



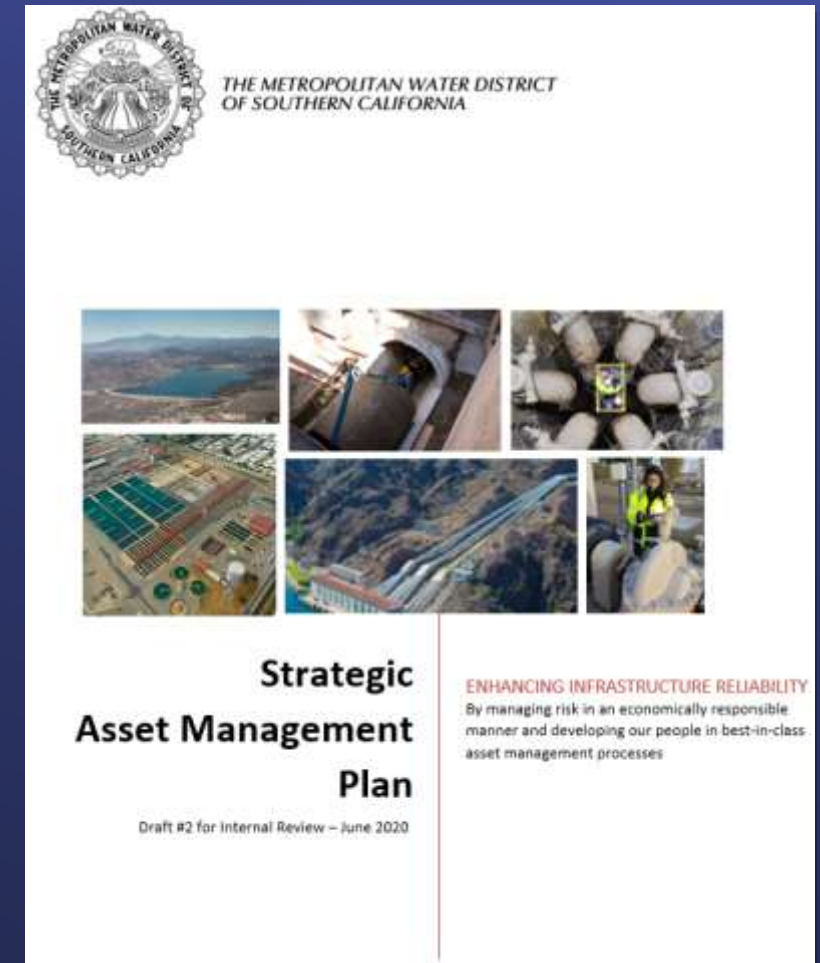
Engineering, Operations, & Technology Committee

# Asset Management Program Update

Item 6b  
October 9, 2023

# Asset Management Program

- Strategic Asset Management Plan adopted in April 2021
- Cross group collaboration of ESG, IT & WSO
- Input from staff and external agencies including DWR
- Several ongoing pilot projects incorporating tactical asset management plans
- Implemented CIP risk framework
- Focusing improvement efforts on O&M side of asset management



# Asset Management Levels

*“Asset management is a systematic process of developing, operating, maintaining, upgrading, and disposing of assets cost effectively”*



**Set aside funding** in anticipation of a replacement or overhaul based on value and risk using assessments, diagnostics and trending

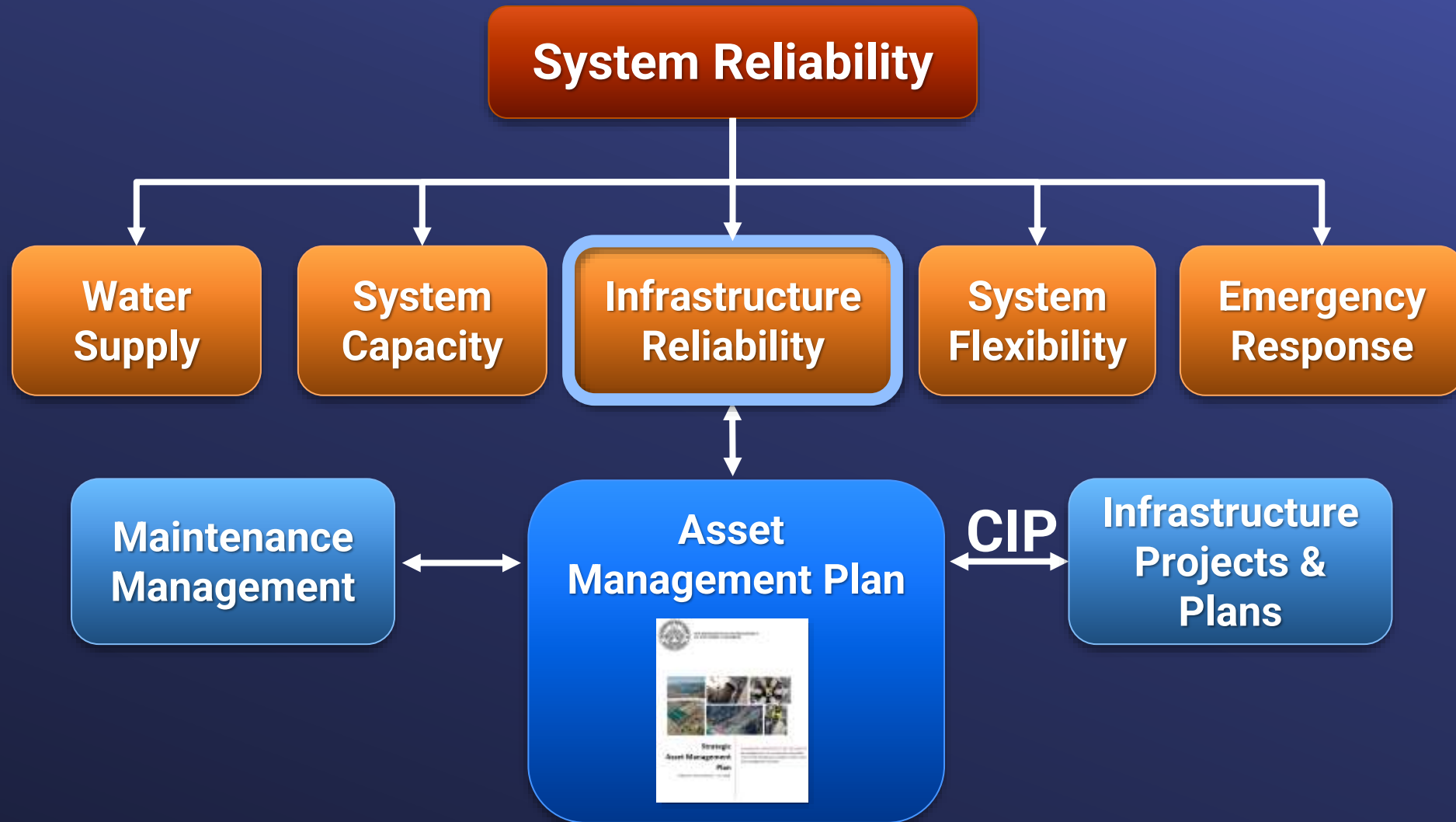
**Anticipate** a replacement or overhaul **based on value and risk** using assessments, diagnostics and trending

