



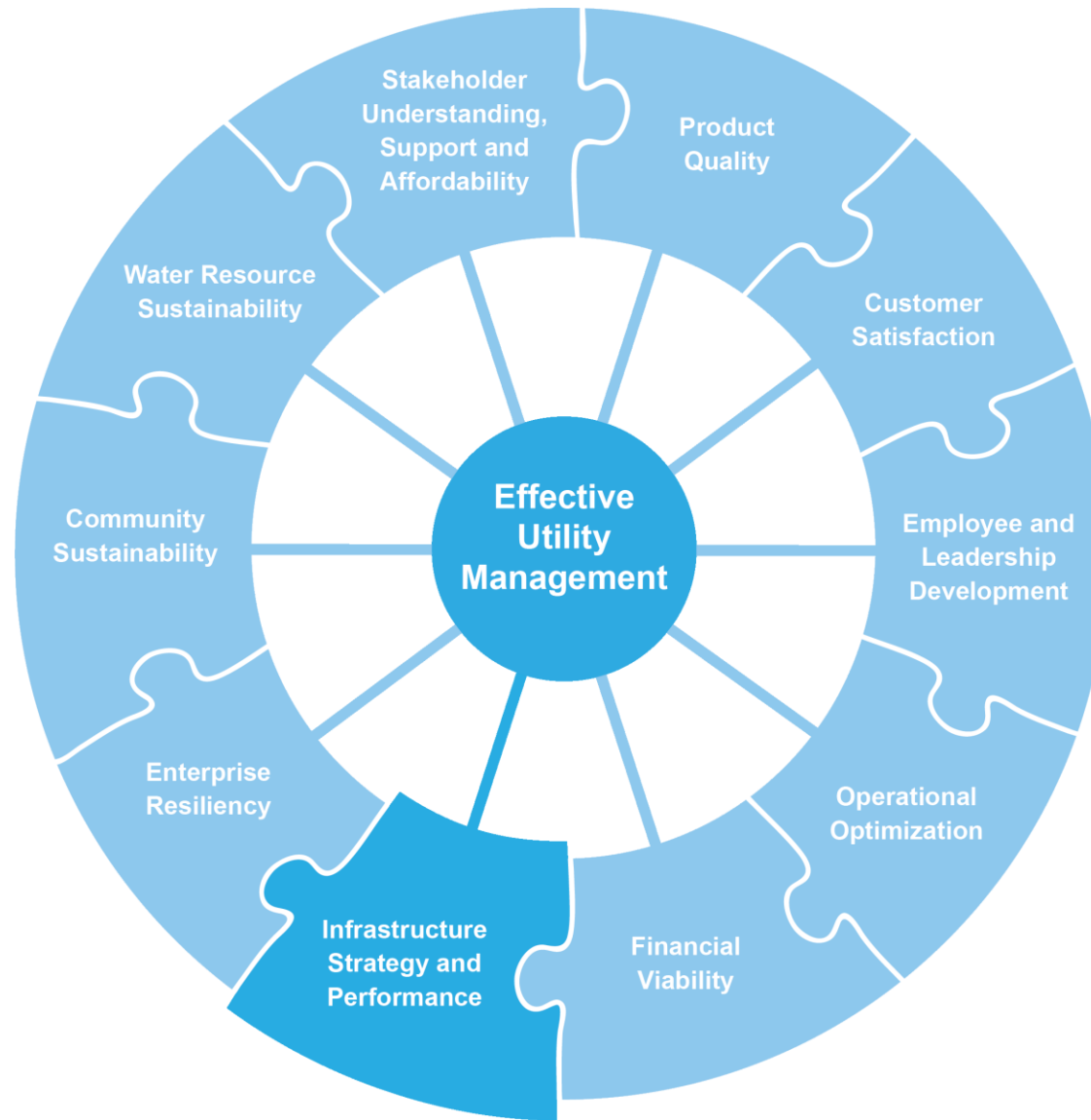
Austin Water Capital Planning Overview and Water Loss Update

