








Pure Water Los Angeles Program

October 2024

AGENDA

-  Welcome & Introductions
-  L.A.'s Current Water Supply
-  Increasing Local Water Supply
-  Recycled Water
-  Strategy: Source & Distribution

Pure Water Los Angeles

- Objectives
- Benefits
- Timeline
- Supply Management
- Alternatives
- Capital Projects & Cost

Q&A

SOURCES

Historical Imports

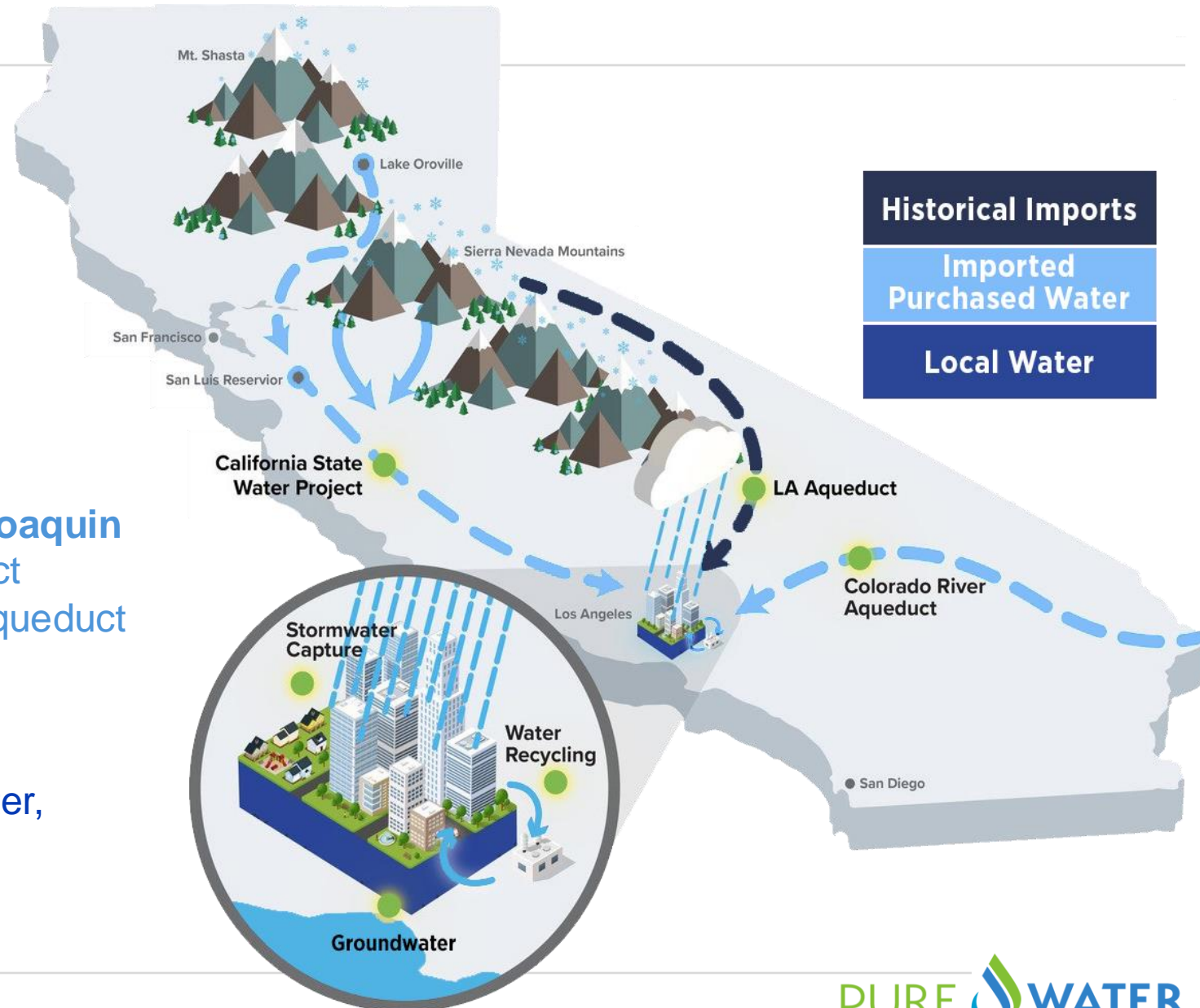
- Eastern Sierras via the Los Angeles Aqueduct

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



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.



