

# Water Utility Overview

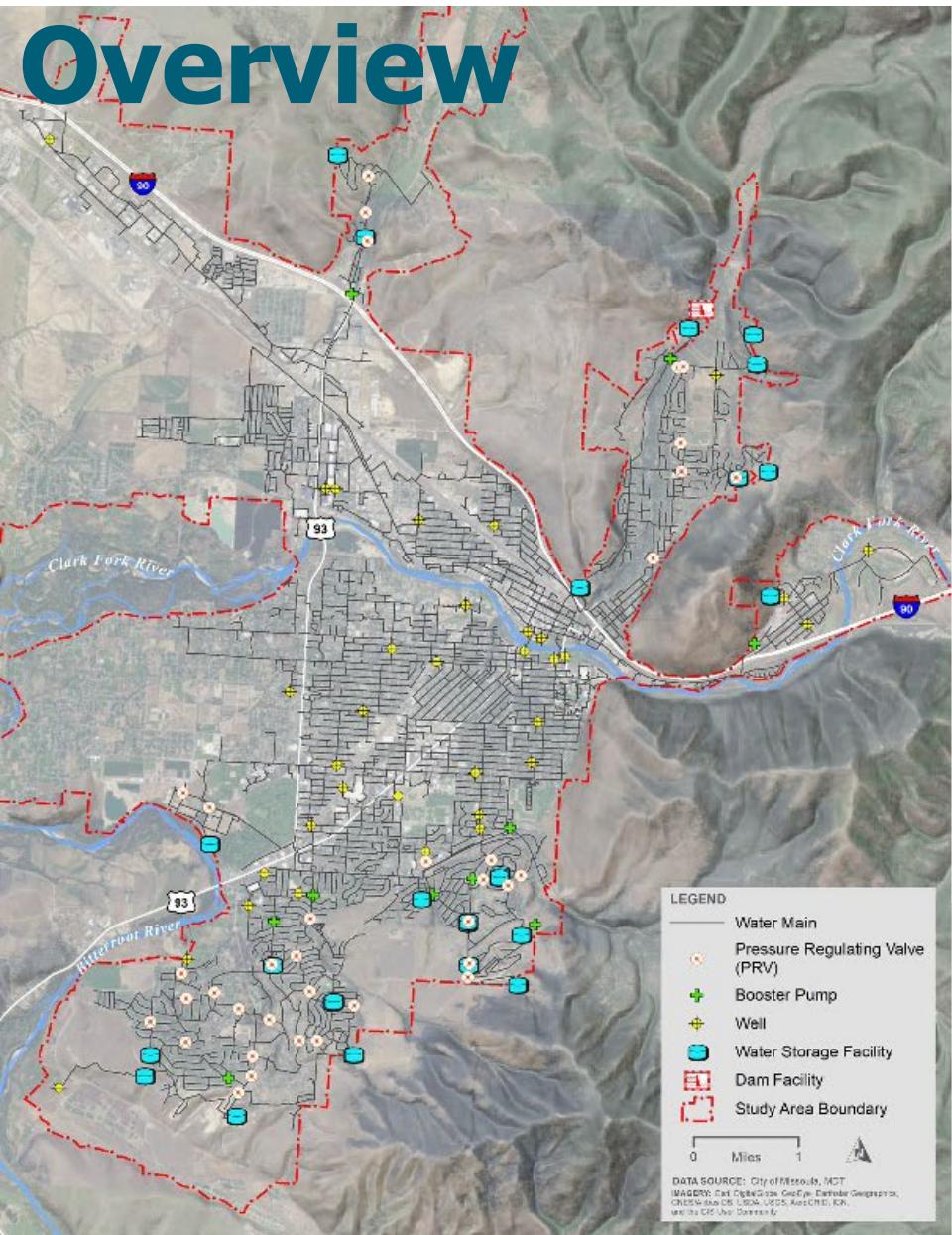
Public Works & Mobility

April 6, 2022

Logan McInnis, Deputy Director - Utilities

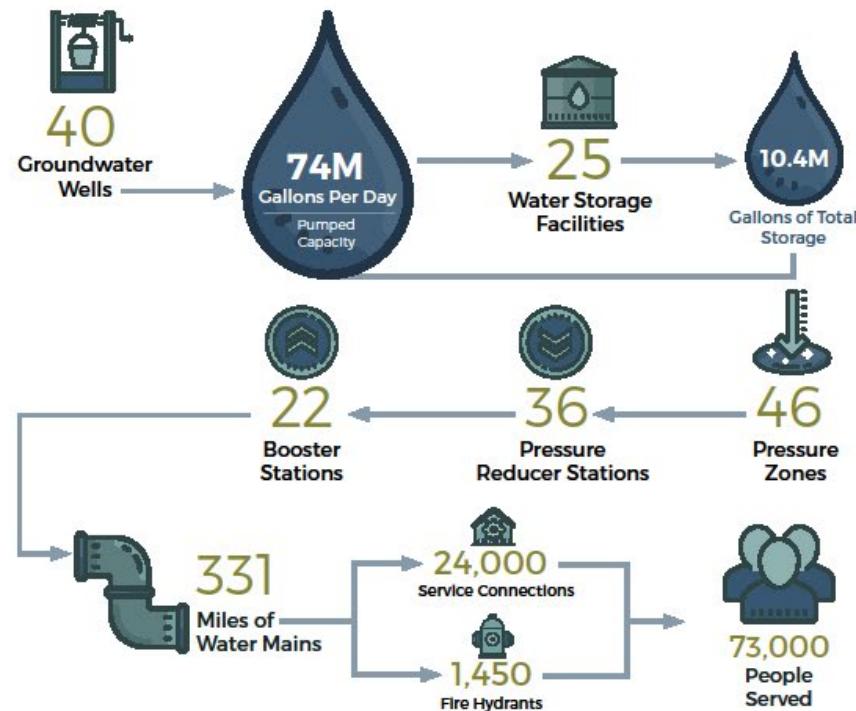


# Overview

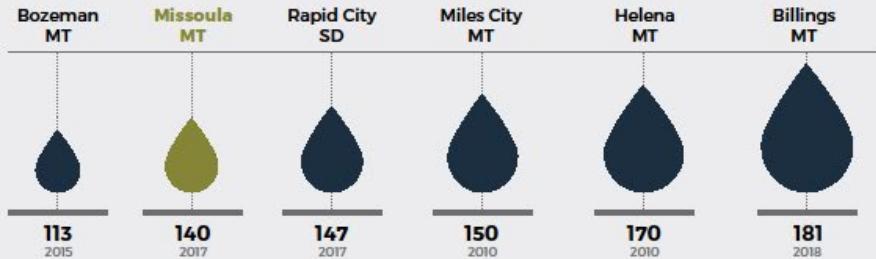


## EXISTING WATER SYSTEM

101 million gallons per day of water rights at groundwater locations

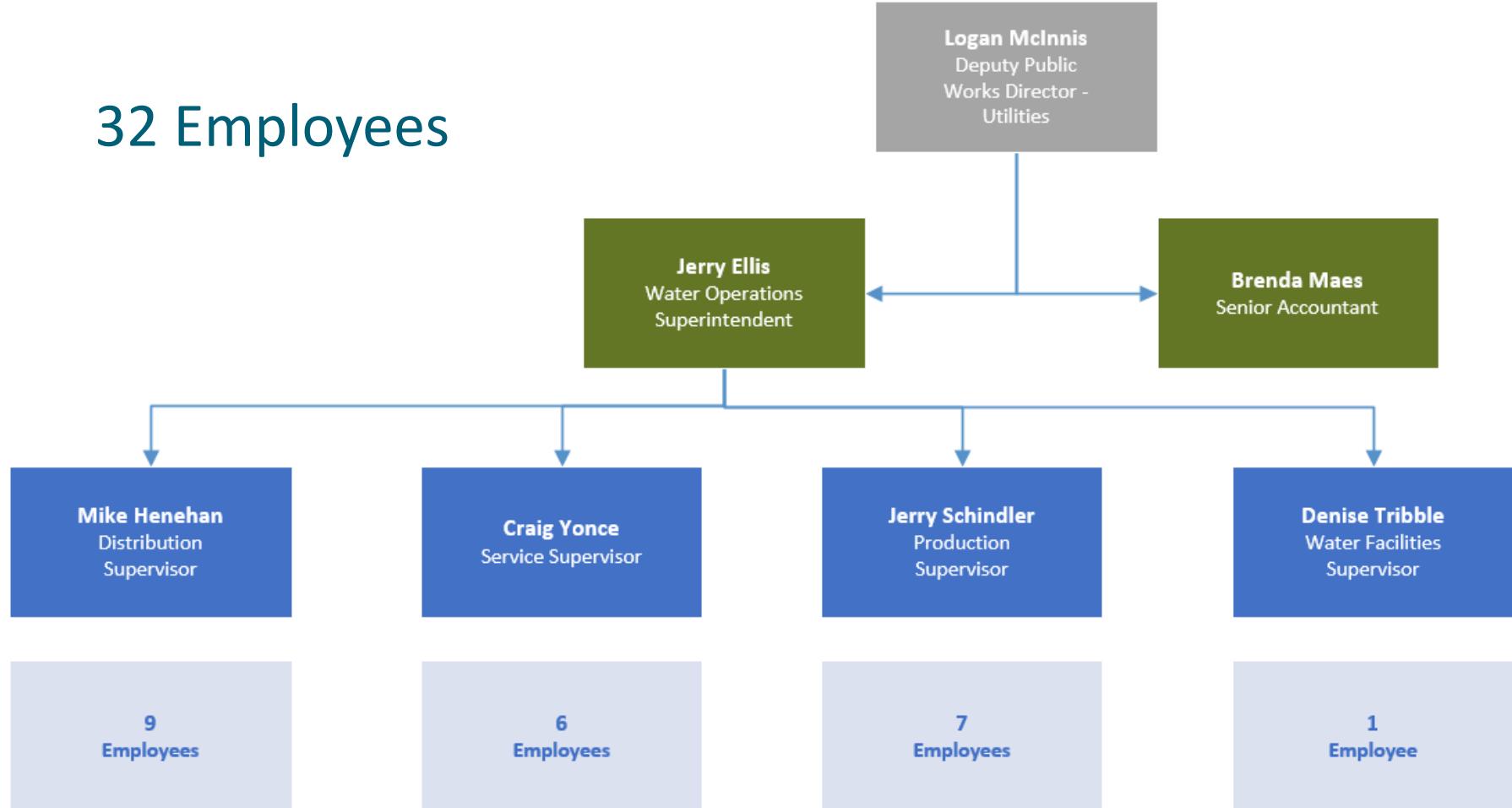


### METERED WATER USE IN SURROUNDING AREAS gallons per capita per day



# Water Staff

32 Employees



# 2021 Maintenance Activities

- Conducted 3,225 hydrant inspections/flow tests
- Turned 1,925 valves
- Performed 86 taps
- Performed 5,134 locates
- Completed 2,800 service orders
- Installed 1,900 meters
- Completed weekly Bacti samples at 37 wells
- Completed monthly Bacti samples at 70 locations

# 2021 Maintenance Activities

- Obtained hundreds of additional samples as required by DEQ (nitrates, metals, VOCs, etc.)
- Visited the 76 production facilities biweekly
- Monitored the SCADA system at 84 sites
- Oversaw testing of 2800 backflow devices

# Capital Needs

- System currently includes 340 miles of water mains
- Water Facilities Plan recommended targeting 1% main replacement per year