Kevin Critendon, P.E., PMP

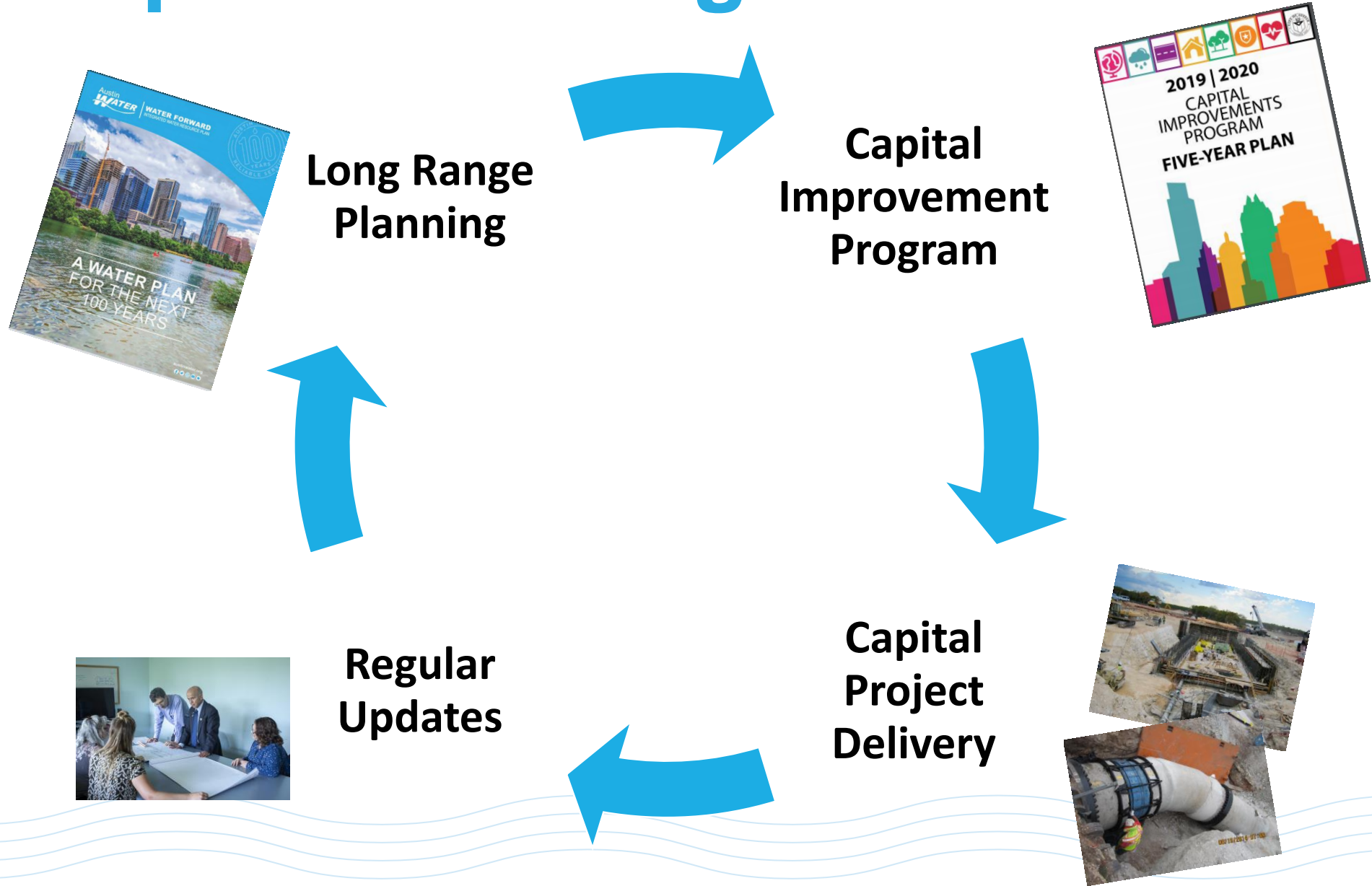
Assistant Director

March 5, 2020

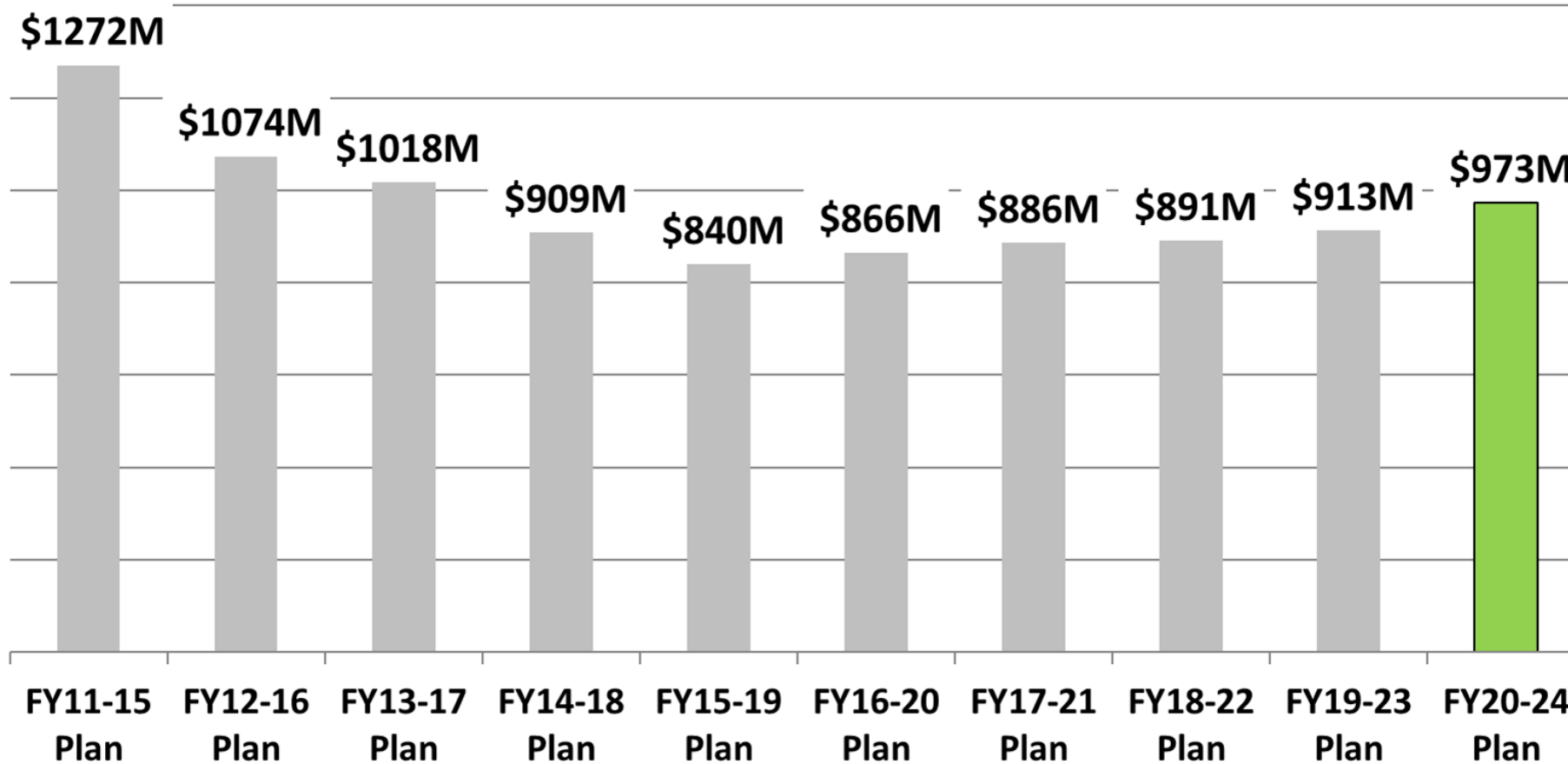




