Valley Water Public Meeting

Water Treatment Plant (WTP) Master Plan Implementation Project

Presented by:
Mike Potter - Master of Ceremonies
Nai Hsueh – Chair of Valley Water Board of Directors, District 5
Miguel Silva - Deputy Project Manager
Barton Ching - Senior Engineer/Project Manager

Water Treatment Plant (WTP) Master Plan Implementation Project

Presented by: **Barton Ching** (Senior Engineer) and **Miguel Silva** (Associate Engineer)
Business Support & Asset Management Unit
June 13, 2024

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Outline

1. Valley Water Overview
2. Purpose, Need, and Benefits of Master Planning
3. Project Goals and Timeline
4. Master Planning Process
5. Recommended Projects
6. Q&A - Feedback

Valley Water (VW): Who Are We?

- VW provides multiple critical services:
  - ✓ Wholesale water supply
  - ✓ Groundwater management
  - ✓ Flood protection
  - ✓ Stream stewardship
- VW serves all of Santa Clara County
  - ✓ 1,300 square miles
  - ✓ 1.9M customers

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Why does VW do Master Planning?

NO Master Planning

- Is reactive
- -Obstructs seeing the big picture
- -Hinders right-sizing project scope

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- -Piecemeals projects
- -Works inefficiently
- -Misses out on cost-savings opportunities

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Results:

- -Adds more deferred maintenance
- -Increases costs
- -Increases service outages

With Master Planning

- -Is pro-active
- -Enables coordinated work holistically and develop a long-term vision

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- -Addresses systemic problems
- -Makes better decisions and the right investments

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Results:

- -Lowers costs
- -Minimizes service interruptions
- -Reduces system failures & safety risks

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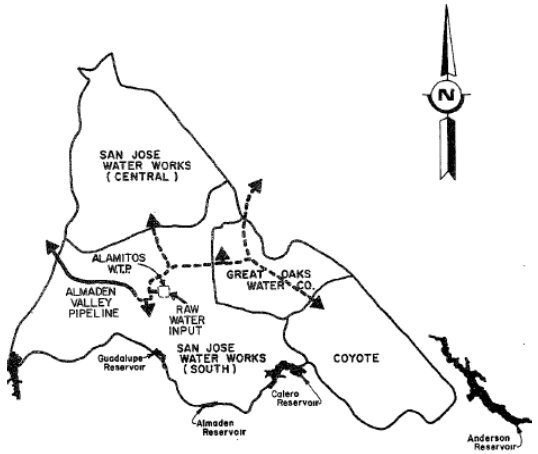
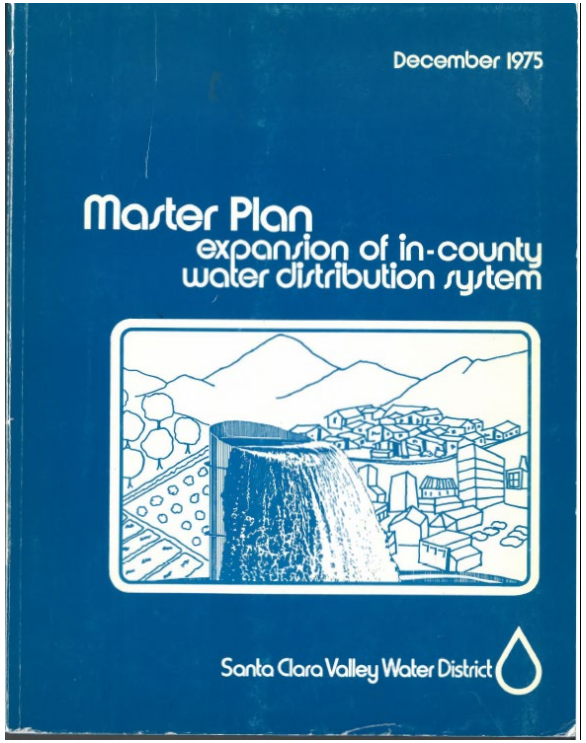
Infrastructure Planning – Background & Purpose

