



Stakeholder Engagement Group Meeting

December 3, 2024



Welcome

Pure Water Los Angeles Partnership



**Los Angeles Department of Water & Power
(LADWP)**



**Los Angeles Sanitation & Environment
(LASAN)**

Team Introductions

Los Angeles Department of Water & Power (LADWP)



**Rafael
Villegas**
Program
Manager



**Johan
Torroledo**
Waterworks
Engineer



**Ben
Tanimoto**
Waterworks
Engineer



**Hubertus
Cox**
Program
Manager



**Charles
Senaya**
Program
Planning



**Christina
Jones**
Program
Management

Los Angeles Sanitation & Environment (LASAN)

Meeting Objectives

Provide an Overview of:

- Pure Water Los Angeles, including the vision and the LASAN/LADWP partnership.
- Federal and state regulations for purified recycled water.
- Early planning stages of the program, including the master plan and its foundational approach.
- Timeline and intent for future public involvement, including the CEQA process.

Engage and Collect Input:

- Time for stakeholders to ask questions, with acknowledgment that some answers may still be under study.
- Topics and questions community members and other stakeholders will be interested in knowing more about.
- Effective methods for involving community members and stakeholders and preferred communication methods.

Agenda

1:00 – 1:05 pm	Welcome and Introductions
1:05 – 1:10 pm	Meeting Objectives, Guide for Productive Meetings, and Agenda
1:10 – 1:20 pm	Engagement Activators
1:20 – 1:50 pm	Pure Water Los Angeles Overview Presentation
1:50 – 2:10 pm	Q&A
2:10 – 2:50 pm	Breakout Discussions
2:50 – 3:00 pm	Next Steps, Wrap-Up and Thank You
3:00 – 4:00 pm	Optional Hyperion Water Reclamation Plant Tour

Our Guide for Productive Meetings



Join the conversation, use the different tools to share your thoughts



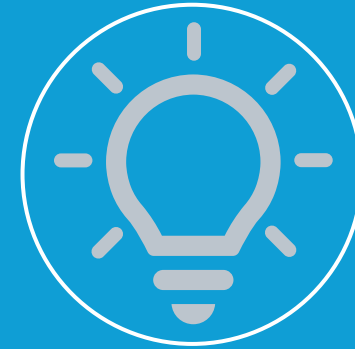
Help to make sure that everyone has equal time to contribute



Keep input concise and focused so that others have time to participate



Actively listen to others to understand their perspectives



Offer ideas to address others' questions and concerns



Los Angeles' Water Supply

SOURCES

Historical Imports

- Eastern Sierra via the Los Angeles Aqueduct

Imported Purchased Water

- Northern Sierra and Sacramento-San Joaquin Delta via the California State Water Project
- Colorado River via the Colorado River Aqueduct