**Evaluate** replacement or overhaul options **based on value** when it breaks

Replace or overhaul when it breaks

Optimal level varies based on cost & risk

# Metropolitan's Comprehensive Reliability Approach



# Asset Management Program

## Key Objectives



**Improve  
long-term  
forecast of  
future  
capital  
costs**



**Refine risk  
evaluation  
used to  
prioritize  
CIP Projects**



**Coordinate  
& integrate  
condition  
assessment**



**Standardize  
asset data**



**Facilitate  
access to  
asset data**

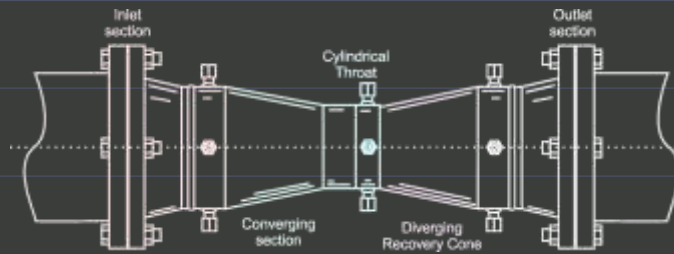
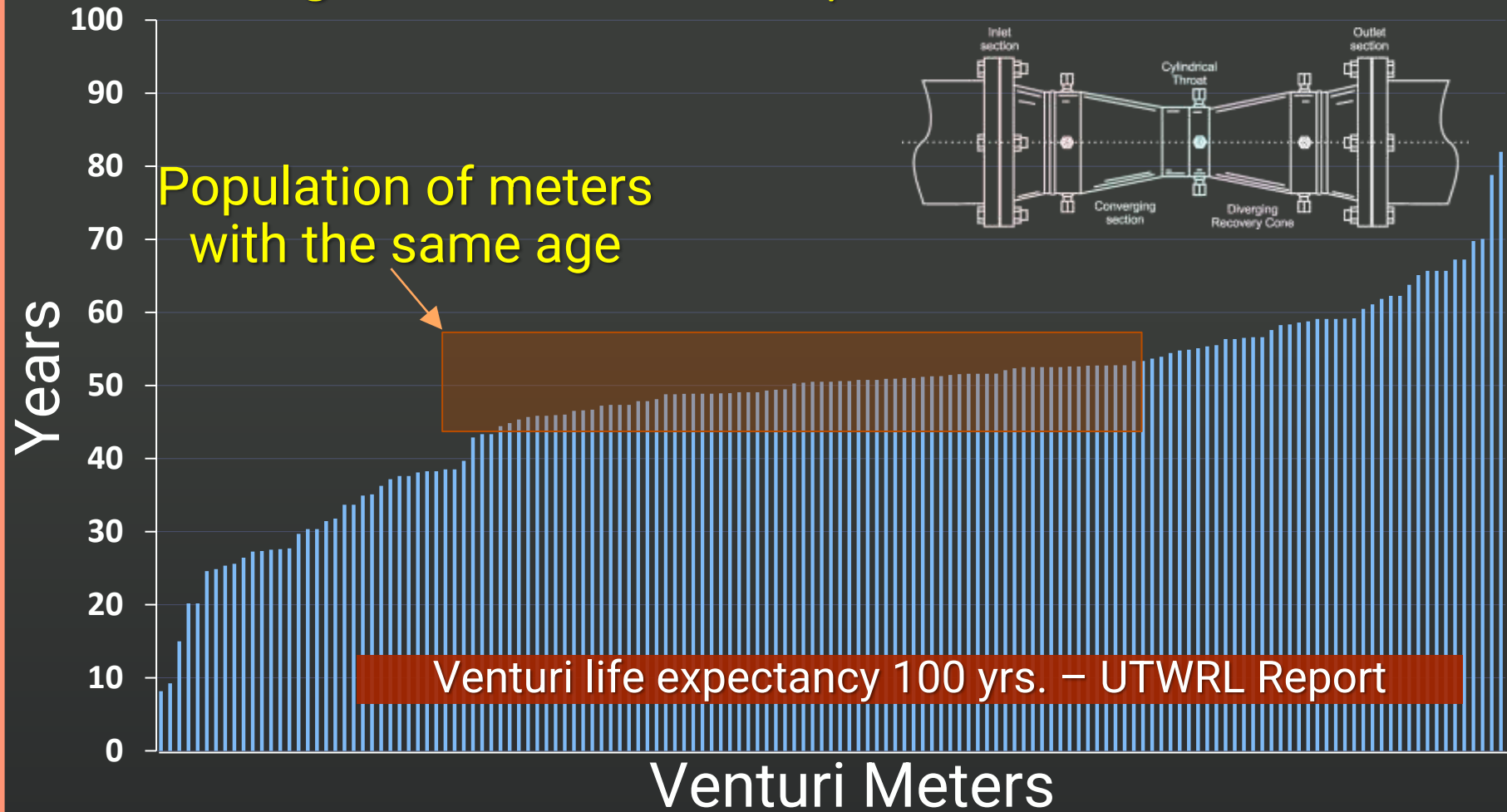