1. Last comprehensive infrastructure master plan was in 1975
2. Purpose of master plans
   - Aging and obsolete Water Utility infrastructure
   - Changes in future demands
   - Upcoming regulatory requirements
   - Need to improve efficiency
   - Need for redundancy to enable maintenance and prevent service outages
   - New supplies coming online





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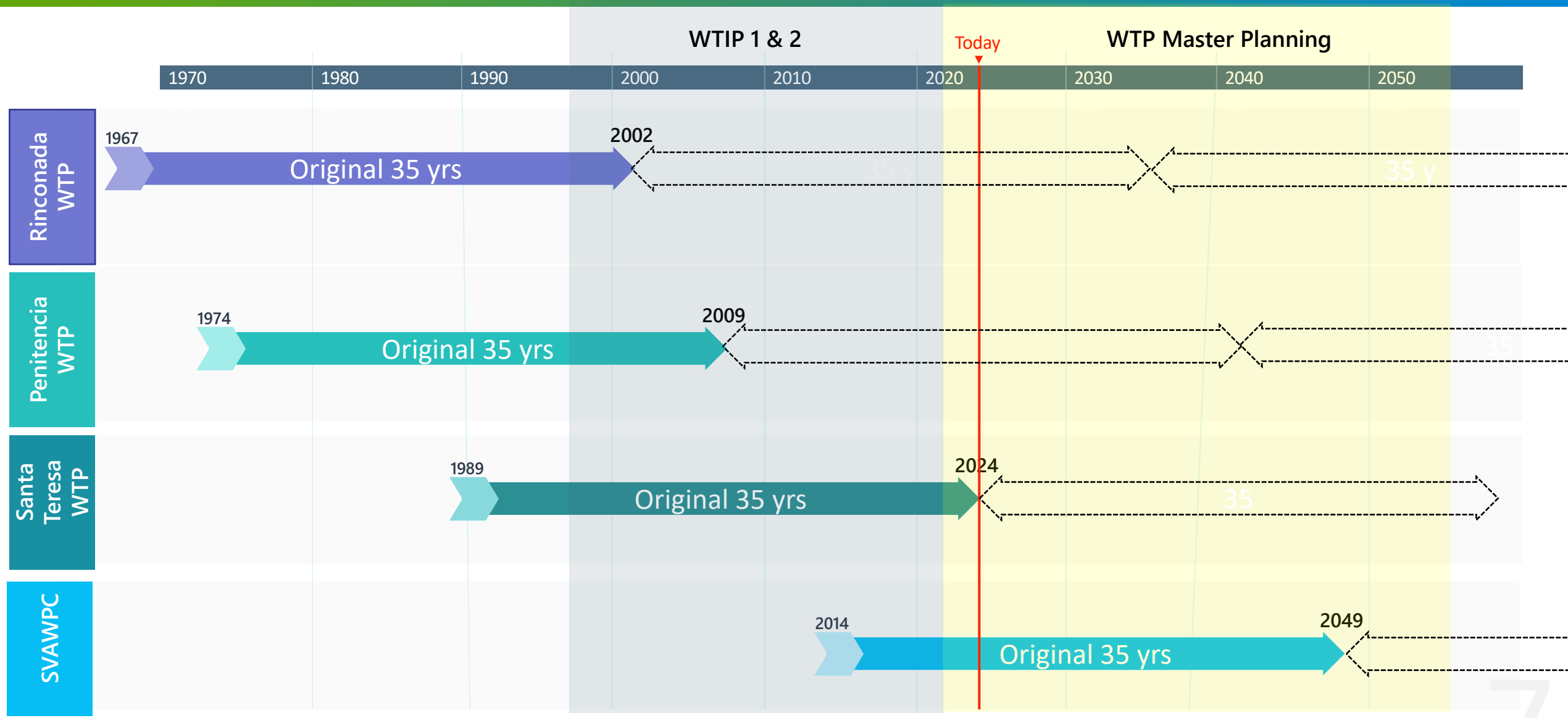
Aging Water Treatment Plants



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Note: WTP = Water Treatment Plant; WTIP 1 & 2 = Water Treatment Improvement Project – Stage 1 & 2; SVAWPC = Silicon Valley Advanced Water Purification Center

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Dams built in the 30s & 50s. Treatment plants built in the 60s, 70s & 80s.

