Proposed Biennial Budget for FYs 2020/21 and 2021/22 Capital Investment Plan

Engineering & Operations Committee
Item 6b
March 9, 2020

Proposed Biennial Budget Capital Investment Plan Presentation Overview

- Priorities
- Capital Program funding
- Revisions/updates
- Capital Program Highlights
- Treatment Projects
- Summary
- Treatment Capacity

Key Priorities

- Prioritizing projects primarily to meet service demands
- High priority projects
  - Req'd for infrastructure/process reliability
  - Regulatory Compliance
  - Safety/Security
  - Equipment/Software Replacements

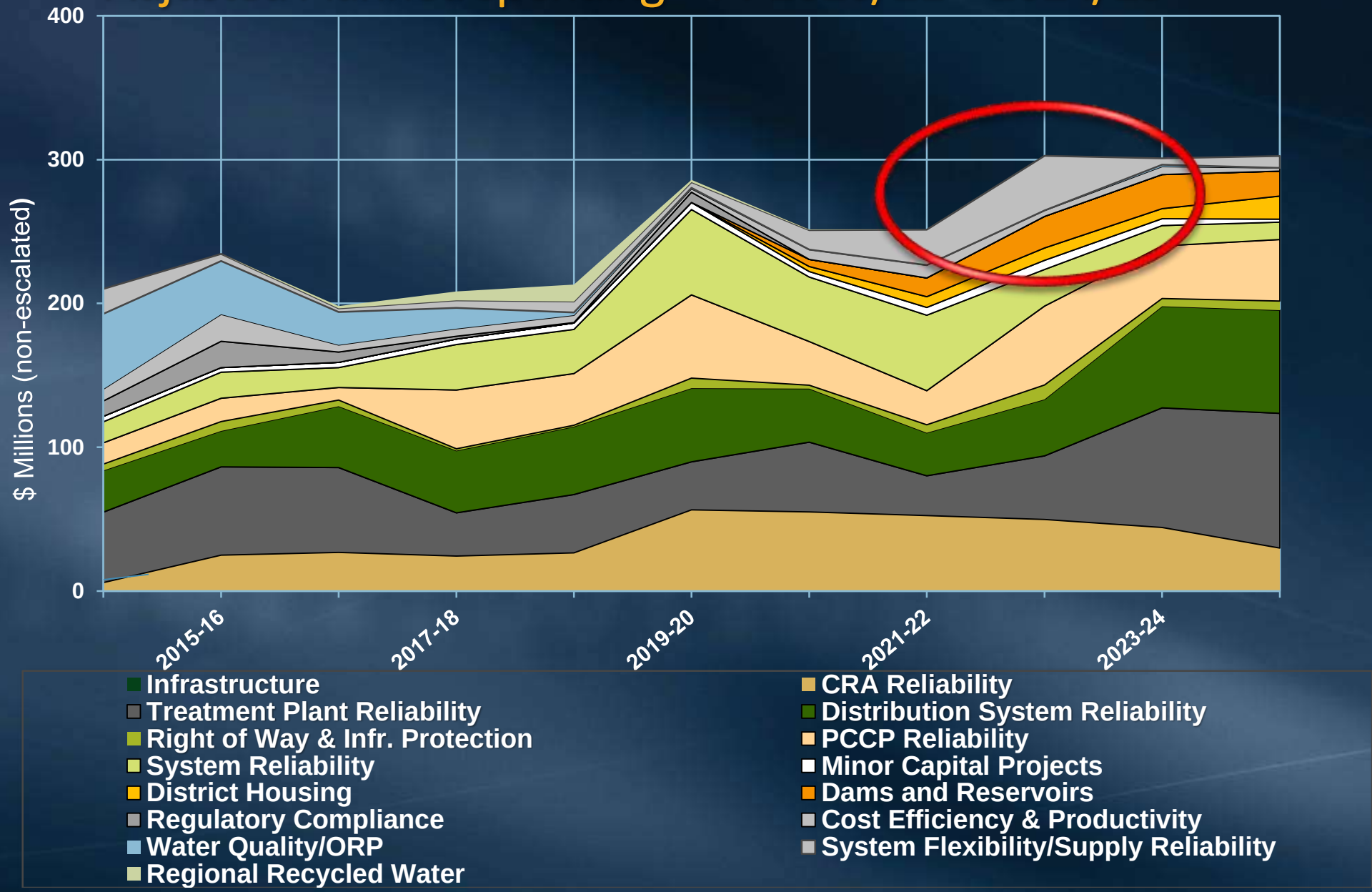
Proposed CIP for FY 2020/21 - 2021/22
Capital Program funding

- 2-Year planned spending - $500 million
  - Target = $450 M (90% of planned)
- Administrative Code 5108 (e)
  - Appropriate $500 M
  - Projects identified in the CIP Appendix
    - Plus:
      - Minor Capital Projects
- April E&O action to appropriate biennial funding

Updates to CIP Appendix

- Desert Housing Improvements
  - Increase in biennium forecast from $3M to $11M
- Perris Valley Pipeline – Tunnels
  - Increase in FY 2022/23 forecast from $300K to $35M
- Construction progress in FY 2019/20
  - CRA Isolation Bulkheads
  - CRA Power Cables
  - Second Lower Feeder Reach 2 PCCP
  - Union Station Headquarters

Capital Investment Plan FY 2014/15 – 2024/25
Adjusted Planned Spending – FY 2020/21 – 2024/25



Project Board Actions

CIP Proposals → Committee Evaluations → Steering Committee (New Projects/Changes) → CIP Appendix Biennial Budget

- Non-budgeted projects will require Board review and authorization
- Board can require that specific projects get individual consideration

Award Contracts
- Procurement
- Construction
> $250K
and/or Property Acquisitions

→ Approve Change Orders
> 5%/$250K

Proposed CIP for FY 2020/21 - 2021/22
Regulatory related projects

- Treatment facilities, floating reservoir covers, etc. are required to meet water quality regulations
- Projects in these areas are driven primarily by need to replace aging/end of service life components, not due to new regulations
- Homeland Security Directive 7 – Owners of critical infrastructure strengthen security/resilience

