



Subcommittee on Pure Water Southern California
and Regional Conveyance

Pure Water Southern California Quarterly Update

Item 3b

September 26, 2023

Pure Water
Southern California
Outline



- Demonstration Testing
 - Tertiary and Secondary MBR Testing
 - Transitions and Future Testing
 - California Draft DPR Regulations
 - Ongoing Partnerships
- Program Updates
 - Planning & Preliminary Design
 - Larger Backbone Pipeline Alternative
 - Schedule Update
 - Program Outreach
 - Funding Opportunities
 - Next Steps



Demonstration Testing

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Demonstration
Facility

Tertiary MBR Testing
2019-2021

*Tertiary MBR treats
Secondary Effluent*

Tertiary MBR Testing Achievements

- Validated increased pathogen credit through MBR
- Demonstrated a feasible tMBR-based treatment train



Analytical expertise developed



*Final Draft Report submitted
Regulatory feedback anticipated in 2023*

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Secondary MBR Testing
2022-2023

*Secondary MBR treats
Primary Effluent*

Secondary MBR Testing Completed

- Demonstrated robustness to meet requirements for groundwater recharge
- Pathogen monitoring and analysis used approved approach to demonstrate enhanced removal
- Report development and data analysis underway



Maintenance



Monitoring



Testing

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Facility

Transition to tMBR Optimization and Preparing for DPR

- O&M/testing "ownership" shifted to Metropolitan staff
- Critical maintenance planned with plant shutdown Nov 2023
- Startup in Dec 2023 for tMBR optimization
- Studies ongoing to support future DPR integration

Focus of future testing:

Optimize tMBR Trains

- (1) nitrifying/denitrifying
- (2) nitrifying-only

Evaluate DPR Treatment

- (1) bench-scale testing
- (2) pilot- & demo-scale testing



Metropolitan Demo Facility Staff



Critical Maintenance Needs



Testing for DPR

Direct Potable Reuse (DPR) Regulations



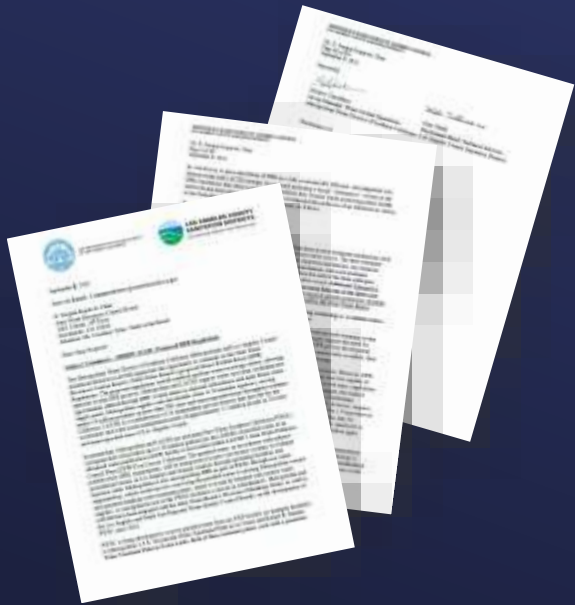
SWRCB Regulatory Activity

- Updated draft DPR criteria released July 21
 - Proposed Regulations and Initial Statement of Reasons
- Workshop held Sept 7
- Submitted joint comment letter with LACSD
- Final regulatory actions anticipated by end of 2023
 - Potential action to adopt at Dec 22 SWRCB meeting
 - Estimated effective date mid-2024



Metropolitan participating in SWRCB public hearing on Proposed DPR Regulations

Direct Potable Reuse (DPR) Regulations



Key Needs in Joint DPR Comment Letter

- **Flexibility** for diverse DPR projects
- Validated **online monitoring** technology
- **Emerging constituents** standardized monitoring **framework** created by a Science Advisory Panel
- **Accommodation** for large regional project **partnerships** in the “Joint Plan”
- **Reasonable** and **feasible** monitoring and reporting **requirements**

Pure Water Southern California Demonstration Facility

Continuing to work with
internal and external partners



Ongoing Partnerships and Collaboration

- LACSD providing
 - Biological treatment guidance
 - Labor for the upcoming shutdown
 - tMBR optimization test plan development
- SNWA providing key guidance on DPR research
- Panel feedback incorporated into testing/report
- Engaged in Water Research Foundation SoCal Reuse Workshop on Sept 14 for industry knowledge sharing



