

Water Utility Overview

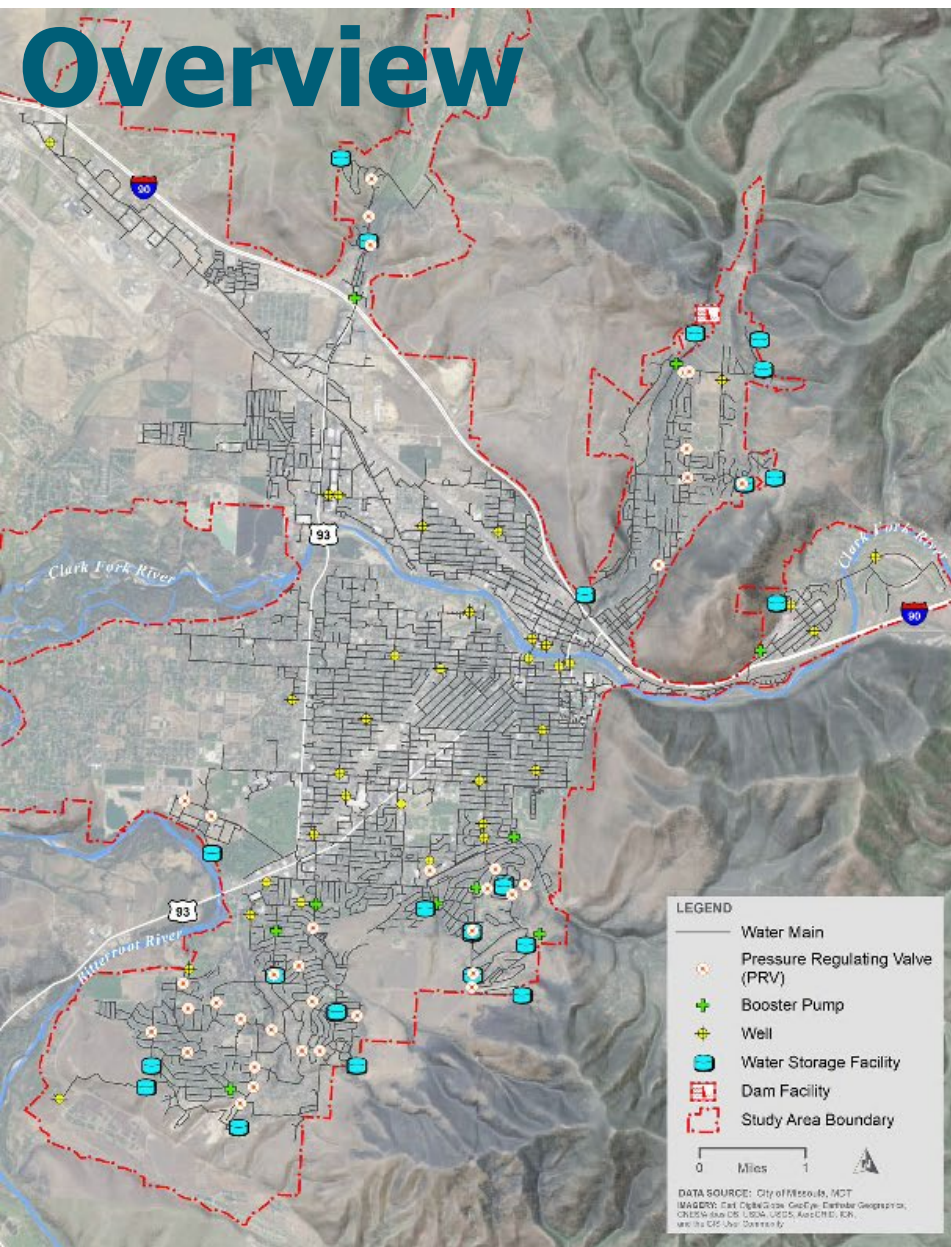
Public Works & Mobility

April 6, 2022

Logan McInnis, Deputy Director - Utilities

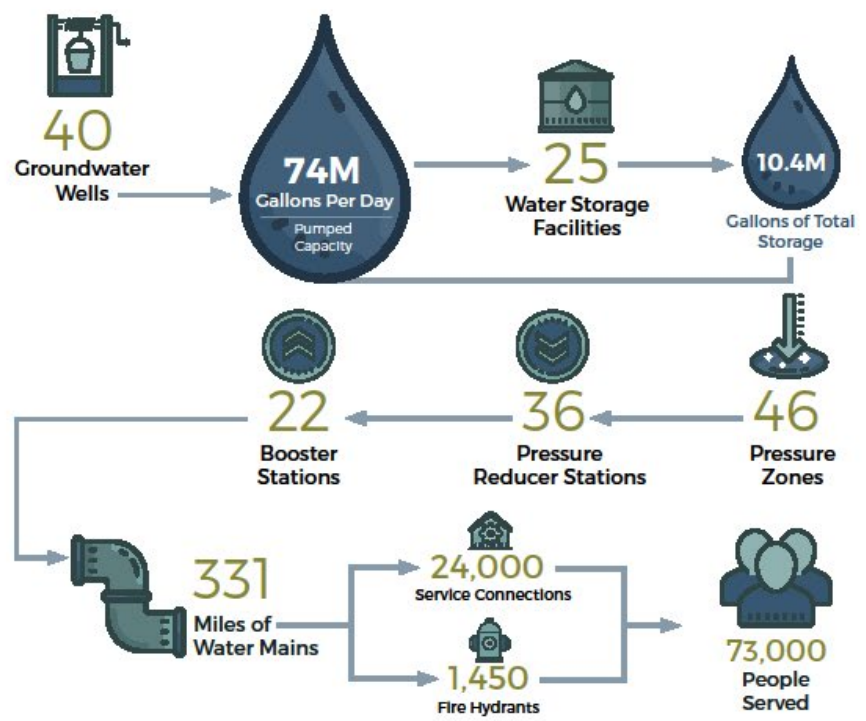


Overview