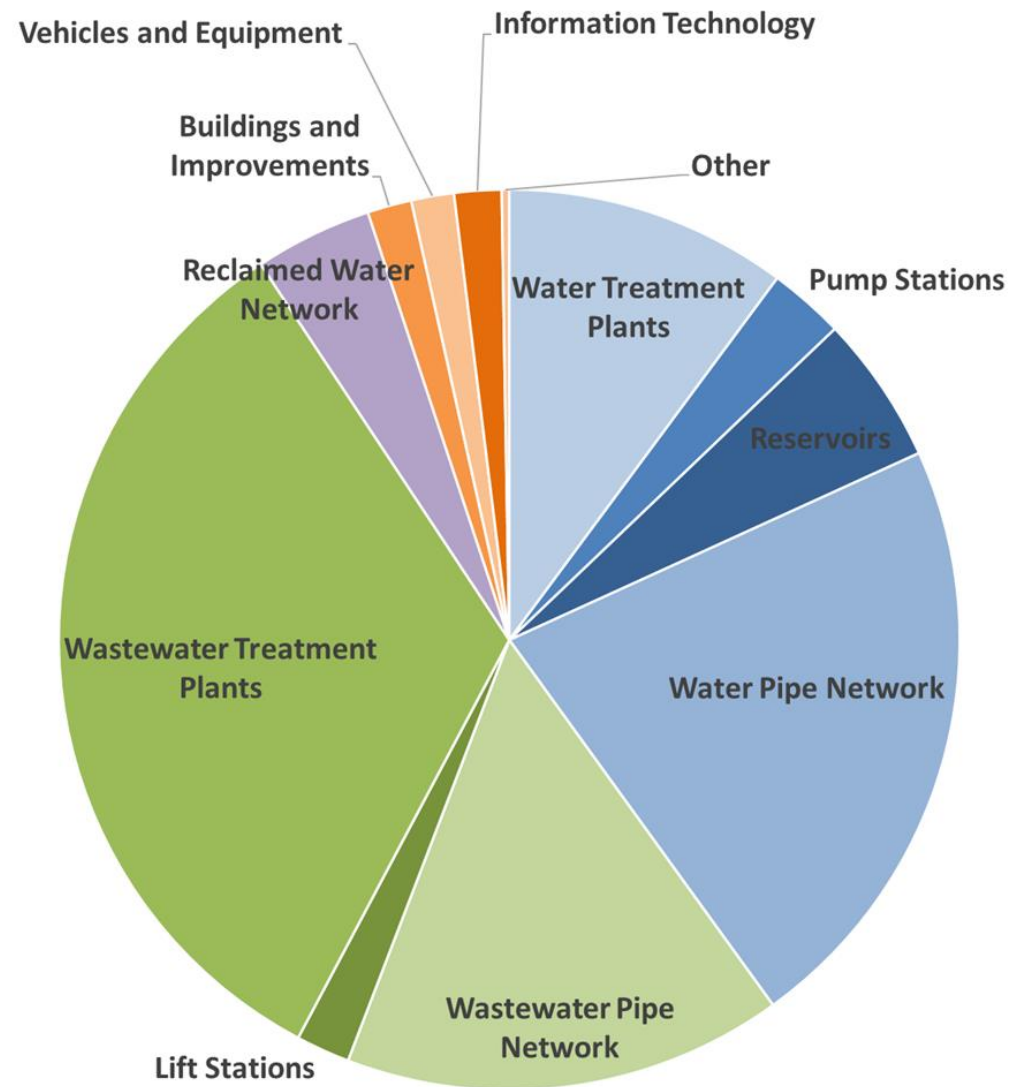
AW Capital Planning Process



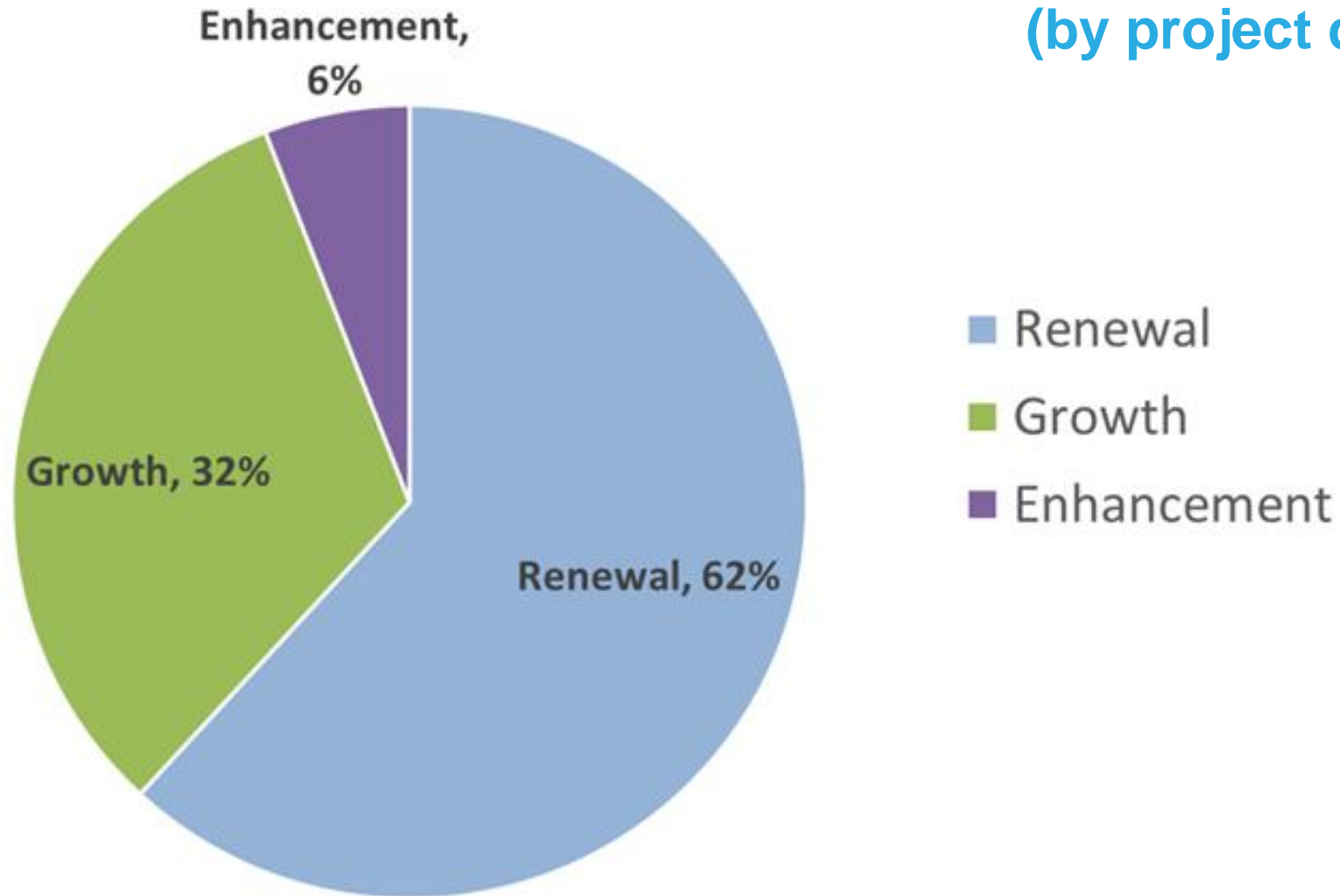