# Enhancing Infrastructure Reliability Planning Tactical Asset Management Plans (Example)

Utah Water Research

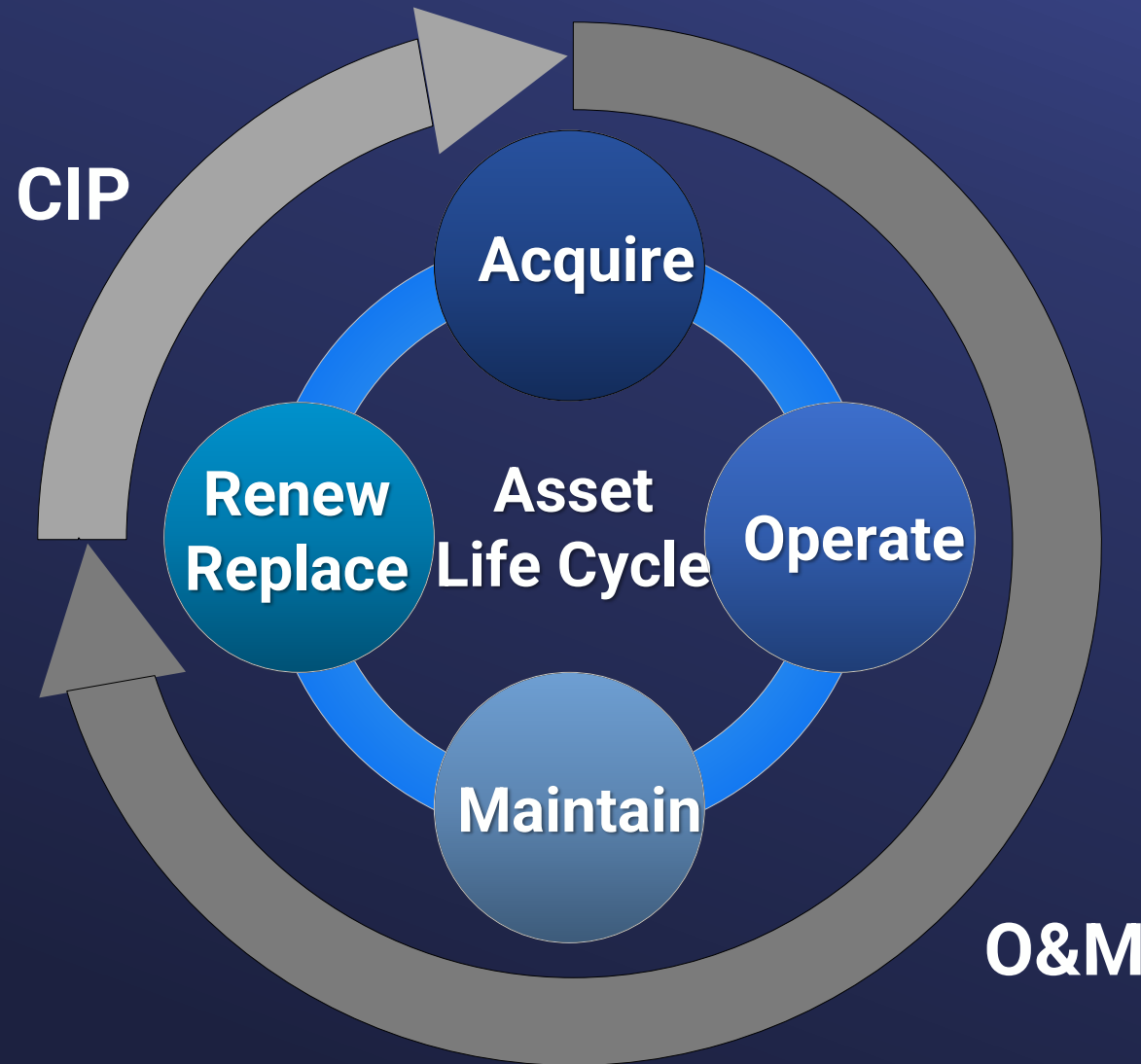


## Age Distribution of Metropolitan Venturi Meters



# Asset Management Program

## Goals for Improvement



- Integrated management of assets over their entire life
- Support a resilient, fast & nimble operations
- Planned & prioritized to org goals
- Focused on being effective and efficient