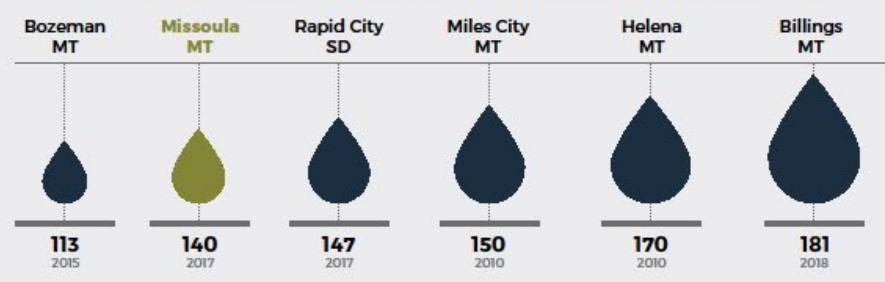


EXISTING WATER SYSTEM

101 million gallons per day of water rights at groundwater locations

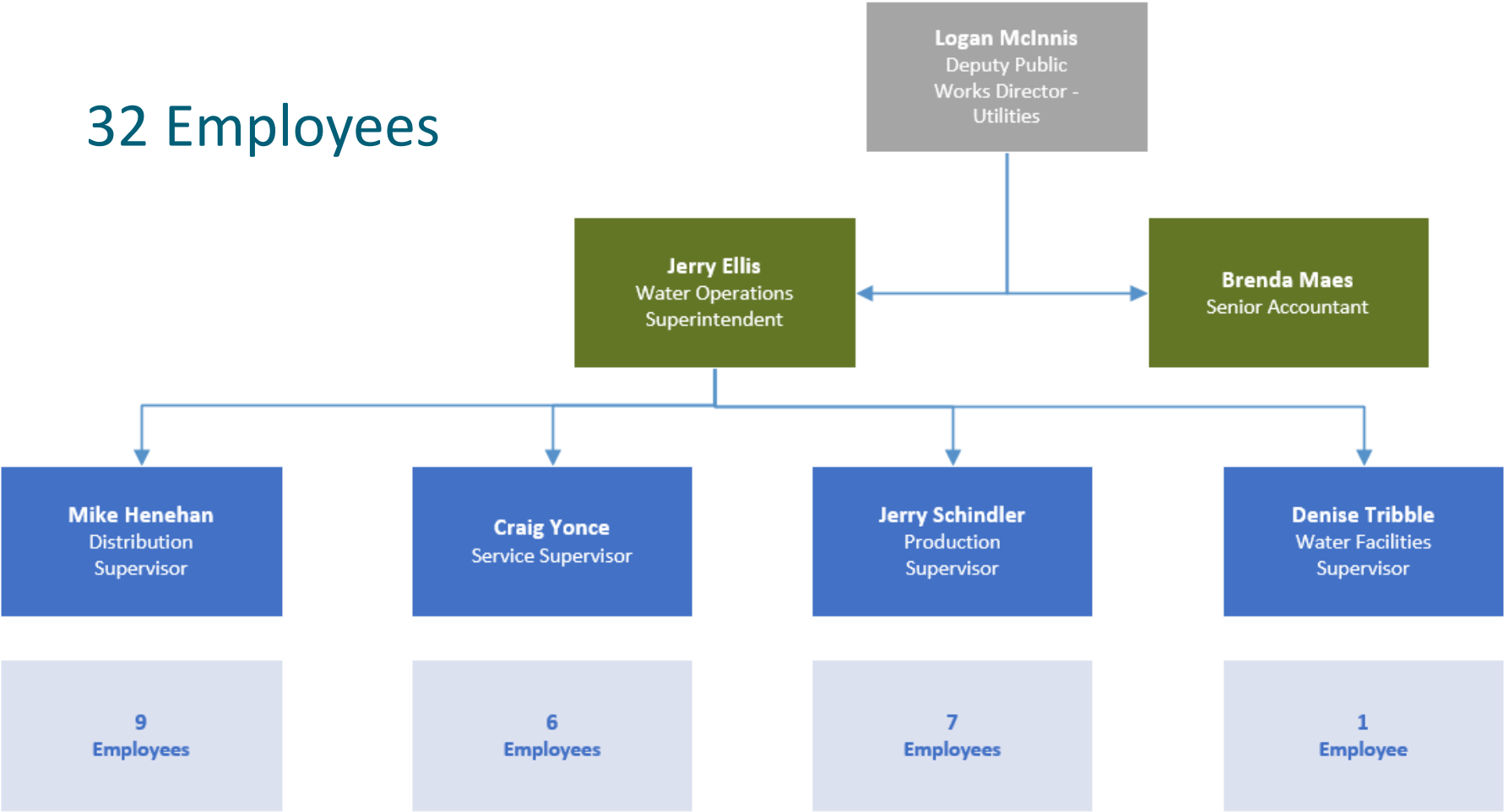


METERED WATER USE IN SURROUNDING AREAS gallons per capita per day