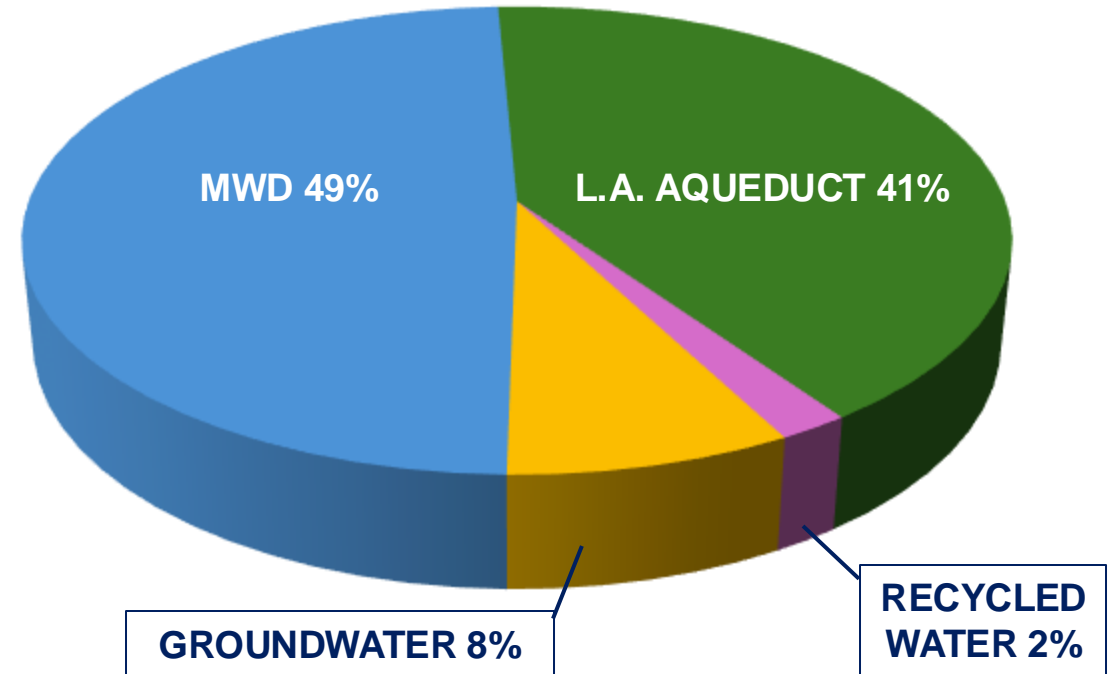
LADWP is forecasting over 70 additional stormwater projects over the next 15 years to double its capacity.



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

What Is 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.