Proposed CIP for FY 2020/21 - 2021/22
Regulatory driven projects

- Current/planned project examples
  - Gene and Copper Basin Discharge Valve Replacements - DSOD
  - Lake Mathews and Lake Skinner Spillway assessments - DSOD
  - Lake Mathews Above Ground Storage Tank – EPA
  - Various security enhancements – DHS
- Total planned biennial expenditures:
  - Gene and Copper Discharge Valves: $17 million
  - Others: $8 million

Colorado River Aqueduct Reliability

FY 2020/21 Estimate - $55 M

FY 2021/22 Estimate - $52.4 M

System Reliability

FY 2020/21 Estimate - $44.9 M

FY 2021/22 Estimate - $52.5 M

Distribution System Reliability

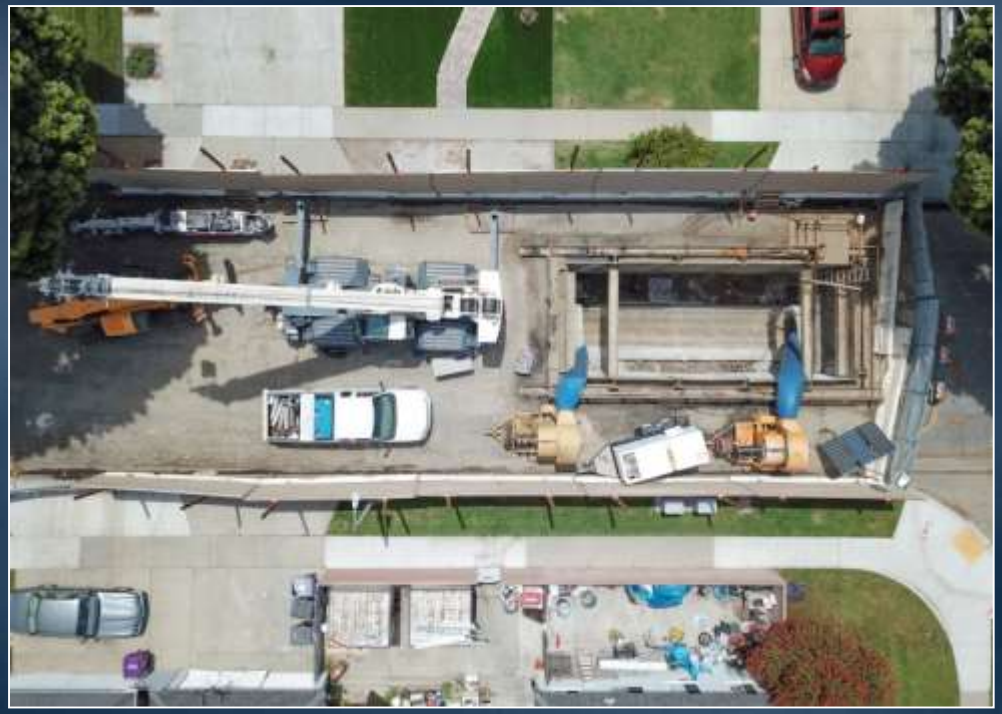
FY 2020/21 Estimate - $37.2 M

FY 2021/22 Estimate - $29.9 M

Prestressed Concrete Cylinder Pipe Reliability

FY 2020/21 Estimate - $30.3 M

FY 2021/22 Estimate - $23.6 M



System Flexibility/Supply Reliability

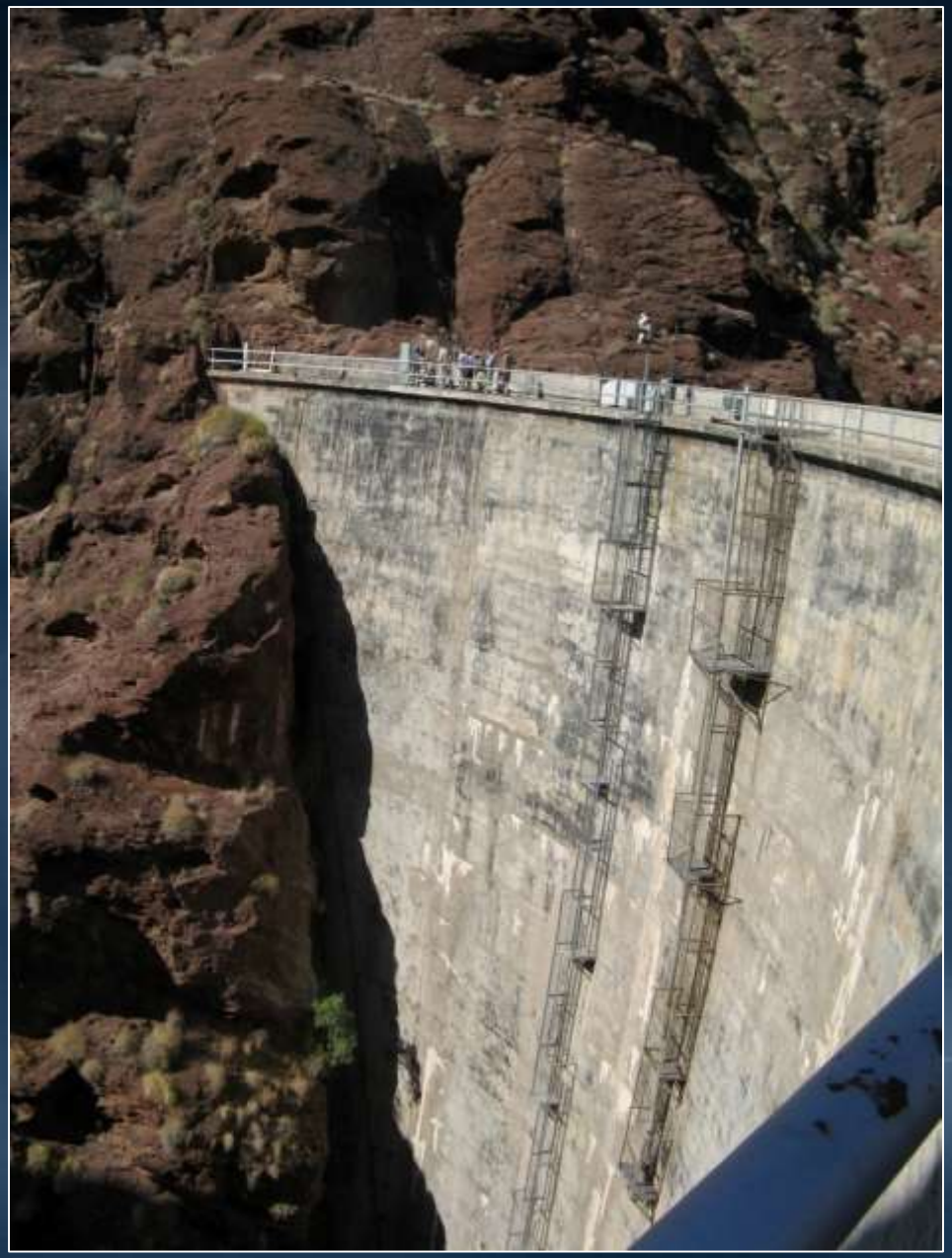
FY 2020/21 Estimate - $13.6 M
FY 2021/22 Estimate - $24.8 M