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



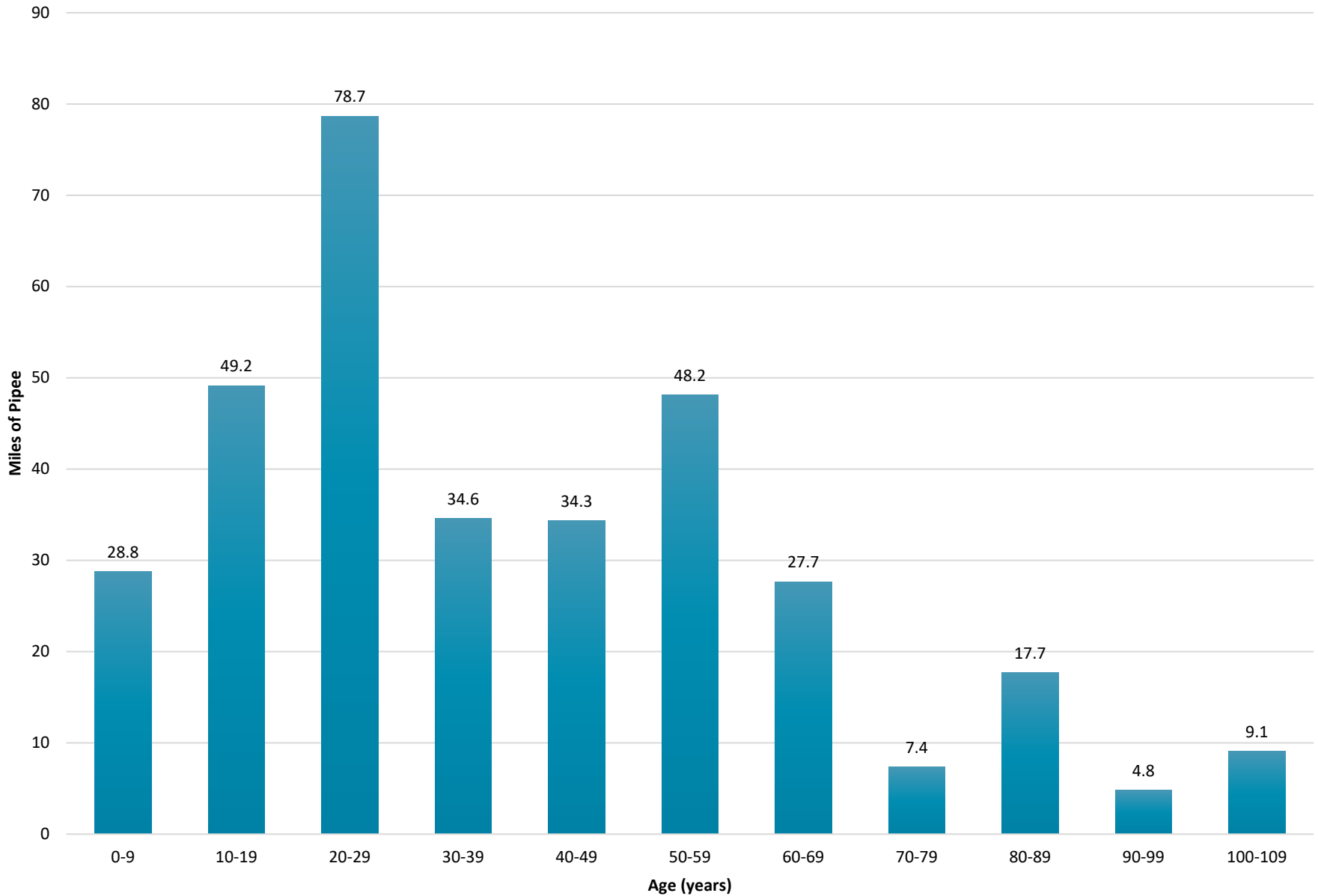
3.4 miles per year

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

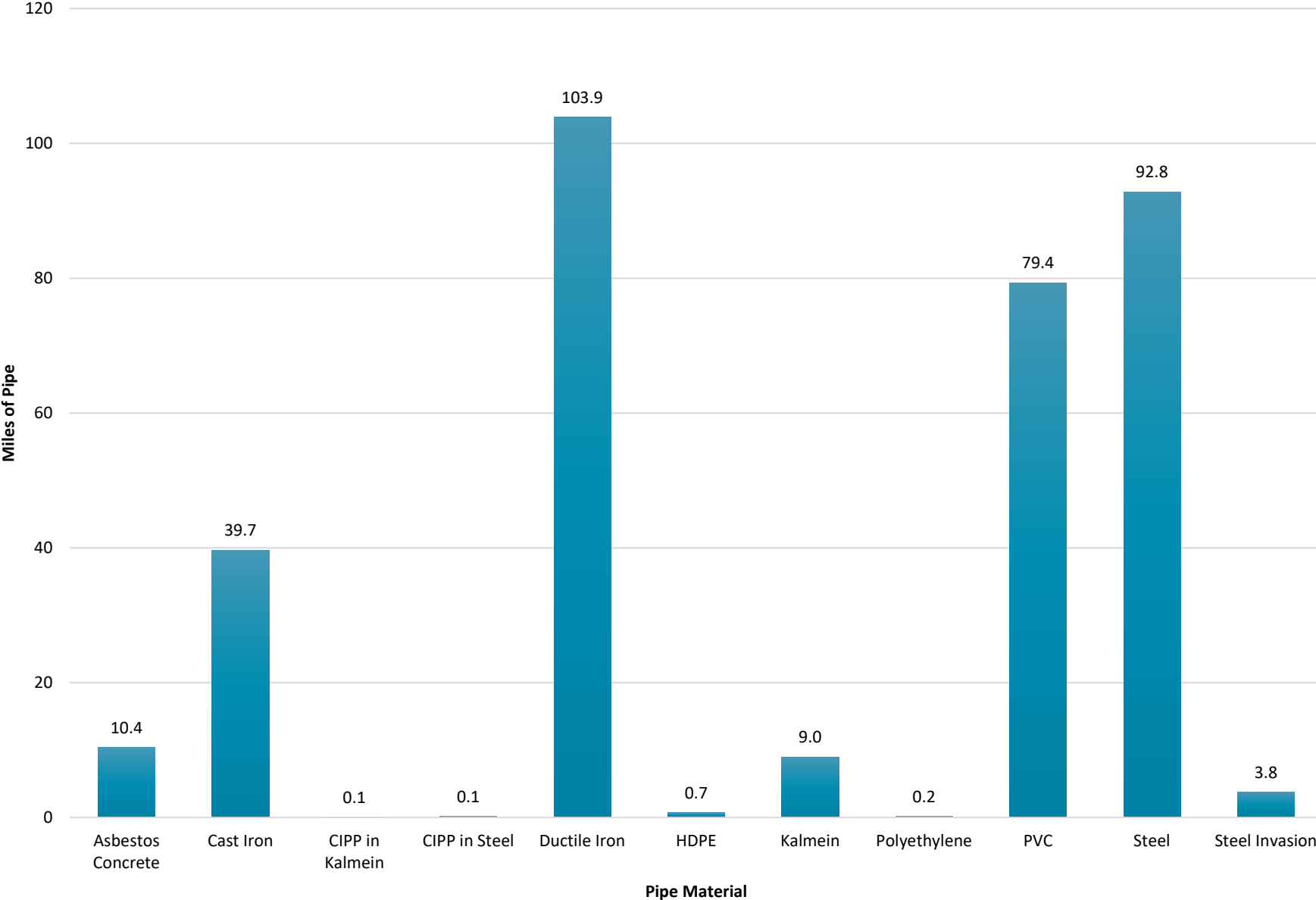