Local Water

- Local Water Supplies including groundwater, recycled water, and conservation



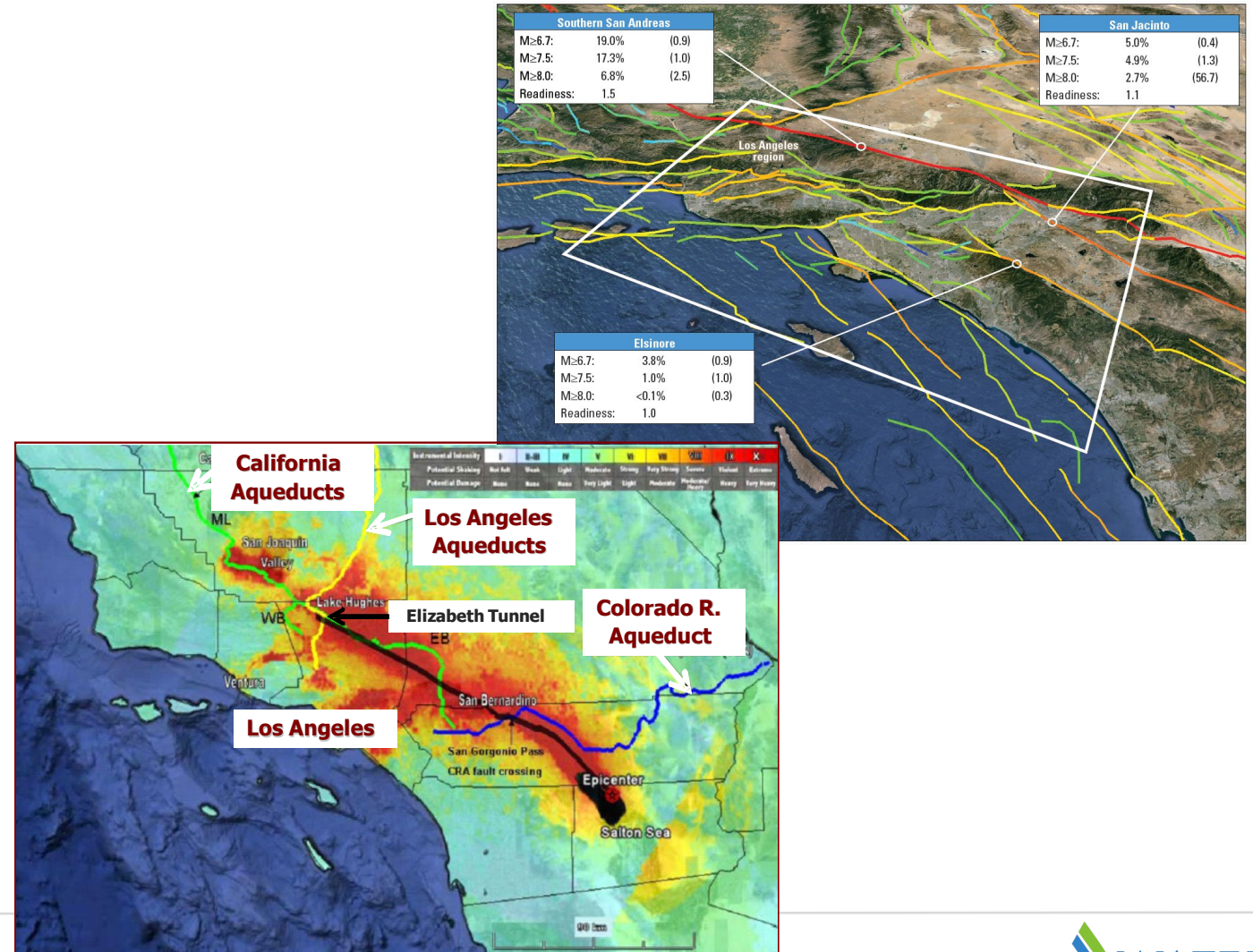
IMPACT



IMPORTED WATER

Seismic Risk

- UCLA Resilient Study for Pure Water Los Angeles (2024) and USGS “ShakeOut” Scenario (2008)
- Not If But When
- Impair all imported supplies to Southern California Region
- Long duration of repair and restoration (12~18months)
- Total regional economic impacts - due to lack of water conveyance up to \$50 billion



LOCAL WATER

Increasing Local Water Supplies



The Pure Water Los Angeles program aims to provide purified recycled water from LASAN's Hyperion Water Reclamation Plant by using advanced treatment and purification processes, which will create a new, sustainable water resource that will diversify the supply for L.A. and the region.



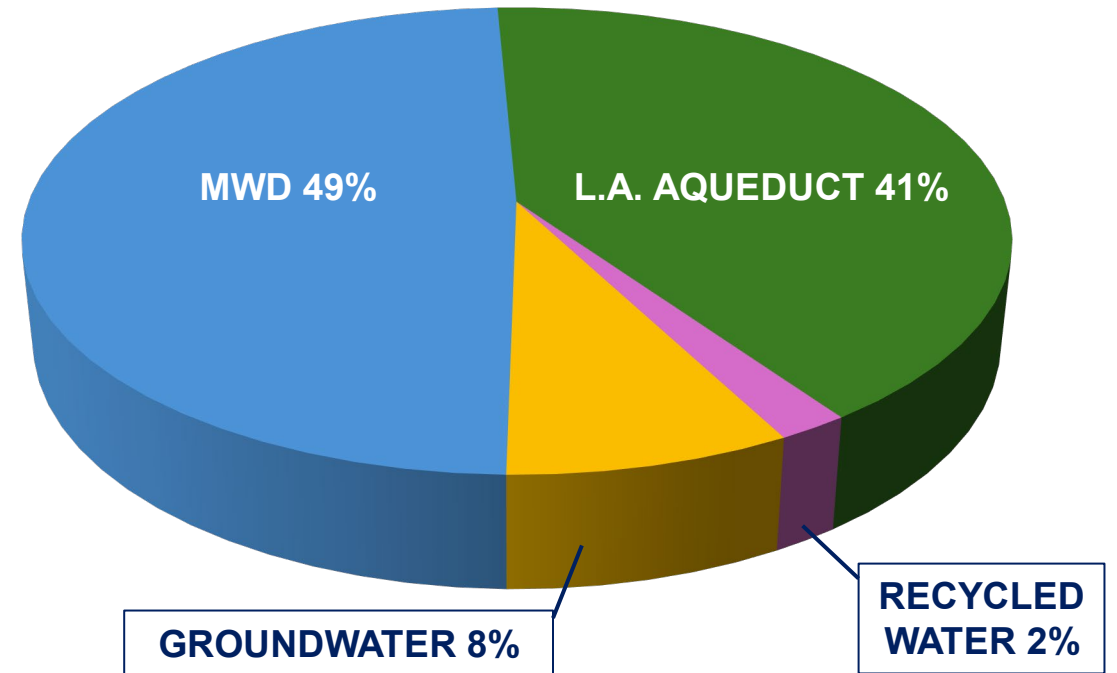
LADWP is forecasting over 70 additional stormwater projects over the next 15 years to double its capacity.