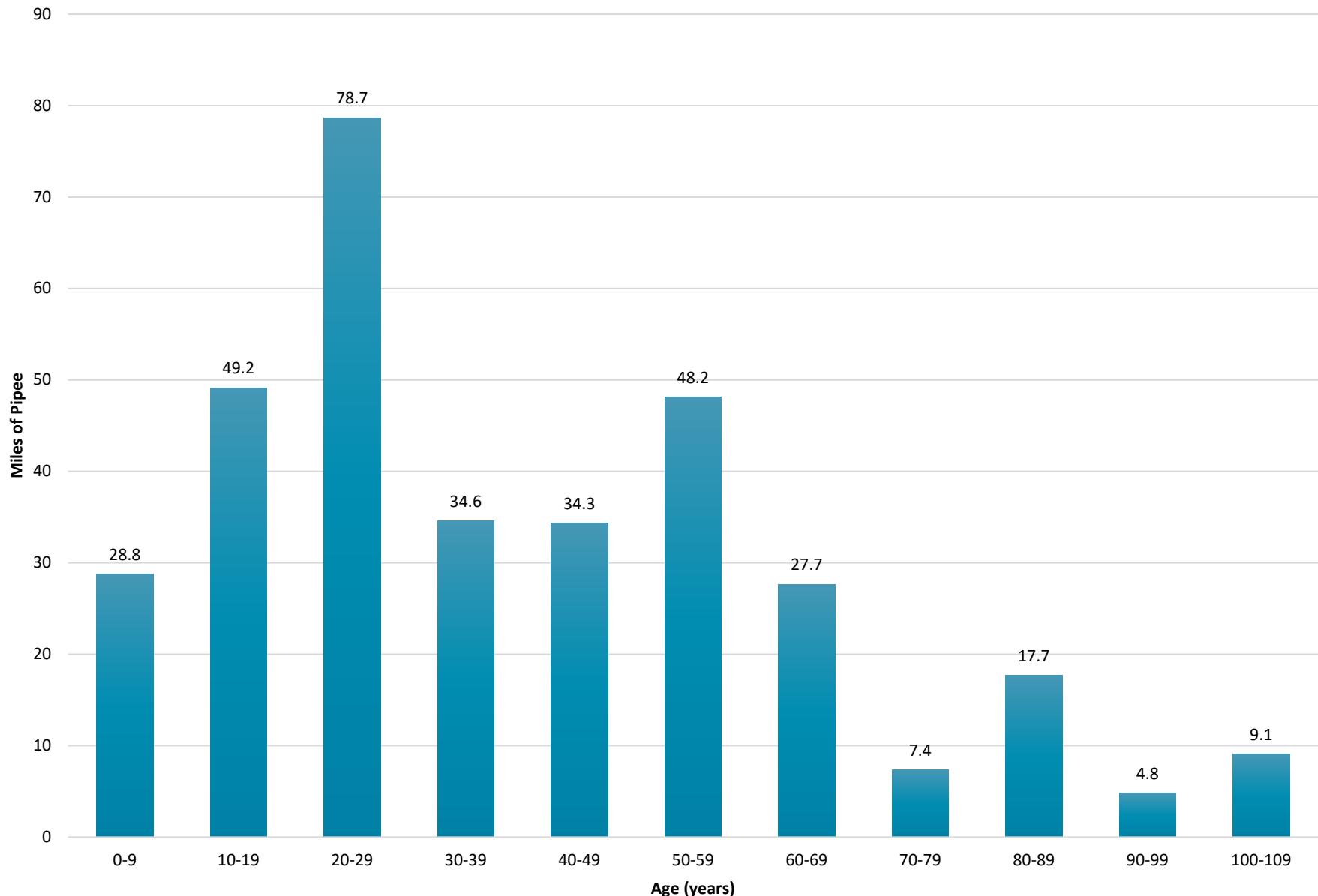
3.4 miles per year

- Water main replacements cost \$2.4 million per mile based on early 2022 bids

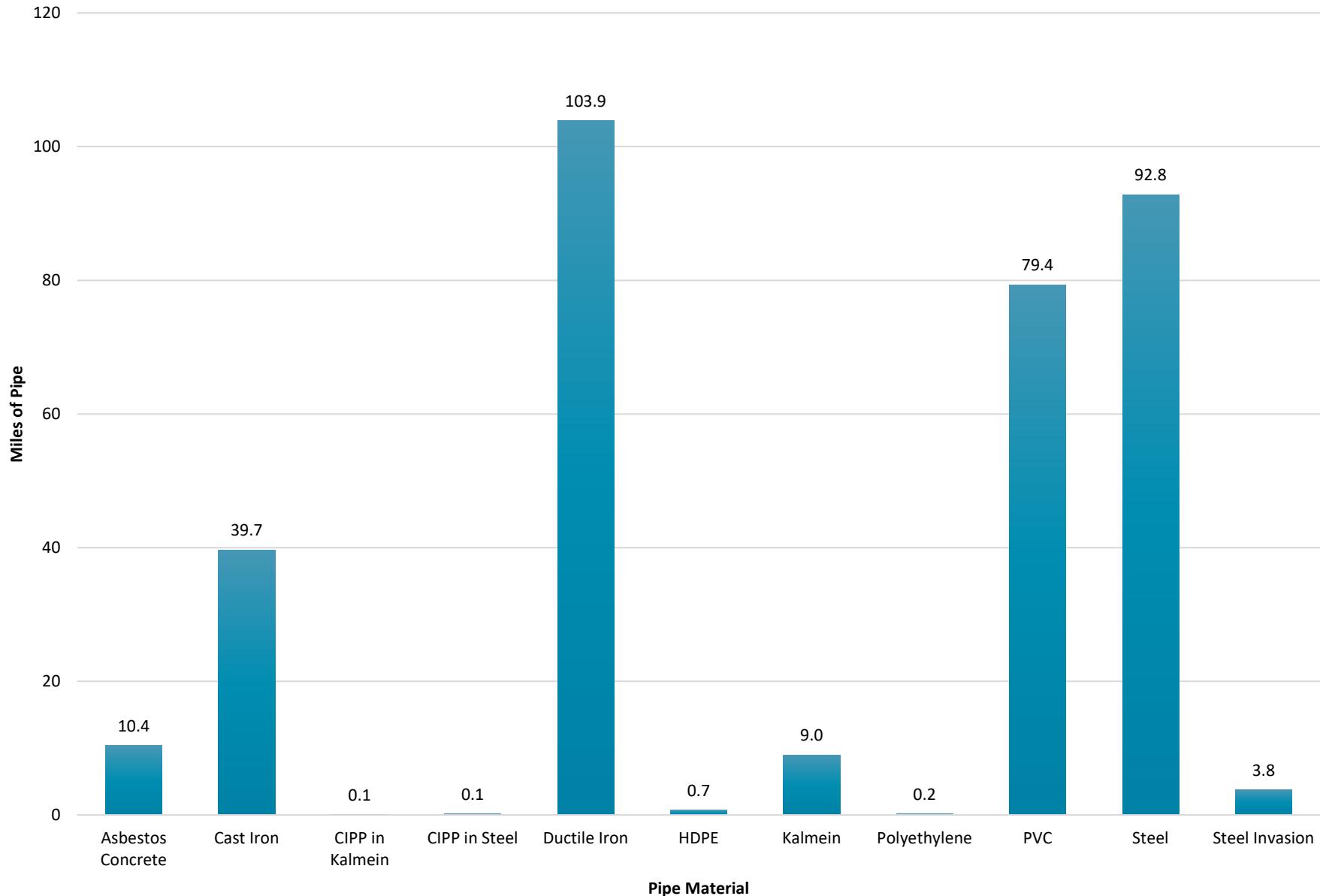


\$8.2 million/year in mains

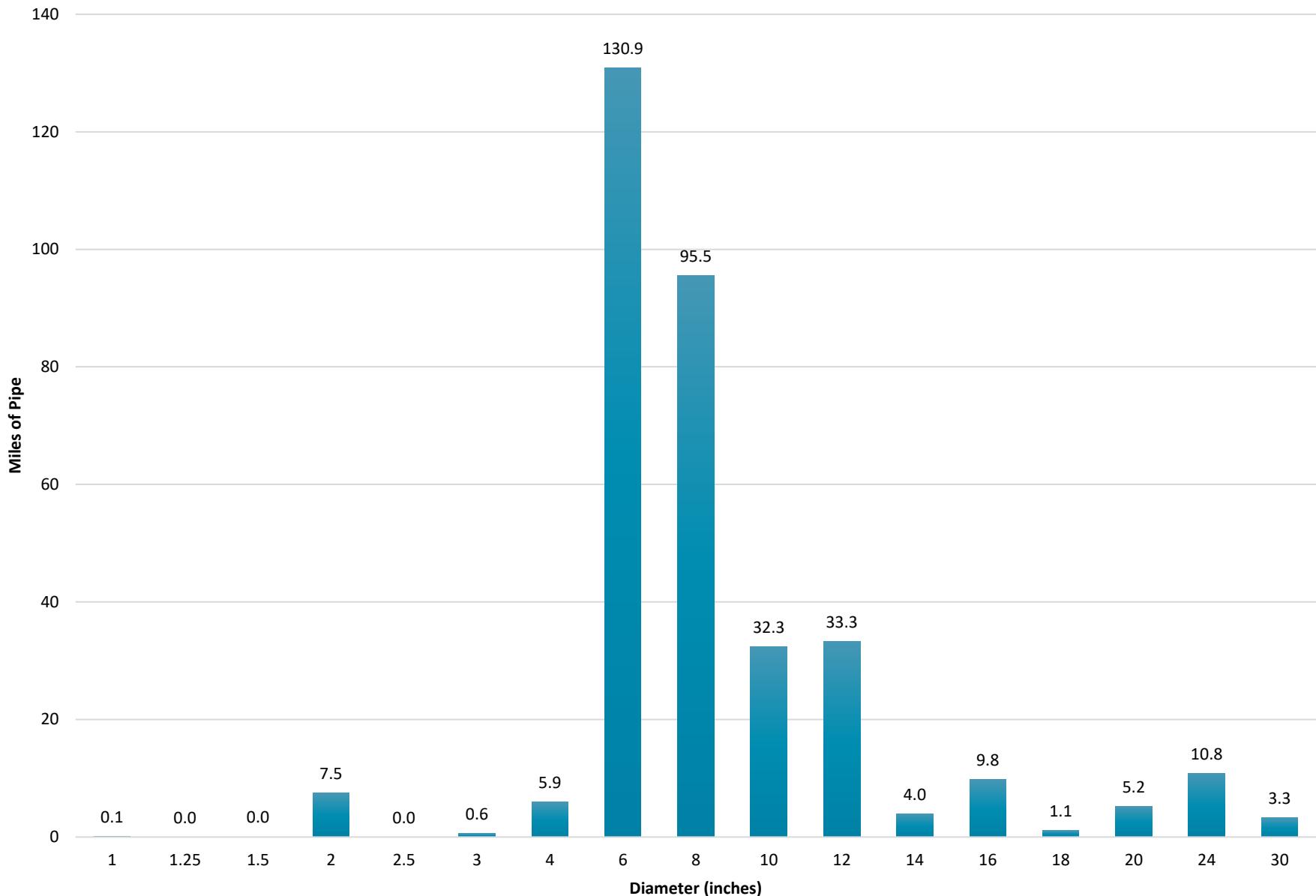
## Miles of Pipe by Age



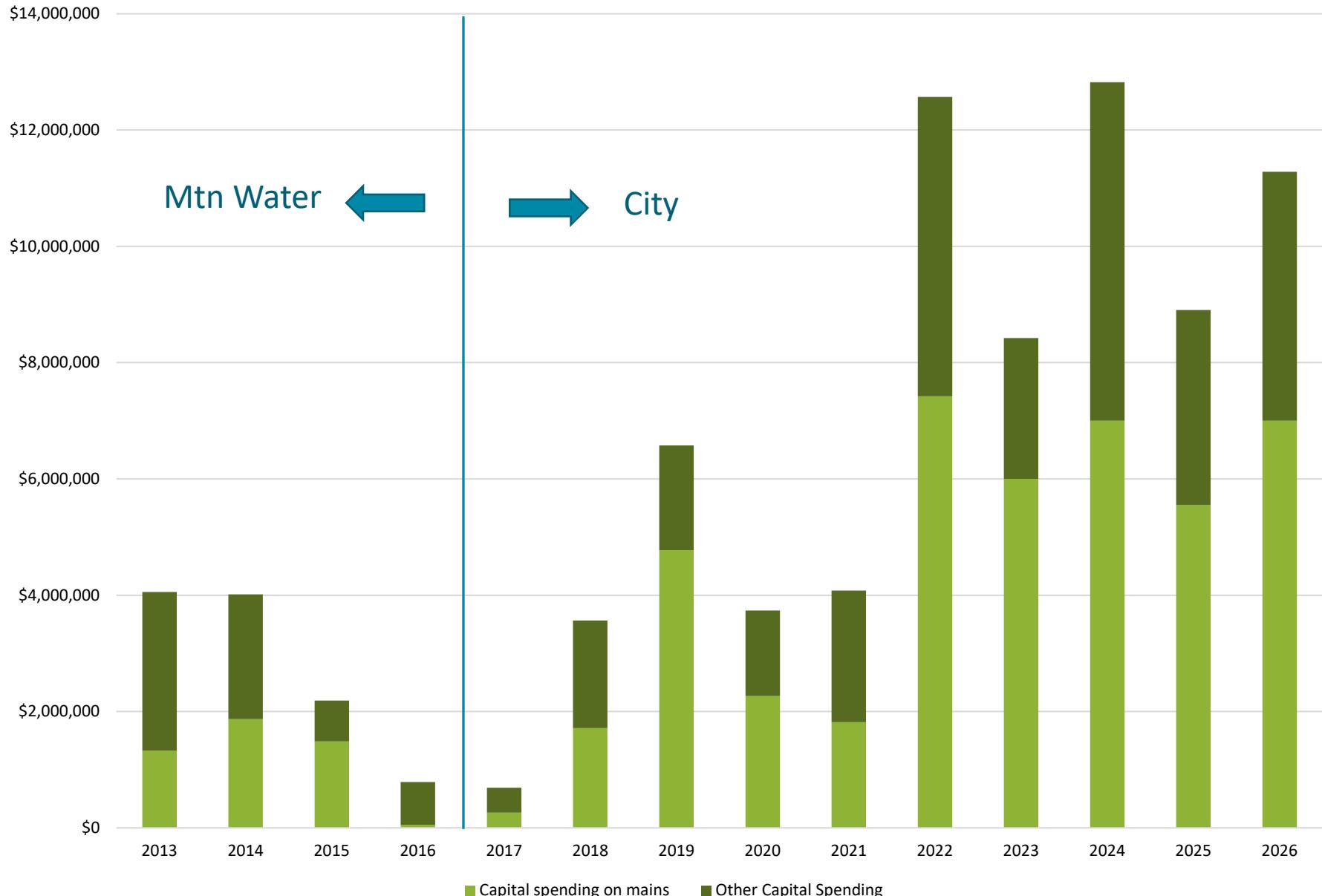