LACSD technical guidance and training



Presenting during WRF Reuse Workshop



Program Updates

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Program Updates

Current Planning Activities

- Sequencing & Implementation Schedule
- AWT facility site plan & conceptual facilities plan
- SCE coordination for power requirements
- LACSD nitrogen mgmt strategies/facilities plan
- DPR literature review & bench-scale testing
- Sustainable design/Envision training

Preliminary Design of Initial Pipelines

- Conducting field investigations & preliminary design activities for initial pipeline reaches through the cities of Carson, Long Beach & Lakewood



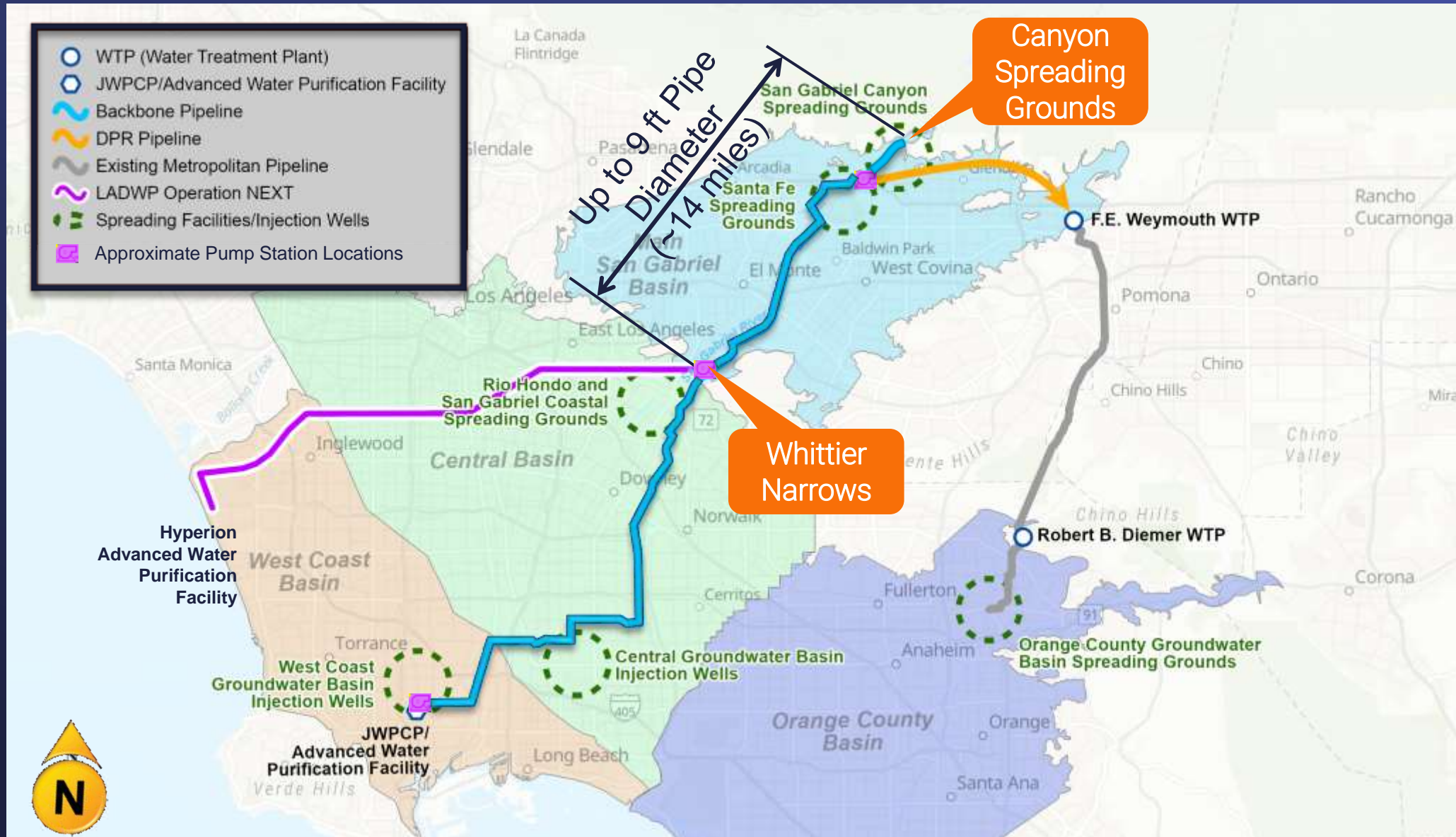
- Coordinating with permitting agencies for pipeline alignment (i.e., Army Corps, Caltrans, Edison, etc.)
- Received approval from Long Beach City Council on pipeline alignment