LADWP is remediating the San Fernando Valley Basin, which restores the capacity of the San Fernando Basin as a drinking water source and groundwater storage.

WATER SUPPLY SOURCES

(5-year average, FY 2019 – 2023)



RECYCLED WATER

Recycled Water: **Used water** that is **purified** and may be used again for purposes ranging from irrigation to drinking.

- 1962** – The Los Angeles County Sanitation Districts' Whittier Narrows Water Reclamation Plant becomes the first plan in the U.S. designated to recycle water and recharge groundwater basins.
- 1979** – LADWP began using recycled water to irrigate the Wilson and Harding golf courses in Griffith Park.
- 2006** – LASAN completed its advanced water purification facility at Terminal Island WRP providing 5mgd of recycled water for the Dominguez Gap to prevent saltwater intrusion and protect the groundwater basins.

Other Places Using Recycled Water



Monterey
Indirect Potable
Reuse since 2020



**Orange
County**
Indirect Potable
Reuse since 2008



San Diego
Planning & initial
phases since 2009,
anticipated
operational
2035



Singapore
Indirect Potable
Reuse since 2003



**Queensland,
Australia**
Indirect Potable
Reuse since 2007

CALIFORNIA

INTERNATIONAL

RECYCLED WATER



Pure Water Los Angeles

JOINT VISION & MISSION

Vision Increase and optimize the City's local supplies and support the transition to seventy percent local water by maximizing the production of purified recycled water as part of a diversified water portfolio in an affordable manner to mitigate risks from climate change and ensure an equitable and resilient future for the region.

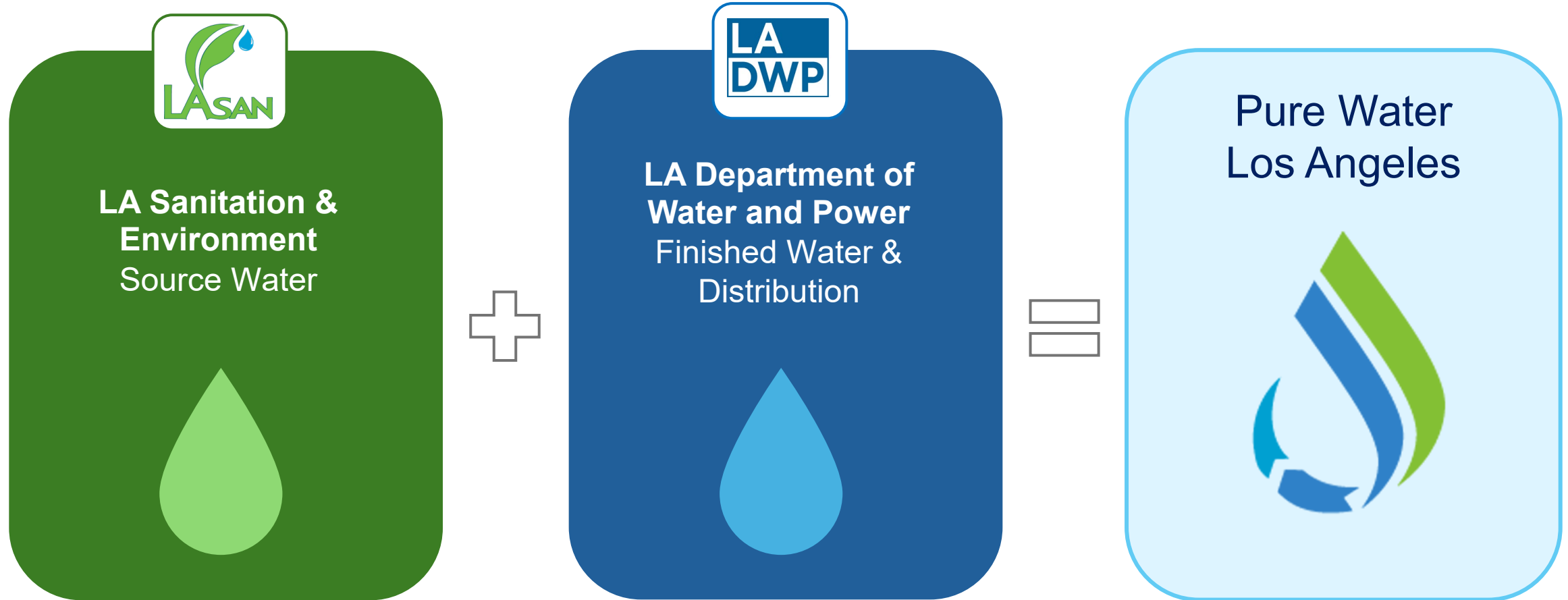
Mission Partner across the region to build and operate a world-class advanced recycled water system, to replenish local groundwater basins and support future direct potable reuse applications.