## Miles of Pipe by Material



## Miles of Pipe by Diameter

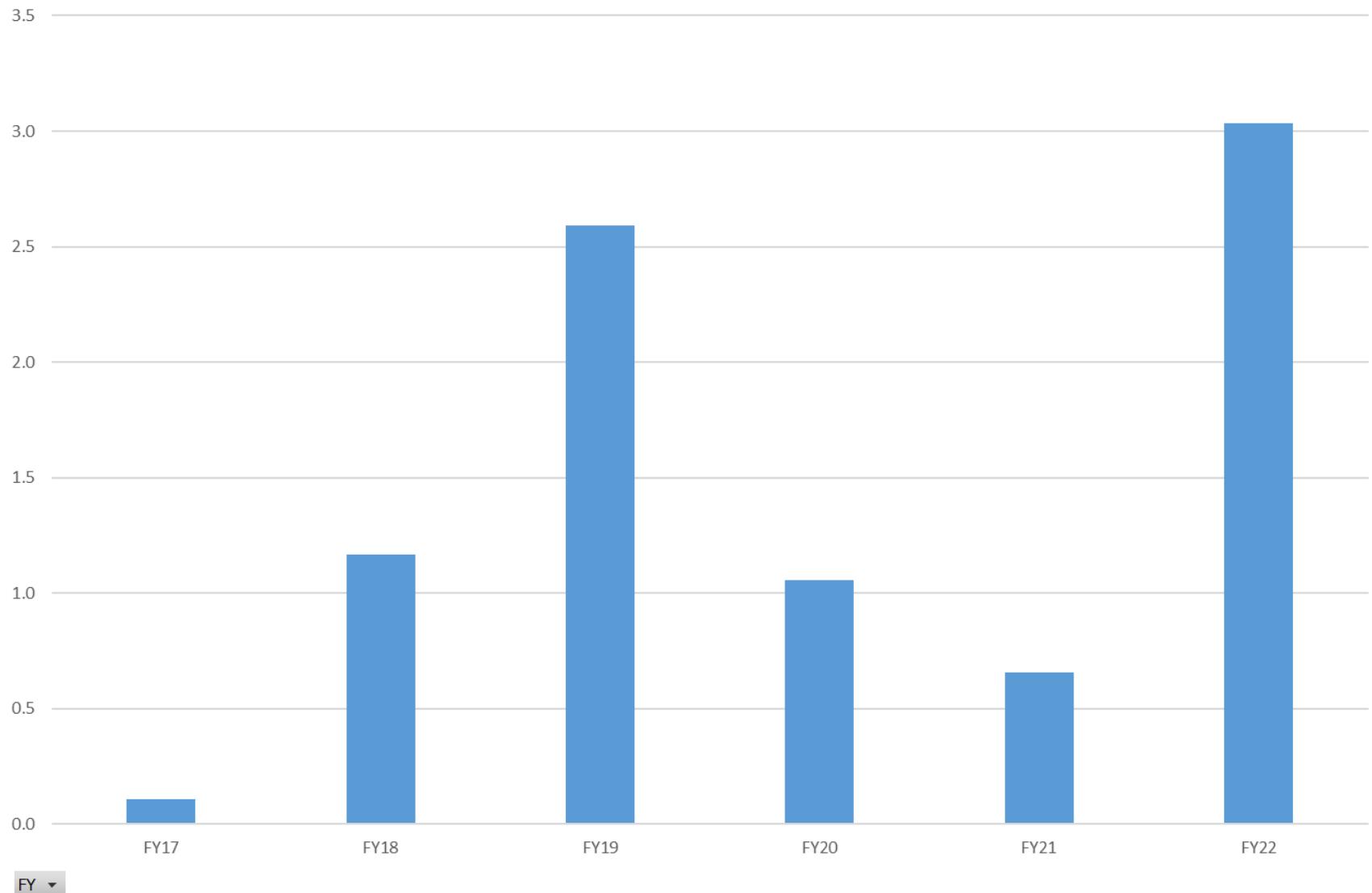


## Capital Spending by Year

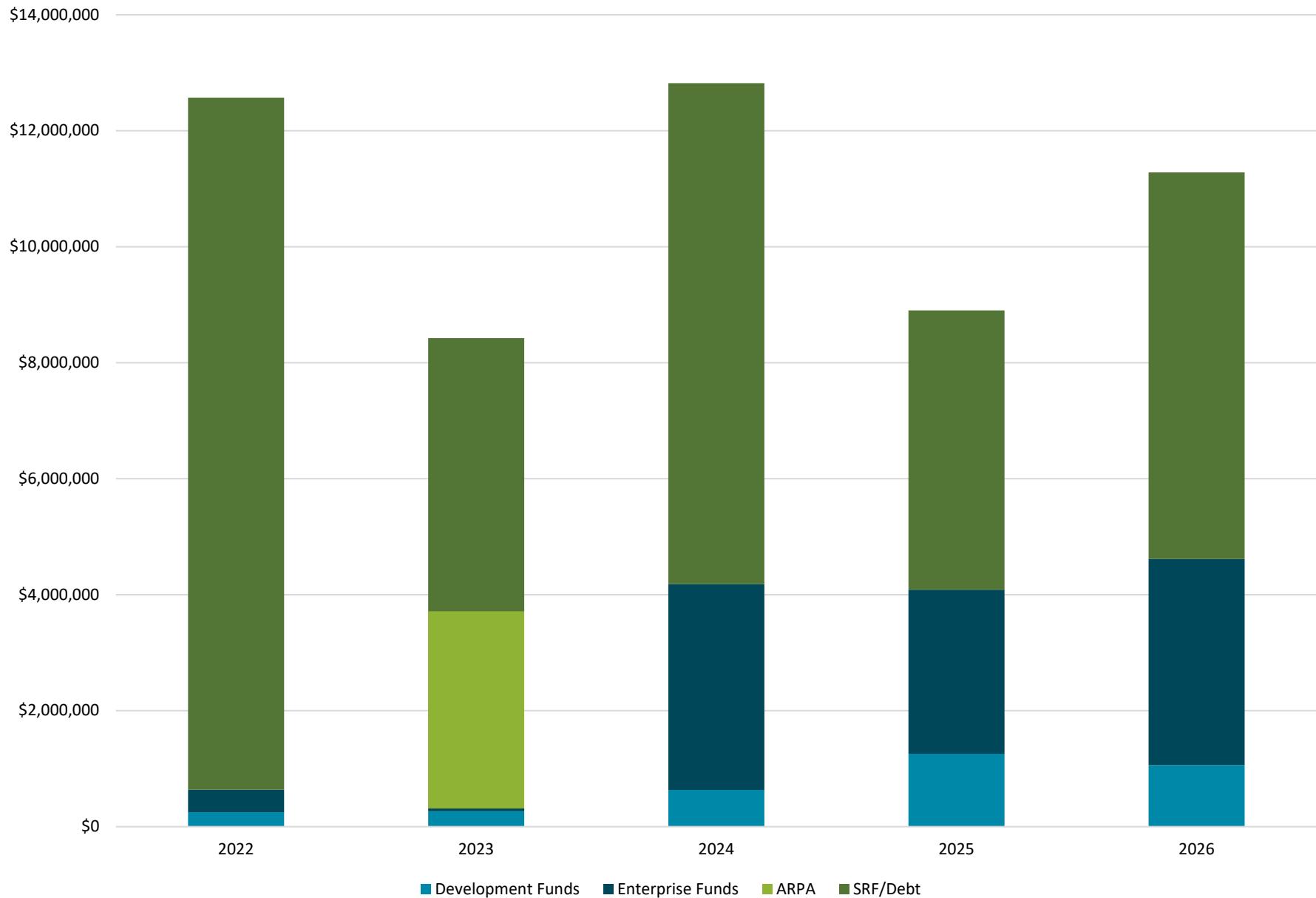


Sum of Miles of Main Replaced/Installed

### Miles of Main Replaced/Installed Per Year



## Future Capital by funding source

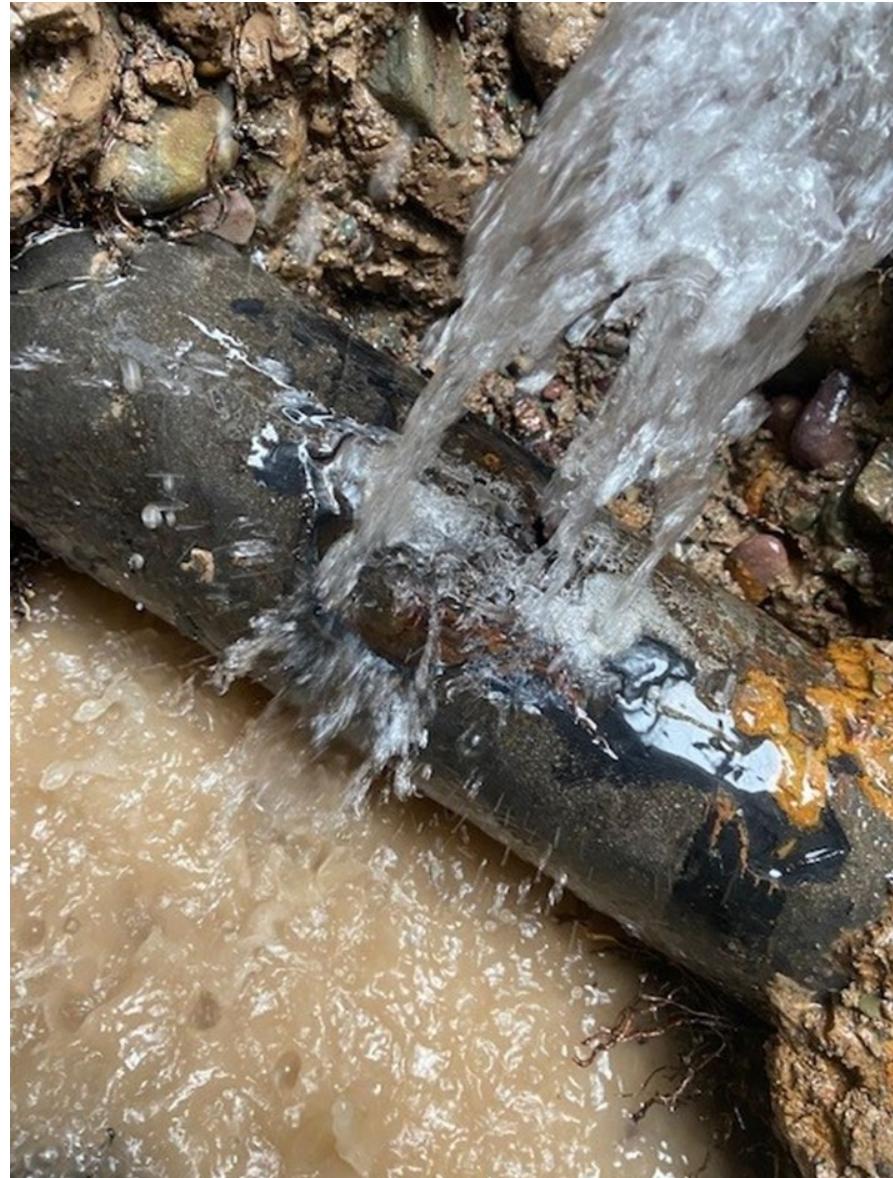