We're repairing, rebuilding, & maintaining the aging system that provides safe, clean water to you, your family, & your business.

#InfrastructureWeek. Invest. Permit. Build.

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Water Treatment Plant Master Plan Cycle

Evaluate Needs for Water Treatment Plants

Develop Projects to meet needs

Coordinate recommendations with Capital Improvement Program

Phase and schedule projects to **Develop Program** 30-year

Begin Implementation with 10% Design and Programmatic Environmental Impact Report

Periodic Plan Updates

Engage VW Board, Public & Stakeholders

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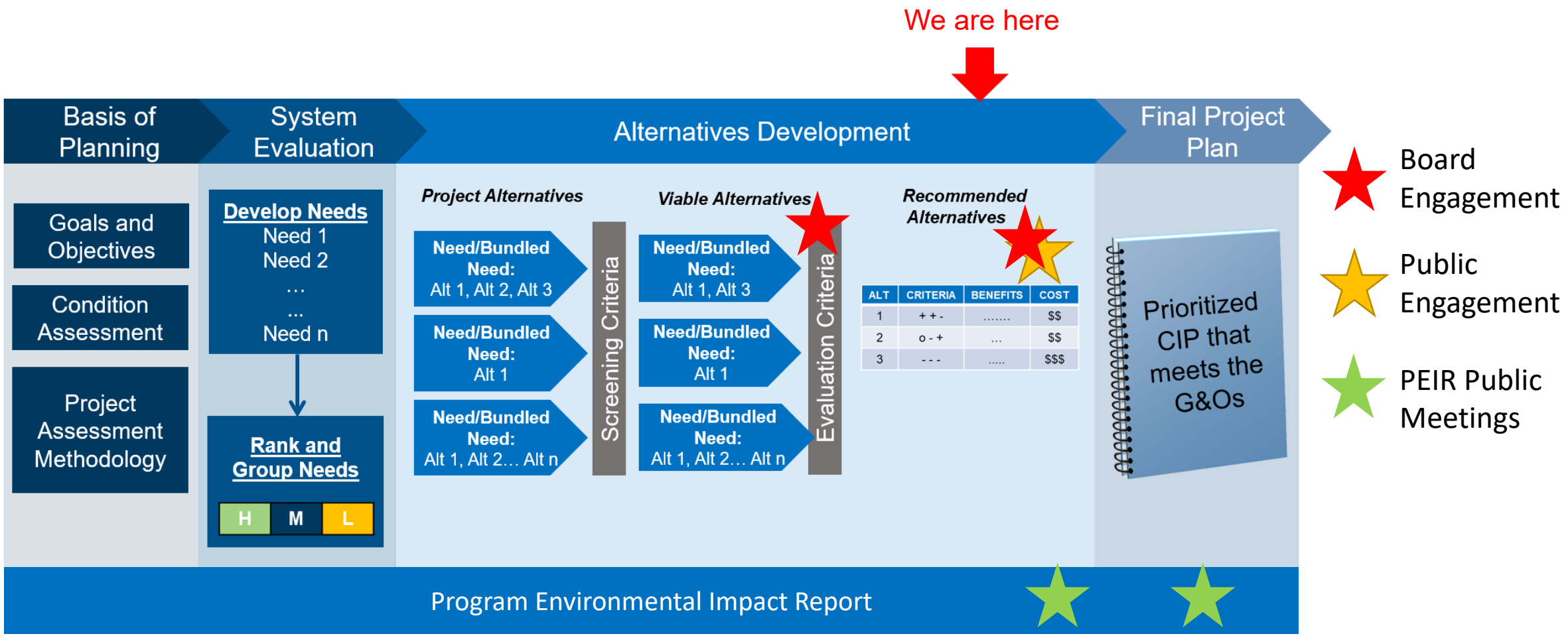
WTP Master Plan Development Process