\$8.2 million/year in mains

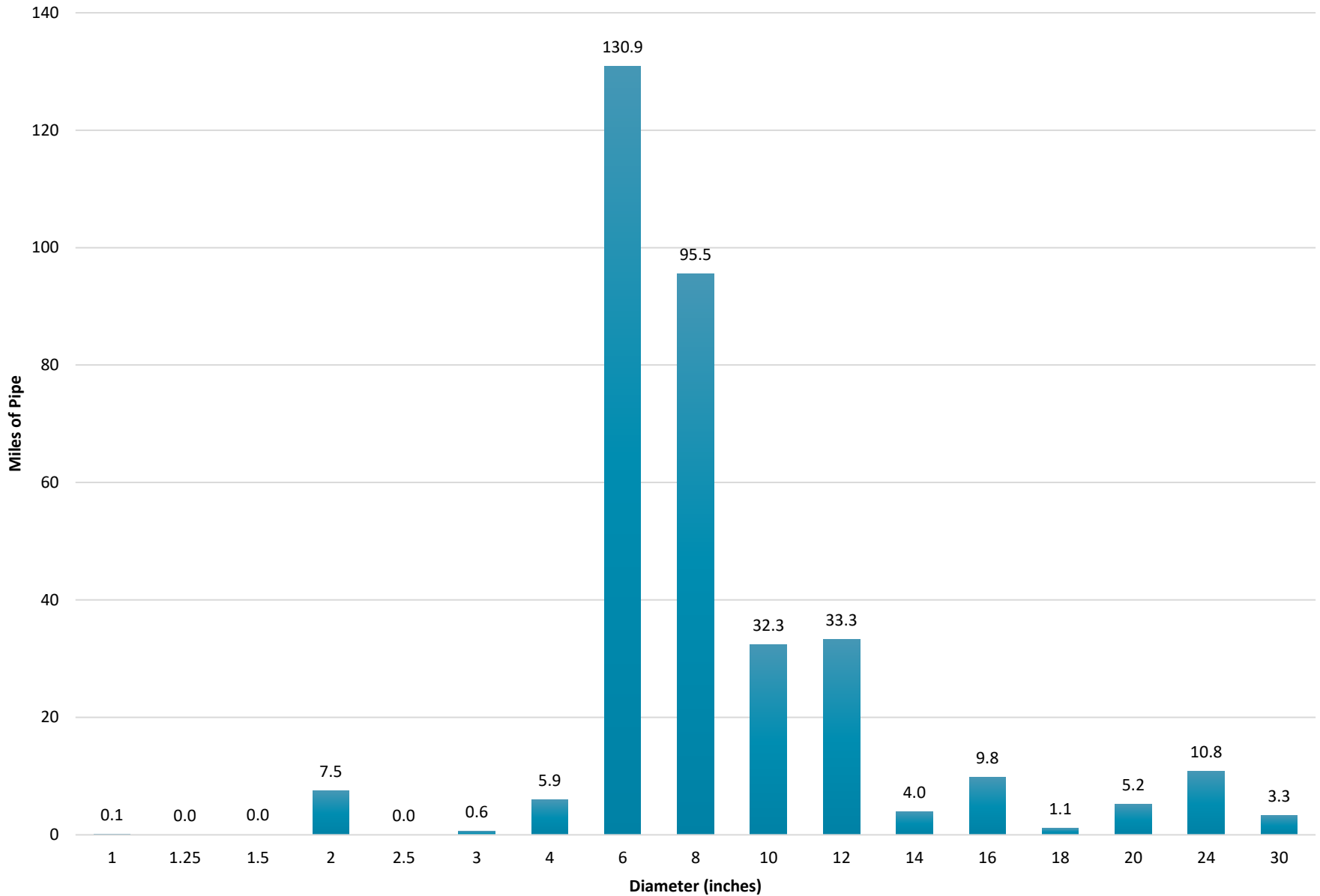
Miles of Pipe by Age



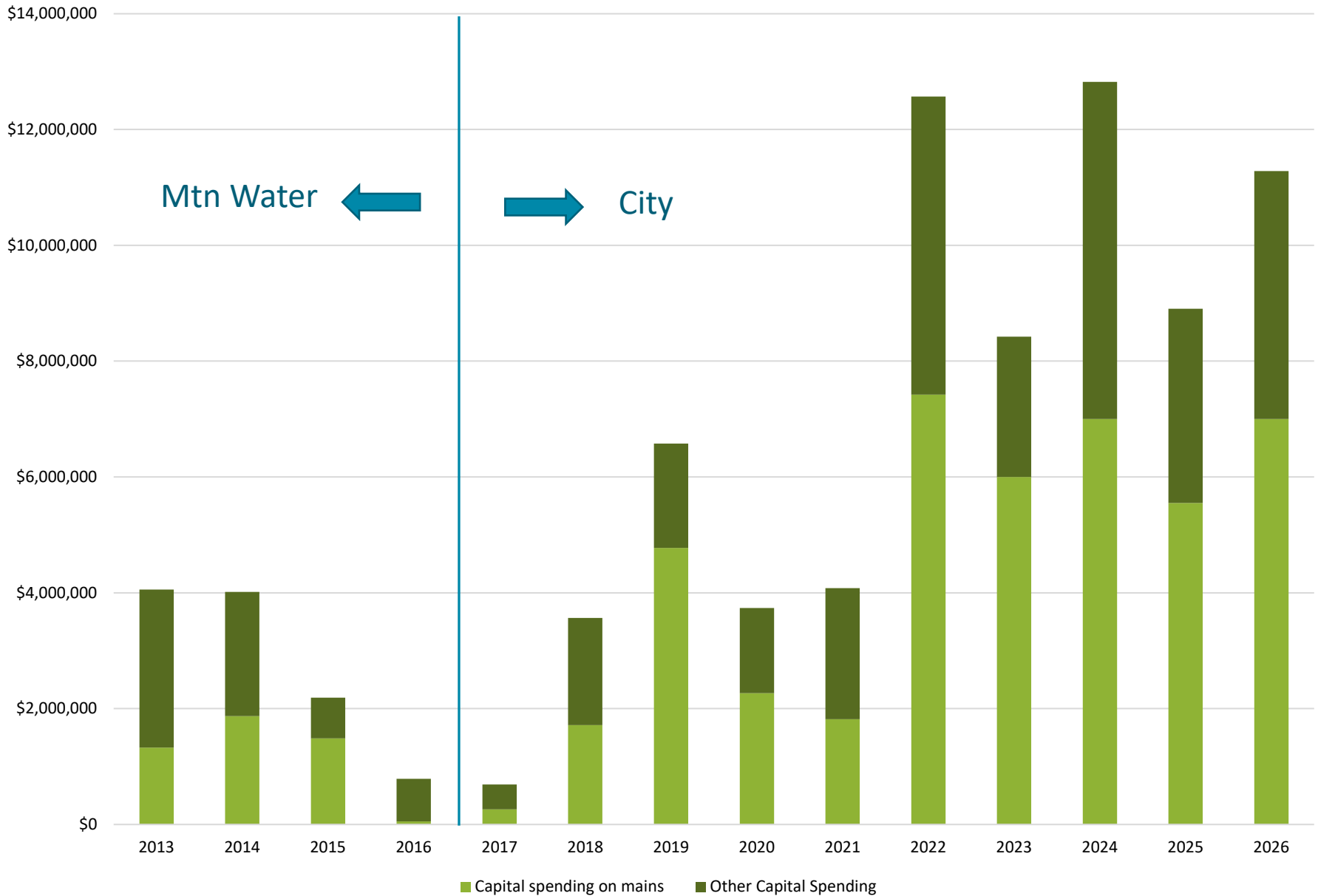
Miles of Pipe by Material



Miles of Pipe by Diameter