# Asset Management Program

## Goals for O&M Improvement



Integrate and implement enterprise-wide data governance



Develop and implement a system wide criticality assessment



Refine operational strategy for climate change



Assess & optimize our maintenance program



Implement enhanced dashboards



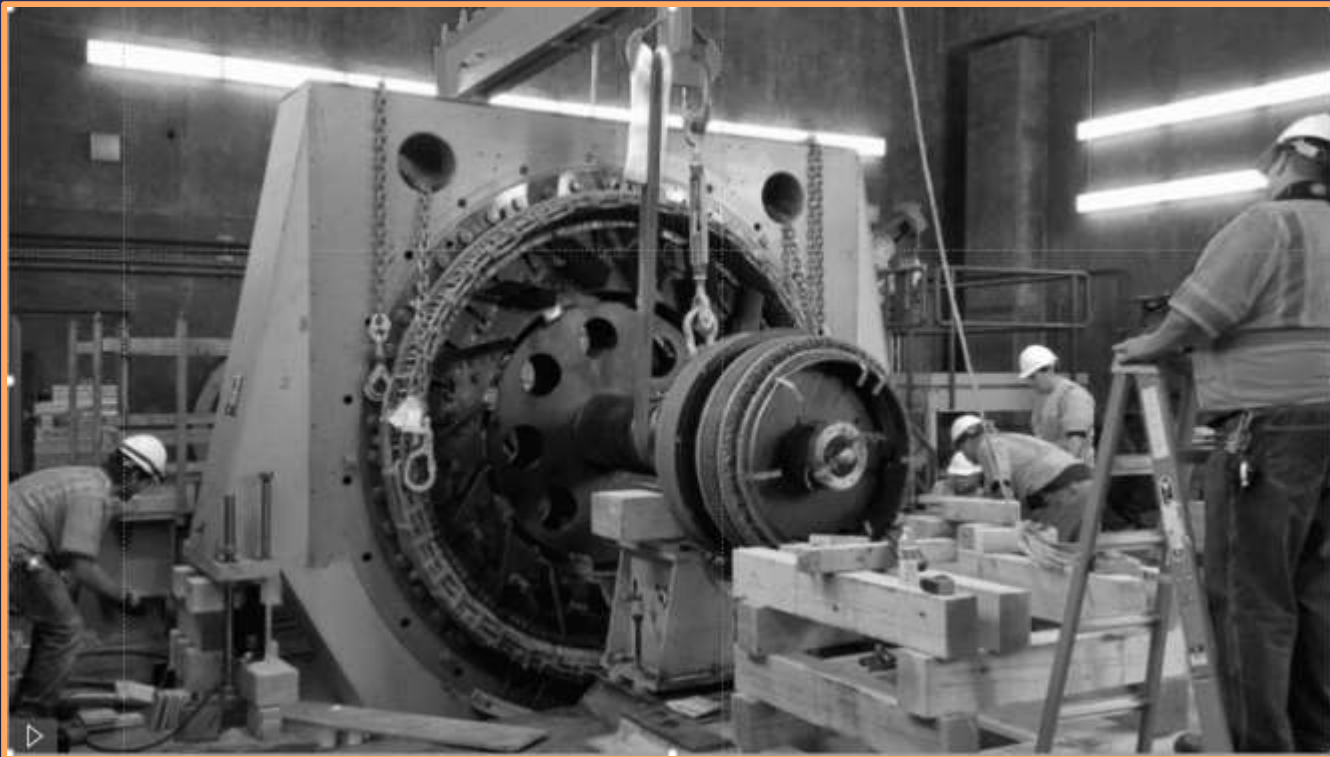
Review and update key performance indicators (KPI)