Other Places Using Recycled Water



Monterey

Indirect Potable
Reuse since 1998



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

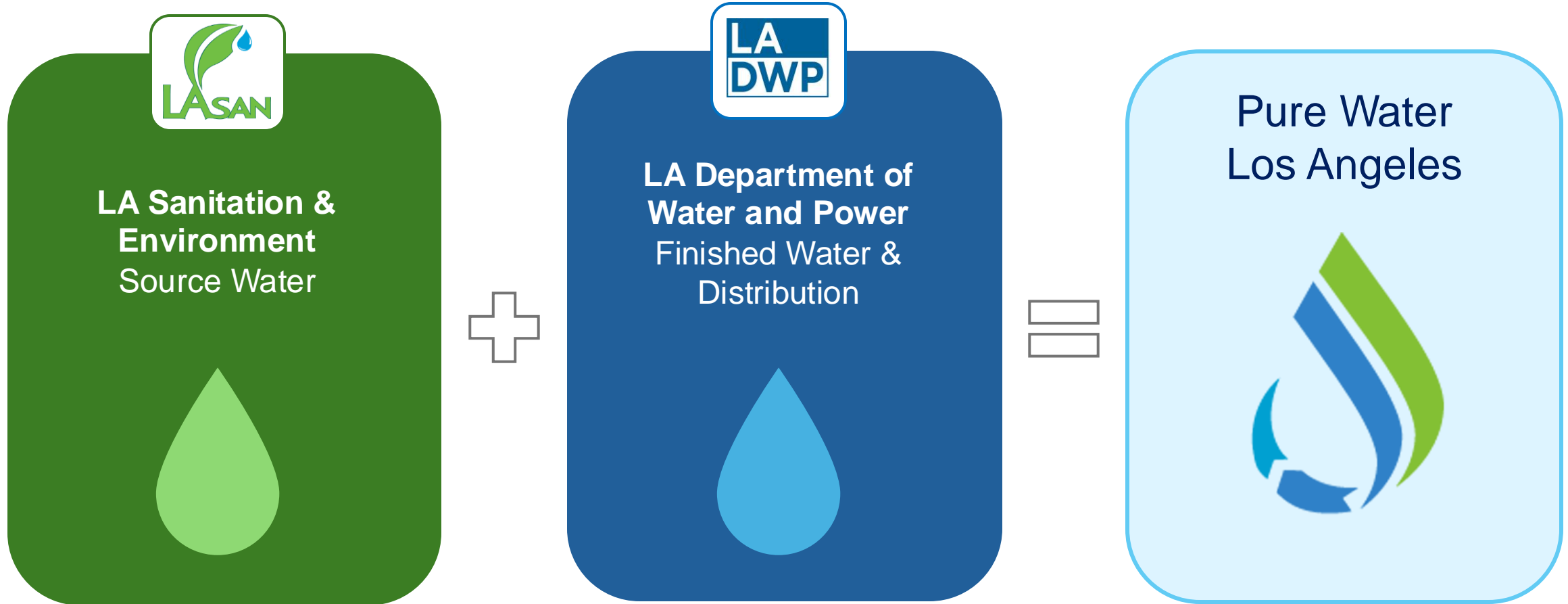
INTERNATIONAL

RECYCLED WATER



OBJECTIVE

Water Source & Delivery With One Major City Initiative



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

Hyperion Water Reclamation Plant



Diversify the City's water supply portfolio by developing and maximizing Hyperion Water Reclamation Plant treated water as a sustainable local water supply, which will mitigate future risks due to seismic and climate change.

PLANNING EFFORTS

Hyperion Water Reclamation Plant



- Apply proven technologies to produce safe and reliable recycled water.
- Convert 100% of Hyperion Water Reclamation Plant to water recycling.
- Launch conversion with phased approach.
- Significantly improve discharges to Santa Monica Bay.

