

# Asset Management Information Session

Presented to Metropolitan Water Pollution Abatement  
Advisory Committee

July 22, 2020



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Department of  
Natural Resources and Parks  
**Wastewater Treatment Division**

# Overview

- History of Capital Investments
- Project Prioritization Process
- Next Steps



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# History of Capital Investments



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# History of Significant System Upgrades

1960s - Metro establishment-construction of treatment plants, pump stations, 100+ miles of interceptor sewers

1990s - West Point secondary treatment

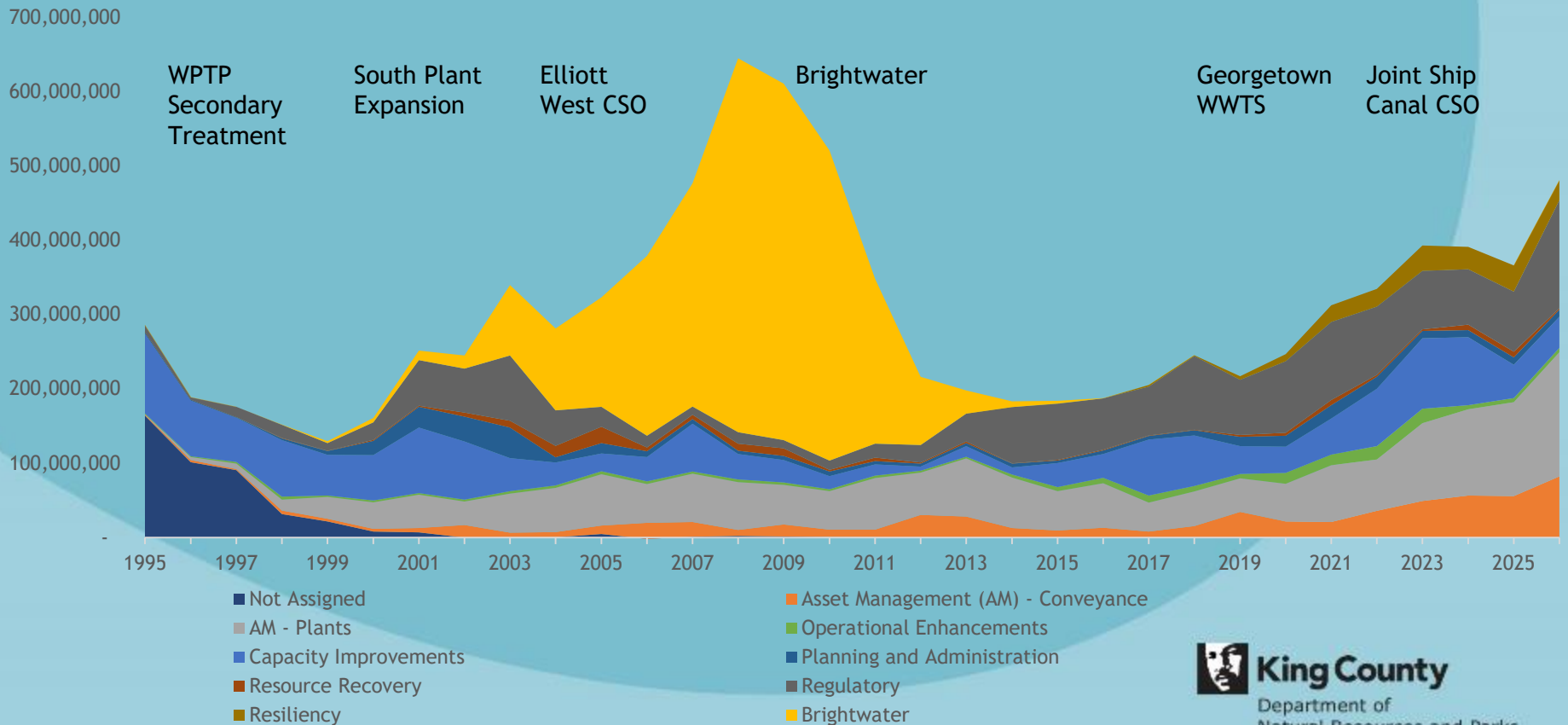
2010s - Brightwater, multiple CSO facilities