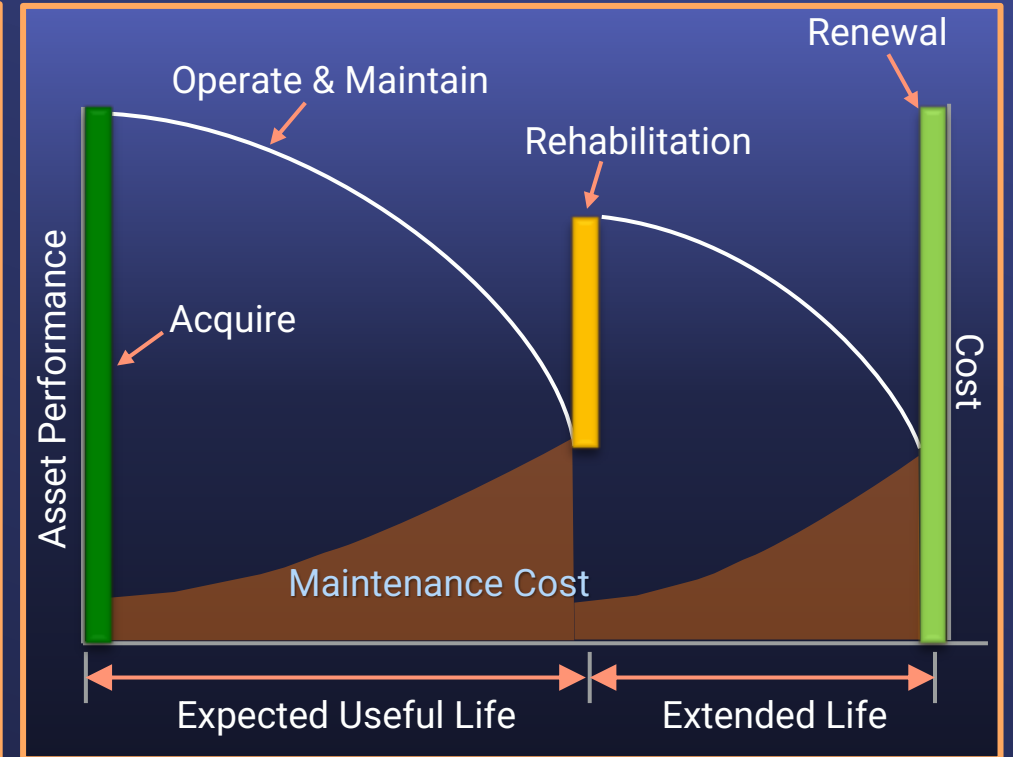
# Enhancing Infrastructure Reliability

## Drivers for Improvement

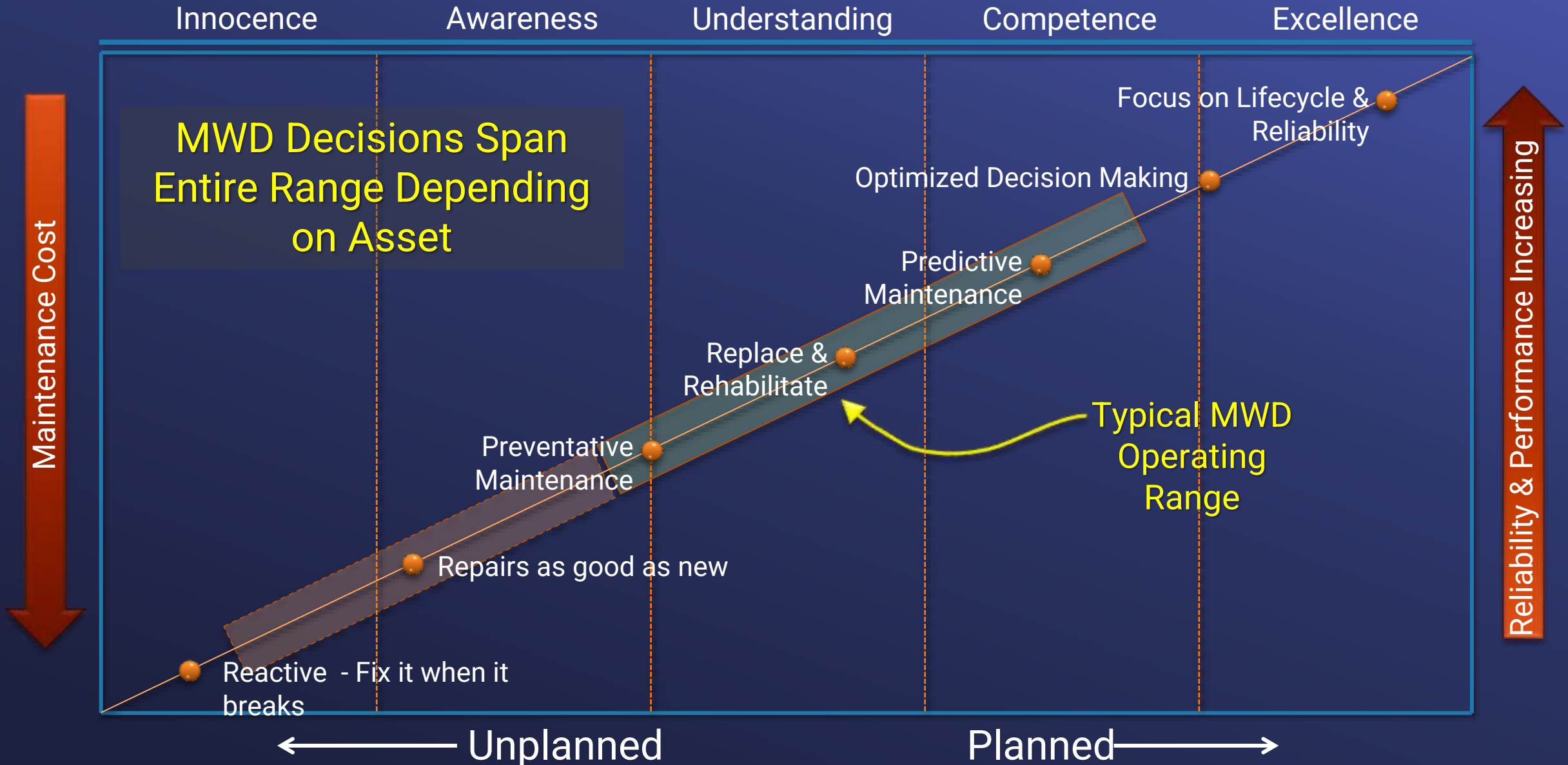
- Focused rehabilitations that extend the life of key assets
- Key assets important to Metropolitan goals