JOINT GOALS

- Maximize Reuse of Treated Wastewater from Hyperion Water Reclamation Plant to Create a New and Sustainable Local Water Supply
- Construct New and Upgrade Existing City's Infrastructure in a Cost-Effective and Responsible Manner
- Urgently Implement Water Strategies to Diversify Los Angeles' Water Supply Portfolio
- Increase the Resiliency, Reliability, and Sustainability of the City's Wastewater and Water Supply Systems
- Protect Santa Monica Bay and Enhance Ecosystem Health across the LA Basin
- Provide Community & Equity Benefits

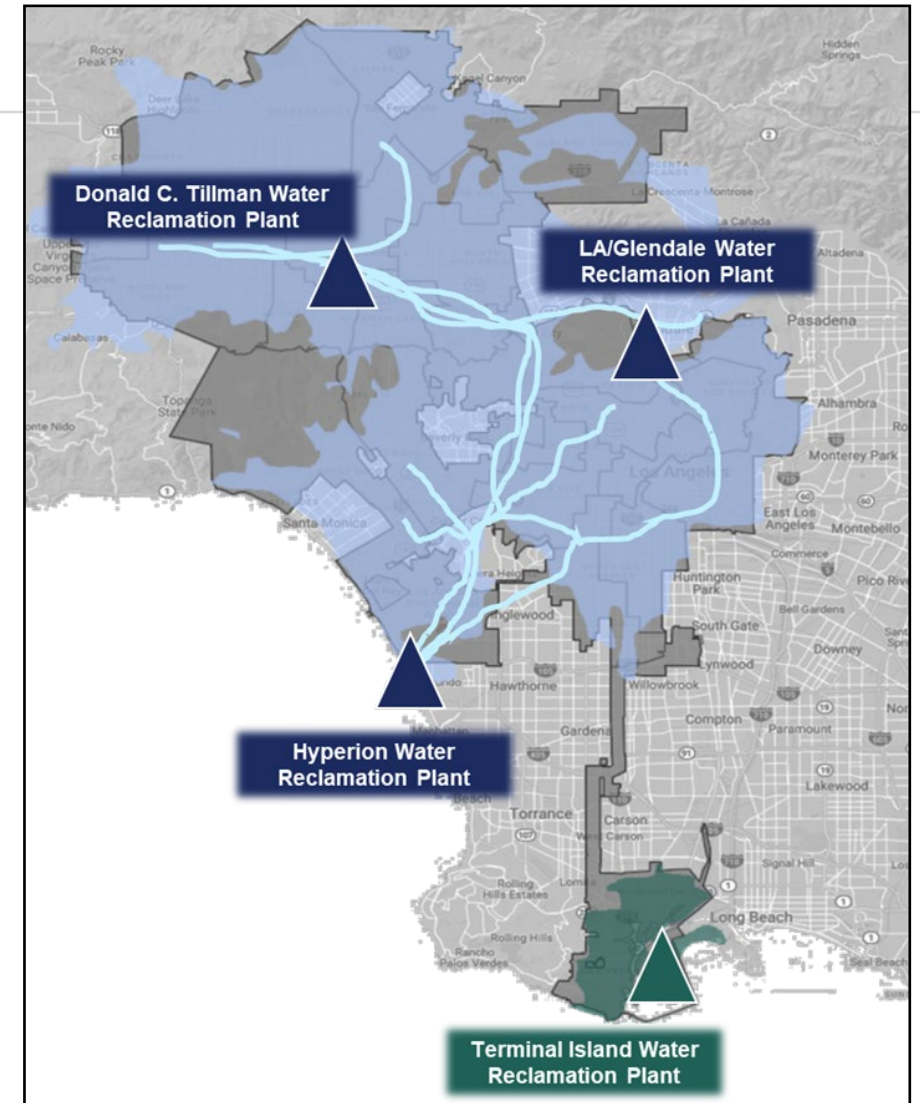
OBJECTIVE

Water Source & Delivery With One Major City Initiative



WASTEWATER SOURCES

Water Reclamation Plant	Average flow (million gallons per day)
Hyperion Water Reclamation Plant	260
Los Angeles - Glendale Water Reclamation Plant	18
Donald C. Tillman Water Reclamation Plant	43
Terminal Island Water Reclamation Plant	12
Total	333



PLANNING EFFORTS

Hyperion Program Implementation Plan (PIP)

Key questions:

- Can we convert Hyperion from secondary treatment to advanced water purification?
- How would the transformation of Hyperion be implemented?