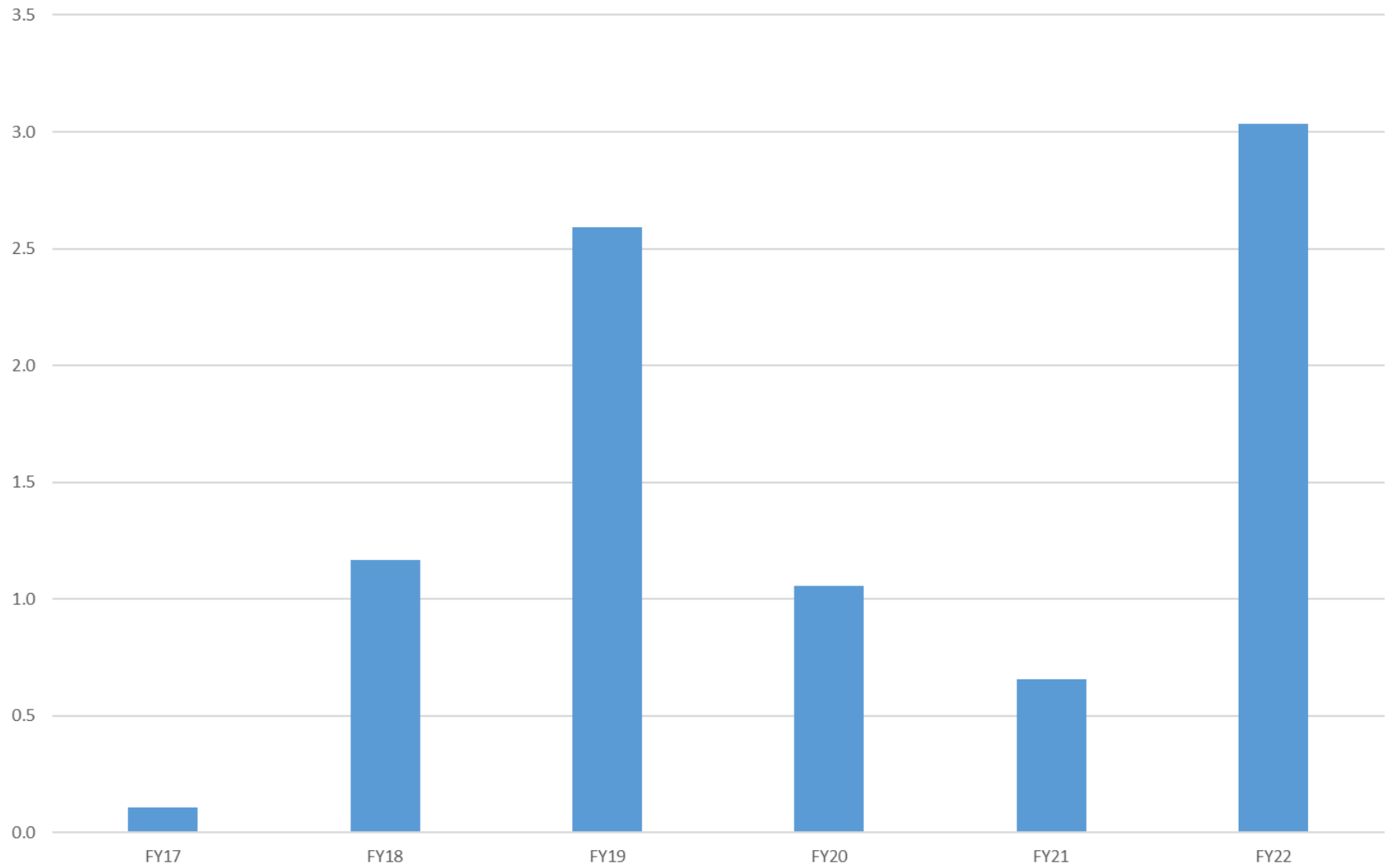


Capital Spending by Year



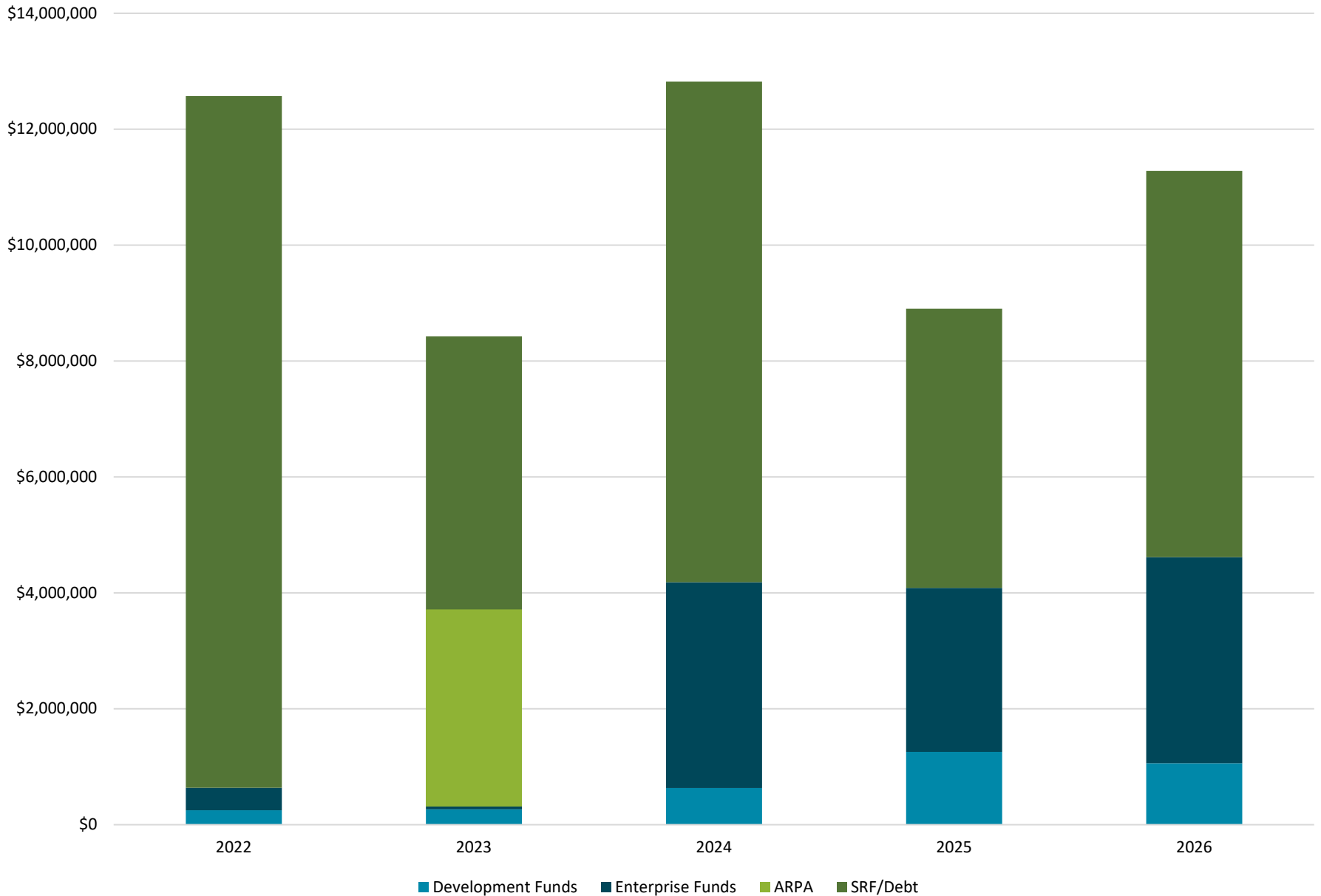
Sum of Miles of Main Replaced/Installed

Miles of Main Replaced/Installed Per Year



FY ▾