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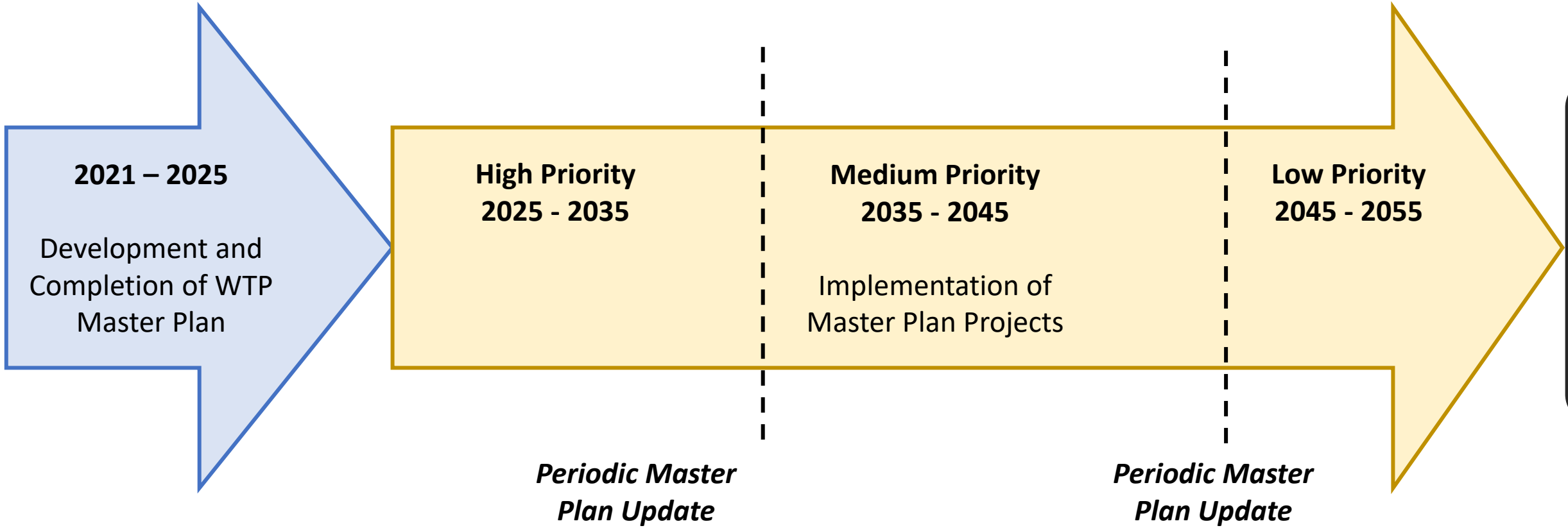
WTP Master Plan Timeline



Final Goals and Objectives

Goal Category	Goals
Capacity	Meet VW treated water demands through 2050.
Reliability	Provide reliable treated water production while allowing for preventive maintenance and minimizing unplanned downtime.
Water Quality	Consistently meet finished water quality regulations.
	Prepare for future regulatory requirements related to contaminants of emerging concern.

Final Goals and Objectives

Goal Category	Goals
Climate Mitigation	Minimize greenhouse gas emissions from VW's WTP operations.
Equity	Incorporate equity into the master planning process and outcomes.

Master Plan: What Are We Actually Doing?

Example: Replacing Aging Assets

- WTPs have lots of parts, nearly 8000 assets each valued over $5000.
- Assets age and need to be replaced over time
- Valley Water already has an effective asset management program to avoid asset failure