(For illustrative purposes only)

Dams & Reservoirs Improvements

FY 2020/21 Estimate
- $5.1 M

FY 2021/22 Estimate
- $13.1 M



Cost Efficiency & Productivity

FY 2020/21 Estimate - $6.7 M

FY 2021/22 Estimate - $8.8 M

Right of Way & Infrastructure Protection

FY 2020/21 Estimate - $2.4 M

FY 2021/22 Estimate - $5.7 M

District Housing & Property Improvements

FY 2020/21 Estimate - $3.5 M

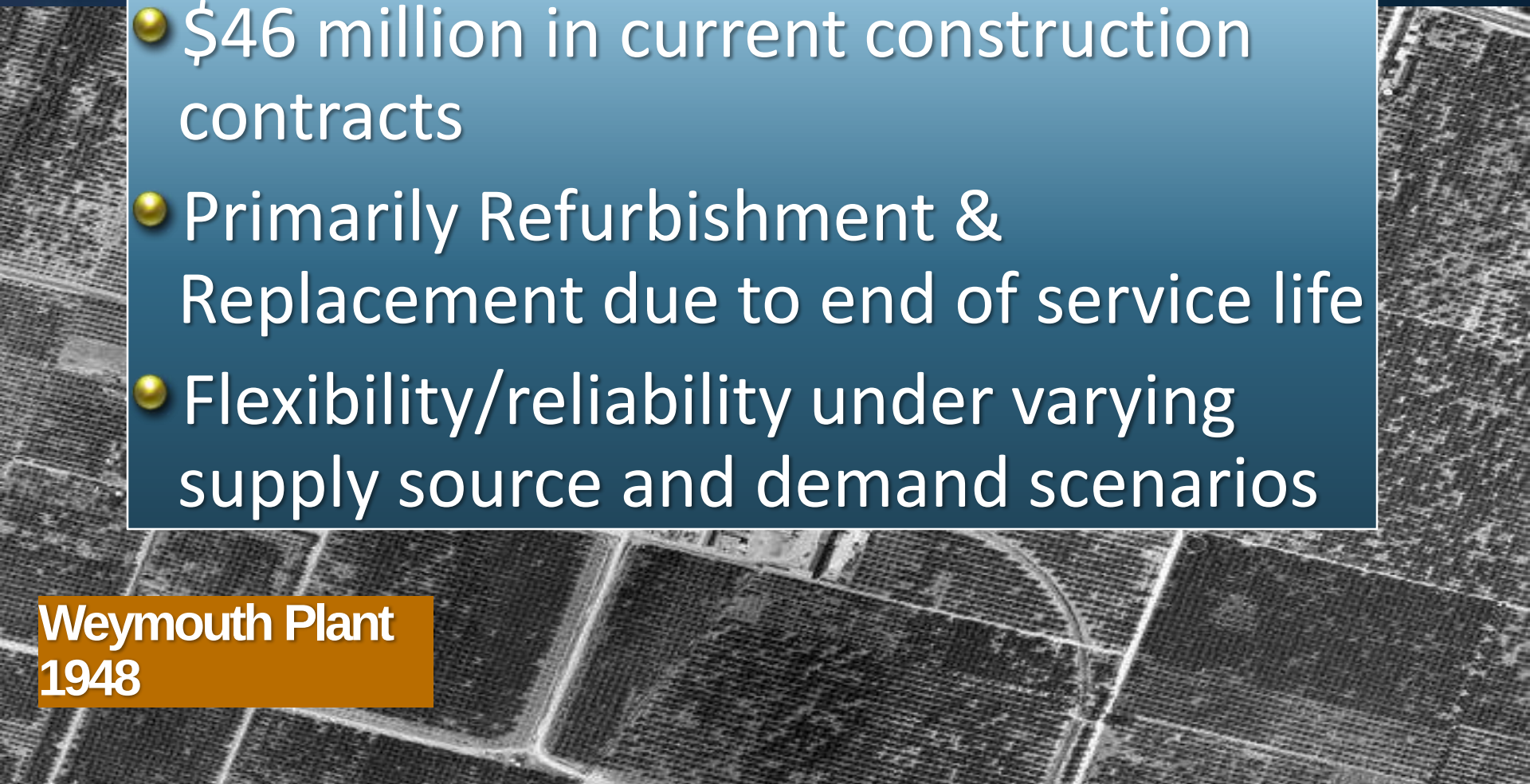
FY 2021/22 Estimate - $7.5 M

Treatment Plant Reliability

FY 2020/21 Estimate - $48.6 M

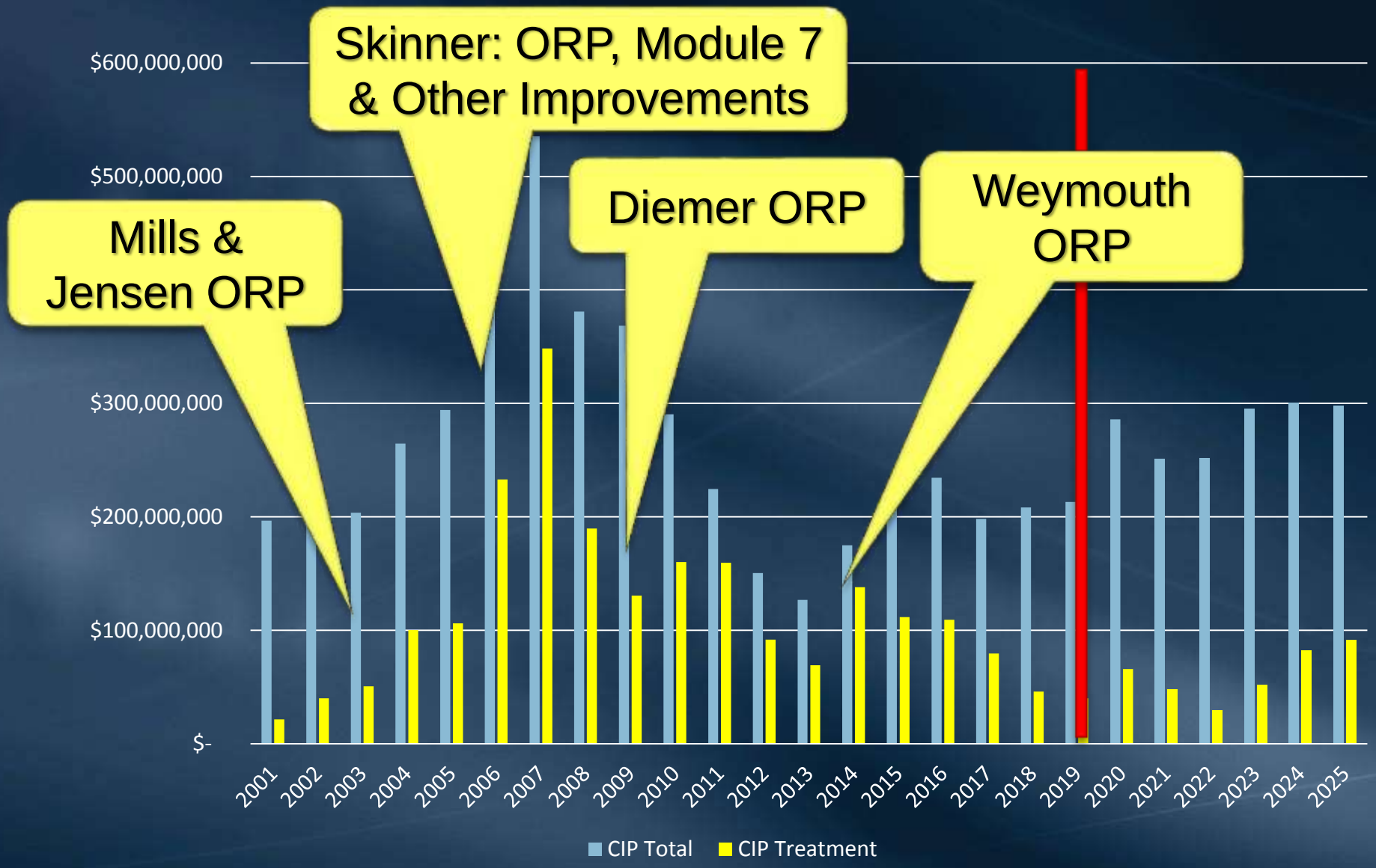
FY 2021/22 Estimate - $27.6 M

- $46 million in current construction contracts
- Primarily Refurbishment & Replacement due to end of service life
- Flexibility/reliability under varying supply source and demand scenarios



