

# PATTERSON PASS WATER TREATMENT PLANT UPGRADES AND OZONATION PROJECT



Zone 7 Board  
of Directors  
Meeting

Project Overview  
and  
Award of  
Construction Phase  
Contracts

February 6, 2019

# Agenda

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## ➤ **Project overview**

- ▶ Objectives, scope, and benefits
- ▶ Major facilities
- ▶ Schedule
- ▶ Costs and funding

## ➤ **Construction phase contracts recommended for award**

- ▶ Construction contract
- ▶ Construction management services
- ▶ Engineering support services
- ▶ Environmental support services



# Project Overview

<b>Project:</b>	<b>PPWTP Upgrades &amp; Ozonation Project</b>
<b>Objectives:</b>	<ul style="list-style-type: none"><li>• Improve treated water quality and plant reliability</li><li>• Increase plant capacity to 24 MGD</li><li>• Increase treated water storage capacity an additional 5 MG</li><li>• Replace or upgrade many major plant components that are reaching the end of their useful life</li></ul>
<b>Scope:</b>	<ul style="list-style-type: none"><li>• Construction of new facilities including an ozone generation building, contactor structures, filters, chemical storage and feed facilities, a 5 MG treated water storage tank, and a pump station</li><li>• Demolition and modification of existing facilities including UF facilities, clarifiers, washwater recovery ponds, chemical facilities, and access road</li></ul>
<b>Construction Schedule:</b>	Begin construction March 2019, complete in April 2022
<b>Cost &amp; Funding Sources:</b>	Approximately \$110 million for planning, design, and construction; funded by water rates, new connection fees, and bonds (\$19 million)
<b>Operating Cost:</b>	Approximately \$980,000 net increase in annual operating and maintenance costs to operate ozone system and pump station; some of the increased energy and chemical costs offset by cost savings in reduction of other chemicals and residuals handling

# Benefits of Ozone Treatment



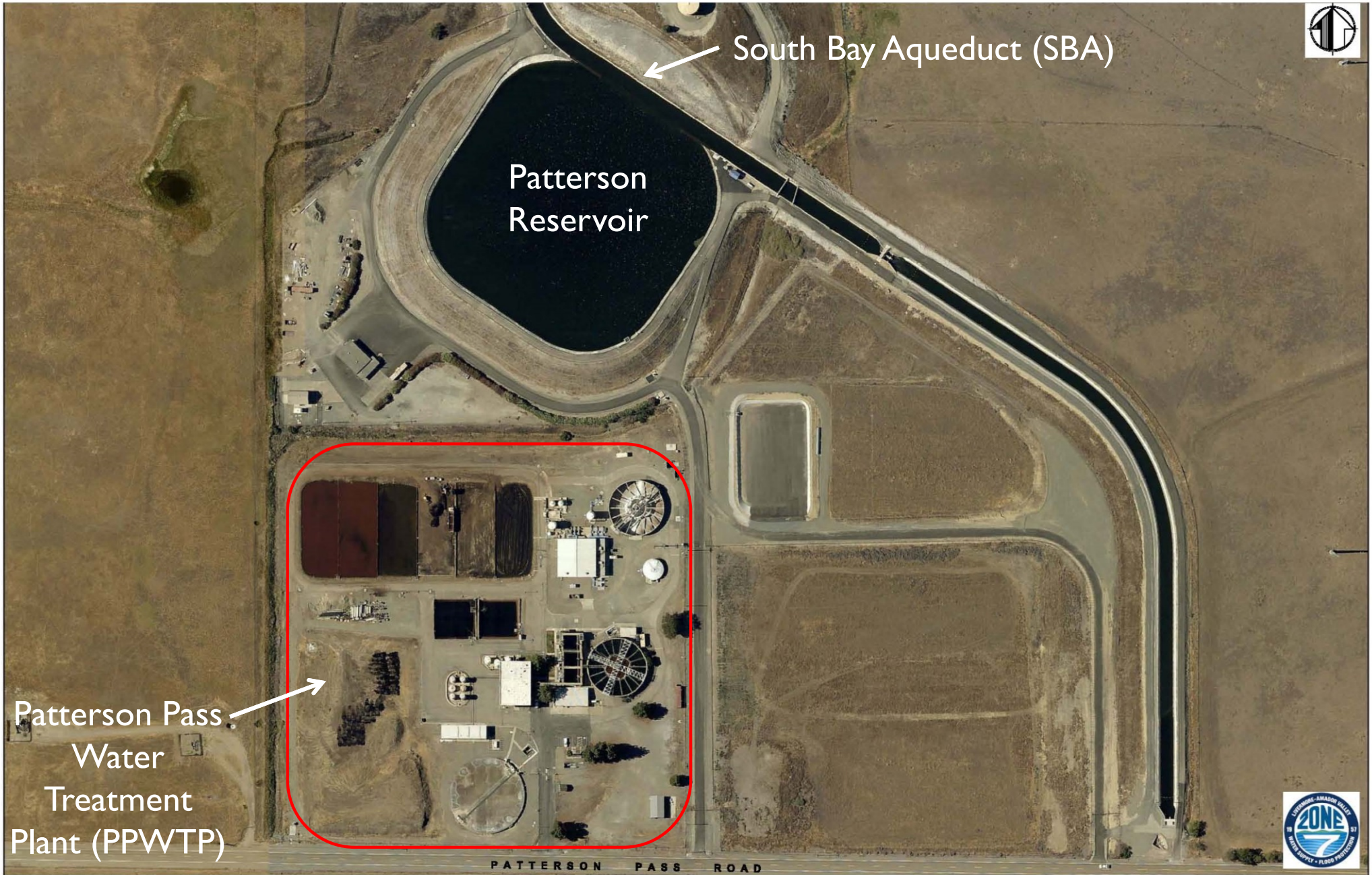
## Zone 7 Mission Statement:

*“...committed to providing a reliable supply of high quality water... in a fiscally responsible, innovative, proactive, and environmentally sensitive way.”*

1. More effective disinfection
  - ▶ Better at treating organic matter than chlorine
2. Reduces potentially harmful Disinfection By-Products (DBPs)
3. Enhances water treatment process
  - ▶ Reduces coagulant use
  - ▶ Reduces sludge handling costs
4. Most effective treatment for Contaminants of Emerging Concern (CECs)
  - ▶ Cyanotoxins, endocrine disruptors, and pharmaceuticals
5. Most effective treatment for Taste and Odor (T&O) causing compounds



# Plant Site



South Bay Aqueduct (SBA)

Patterson Reservoir

Patterson Pass Water Treatment Plant (PPWTP)

PATTERSON PASS ROAD

**PATTERSON PASS WATER TREATMENT PLANT**  
**ZONE 7 WATER AGENCY**

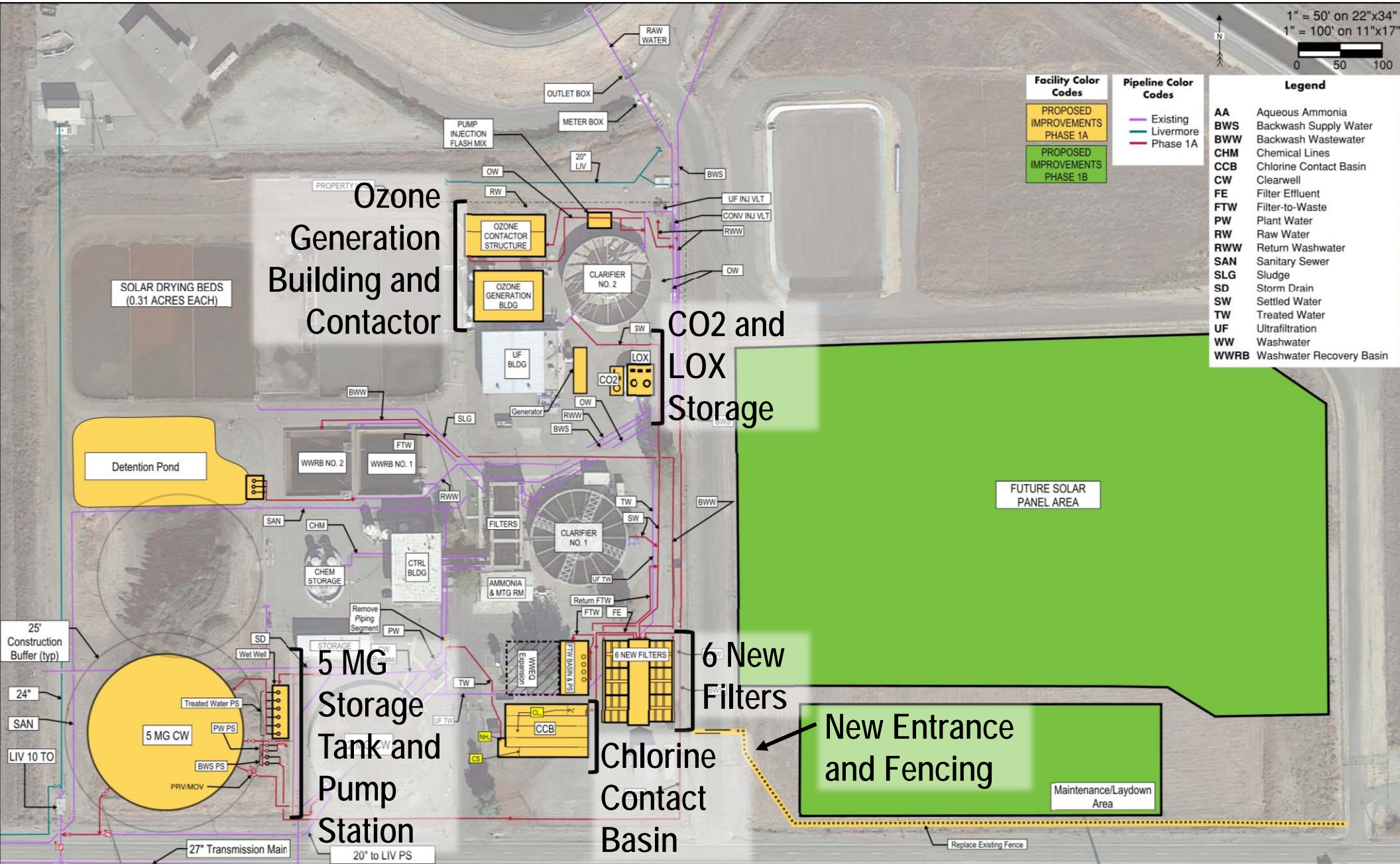


DATE: OCTOBER 21, 2015  
BY: GENE BRIONES

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# Project Facilities





# Project Artistic Rendering

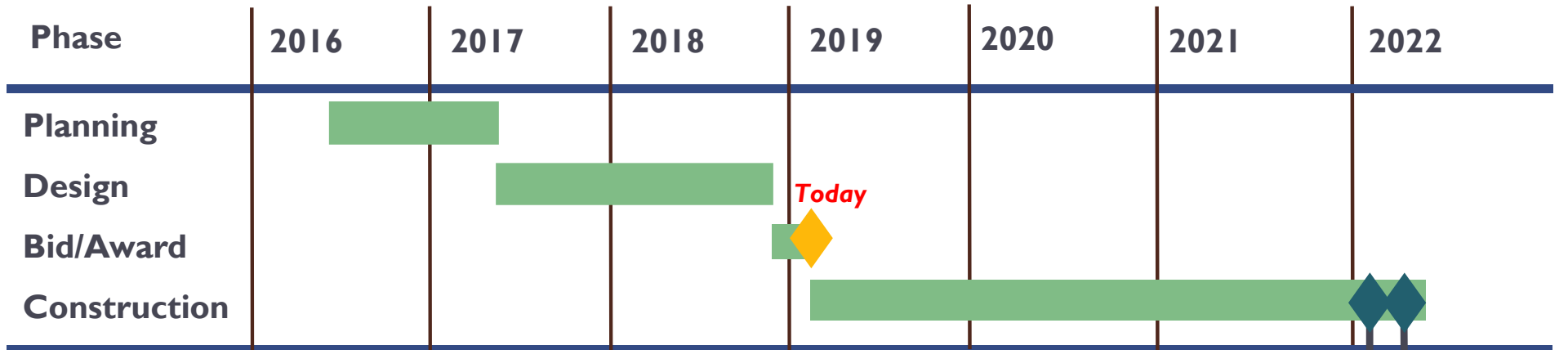


**Current View** (June 2018)



**Artistic Rendering of Proposed Project**

# Project will be in Service in Spring 2022



## Key Project Milestones:

Award of Planning/Design Phase Contracts	Apr. 2016
Design Contract Amendment to Add Ozone	Dec. 2016
Adoption of Final CEQA Document	Sept. 2018
Design Completion	Nov. 2018
Bid Opening	Jan. 15, 2019
<b>Award of Construction Phase Contracts</b>	<b>Feb. 6, 2019</b>
Substantial Completion	Early 2022
Final Completion	Spring 2022