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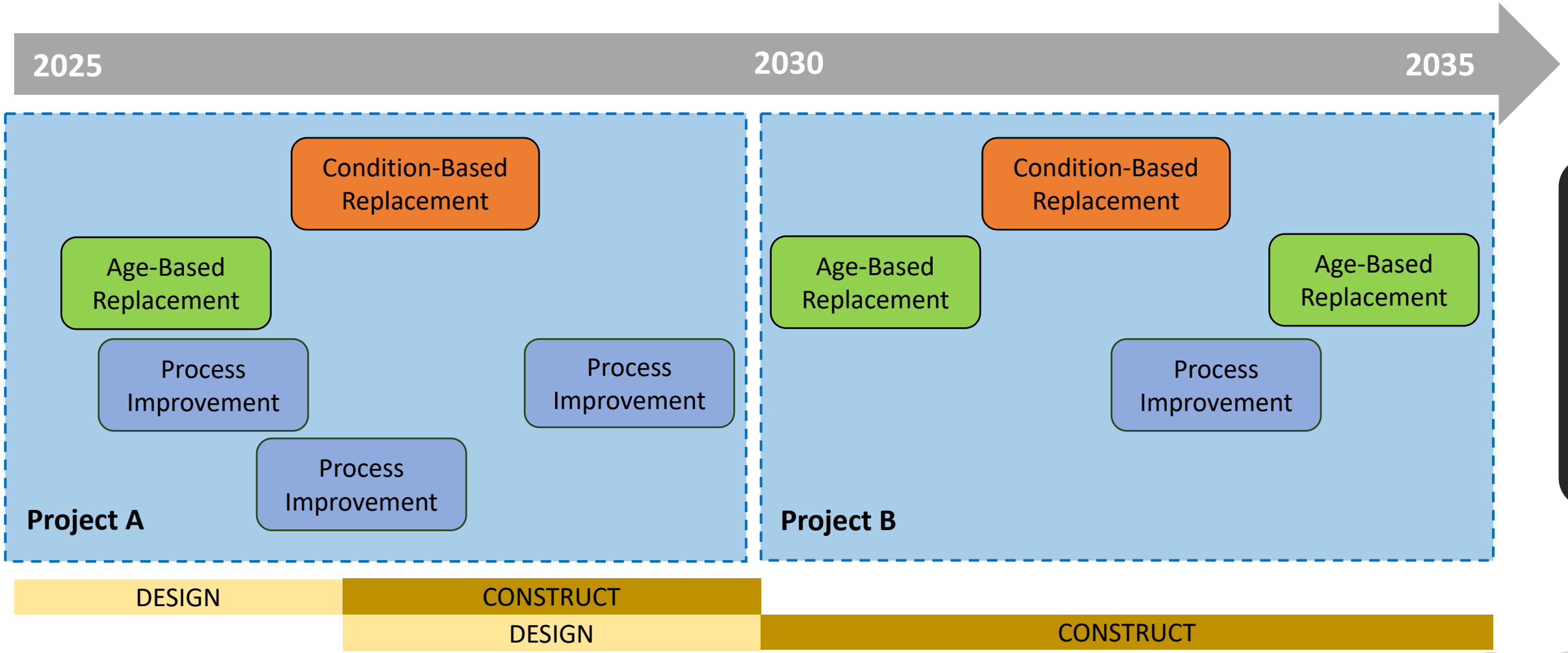
Master Plan: What Are We Actually Doing?

Example:

Chemical Storage Reliability Project

- Adding several chemical storage tanks
- Addresses needs at all three treatment plants
- Ensures sufficient chemical storage to meet demands during peak season
- Leverages efficiencies by rolling multiple similar solutions into one project
  - ✓ Single procurement process & contractor
  - ✓ Common equipment supplier