# 2022 Capital Investments

- Upper and Lower Lincoln Hills Tanks (\$2.5 million)
  - Starting as soon as Mount Jumbo opens
- Prospect Tank (\$1.1 million)
  - Early summer
- Water meter replacements (\$1.2 million)
- BUILD grant water (\$2.6 million)
- Water Mains (\$4.6 million)
  - Cooley-Stoddard
  - Cooper Alley
  - Beckwith
  - Shakespeare
  - Broadway/May

# Main Leak

- Repaired on 3/2/2022 in the Lincolnwood neighborhood
- Estimated flow rate = 90 gallons per minute
- Leak was on 57-year-old steel main
- Missoula Water typically repairs 25-35 main leaks/year



# Service Lines are a big problem

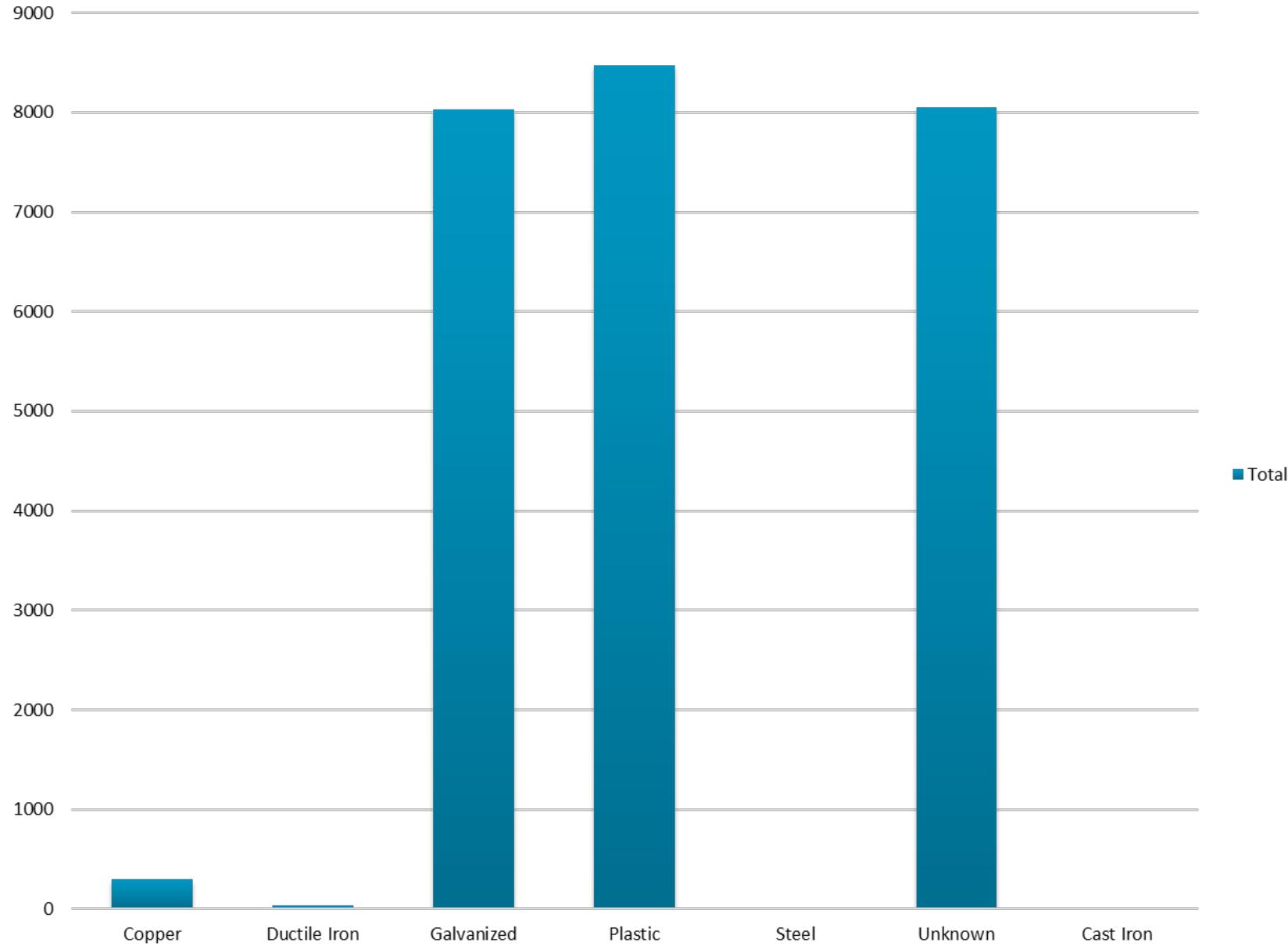
- Customer owns the service line from the main to the house
- Likely hundreds of leaking water services
- ~ 16,000 galvanized service lines in service
- Required community investment of \$120 million to replace the galvanized services
- No easy answers but we are considering a variety of solutions to the problem
- Lead and Copper Rule requires us to perform a service line inventory.