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Regional
Integration

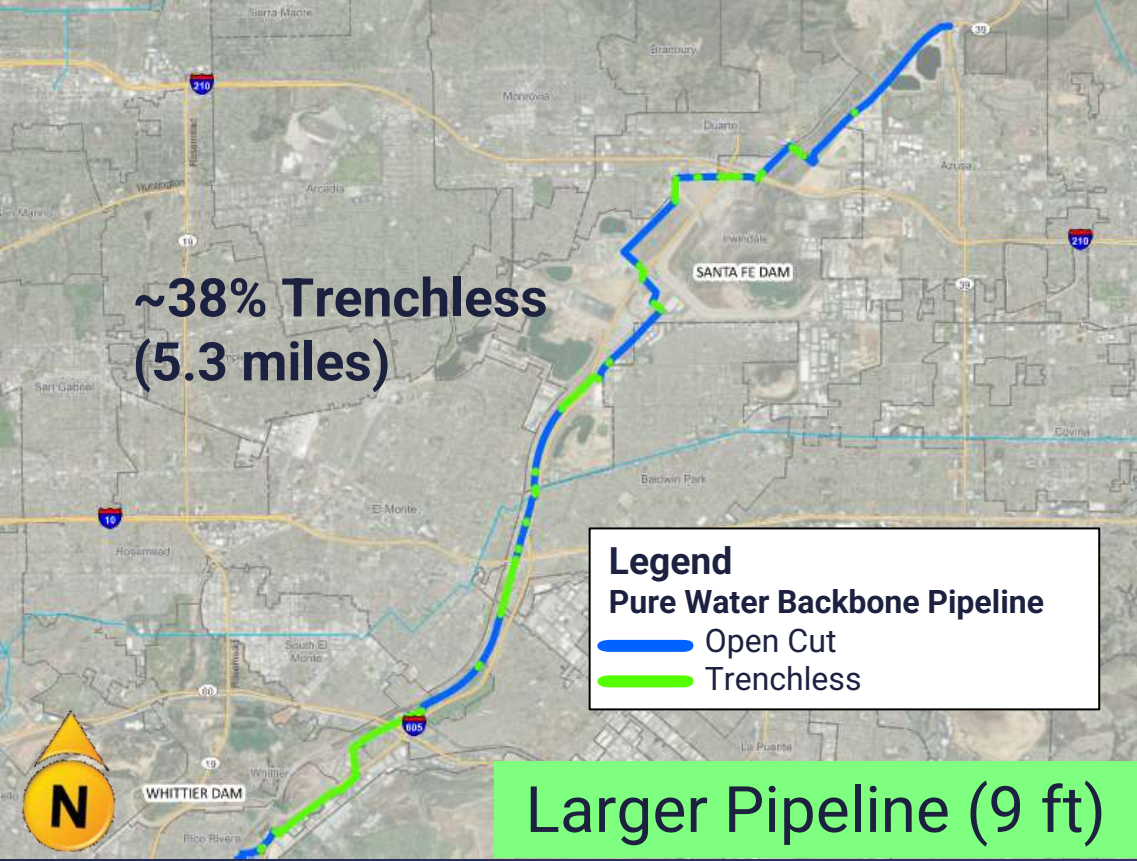
Development of Larger Pipeline Alternative

- Allow for flexibility & potential connection with Operation NEXT
- Analyze upsized backbone piping
 - Up to 9-ft diameter
 - Between Whittier Narrows and Canyon Spreading Grounds (approx. 14 miles)
 - 300 mgd combined conveyance capacity between OpNEXT & PWSC
- Revise technical studies to address potential environmental impacts
- Conduct CEQA project-level analysis