Valley View HEP Rehabilitation

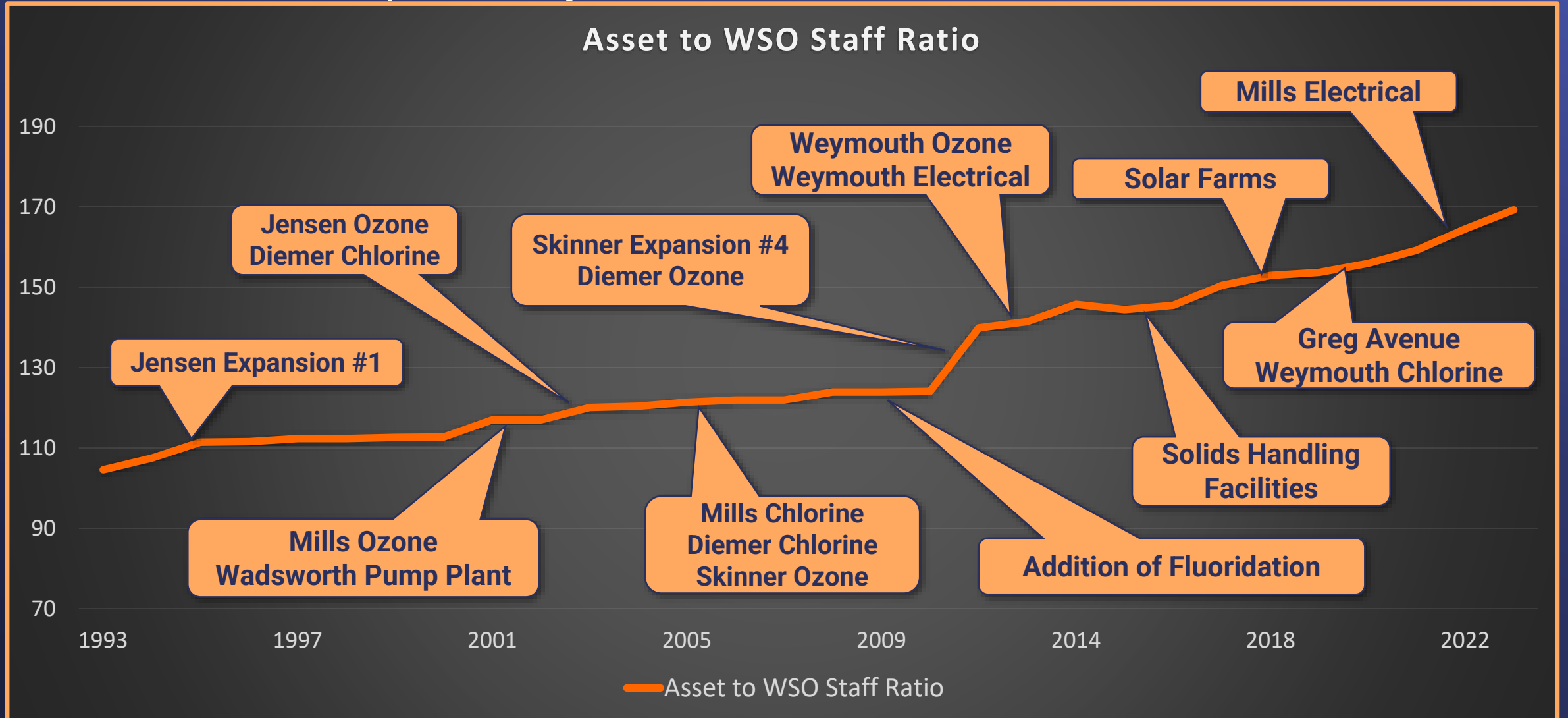


# Asset Management Maturity Level



# Increasing Challenges

O&M responsibility almost doubled over last two decades



# Increasing Challenges

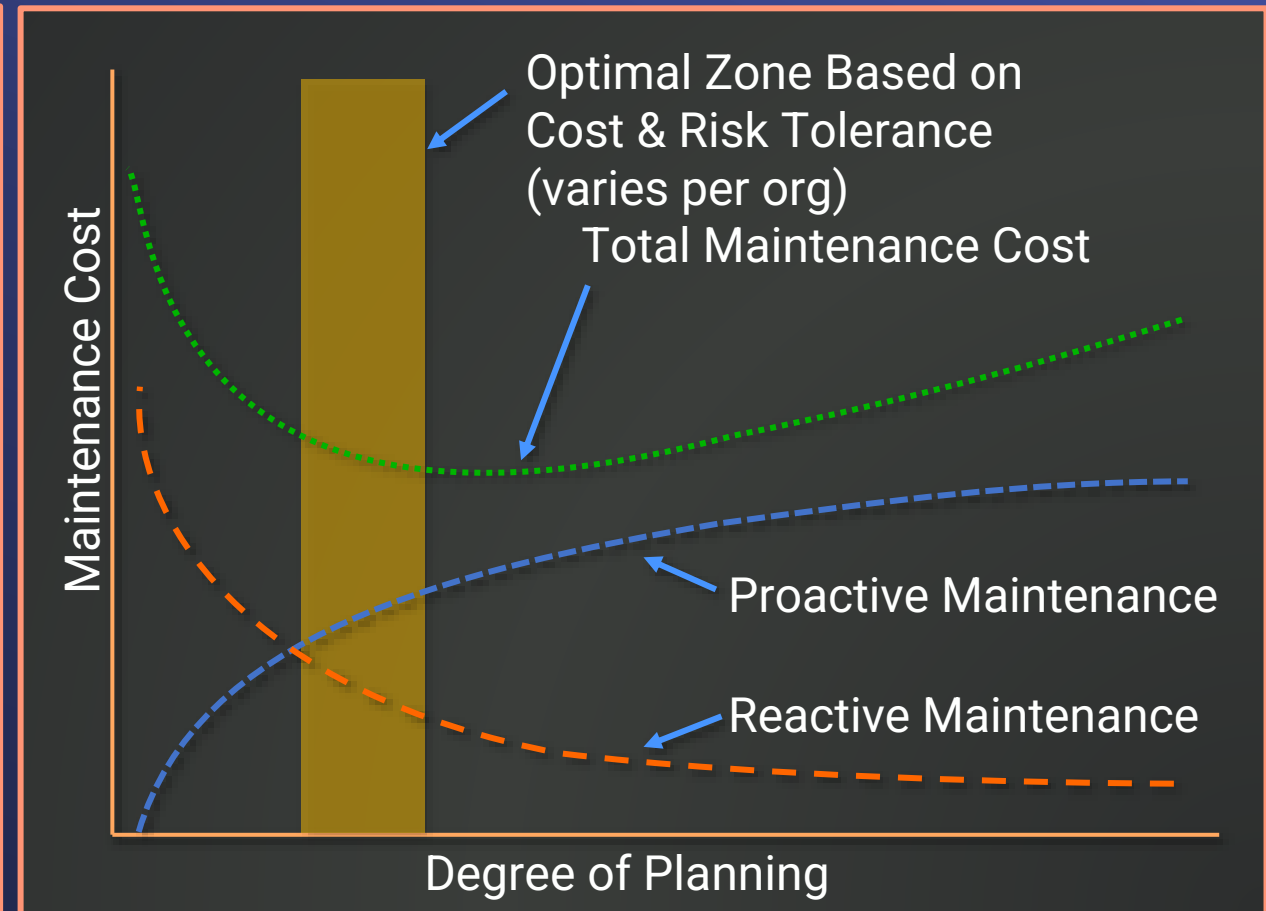
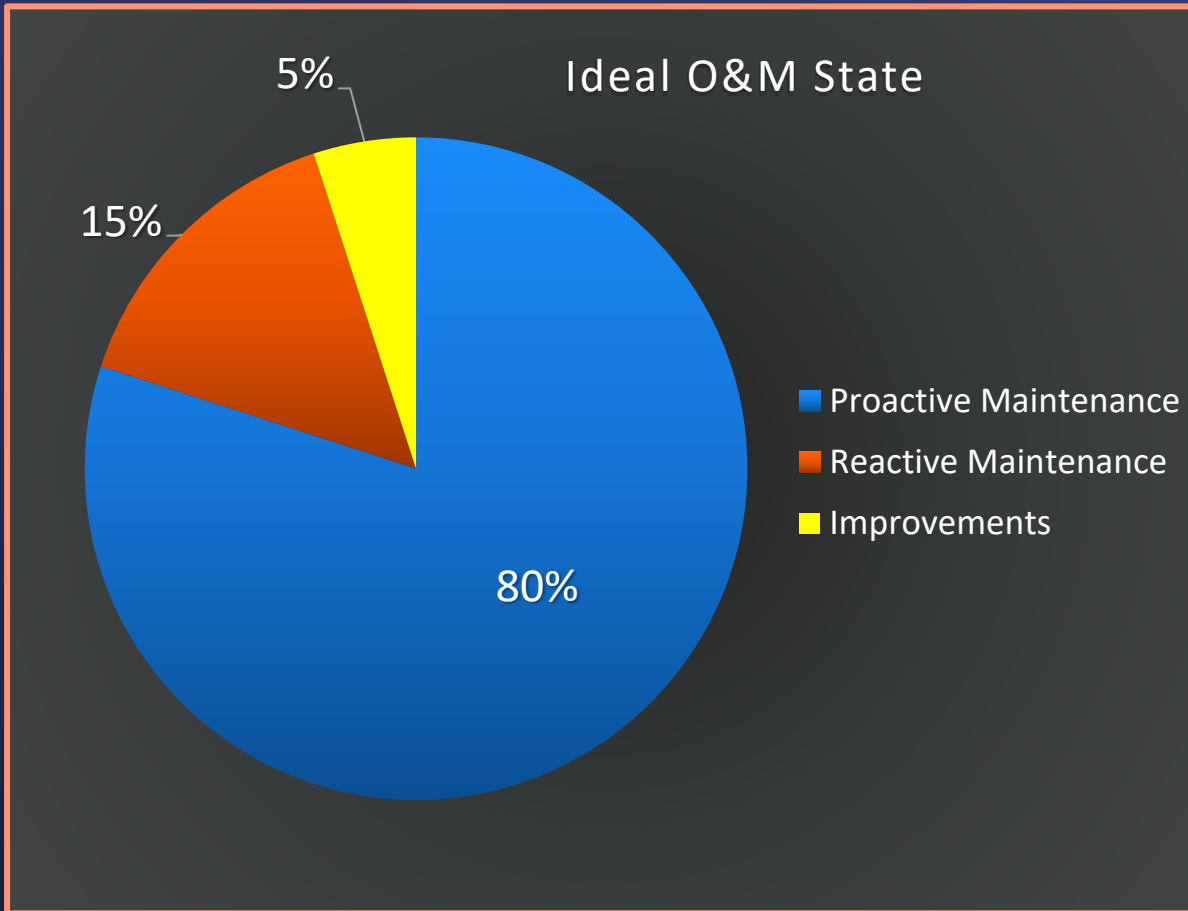
## Drivers for Improvement