Substantial  
Completion

Final  
Completion





# Total Project Costs by Fund

Total Project Costs by Fund				
Project	Fund 120*	Fund 130**	Total	Comments
PPWTP Upgrades	\$19.5M	\$45.5M	\$65M	100% funded with available fund balance
PPWTP Ozonation	\$22.5M	\$22.5M	\$45M	\$19M of Fund 120's construction phase costs is funded from bond proceeds.
<b>Totals</b>	<b>\$42M</b>	<b>\$68M</b>	<b>\$110M</b>	Includes planning, design, and construction

Fund Split		
Project	Fund 120	Fund 130
PPWTP Upgrades	30%	70%
PPWTP Ozonation	50%	50%

- Funds are available in Fund 120 and Fund 130 for these projects, and fund balances are projected to be in compliance with the Board-approved reserve policy requirements after the funds are expended/projects completed.

➤ \* Fund 120 – Water Enterprise Capital Renewal/Replacement and System-Wide Improvements Fund

\*\* Fund 130 – Water Enterprise Capital Expansion Fund



# Fund 120\* Fund Balance

Fund 120 Component	Balance on June 30, 2018	Purpose
Debt Rate Stabilization Reserve	\$6,300,000	Debt rate stabilization (not available to fund capital projects)
Capital Projects Available Fund Balance	\$35,027,349	Water system renewal, replacement, and improvement program
<b>Total Fund Balance</b>	<b>\$41,327,349</b>	

Major Projects Funded from the Capital Projects Available Fund Balance through FY 2021/22	
DVWTP Ozonation Project (non-bond share)	\$11.0M
PPWTP Upgrades Project	\$19.5M
PPWTP Ozonation Project (non-bond share)	\$3.5M
<b>Total</b>	<b>\$34M</b>

- Fund 120 has an additional \$57M from water revenue bonds to finance the DVWTP and PPWTP Ozonation projects. The remaining ozone project costs are funded from the Capital Projects Available Fund Balance.
- Other Renewal/Replacement and System-Wide Improvements projects are funded by Board-approved Asset Management Program annual funding (~\$12M/yr).