1980s - South plant expansion and new effluent discharge to Puget Sound

2000s - South plant expansion, multiple CSO facilities

# Historical Capital Investments

## Historical Capital Expenditures and 6-Year Forecast (Inflation-Adjusted)



# Capital Fund Financing History

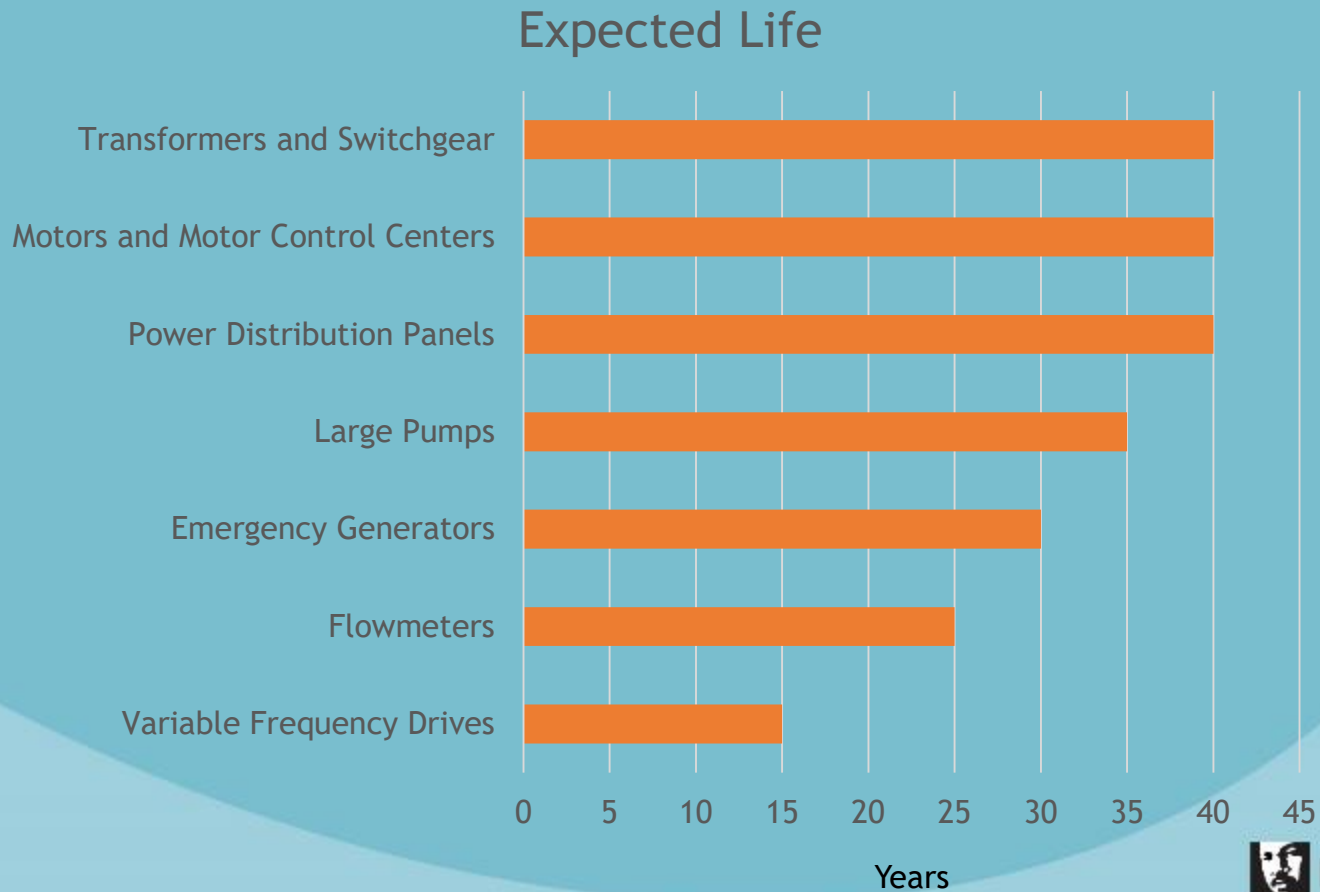
- In 2017:
  - Implementation of 40 percent cash funding practice to reduce the growth of outstanding debt
- Prior to 2017:
  - King County policy: the sewer rate shall be set so that net revenues are sufficient to yield at least 1.15 times coverage on all debt service payments made during the year