5-Year CIP Planning History

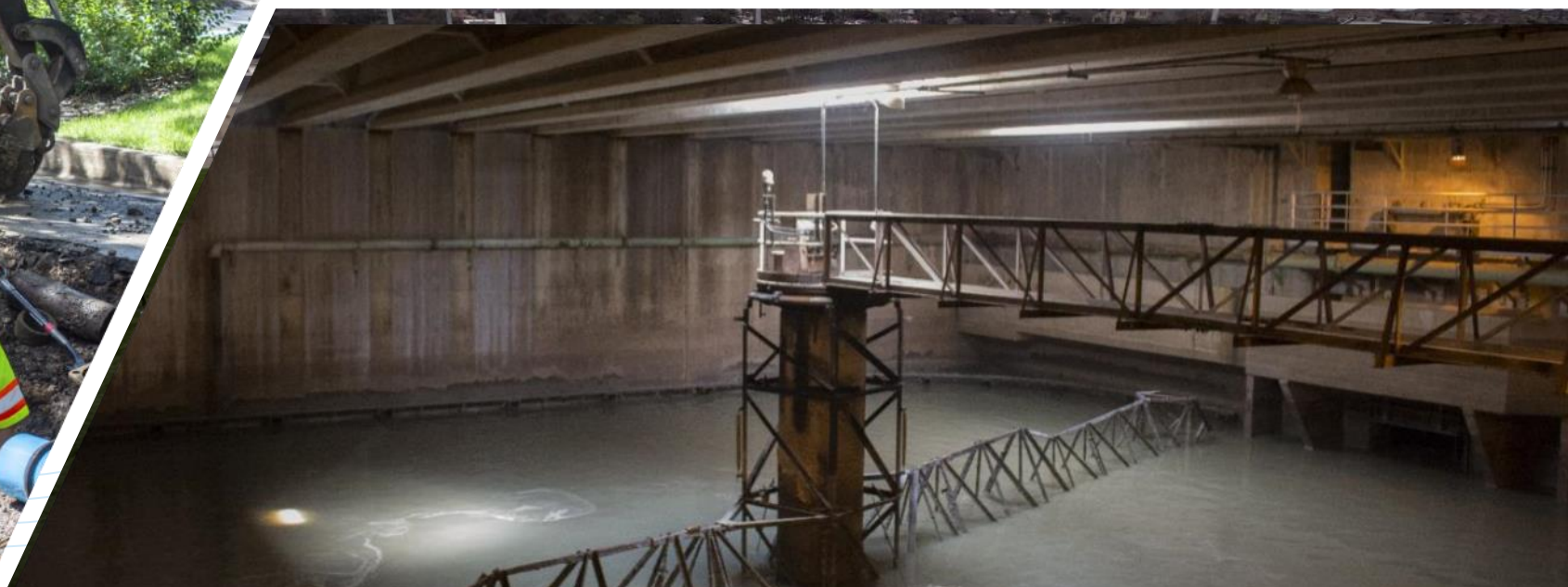
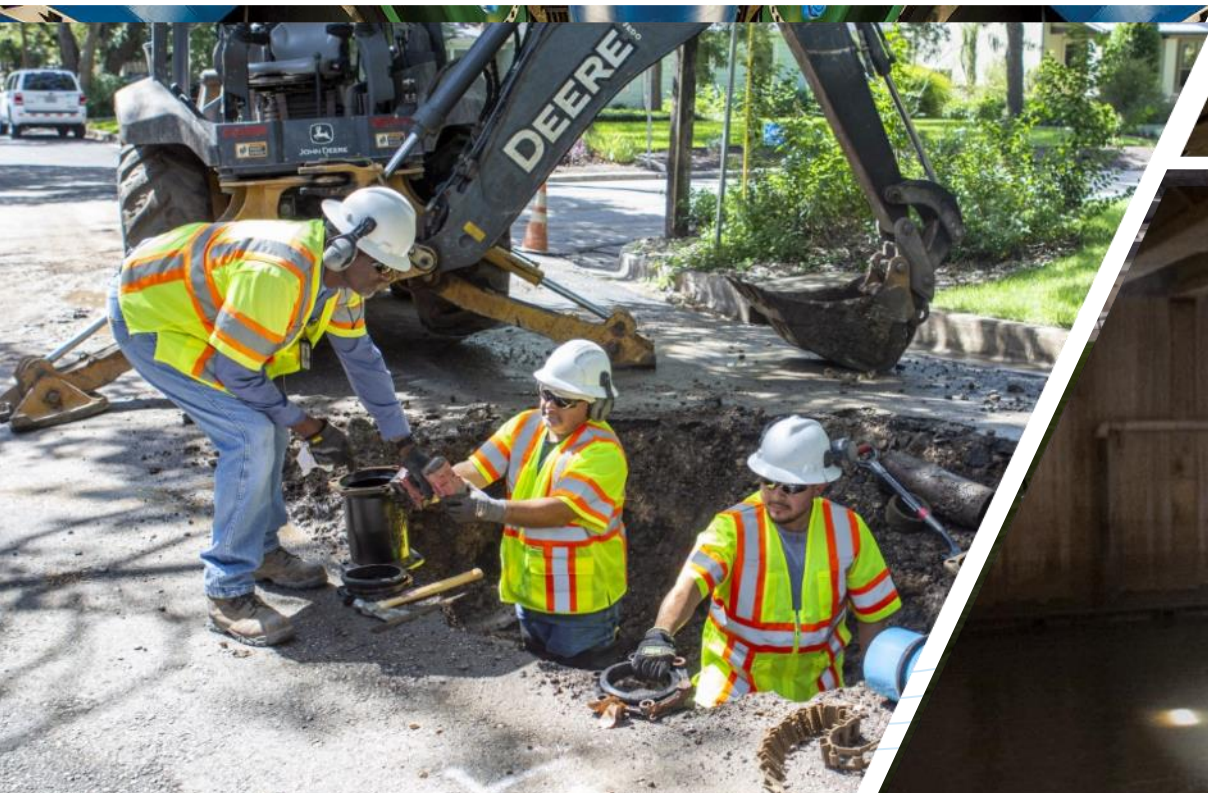