Upsizing Pipeline for Potential Future Flows



Change in Construction Methods for Pipeline Upsizing

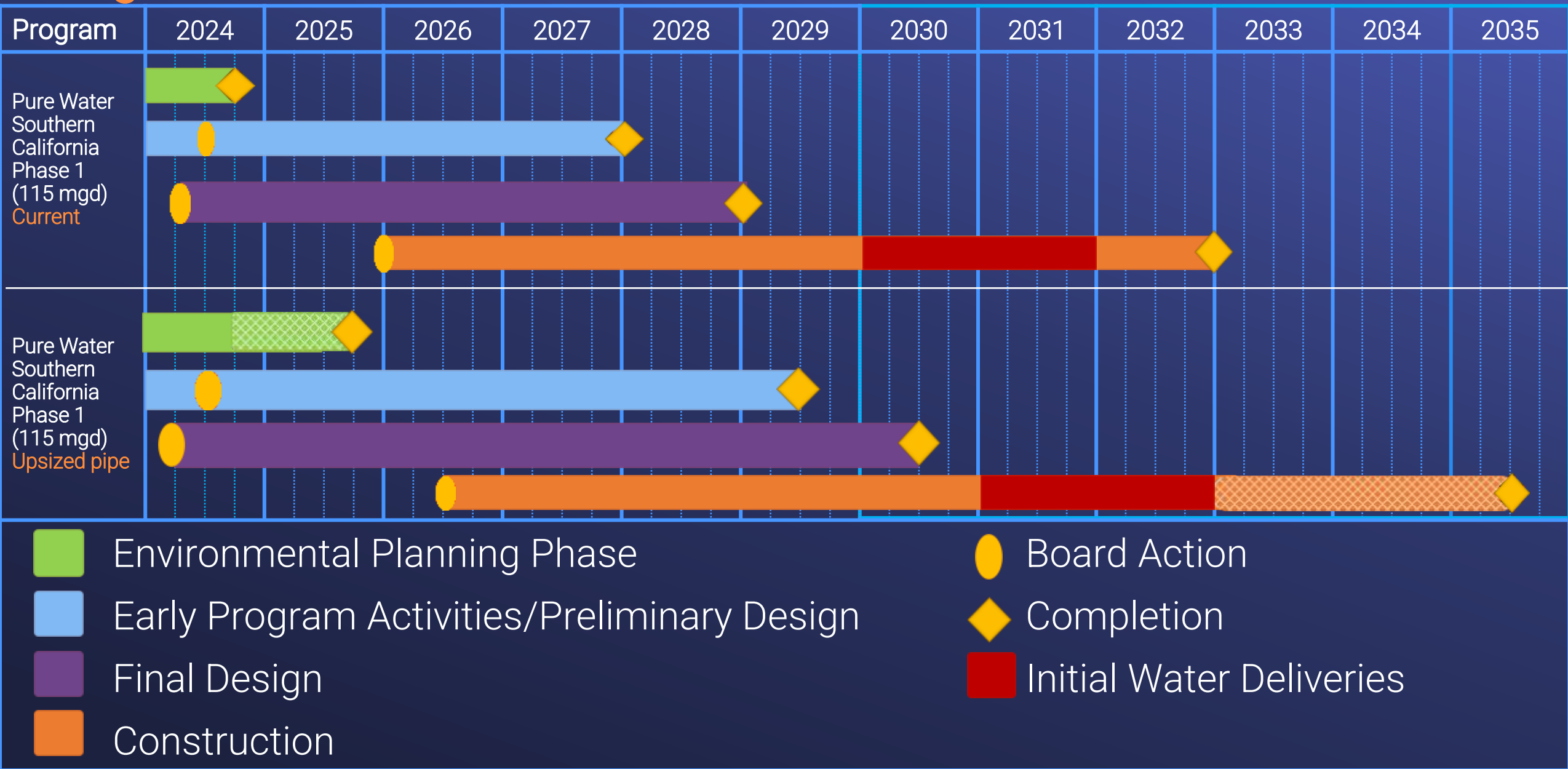


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Upsizing
Pipeline for
Potential Future
Flows

Additional CEQA/Planning Work for Upsized Pipeline Alternative

- Revise CEQA documents
- Revise conceptual design
- Additional planning costs (\pm \$3M)
- CEQA schedule extension (9-12 months)

Program Schedule



Program Outreach Events

Pure Water Southern California Outreach Activities



Pure Water Southern California Funding

Outside Funding & Agency Contributions

- \$82M outside funding received to date
- \$8.2M partner contributions received to date
- Upcoming funding opportunities
 - WaterSMART \$5M grant - awaiting confirmation
 - USBR Large Scale Water Recycling Program
 - Proposed 2024 Climate Bond - \$1.8B for recycled water



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Next Steps

Upcoming Work

- Update environmental documentation
- Continue pipeline preliminary design
- Prepare Conceptual Facilities Plan
- Submit SCE Method of Service application
- Continue community & agency outreach
- Continue work at demonstration plant