Conceptual Project Implementation



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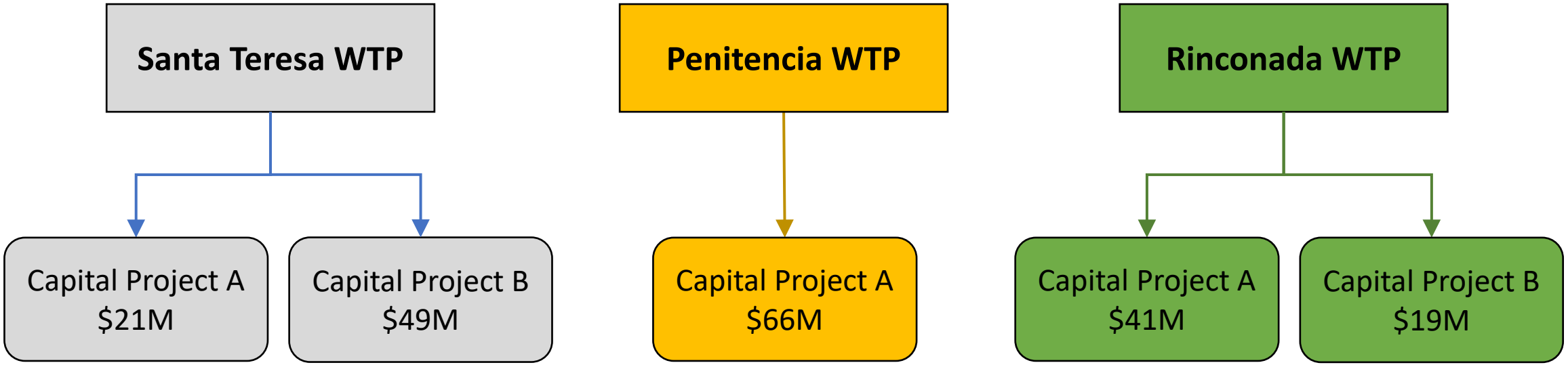