5 Year Capital Improvement Plan (by asset class)



5 Year Capital Improvement Plan (by project driver)

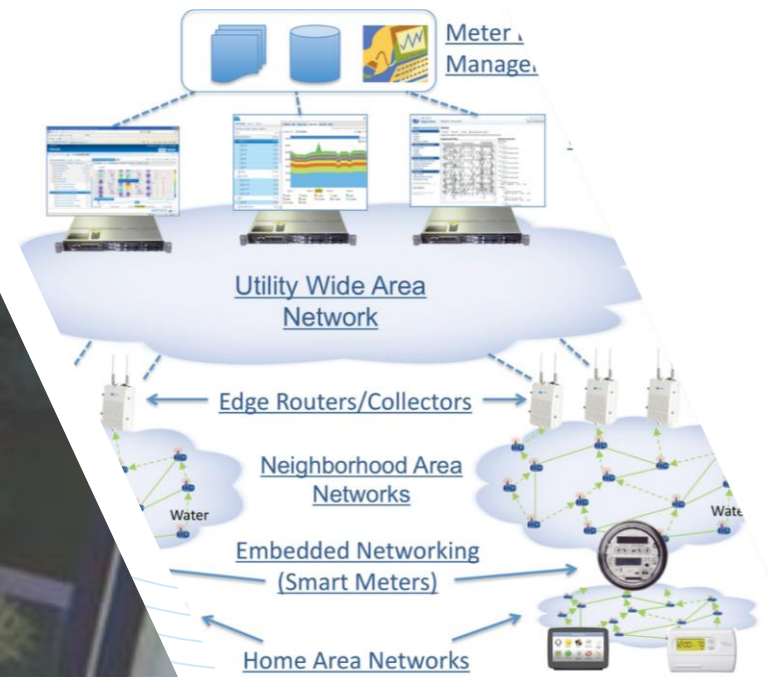




FY20-24 CIP Project Highlights

Project	Budget (\$ millions)
Walnut Creek WWTP 25 MGD Expansion (to 100 MGD)	\$ 202
South Austin Regional WWTP Trains A&B Improvements	\$ 90
Williamson Creek Wastewater Interceptor	\$ 40
North Austin Reservoir & Pump Station Improvements	\$ 32
South Austin Regional WWTP Electrical Substation No.1 Replacement	\$ 29
Ullrich WTP Low Service Pump Station Electrical Improvements	\$ 21
Ullrich WTP On Site Disinfection Conversion	\$ 17





FY20-24 CIP Project Highlights

Project	Budget (\$ millions)
Advanced Meter Infrastructure	\$ 80
Planning and Development Center On-Site Wastewater Reuse	\$ 1.5
AW Facilities Master Plan	\$ 2.5
Reclaimed Water System Improvements	\$ 41.3
Aquifer Storage and Recovery Program Management and Piloting	\$ 4.5
Water Treatment Process Resiliency Improvements	\$ 7.6