TESTING

Current Projects at Hyperion Play a Critical Role in the Planning Efforts



Hyperion Advanced Water Purification Facility

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



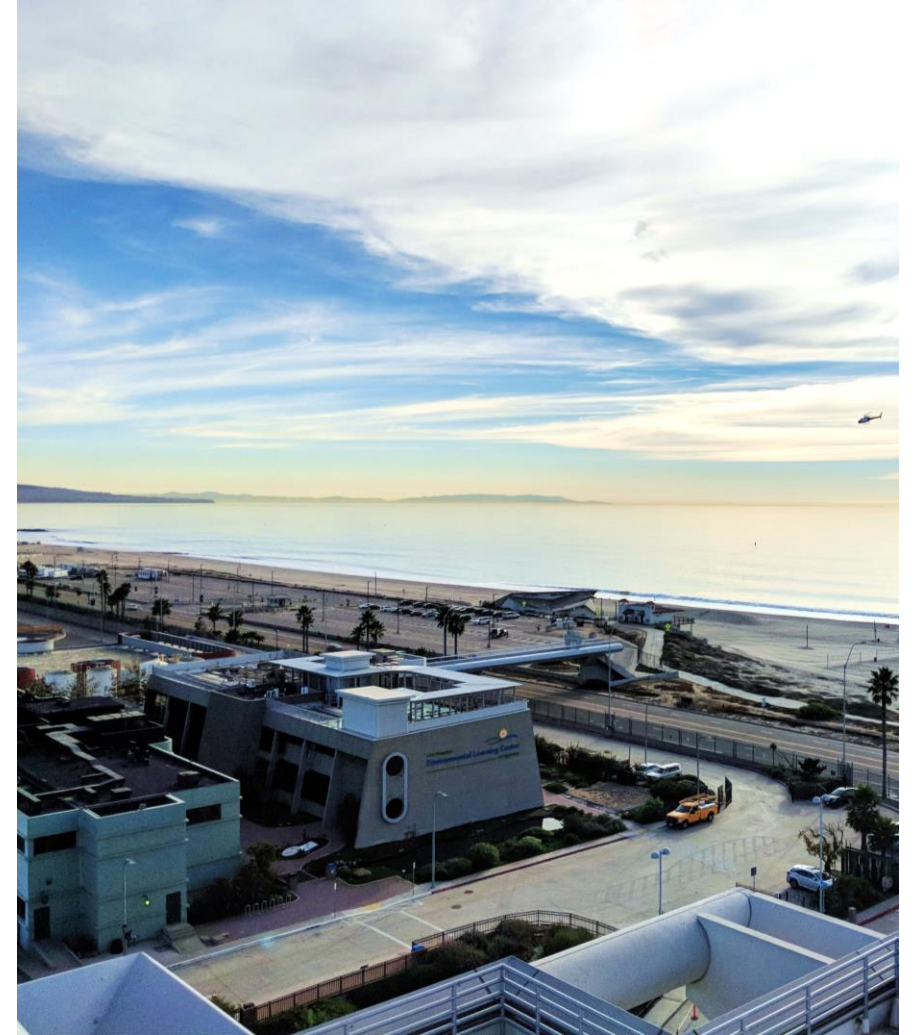
MBR Pilot Facility

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

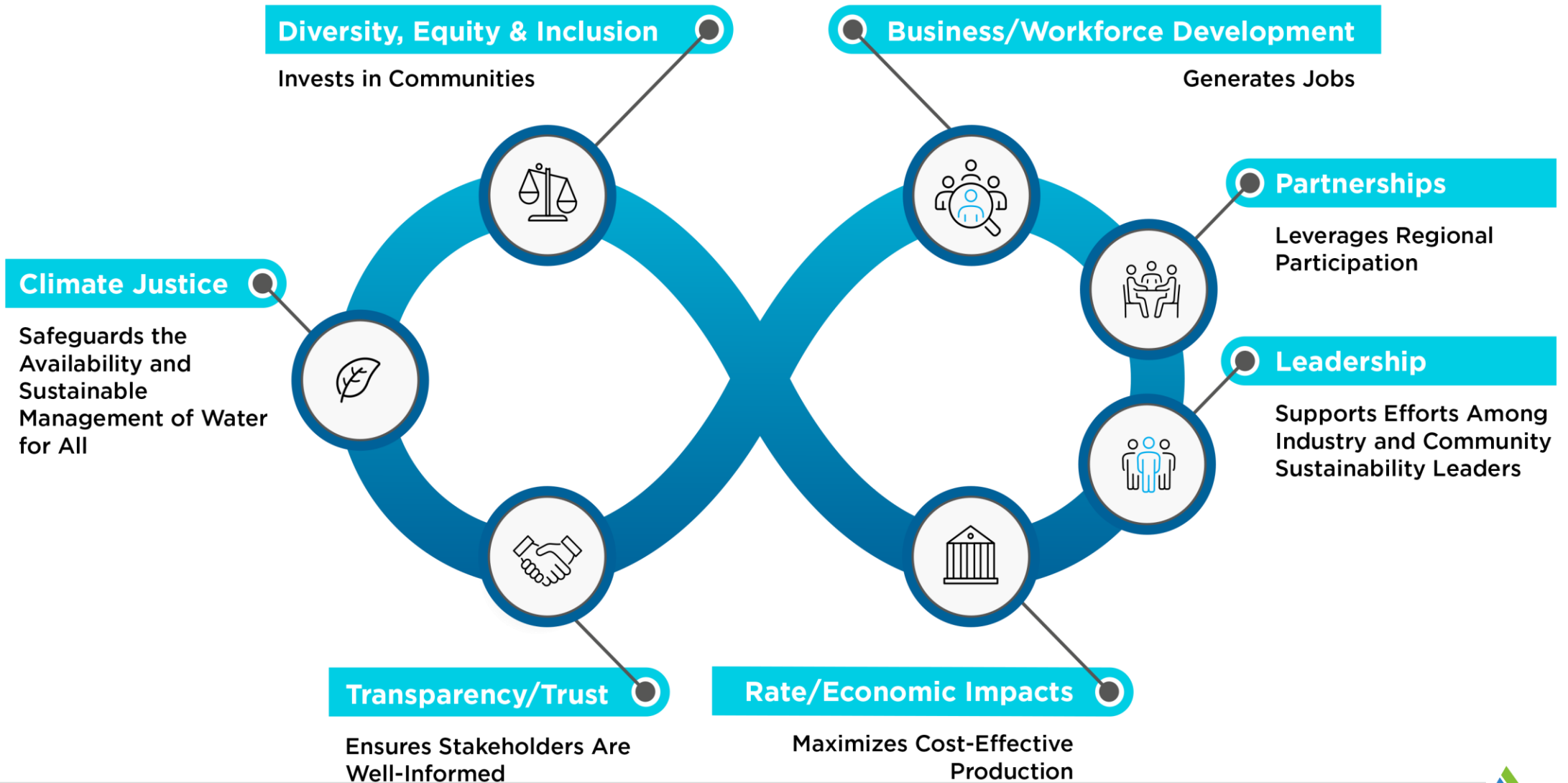