# Fund 130\* Fund Balance (Restricted)

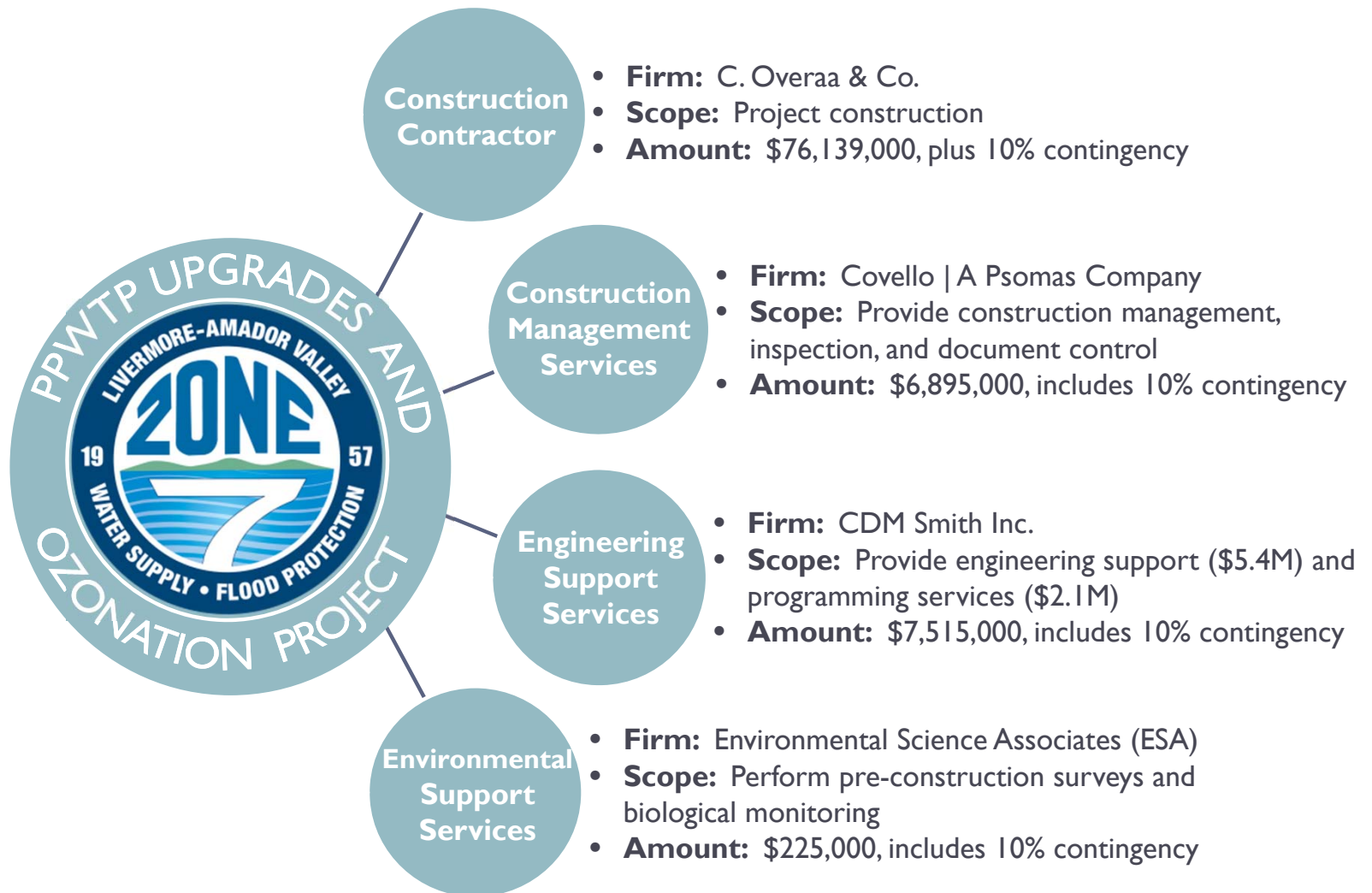
Fund 130 Component	Balance on June 30, 2018	Purpose
SBA Enlargement Sinking Fund	\$11,423,181	Funds debt service payment after build-out
Future Contractor's Share Sinking Fund	\$3,369,632	Funds annual payment after build-out
Debt Rate Stabilization Reserve	\$2,300,000	Debt rate stabilization (not available to fund capital projects)
Capital Projects Available Fund Balance	\$81,407,872	Water enterprise capital expansion projects and water purchases
<b>Total Restricted Fund Balance</b>	<b>\$98,500,685</b>	

Major Projects Funded from the Capital Projects Available Fund Balance through FY 2021/22	
PPWTP Upgrades Project	\$45.5M
PPWTP Ozonation Project (non-bond share)	\$22.5M
<b>Total</b>	<b>\$68.0M</b>

- Other Expansion projects are funded from annual connection fee revenue (~\$35M/yr).
- Annual debt payments for State Water Project and Cawelo total \$20M.