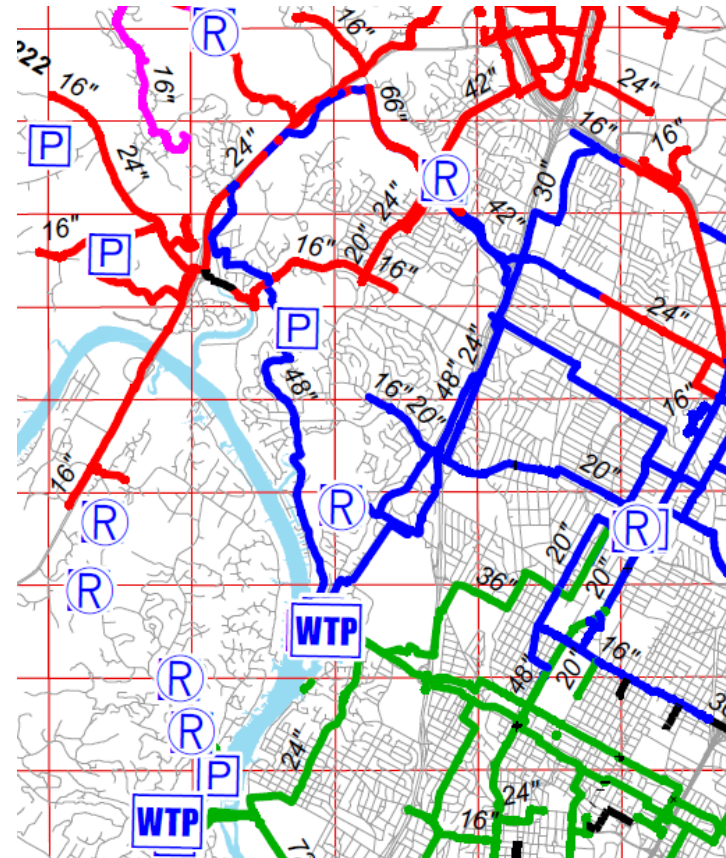
Water Loss Management Update

- System Summary
- Apparent Losses and Meter Management
- Real Loss Management Strategies
 - Leak Response
 - Active Leakage Detection
 - Asset Management (Renewal, Rehabilitation and Replacement)
- Infrastructure Leakage Index



Austin Water System

- 240,000 meters
- 3,950 miles main
- 29,300 hydrants (City)
- 73,000 valves
- 38 Storage Tanks

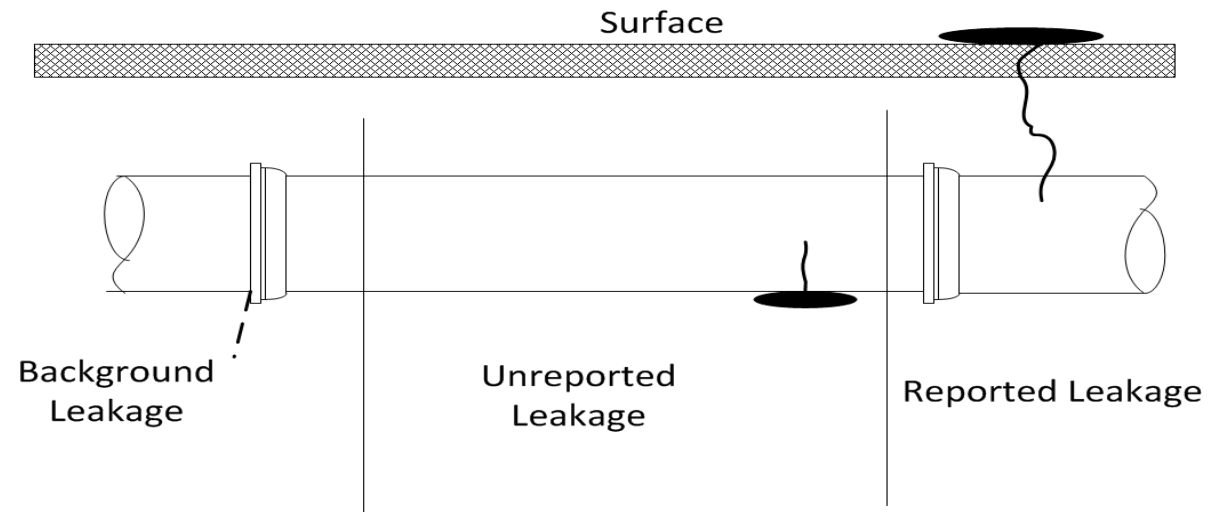


Water Loss Management

APPARENT LOSS MANAGEMENT



REAL LOSS MANAGEMENT



Source: M36, Third Edition, p. 116



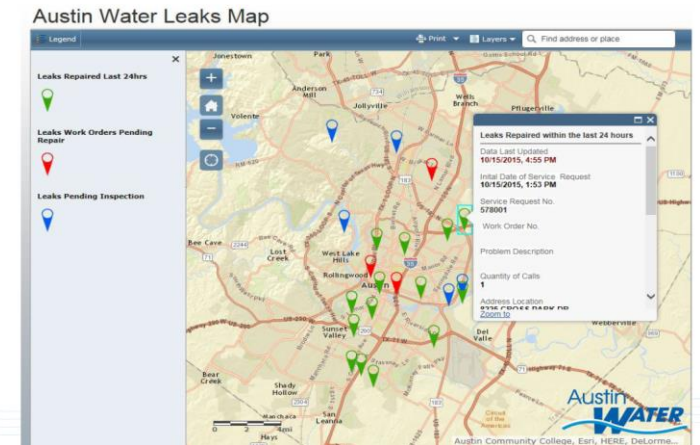
Apparent Losses - Meter Management

- Production meter validation project
- New Meter Testing Bench
- Customer meter accuracy study
- Meter Accuracy Testing 3"+ (Field)
- Meter replacement programs