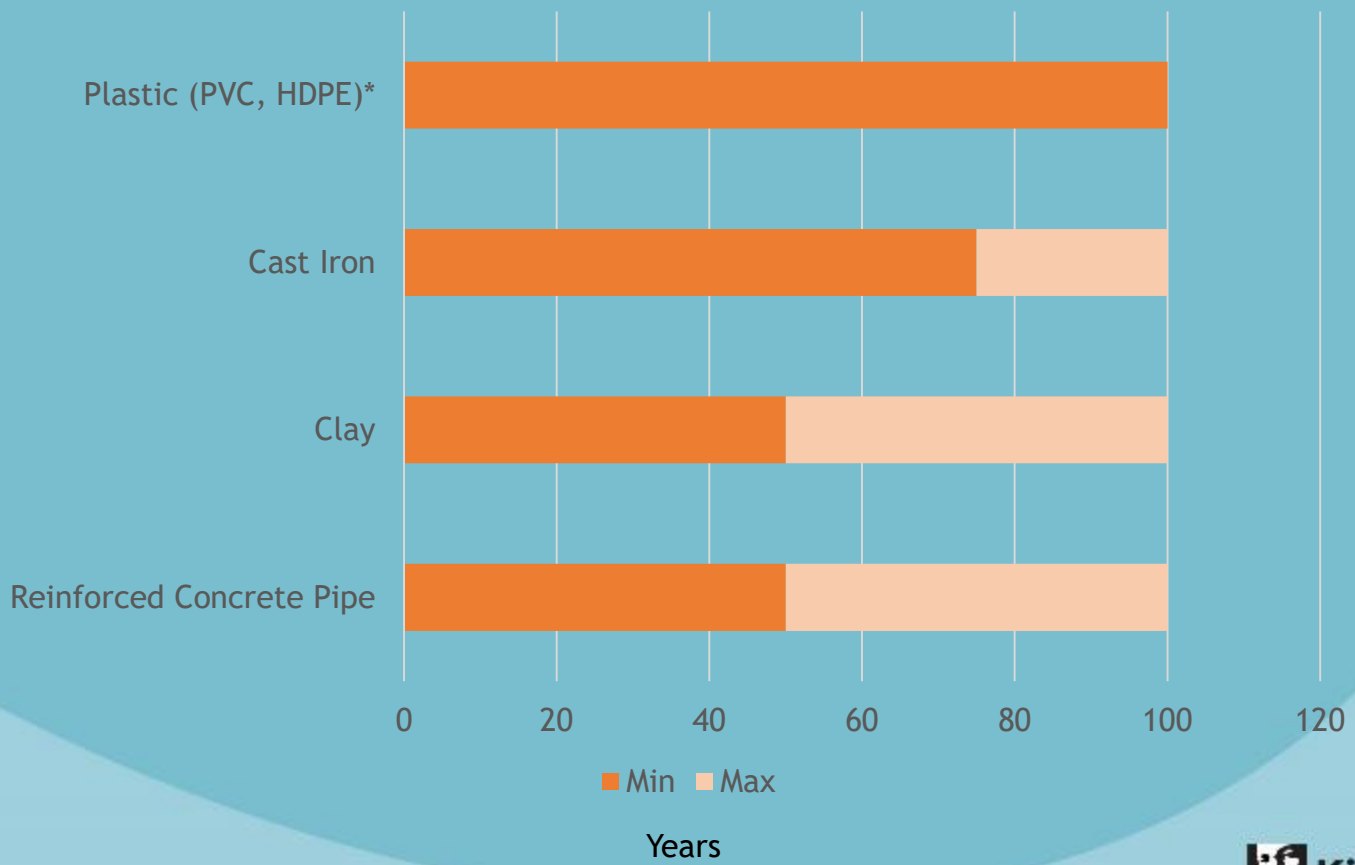
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# Expected Life of Common Wastewater Assets