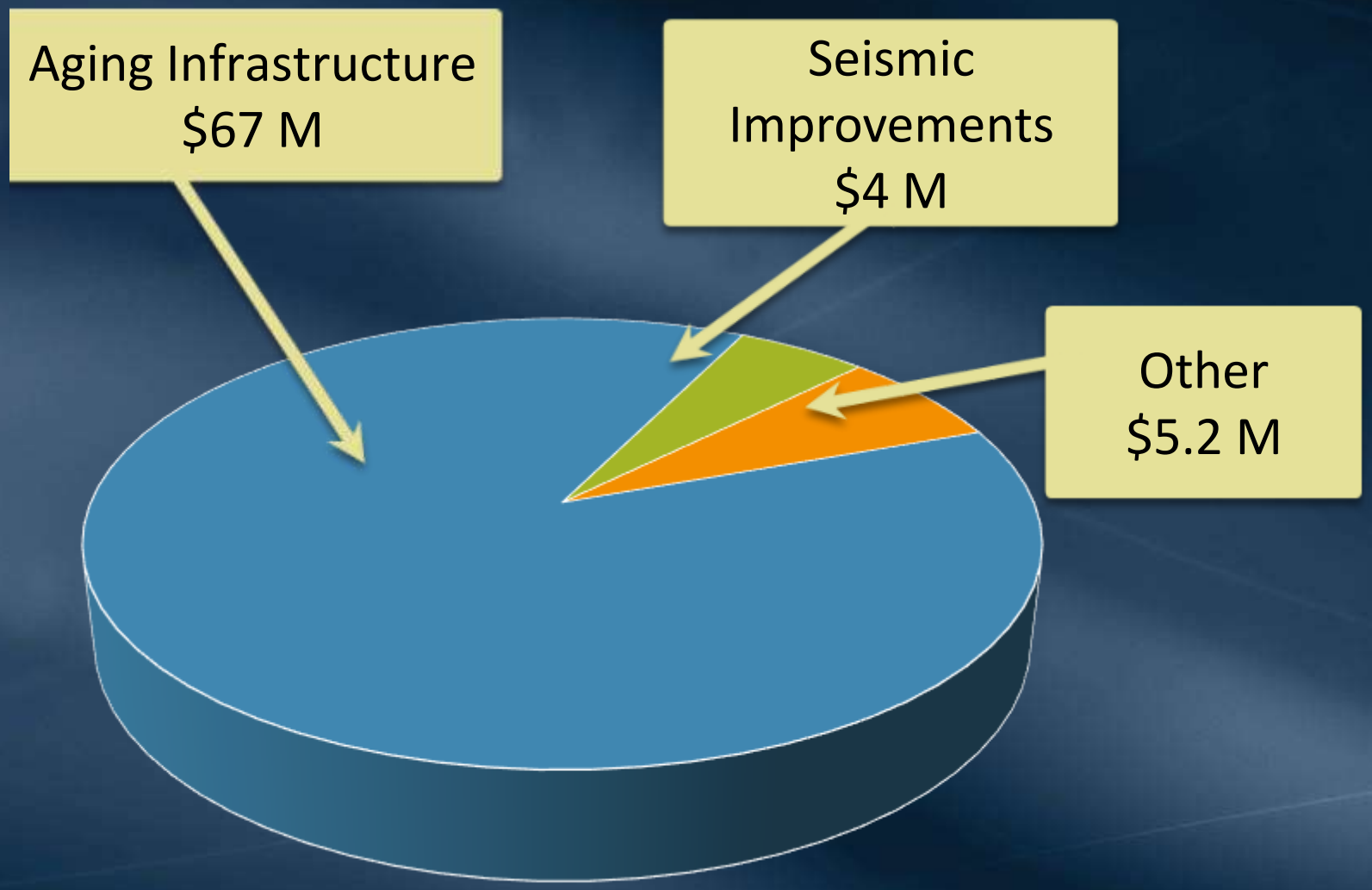
Weymouth Plant 1948

CIP Spending – Treatment Plants



Treatment Plant Reliability

Planned biennial spending



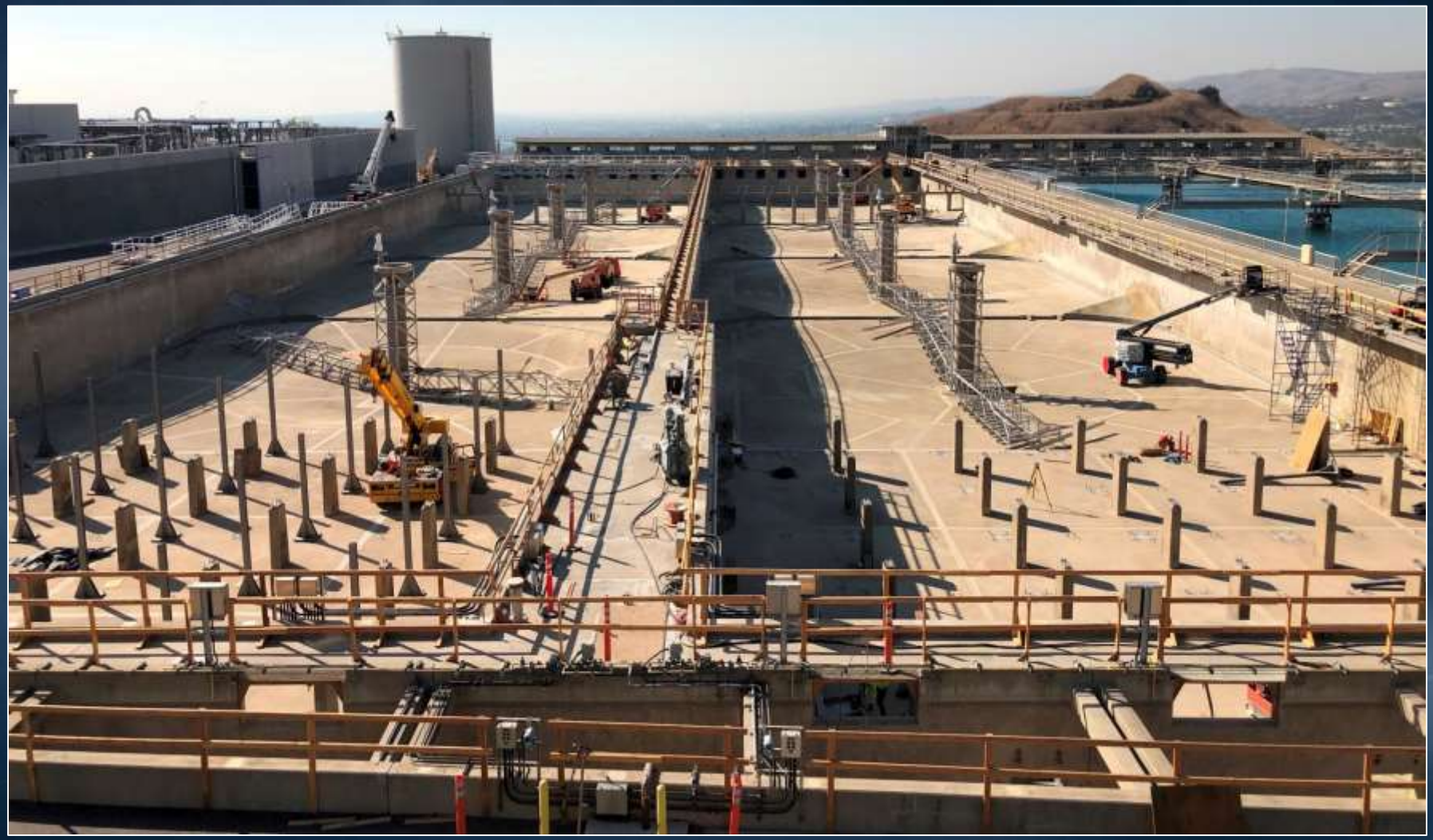
Diemer Basins Rehabilitation

Total Project Estimate - $63.5 M

Biennial Estimate - $14.5 M

Biennial Plan – West:

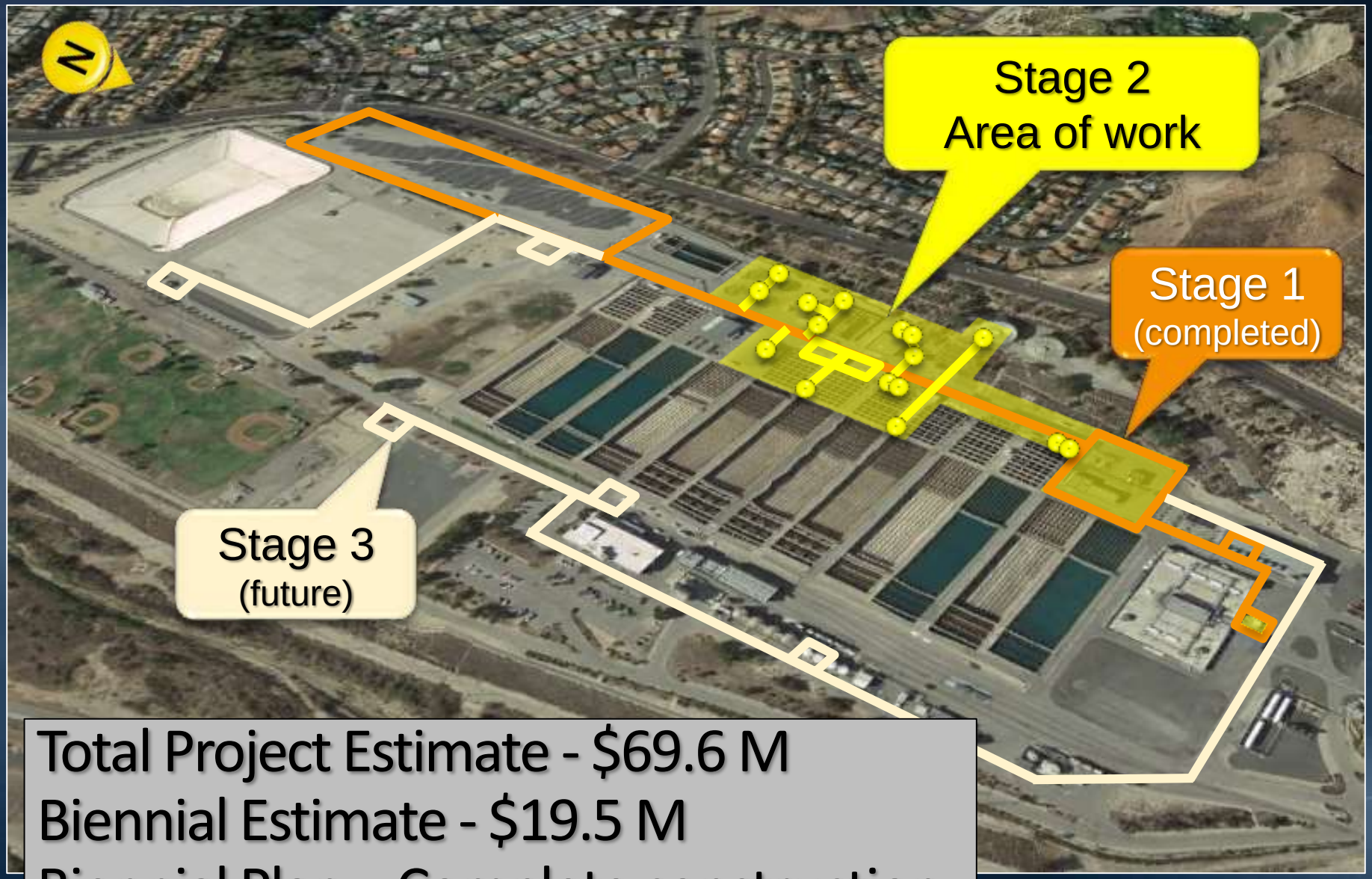
Complete construction



Weymouth Basins 5-8 Refurbishment

Total Project Estimate - $48.5 M
Biennial Estimate - $5.5 M
Biennial Plan – Design

Jensen Plant Electrical Upgrades



Total Project Estimate - $69.6 M
Biennial Estimate - $19.5 M
Biennial Plan – Complete construction

Jensen Ozone Generation System

- Procurement Contract awarded Feb. 2020
- Staging (4 of 5 ozone generators) pending capacity decision