BENEFIT TO SANTA MONICA BAY

Membrane Bioreactor (MBR) would replace an existing treatment process at Hyperion, providing two major benefits:

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



BENEFITS



SUPPLY MANAGEMENT

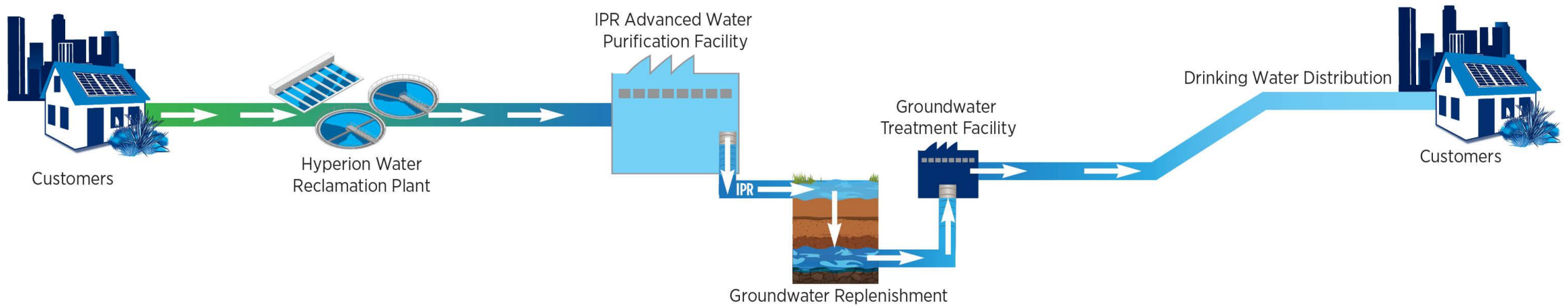
Holistic Approach to Water Management



ALTERNATIVES

Indirect Potable Reuse (IPR)