- Staff operate, maintain, and support capital projects
- Managing impacts of more shutdowns, climate change impacts, and aging infrastructure



# Industry Best Practices for Maintenance

## Following 80/20 Rule

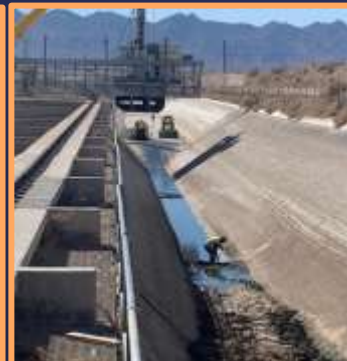
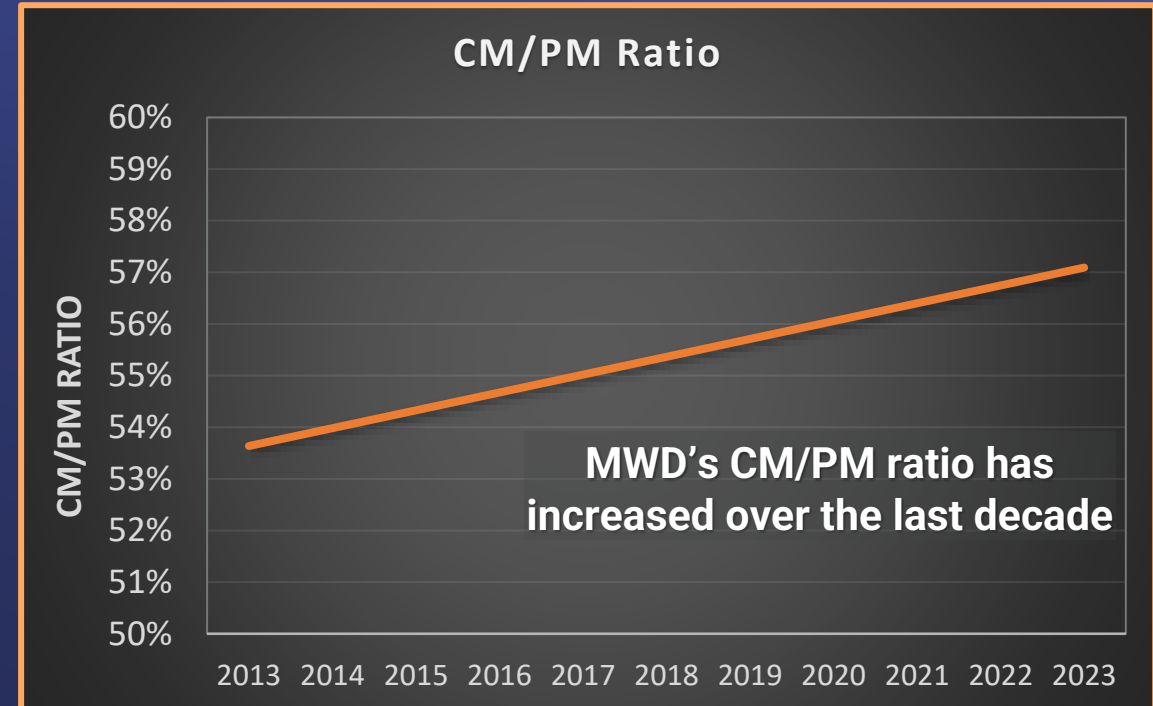
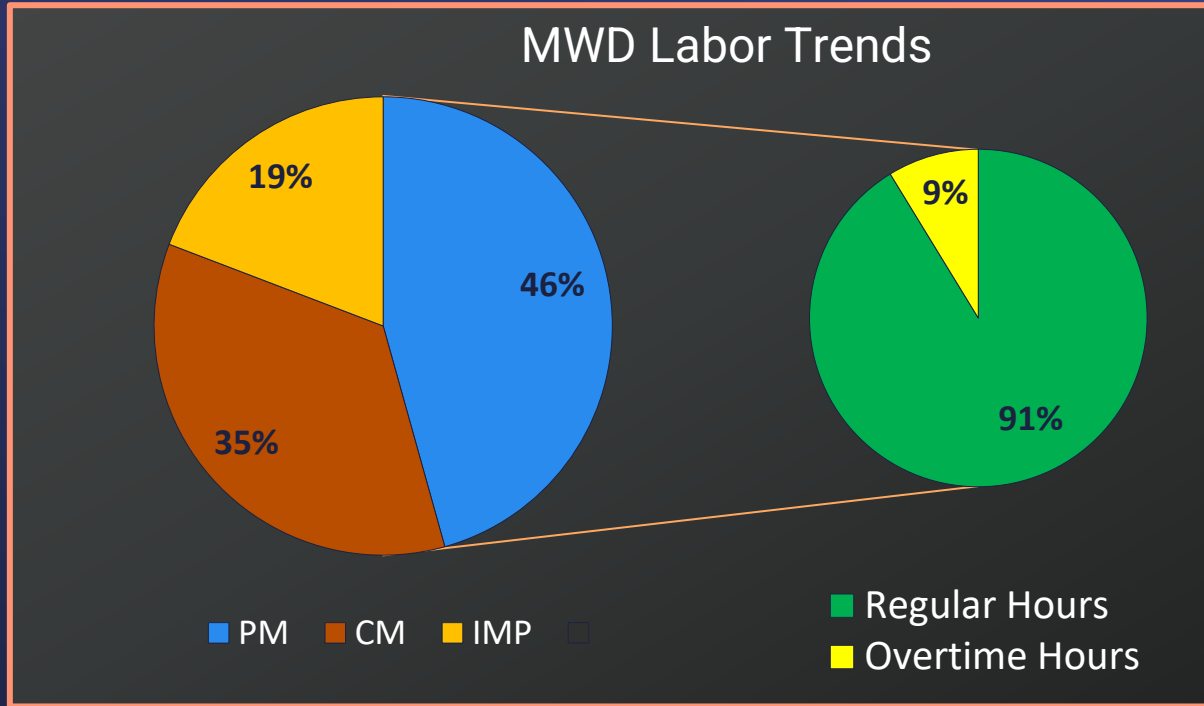