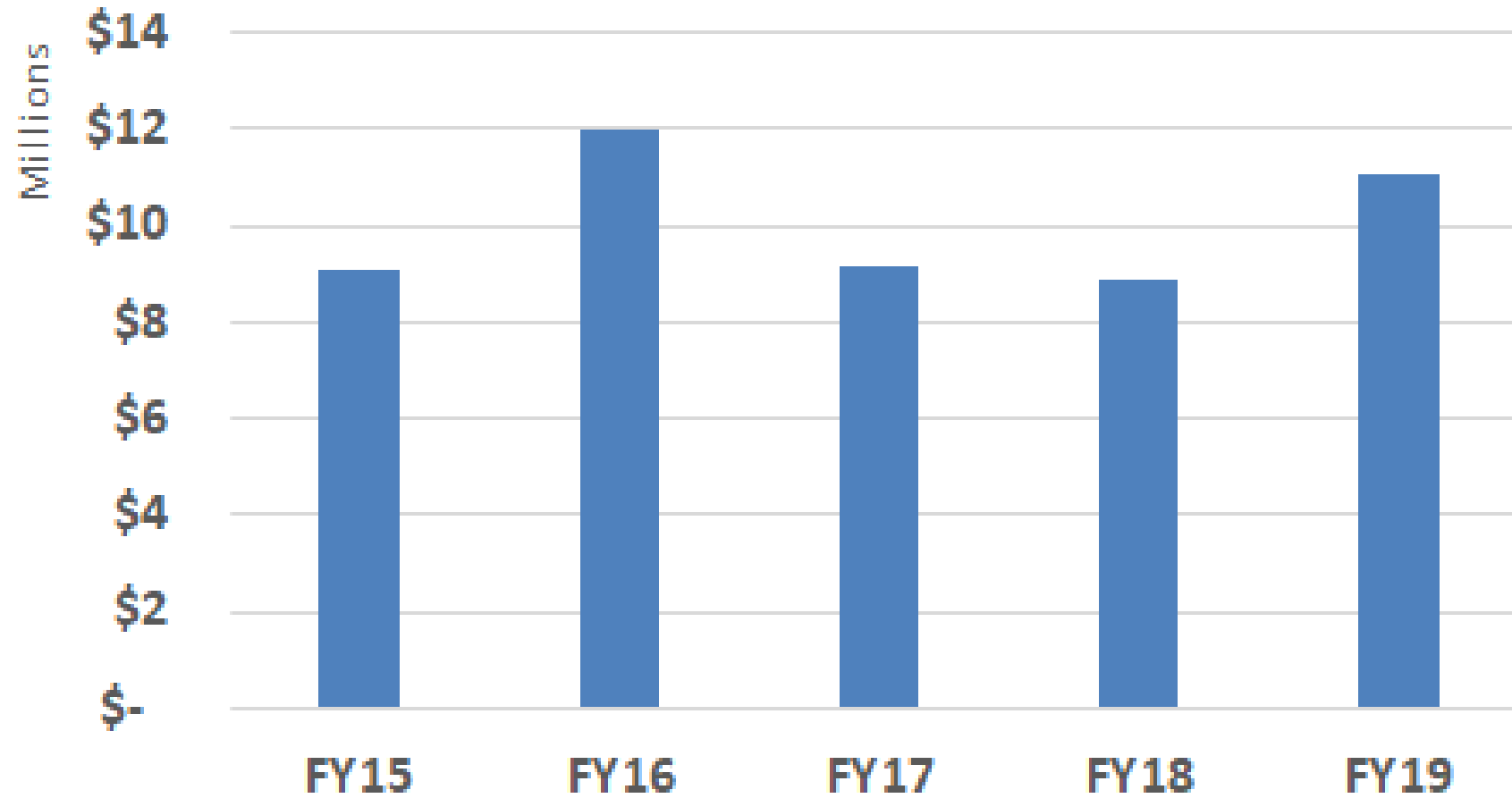


Real Loss Management

- Leak response – most leaks repaired in less than a day (72%)
- Leak detection
 - Small diameter mains – cover entire system on 8 year rotating basis
 - Large diameter mains – Survey more than 10 miles a year
 - Piloting emerging technologies
- Renewing Austin – Replaced over 87 miles of main since 2012
- Continued reinvestment – Ongoing CIP and asset management – improving prioritization criteria