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

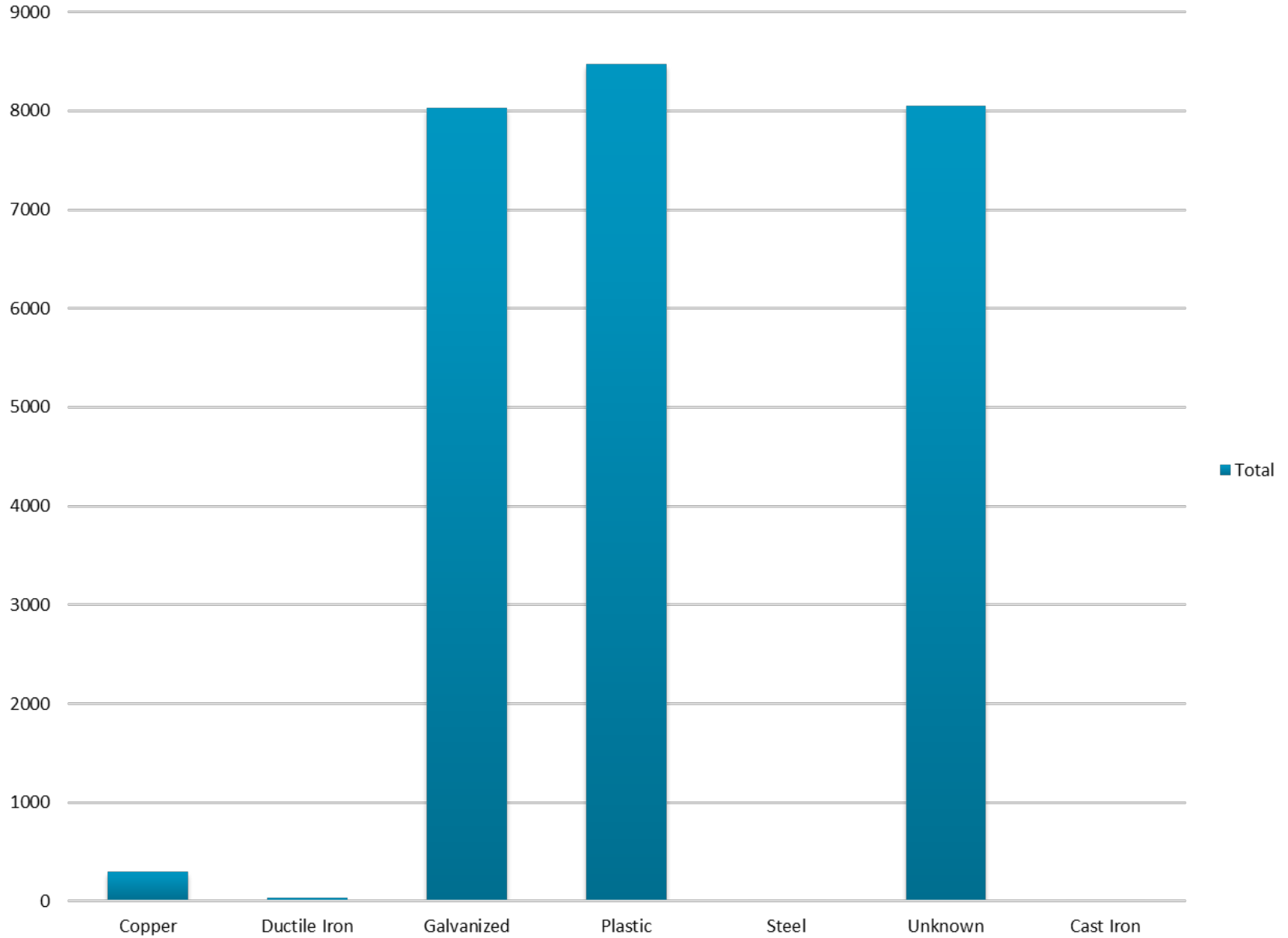
- Customer owns the service line from the main to the house
- Likely hundreds of leaking water services
- ~ 16,000 galvanized service lines in service
- Required community investment of \$120 million to replace the galvanized services
- No easy answers but we are considering a variety of solutions to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

