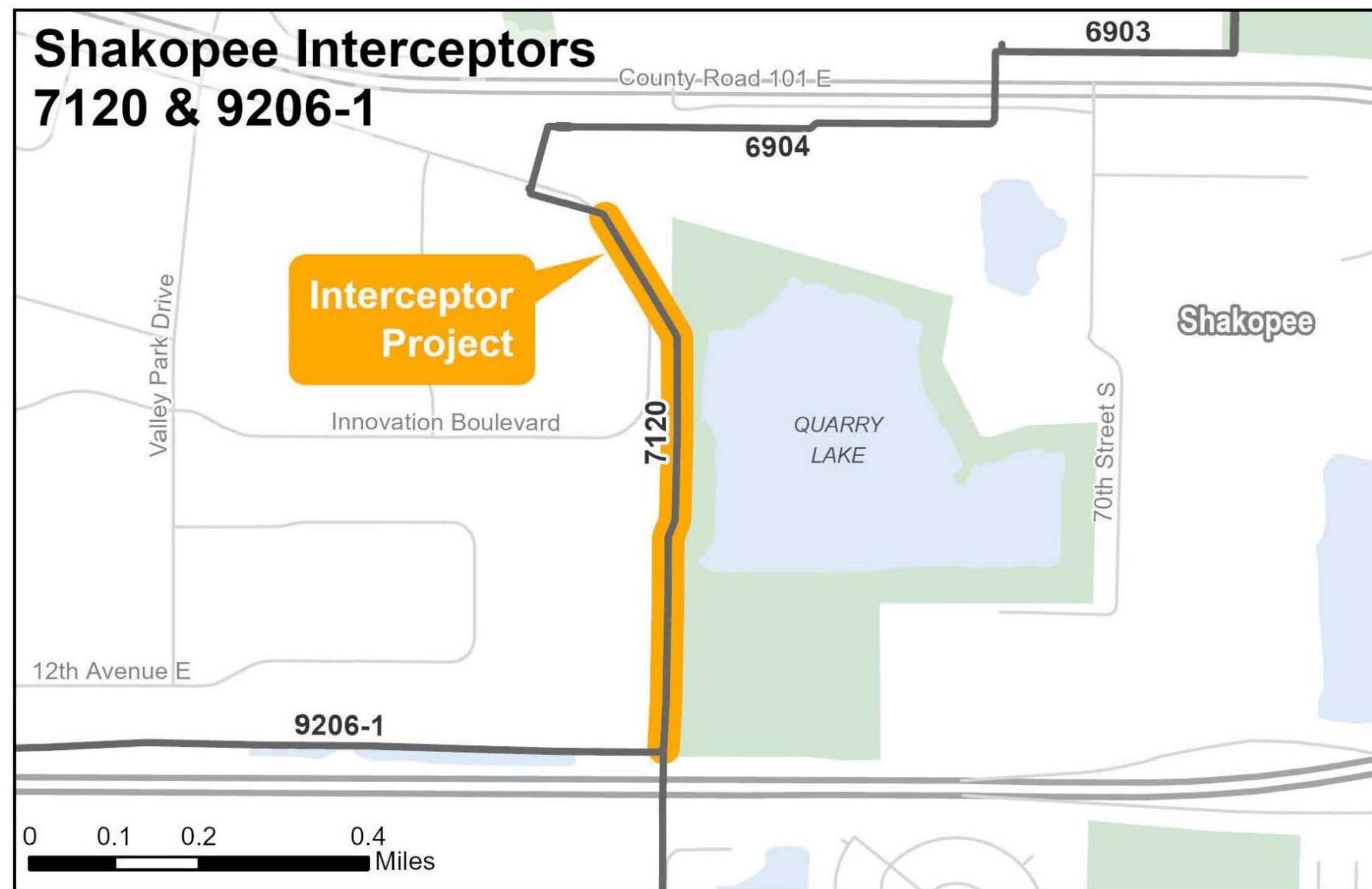
- ISBU Trades completed 3,715 Work Orders in 2020
  - Electricians: 1,736 work orders
  - Machinists: 1,590 work orders
  - Vehicle Mechanics: 573 work orders
  - 47% of work orders completed were preventative maintenance
  - 379 work orders designated with “Project” class to improve process, equipment and/or safety. Equates 10% overall improvement in ISBU system. This includes the radar upgrade and emergency pump float projects.
  - Fun Fact: Work Orders for ISBU assets (Operations and Maintenance) accounted for 28% of all work orders created in WAM in 2020!