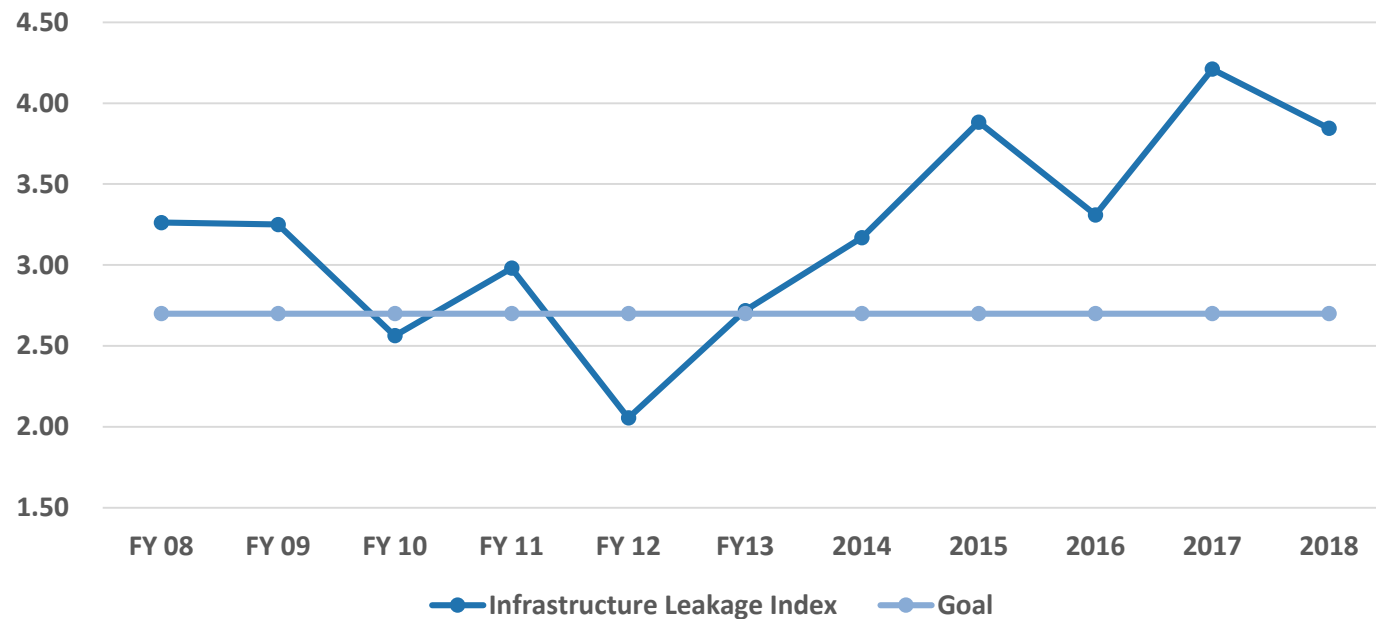


Water Pipe Rehabilitation Expenditures



Infrastructure Leakage Index

- Industry standard metric for system water loss
- AW is within industry standard, but opportunities for improvement
- Currently conducting production meter validation project to improve the reliability of this metric



Water Loss Management Summary

- 💧 Water loss management is a priority
- 💧 Water distribution system health consistent with industry standard
- 💧 AW's current focuses are
 - Continue the work we are doing
 - Meter accuracy improvement and AMI
 - Leak response time
 - Leak detection
 - Main and service replacement
 - Improve meter reliability





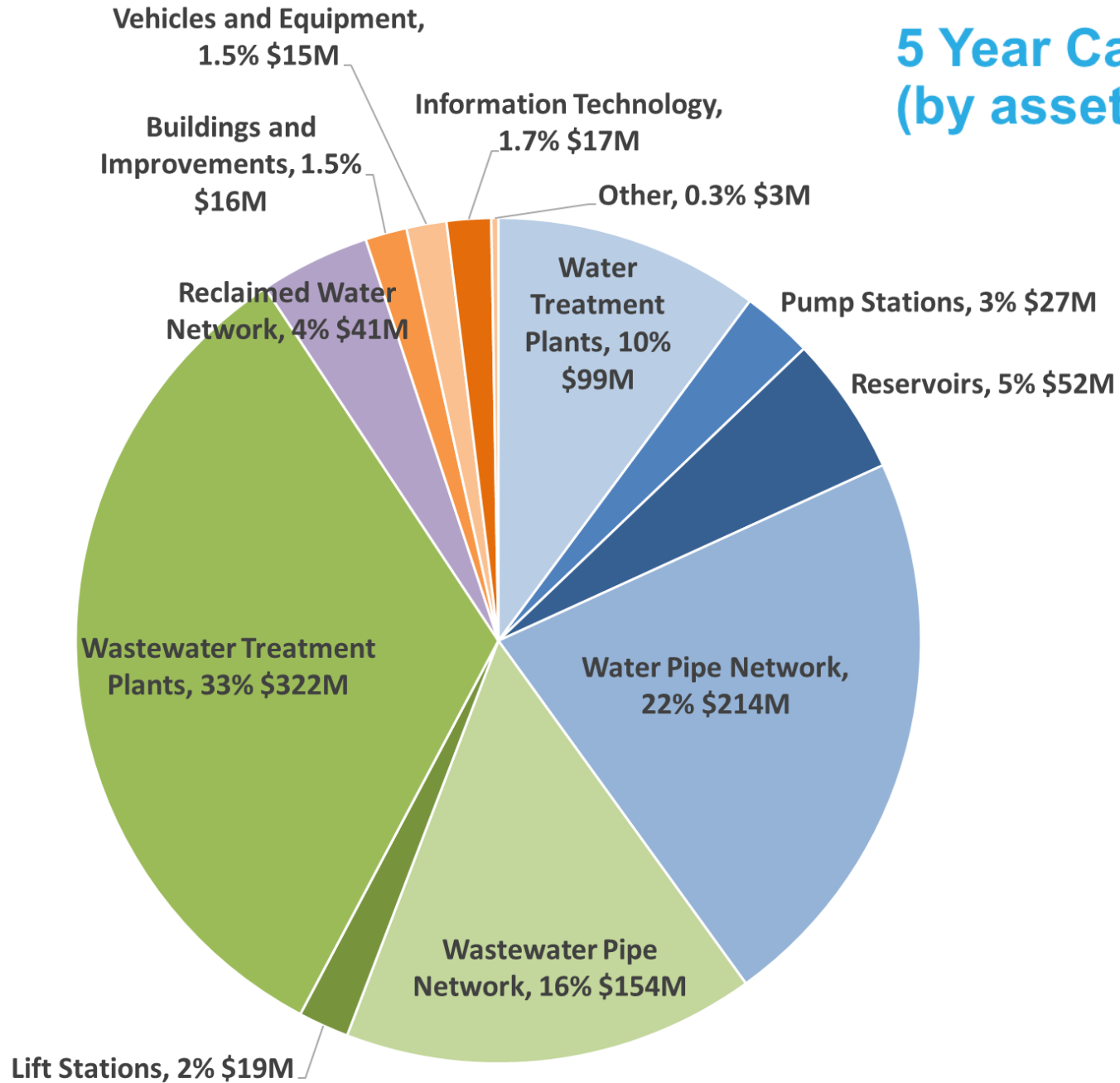
<https://austinwater.maps.arcgis.com/apps/OnePane/basicviewer/index.html?appid=a6252154a5f7426d93c1fc2a341bf779%20>

https://assets.austintexas.gov/budget/19-20/downloads/FY20_5_Year_CIP_Plan_Final.pdf

<https://capitalprojects.austintexas.gov/projects>



5 Year Capital Improvement Plan (by asset class)



Austin Water Leaks Map