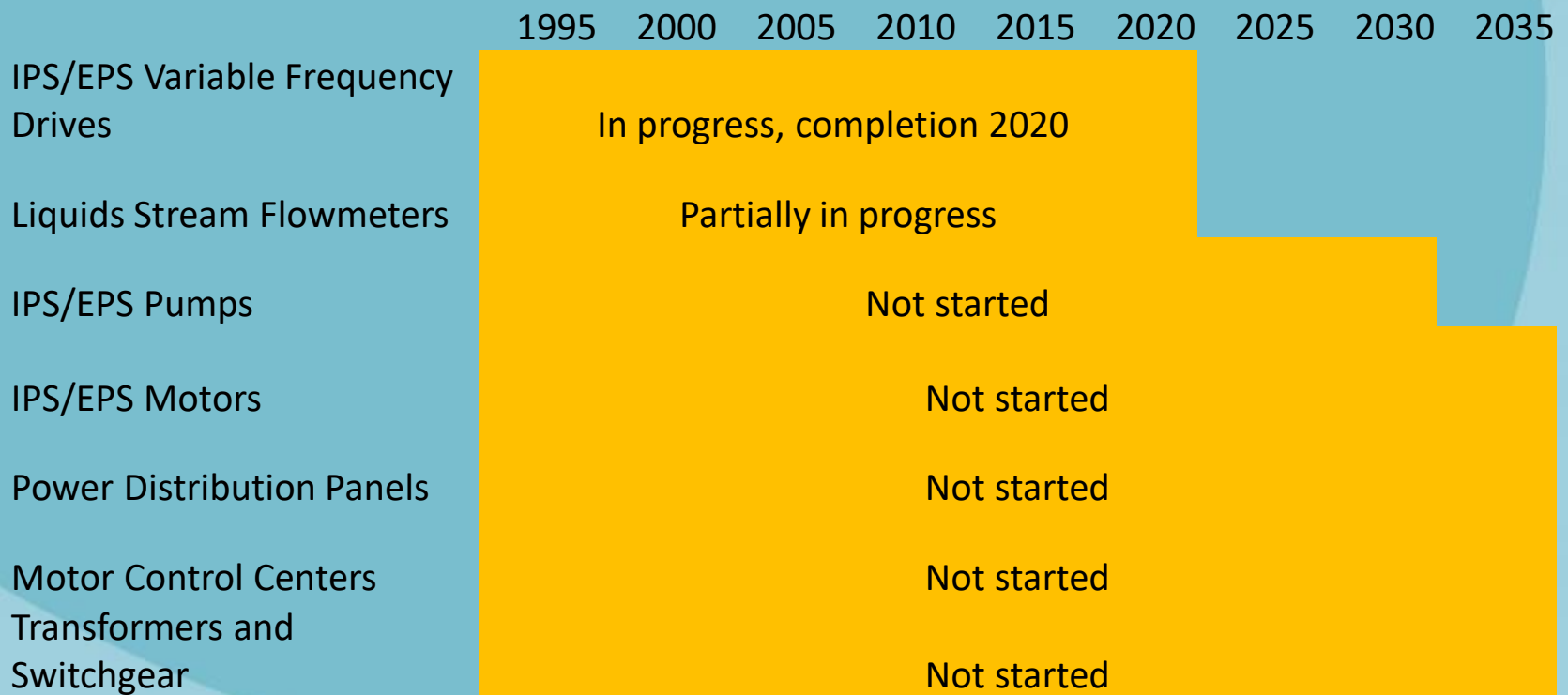


# Expected Life of Wastewater Conveyance Pipe Materials





# Example: Projected End of Life of Major West Point Secondary Expansion Assets



# Project Prioritization Process



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# Asset Management Capital Project Requests

- When O&M determines that a capital project is warranted, capital project request process is formally submitted for evaluation
- Form used is intended to provide information for scoring and to help define project scope
- For asset management projects, questions on the form focus on condition, criticality, obsolescence, and organizational impact of failure
- Information requested:
  - Asset names and numbers
  - Basic need for a project
  - Potential consequences if problem is not addressed
  - Whether operational changes have been pursued to solve problem
  - Potential solution and rough order of magnitude cost
  - Permit and code implications
  - Safety implications



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# Project Prioritization

- Projects are scored using objective criteria applied using a numerical scale
- Scores are applied by a ranking team comprised of subject matter experts (SMEs)
- Team members discuss each project request together and seek out any additional information that may be needed to help develop a common understanding of the project request
- Team member scores are aggregated to determine a calculated consensus score
- All project requests are scored in this manner and the consensus scores are used to determine priority
- Prioritized project lists are elevated to management for budget consideration



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# Ranking Team Composition

Between all categories, there are around 60 SMEs working on ranking teams. Some of these SMEs work on multiple teams.

- Asset Management Conveyance (10 members)
  - Hydrogen Sulfide Rehabilitation Program Manager (Lead)
  - Engineering Group Corrosion Lead
  - Conveyance Inspection Supervisor and Staff
  - Offsite Conveyance System Managers
  - Asset Management Supervisor and Staff (backups)
- Asset Management Plants (6 members)
  - Asset Management Supervisor (Lead)
  - Treatment Plant Managers
  - Reliability Engineers



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# Criteria and Scales

- The criteria and scales are written so that they incorporate objective and measurable data in the scoring when possible
- Not all considerations are measurable, so human judgement is used
- Relies on a calculated consensus among ranking team members to counter bias
- Criteria do not fit all projects well, so teams can also elevate projects for management consideration regardless of score, if warranted
- Please refer to handout for details