Ozone Generators

Power Supply Unit

Jensen Module Nos. 2 & 3 Flocculator Refurbishment

- Contract awarded May 2019
- Staging Module 1 pending capacity decision

Corroded stub shafts

Broken baffle boards

Proposed CIP for FY 2020/21 - 2021/22
Summary

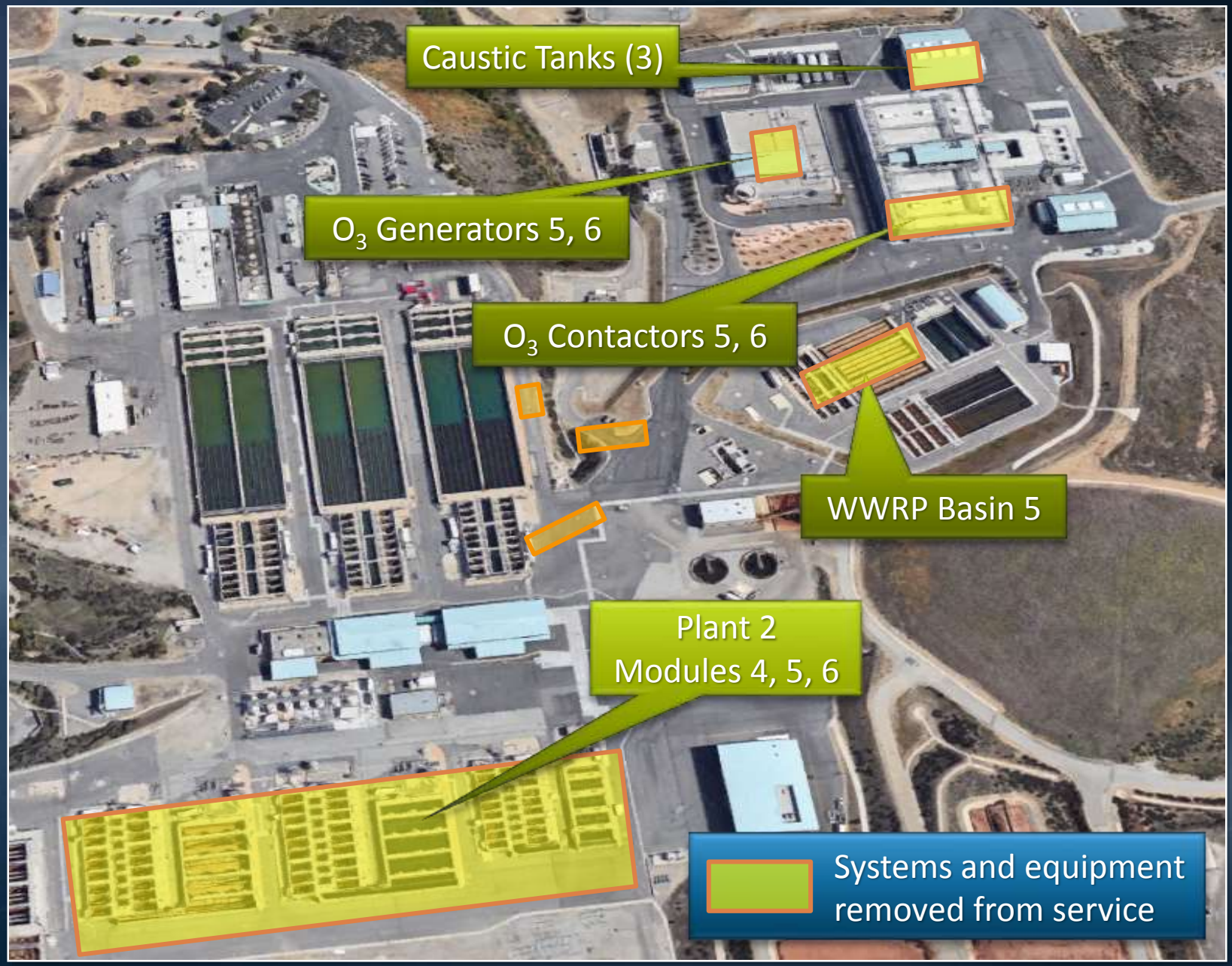
- 2-Year planned spending - $500 million
  - Target = $450 M (90% of planned)
  - Projects identified in the CIP Appendix
- Over 80% proposed for Infrastructure Reliability work
- Prioritized to maintain reliability & comply with regulations