Key assumptions:

- Maximize recycled water at Hyperion
- All processes to be at Hyperion
- Phased approach of Indirect Potable Reuse first, followed by Direct Potable Reuse

Status:

- Four years of engineering analyses completed in October 2024
- Over 25 technical memos and 70 workshops by LASAN, LADWP and others
- 2020-2021 Hyperion 2035 Advisory Group

PLANNING EFFORTS

Hyperion Implementation: three phases

Phase 1: Foundational infrastructure and initial water production

Phase 2: Expansion of treatment, increased water production

Phase 3: Complete build out, maximization of water production

Final configuration and capacity of advanced treatment depends on CEQA, regional partnerships and LADWP's Master Plan



PLANNING EFFORTS

Current Projects at Hyperion Play a Critical Role



Hyperion Advanced Water Purification Facility

- Proof of Concept
- Construction completed
- Water delivery to LAX anticipated early 2025



Membrane Bioreactor Pilot Facility

- Regulatory acceptance and research
- Construction completed
- Testing to begin Spring 2025

BENEFITS

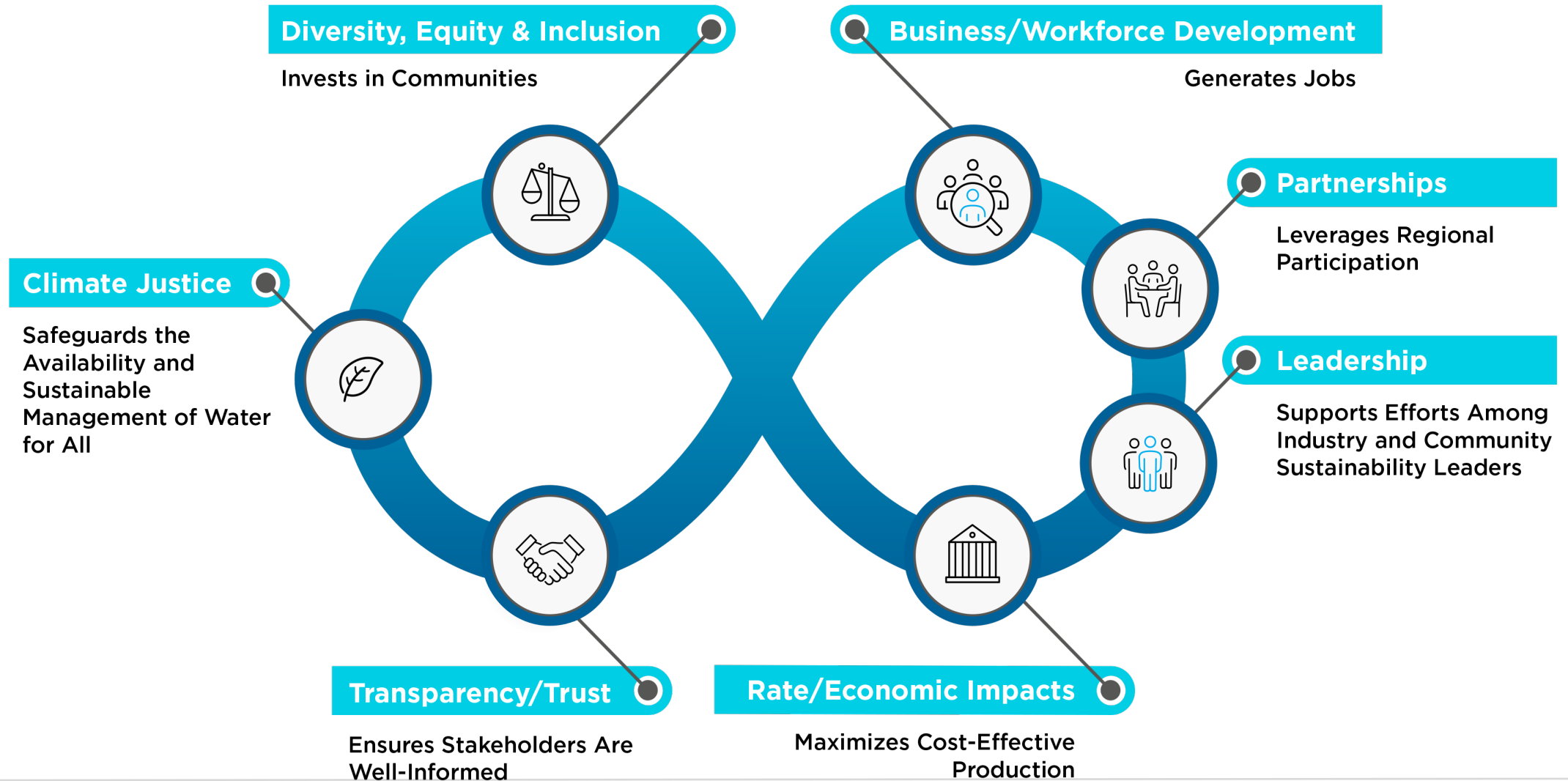
Santa Monica Bay

Use of Membrane Bioreactor (MBR) instead of existing secondary treatment process at Hyperion, provides two major benefits:

- **Cleaner water for subsequent purification**
- **Reduction of pollutants discharged:**
 - Nitrogen 86%
 - Solids 79%
 - Biochemical Oxygen Demand 96%



ADDITIONAL BENEFITS



SUPPLY MANAGEMENT

Holistic Approach to Water Management



ALTERNATIVES

Master Plan Approaches and Alternatives

Approach I: Full IPR

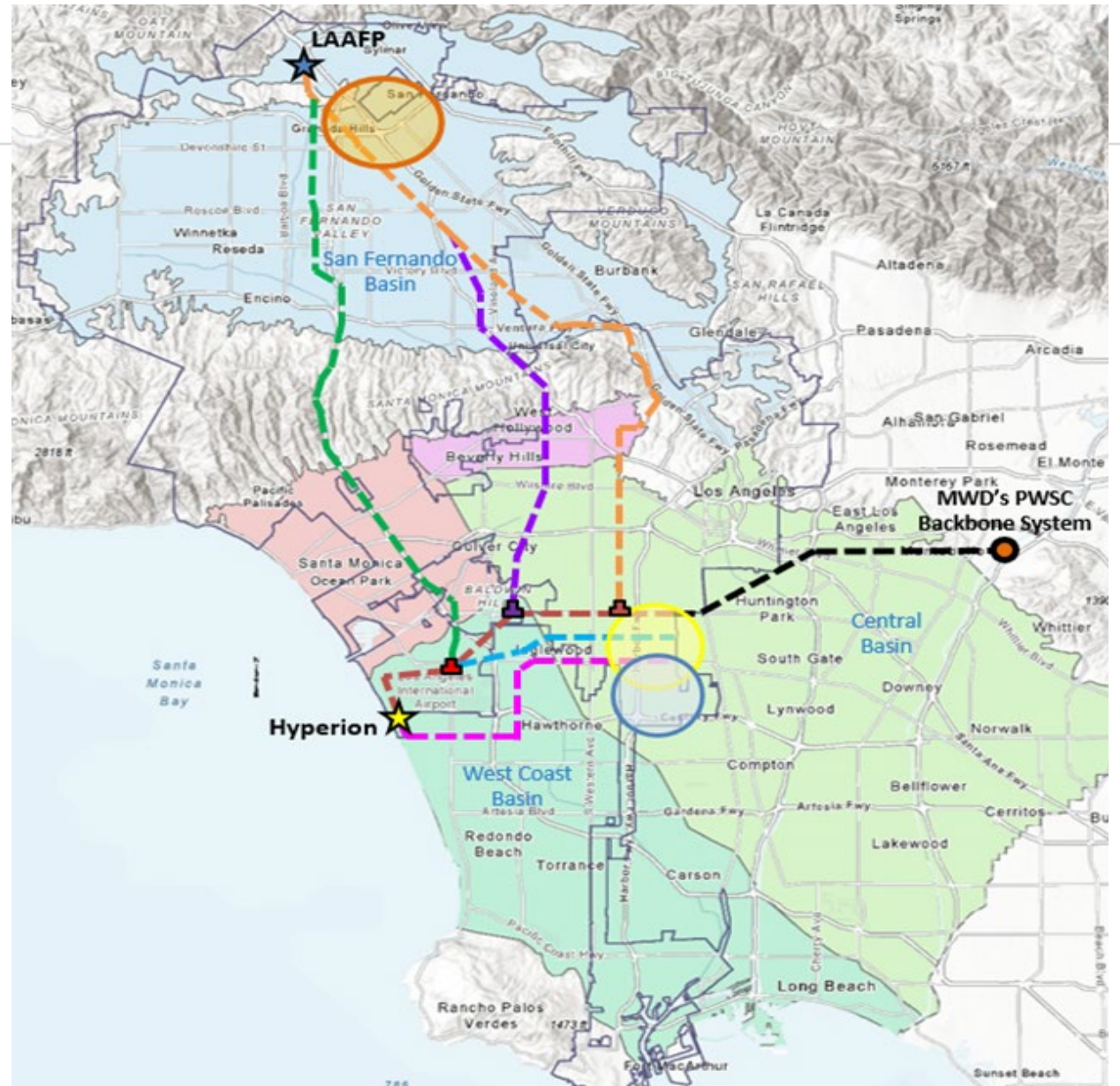
- Alternative 1 **Sepulveda**
- Alternative 2 **Cahuenga**
- Alternative 3 **MWD-Centric**