# Project Team for Successful Project Completion



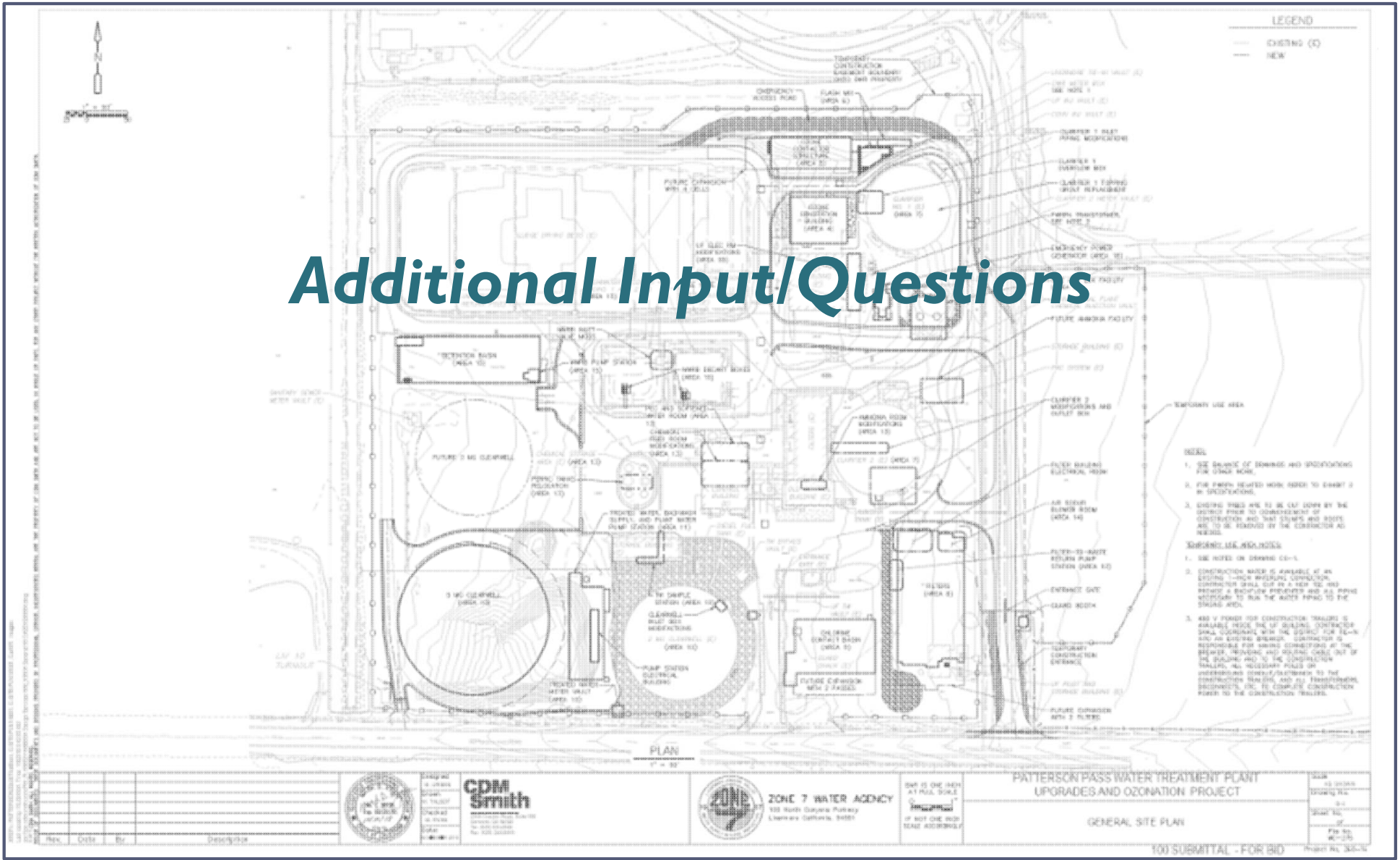
# Next Step – Adopt Four (4) Resolutions

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- Approve the plans, specifications, appendices, and addenda for the PPWTP Upgrades and Ozonation Project
- Accept Overaa's bid
- Appropriate \$19,078,361 in the FY 2018-19 budget from Fund 120 and Fund 130 for the PPWTP Upgrades and Ozonation Project
- Authorize the General Manager to:
  - ▶ Award the construction contract to Overaa for \$76,139,000, and execute change orders as and when needed in an amount not to exceed 10% of the construction contract amount
  - ▶ Negotiate, execute, and amend as necessary, a professional services agreement with CDM Smith for engineering support services in an amount not-to-exceed \$7,515,000, which includes 10% contingency
  - ▶ Negotiate, execute, and amend as necessary, a professional services agreement with Covello for construction management services in an amount not-to-exceed \$6,895,000, which includes 10% contingency
  - ▶ Negotiate, execute, and amend as necessary, a professional services agreement with ESA for environmental support services in an amount not-to-exceed \$225,000, which includes 10% contingency



# Additional Input/Questions



Thank you