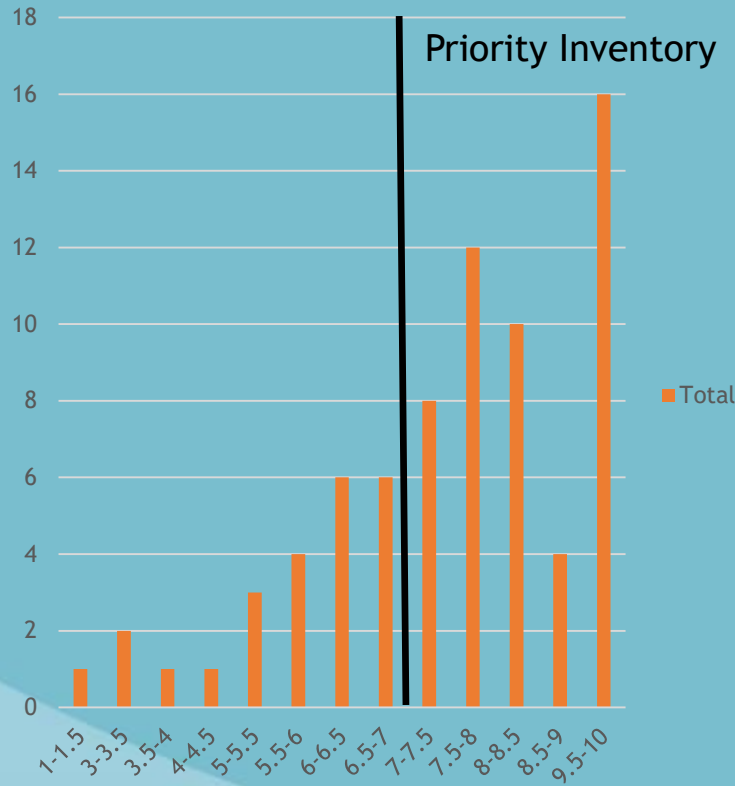


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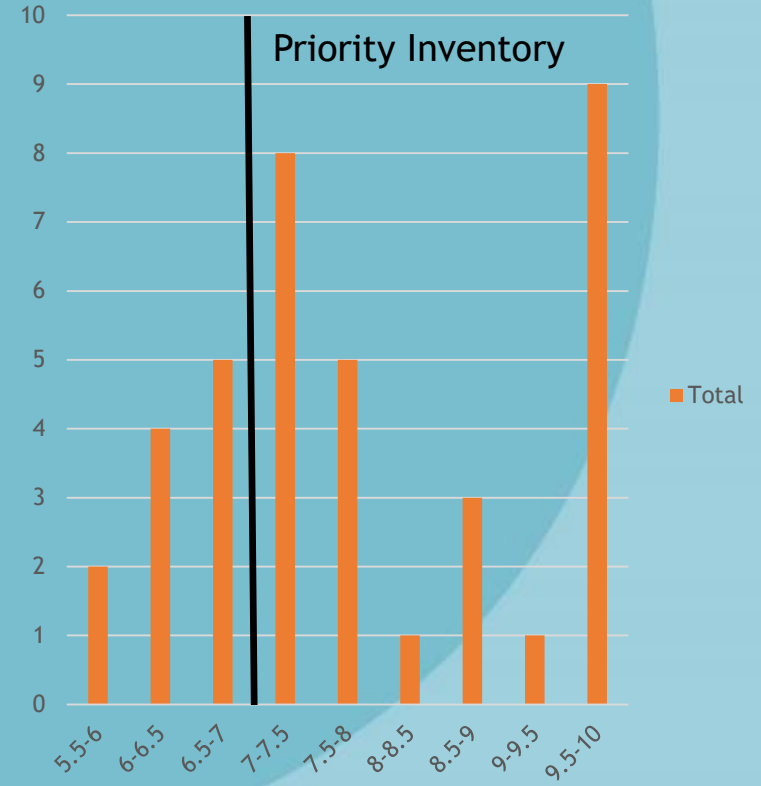
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# Inventory Analysis - # of Active Projects and Project Requests

Asset Management - Plants



Asset Management - Conveyance



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# Next Steps



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# 2022 Rate Setting Process Milestones

- August 6 - Capital Funding Analysis
- September 3 - Operating Forecast
- October 1 - Rate Strategy and Reserves Management
- November 5 - Projected Year-End Update
- December 3 - TBD



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# Next Steps

- Schedule for Asset Management Briefings with MWPAAC
- Info on upcoming Asset Management Webpage



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# Summary

- Over time, significant investments have been made into the conveyance and treatment system. Many assets are reaching end of life.
- WTD uses objective and measurable criteria to prioritize asset management projects.
- WTD will continue to engage with MWPAAC on how to best address asset management in the regional wastewater system.



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# Questions?

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