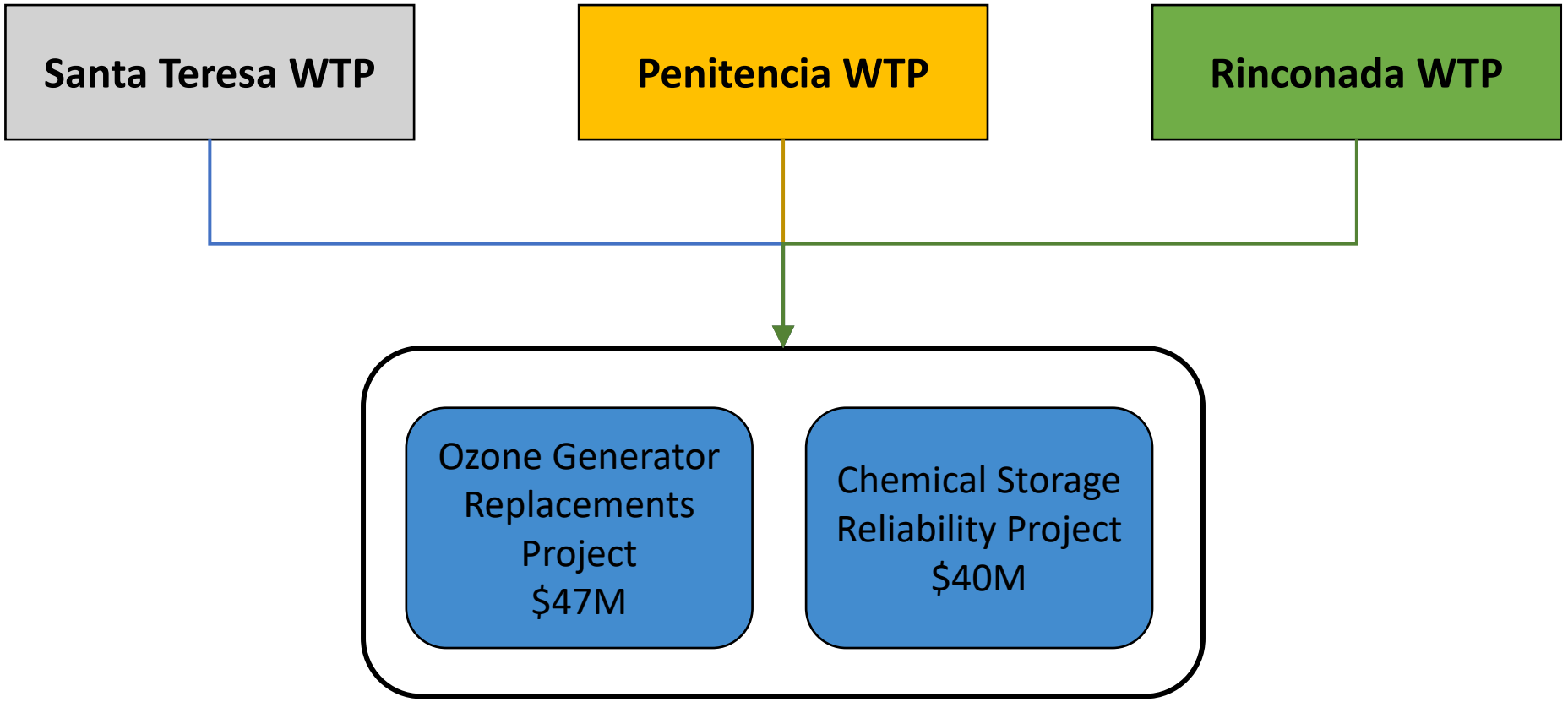
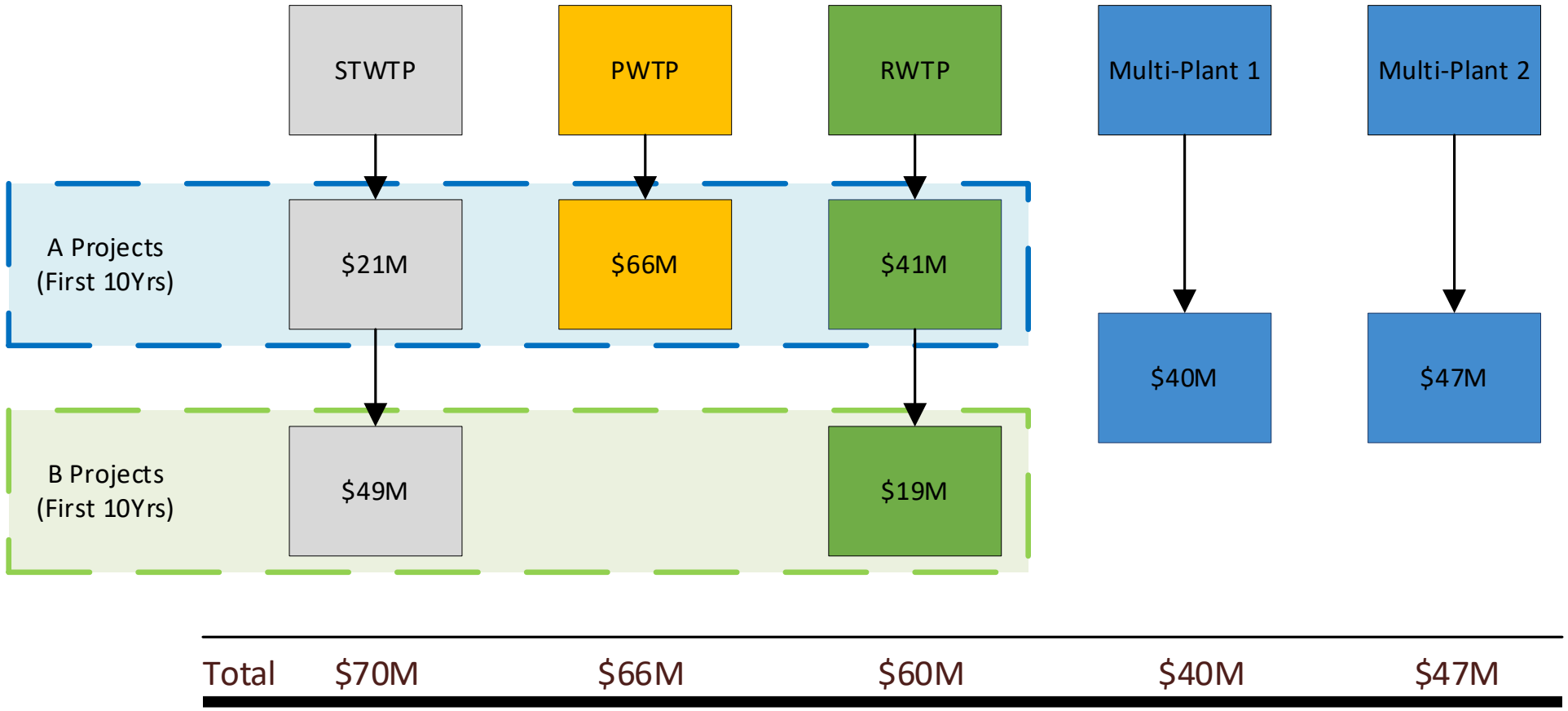
Proposed Projects Overview: Plant Projects