Proactive Maintenance = Preventative, Predictive, and Condition Monitoring



# Metropolitan's Labor & Maintenance Trends

## Increasing Repairs & Replacements



# Asset Management Program

## Optimizing Maintenance Management

Criticality = impact of failure

Why do we need a criticality assessment?



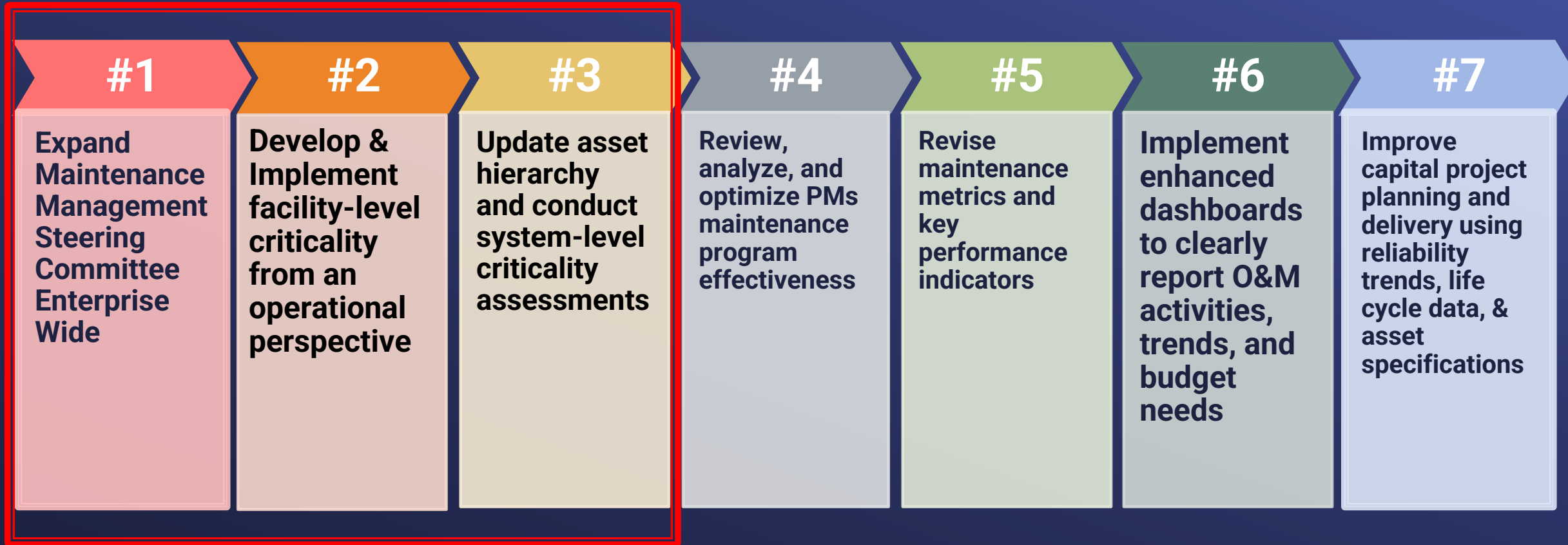
Determine impact of a facility, system, or an asset failure

Prioritize CIP and O&M resources effectively

Rank facilities against each other

# Asset Management Program

## Maintenance Management Improvements



In Progress



# Asset Management Program

## Summary & Next Steps

- Staff continues to partner closely internally as well as outside organizations
- Focused on implementing improvements in O&M
- TAMP in development for meters, pipelines, fleet assets, and distribution areas
- Ongoing CIP focus areas
  - Building Information Modeling (BIM)
  - Asset and life cycle data collection in construction contracts

CRA Tunnel Cleaning



Red Mountain HEP Rehabilitation