- April E&O action to appropriate biennial funding

Treatment Capacity Considerations For the CIP Development Process

Treatment Plant Capacity Evaluations

Treatment Plant	Capacity	Revised Capacity
Mills	326 MGD	220 MGD
Skinner	630 MGD	350 MGD
Jensen	750 MGD	Study Underway
Weymouth	520 MGD	No Change
Diemer	520 MGD	No Change

Skinner Plant 2 Decommissioning



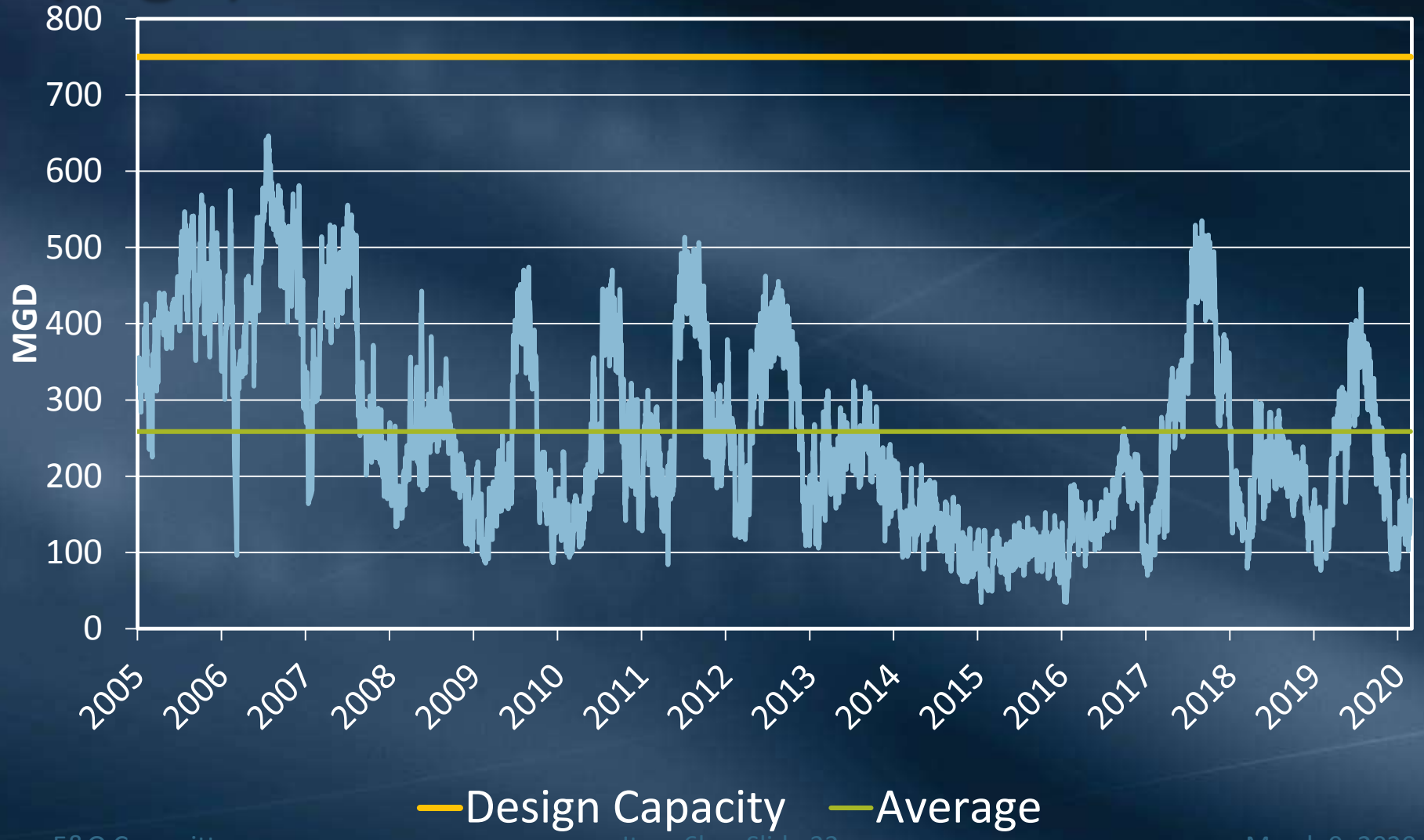
Capital Improvement Projects Avoided at Skinner Plant Over Next 30-years