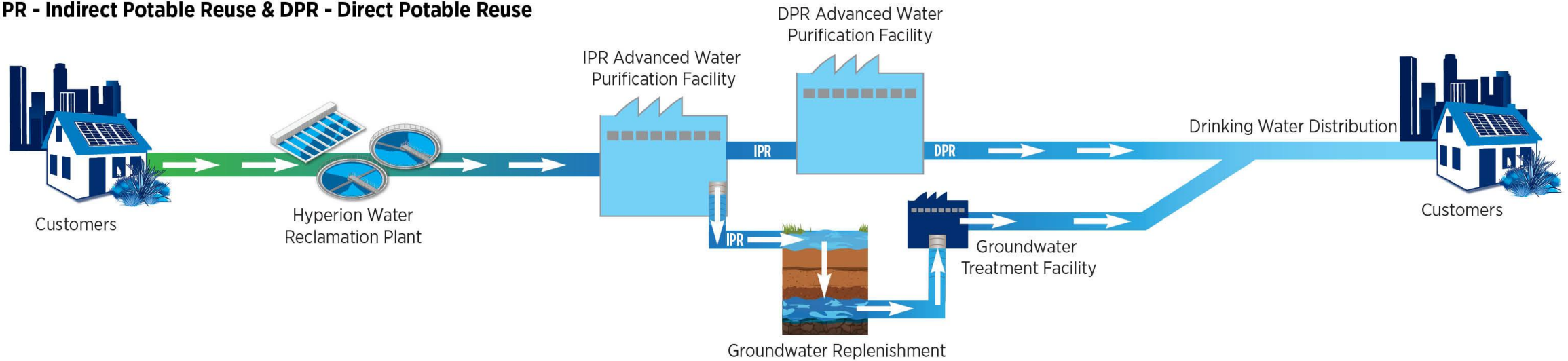
IPR - Indirect Potable Reuse



ALTERNATIVES

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

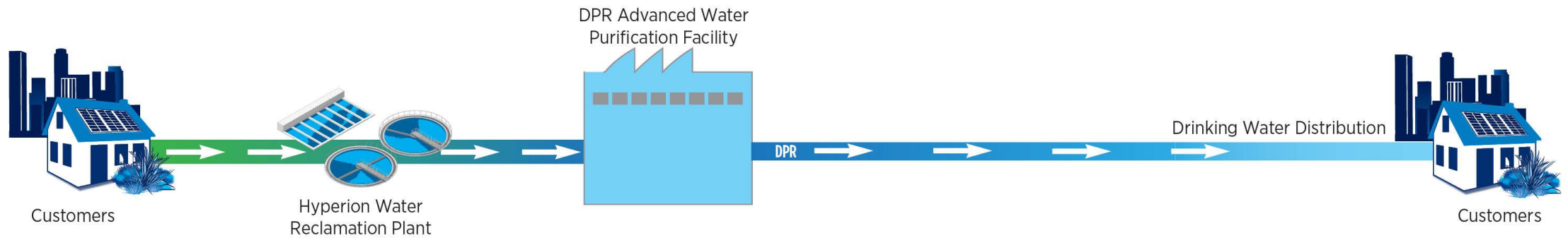
IPR - Indirect Potable Reuse & DPR - Direct Potable Reuse



ALTERNATIVES

Direct Potable Reuse (DPR)