# Service Line Leak

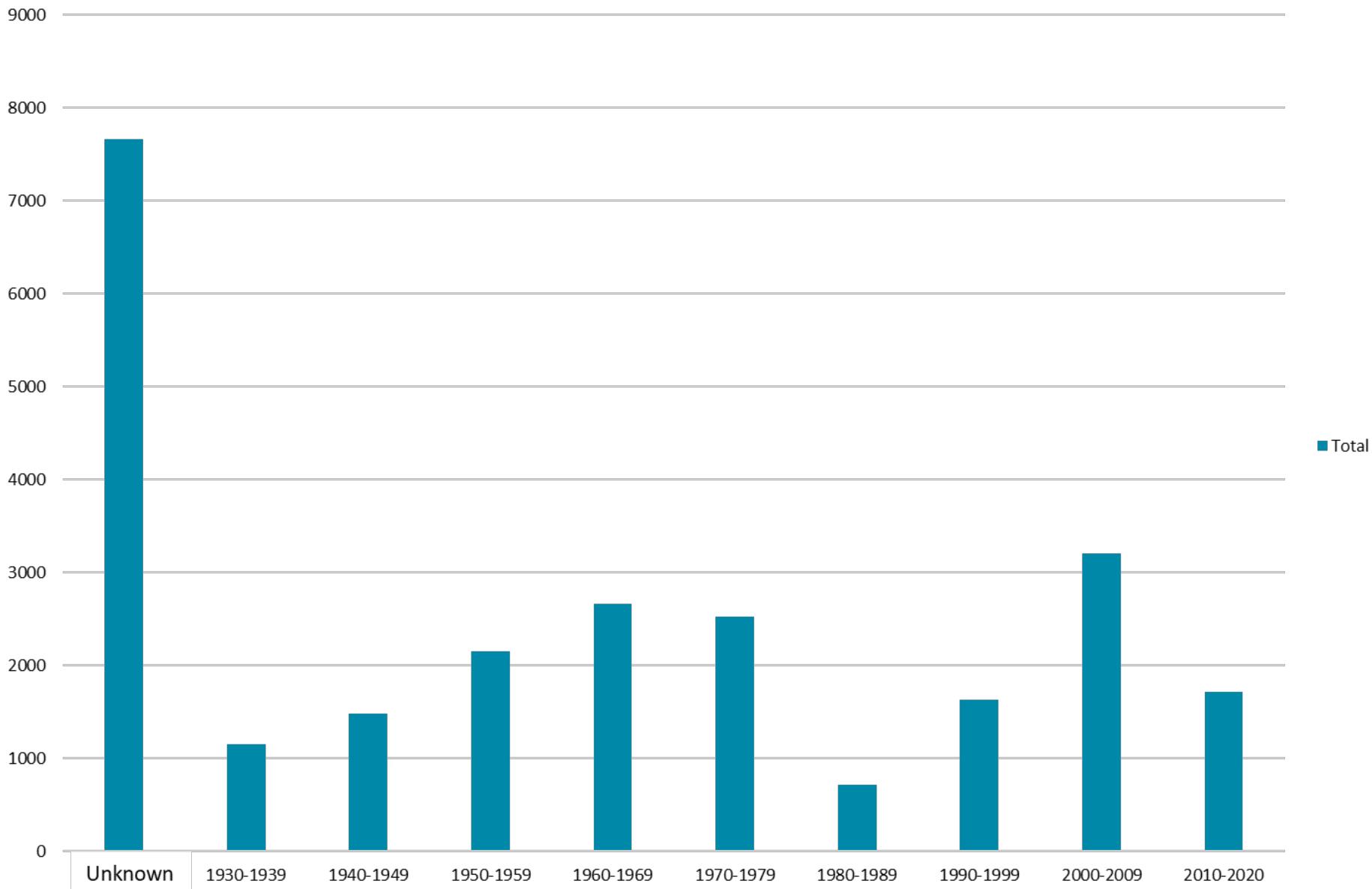


- Identified based on a customer noise complaint, not low pressure
- Repaired by Missoula Water in February 2022
- 1936 service line

## Service Lines by Material



## # of Services by Decade



# Sustainability Efforts

- Reduce system leakage
- Install a production well at the airport
- Install a production well at the Clouse property
- McKinstry study of pump energy efficiency
- Deploy satellite imagery leak detection technology

# Questions