Proposed Projects Overview: Multi-Plant Projects



Initial Proposed Capital Projects (Next 10 years)



We plan to spend $283M on water treatment plant infrastructure over the next 10 years, including replacing aging equipment, pipes, and tanks. Just one of the ways we keep your water safe and reliable.

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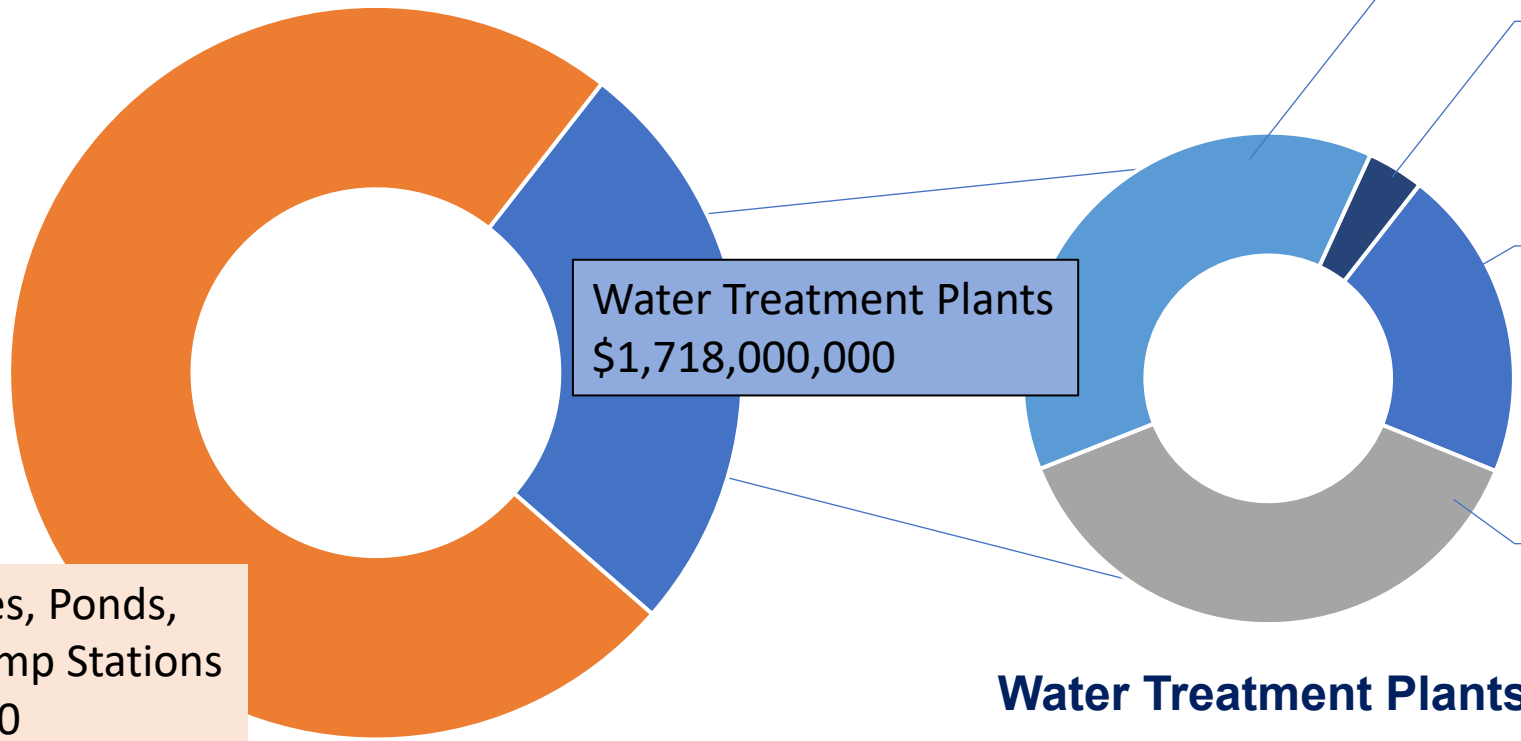
VW Assets are Valuable Investments

Total infrastructure replacement value = $6.94B*



Rinconada WTP
$750,000,000

SV Advanced Water
Purification Center
$64,000,000

Penitencia WTP
$354,000,000

Santa Teresa WTP
$650,000,000

Water Treatment Plants

Water Utility Assets

***In 2020 dollars**

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END OF PRESENTATION

Questions & Answers

If you have feedback, please share with us. You can also e-mail me at bching@valleywater.org or call me at 408-630-3079.