

Welcome



Greg Mills

Chair, WACO

Director, Serrano Water District



WACO Meeting – May 2, 2025



I pledge allegiance to the flag
of the United States of
America, and to the republic
for which it stands, one nation
under God, indivisible, with
liberty and justice for all.

Reminders

- Meeting is being recorded
- Participants will be muted during the presentation
- Program speaker → Q&A → Reports
- Conclude with agency announcements if we have time



Program

“Pure Water San Diego: Commissioning on the Horizon”



***Juan Guerreiro
Public Utilities Director
City of San Diego***



Pure Water San Diego

**Juan Guerreiro, Director
Public Utilities Department**

Agenda

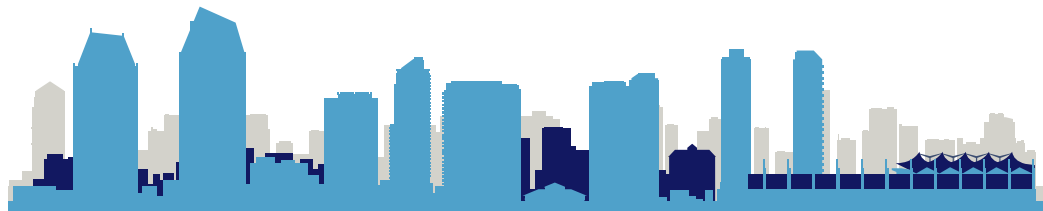
- Pure Water San Diego Program Overview
- Wastewater System
- Drinking Water System
- Pure Water San Diego Program History
- Phase 1
- Phase 2



Pure Water
San Diego

Pure Water San Diego

Provide nearly 1/2
of San Diego's water
supply



Provide a reliable,
sustainable water
supply



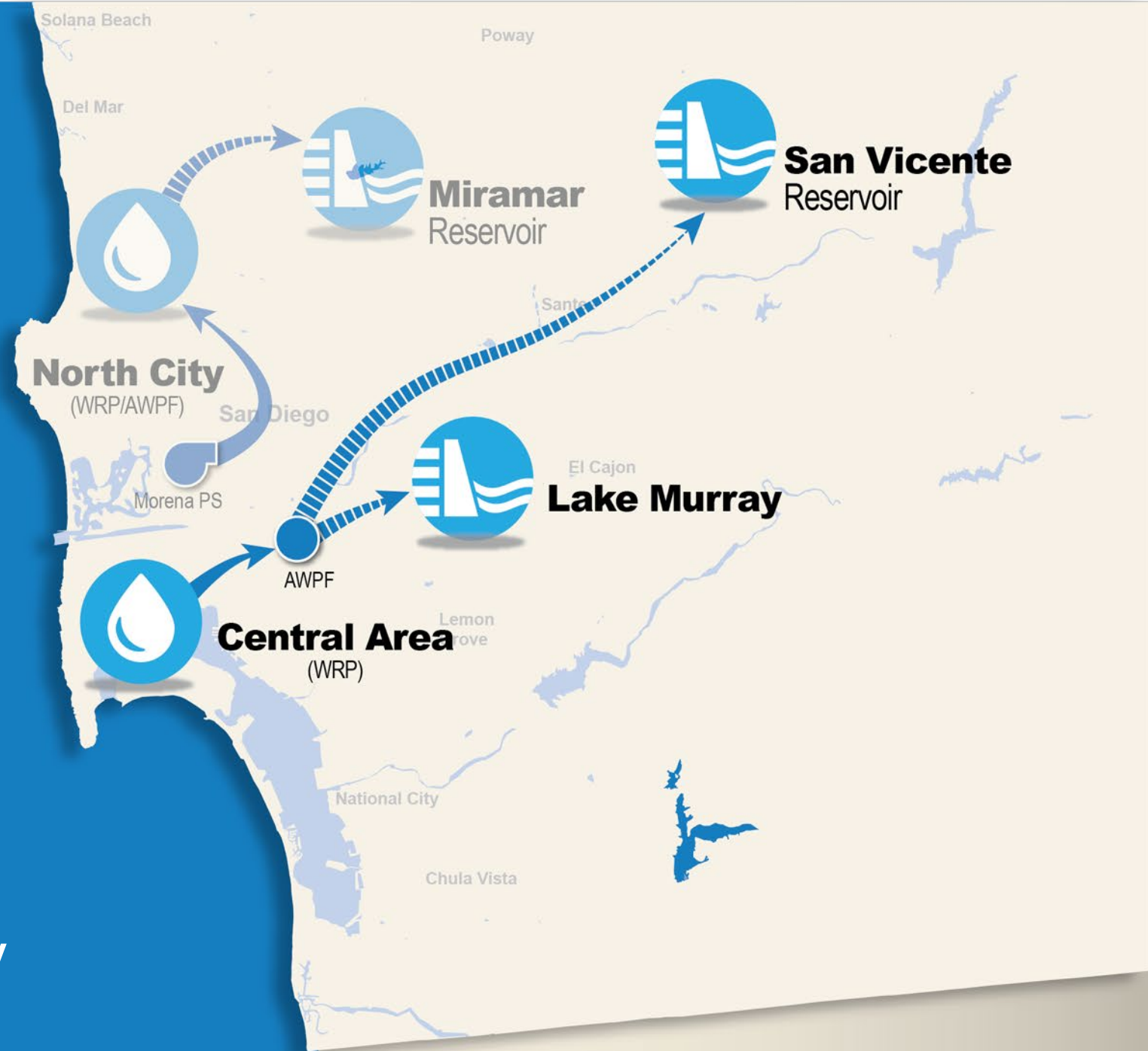
Produce safe,
high-quality
drinking water