Project Type	Cost ($)
Instrumentation	1,541,000
Control System	2,092,000
Mechanical/Electrical	7,935,000
Filters	6,560,000
Piping	872,000
Total	**19,000,000**

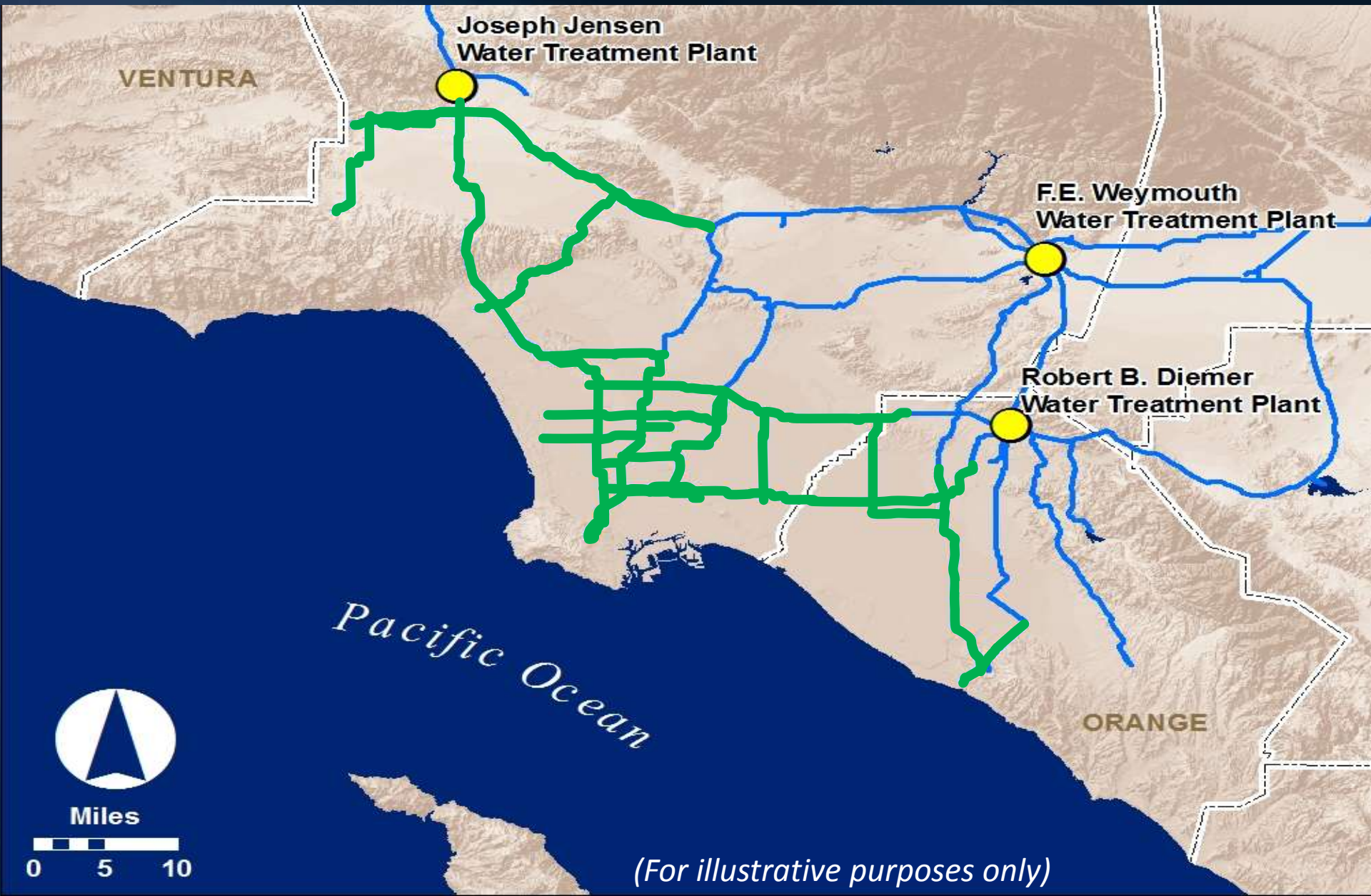
Jensen Plant Capacity Evaluation

- Jensen is the largest treatment plant at 750 MGD
- Only MWD treatment plant that delivers SWP West Branch water
- Can serve a significant portion of the Common Pool

Historical Jensen Peak Daily Flows (mgd)



Jensen Service Area – Maximized



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Next Steps

- Coordinate with member agencies and update Jensen plant demand projections
- Continue to evaluate feasibility and cost savings for reducing Jensen capacity
- Develop recommendations for Board and Member Agencies


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