DPR - Direct Potable Reuse



ALTERNATIVES

Master Plan Approaches and Alternatives

Approach I: Full IPR

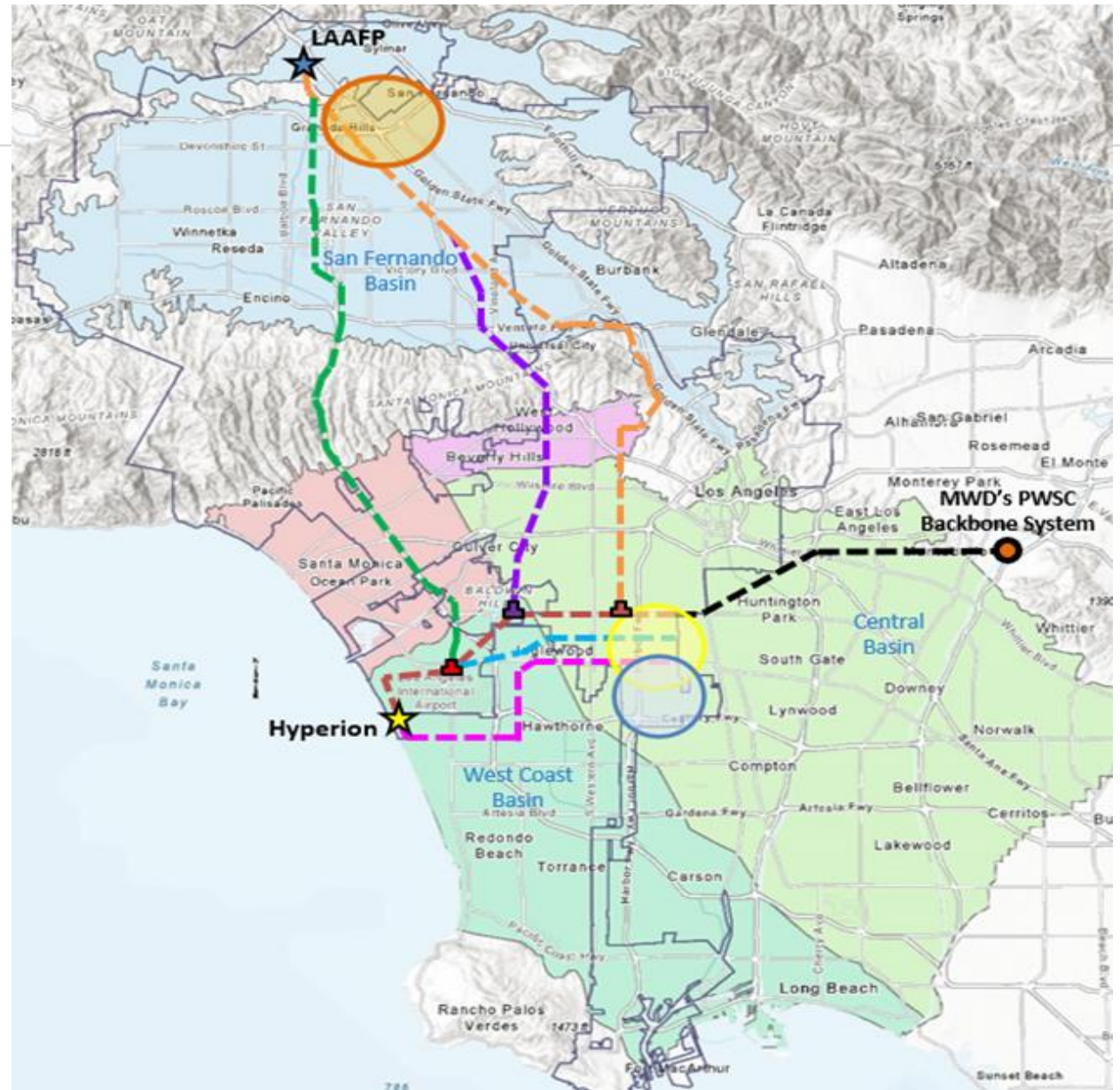
- Alternative 1 **Sepulveda**
- Alternative 2 **Cahuenga**
- Alternative 3 **MWD-Centric**