Approach II: IPR + Post AWPf DPR

- Alternative 4 **Sepulveda**
- Alternative 5 **Cahuenga**
- Alternative 6 **Griffith Park**

Approach III: Full DPR

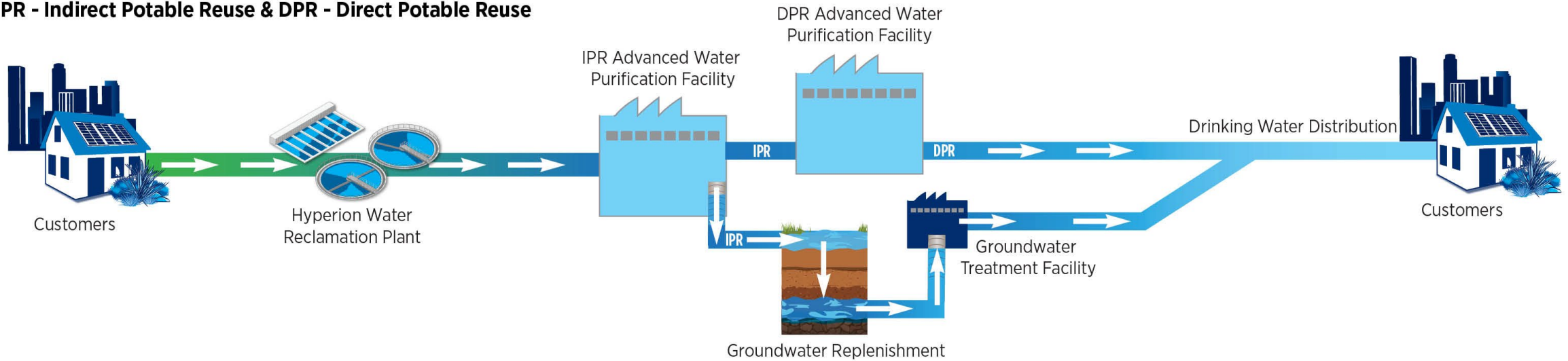
- Alternative 7 **Sepulveda**
- Alternative 8 **Cahuenga**
- Alternative 9 **Griffith Park**



APPROACH II

Indirect Potable Reuse and Direct Potable Reuse (IPR and DPR)

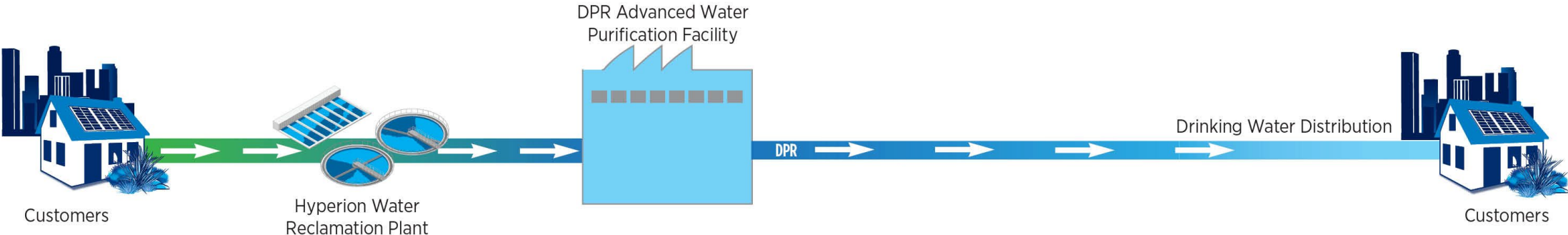
IPR - Indirect Potable Reuse & DPR - Direct Potable Reuse



APPROACH III

Direct Potable Reuse (DPR)




DPR - Direct Potable Reuse






PURE WATER LOS ANGELES

Cost Considerations

Approach II: Indirect Potable Reuse with Post-AWPF Direct Potable Reuse

Alternative	Total Capital Cost (Estimated)	O&M Cost/Year (Estimated)
 Alternative 4 Sepulveda	\$21.0B	\$393M
 Alternative 5 Cahuenga	\$20.6B	\$388M
 Alternative 6 Griffith Park	\$21.2B	\$398M

Approach III: Full Direct Potable Reuse

Alternative	Total Capital Cost (Estimated)	O&M Cost/Year (Estimated)
 Alternative 7 Sepulveda	\$25.0B	\$440M
 Alternative 8 Cahuenga	\$24.8B	\$438M
 Alternative 9 Griffith Park	\$25.4B	\$449M

*AACE Class V Cost Estimate for all Alternatives, includes AWPF costs in each Alternative. Monte Carlo simulations will be performed to verify that cost estimates/ranges are robust and sufficiently conservative given the current level of definition for the Program.

PURE WATER LOS ANGELES

Projected Timeline

2019 - 2024

- Master Plan – conducts validations of analysis of various approaches and alternatives
- Program Implementation Plan - identified Hyperion WRP as a new, resilient, and sustainable water source.