Service Line Leak

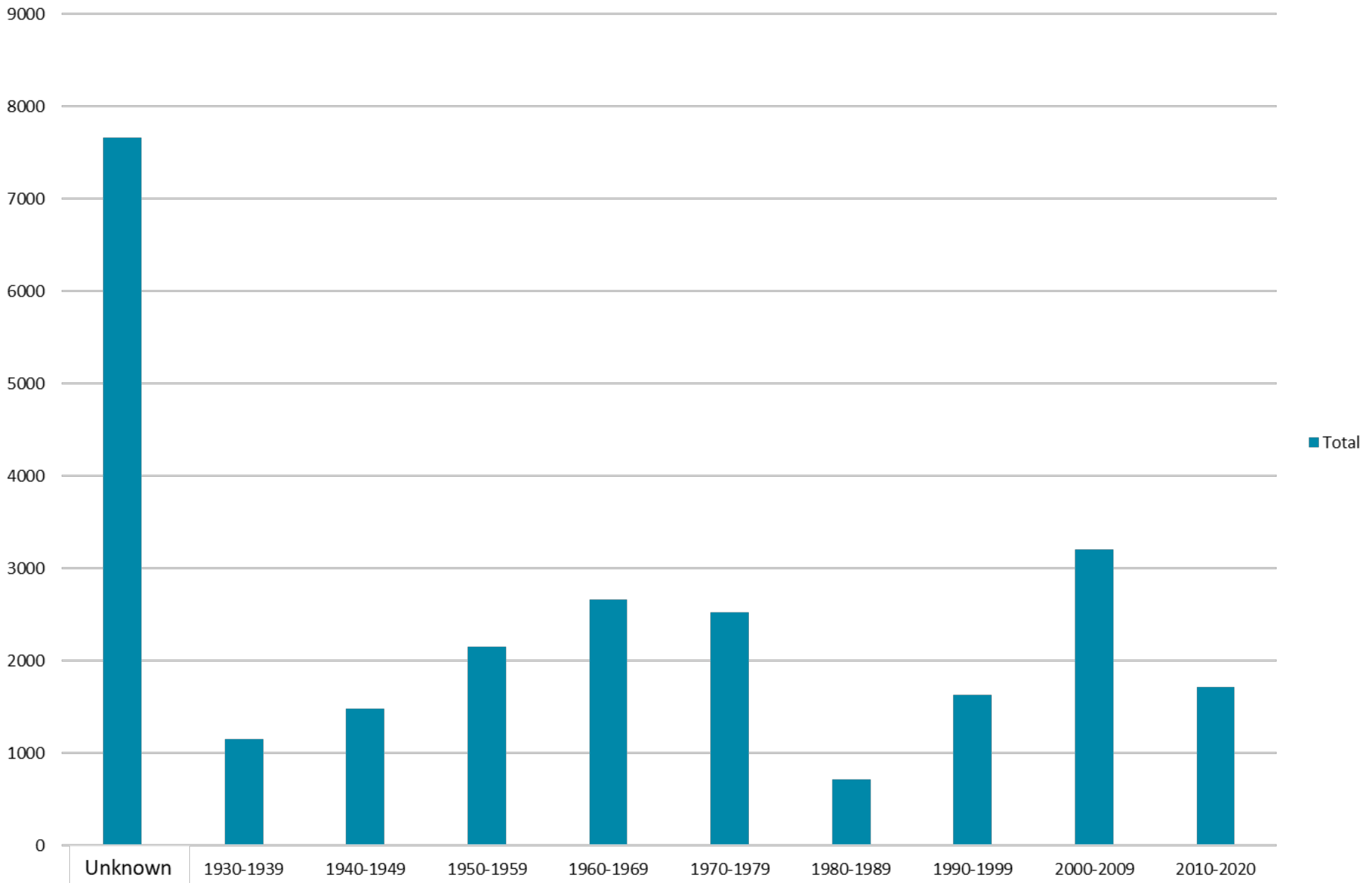


- Identified based on a customer noise complaint, not low pressure
- Repaired by Missoula Water in February 2022
- 1936 service line

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