Approach II: IPR + Post AWPf DPR

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

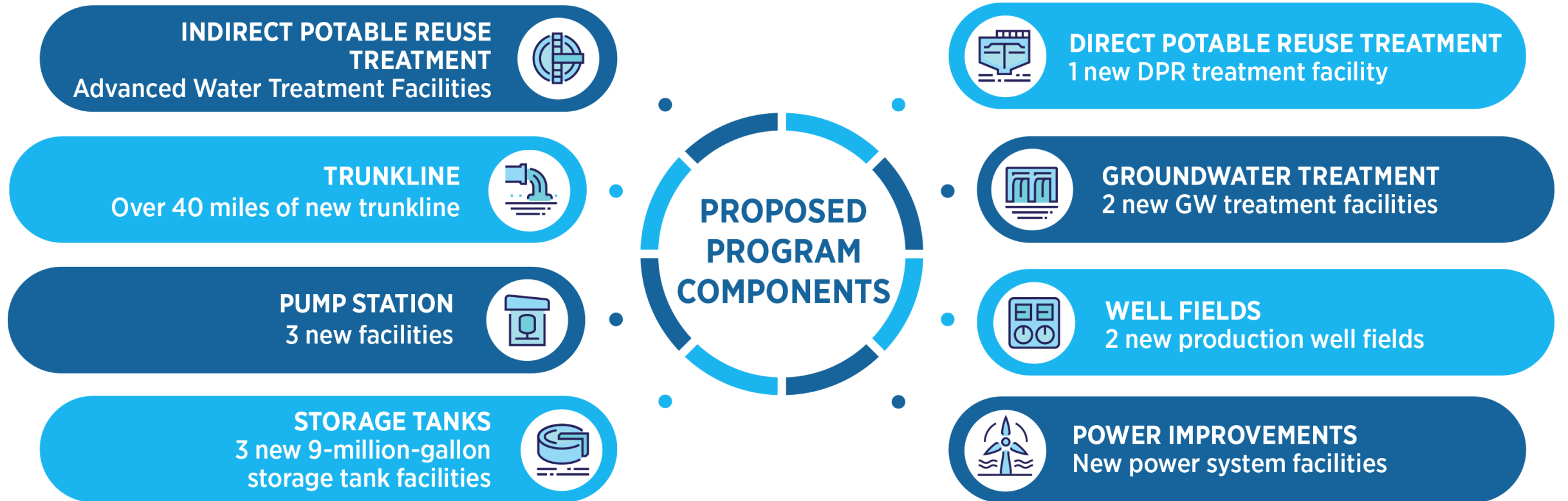
Approach III: Full DPR

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



PURE WATER LOS ANGELES




Projected Capital Improvements






PURE WATER LOS ANGELES

Preliminary 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

Where We Are Now & Next Steps

NOW – Q4 2024

- Master Plan – conducts validations of analysis of various approaches and alternatives



2025

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

2025 - 2058

- Program Delivery: Planning, Design, Bid Award, Construction, Post Construction

PURE WATER LOS ANGELES

Community Engagement

Affordability

Access to
Clean Water

Public Health



Jobs

Environmental
Benefits & Impacts

Inclusivity

PURE WATER LOS ANGELES

Community Engagement – Cont.



Guidance provided by the program's Equity Plan, currently in development.



Using demographic data, translate program information and messaging to top languages spoken throughout affected areas.



Prioritize the concerns of Environmental Justice stakeholders and historically disadvantaged communities in areas where recycled water will be produced, transported and used.

A large, stylized graphic in the background consisting of three curved arrows forming a circle. The top arrow is light green, the left arrow is light blue, and the bottom arrow is a darker blue. The text is centered over this graphic.

THANK YOU!

Questions and Answers

LADWP.com/PureWaterLosAngeles
lacitysan.org/PureWaterLosAngeles