2025

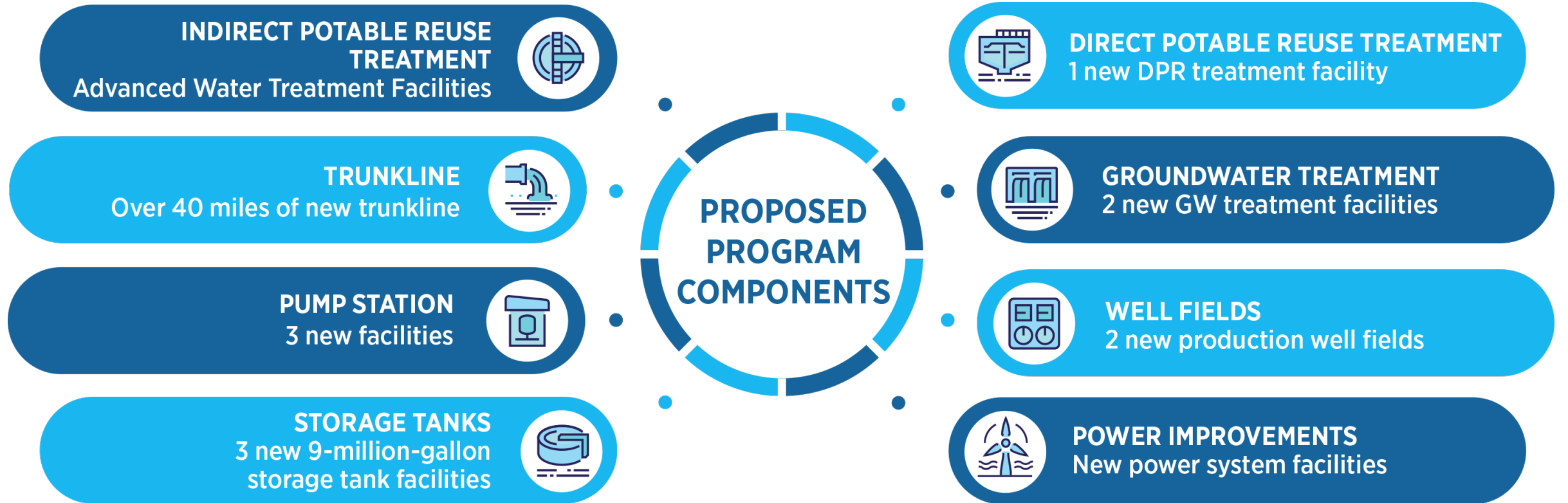
- Programmatic Environmental Impact Report: Developed Jointly by LADWP and LASAN

2025 – 2058

- Program Delivery: Planning, Design, Construction
 - Phase 1: 50 MGD IPR by 2040
 - Phase 2: 40 to 50 MGD IPR/DPR 2046
 - Phase 3: 120 to 130 MGD DPR 2056

PURE WATER LOS ANGELES

Projected Capital Improvements



Next Steps

NEXT STEPS

Community Engagement

Affordability

Access to
Clean Water

Public Health



Jobs

Environmental
Benefits & Impacts

Inclusivity

NEXT STEPS

California Environmental Quality Act



LADWP and LASAN as joint partners, will prepare a Program Environmental Impact Report (PEIR).



CEQA outreach which will include scoping meetings as well as public meetings.



Opportunities for enhanced outreach to hold regular, ongoing Community Dialogues that center the experiences of stakeholders.



Pure Water Los Angeles will provide a local renewed water source and ensure a more secure and sustainable water future for Los Angeles.

Q&A

Breakout Discussions

Breakout Discussion

Overview:

- Form 5 breakouts, count off to form breakouts
- Each breakout group will have 1 facilitator and 1 notetaker to help respond to the discussion questions.
- 30 minutes for discussion and report back.

Things to keep in mind:

- Consider the involvement of community members and other stakeholders throughout the process of planning, designing, environmental review, and testing/monitoring, construction, and implementation for Pure Water Los Angeles.
- Your input on these questions will help to shape and inform the initial planning for community and stakeholder involvement.

Breakout Discussion Questions

Question 1: What was your first reaction upon hearing the news about Pure Water Los Angeles moving forward?

Question 2: What are some of the opportunities and challenges for Pure Water Los Angeles?

Question 3: What topics and questions would you like to hear more about during future engagement activities?

Question 4: What types of questions will customers (residential and business) and other community members have about Pure Water Los Angeles?

Question 5: In your experience engaging with communities in Los Angeles, what are the most effective engagement methods that the Pure Water Los Angeles team should consider using?

Breakout Discussions

Report Back



Thank you



**Optional Tour:
Hyperion Water Reclamation Plant
Niesha Louis and Kenneth Jeong**