# Capital Improvement Program - Project Identification

- Shakopee Interceptor 7120 & 9206-1
  - Condition 4 and 5 pipe
  - Conveys 8 million gallons per day (MGD) of flow to Blue Lake WWTP
  - \$5 to 7 Million to rehabilitate





# Capital Improvement Program

## - Project Construction

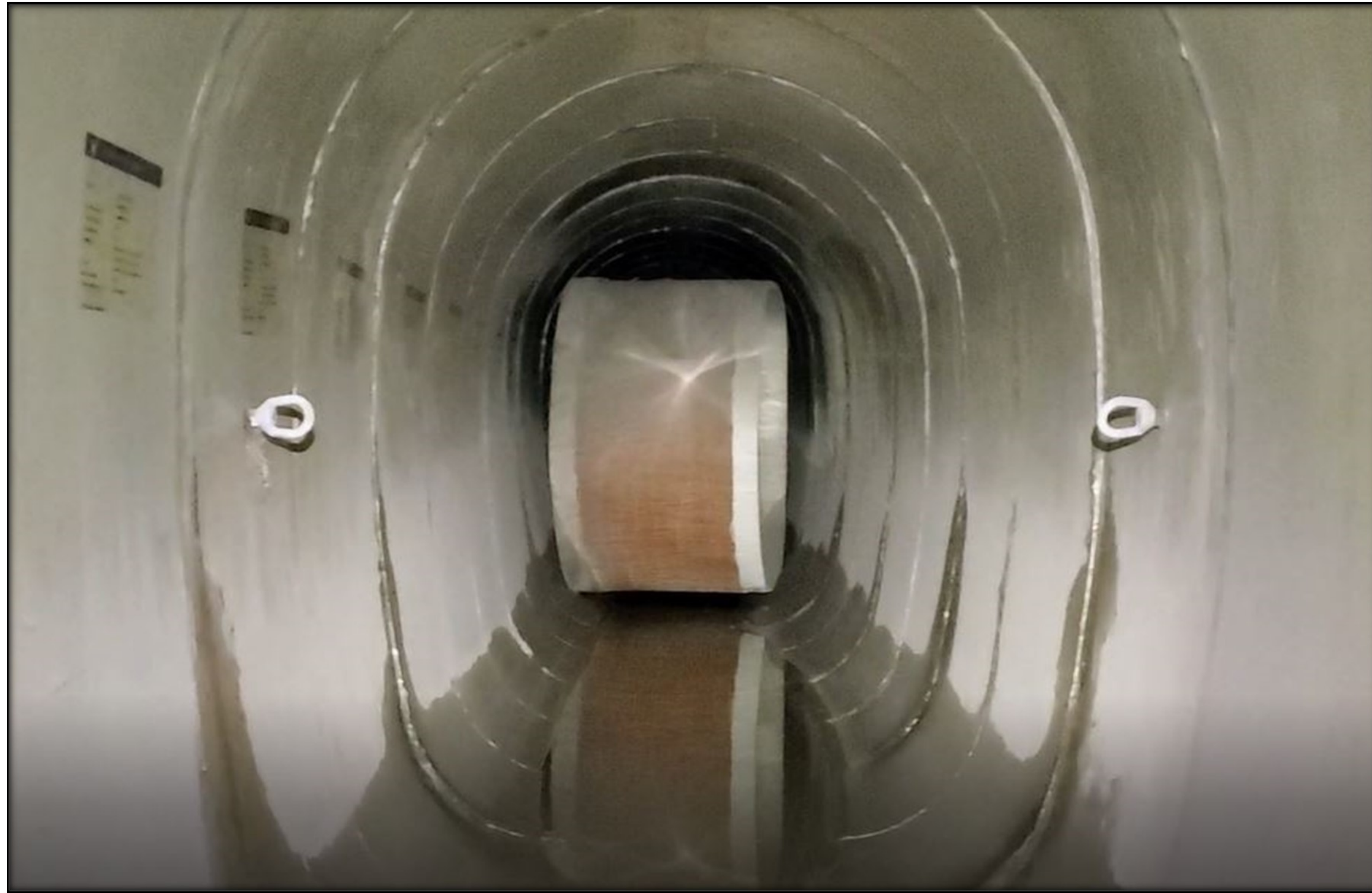
- Direct Replacement
  - Meet capacity needs
  - Existing structure cannot be rehabilitated
- Rehabilitation
  - Slip Lining
  - Cured-in-Place Pipe





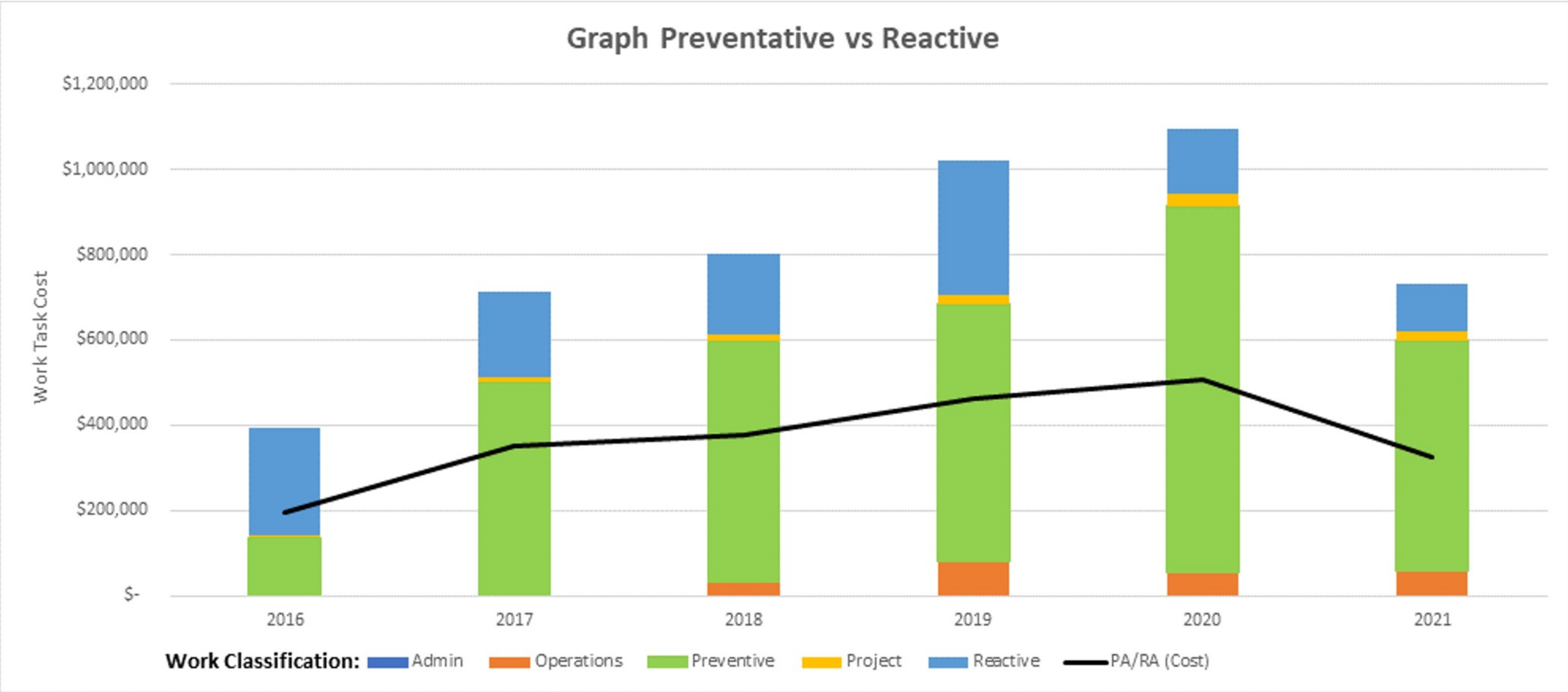
# Capital Improvement Program - Project Construction (continued)

- Unique lining of tunnel with irregular shapes





# Performance Measurement





# Questions

Bert Tracy, Business Unit Manager

Interceptor Services

[bert.tracy@metc.state.mn.us](mailto:bert.tracy@metc.state.mn.us)

651-602-4024

Adam Gordon, Manager

Interceptor Engineering

Wastewater Planning & Capital Project Delivery

[adam.gordon@metc.state.mn.us](mailto:adam.gordon@metc.state.mn.us)

651-602-4503