Offer a cost-effective investment
for San Diego's water needs

Pure Water
will produce nearly
1/2
of the City's water
locally

Phase 2

- 53 mgd
- Central Area PWF to San Vicente or Lake Murray



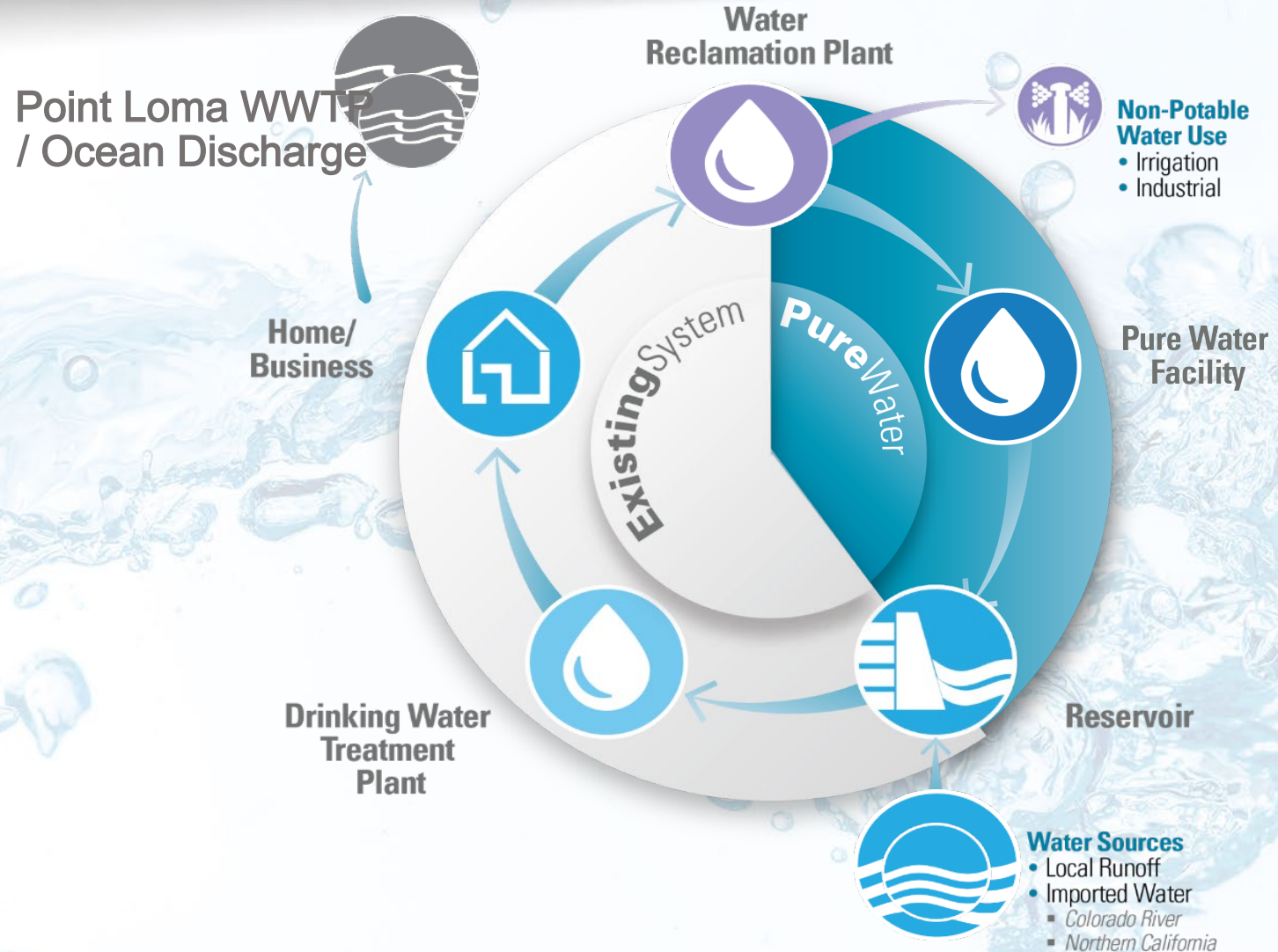
San Diego's Water Supply System

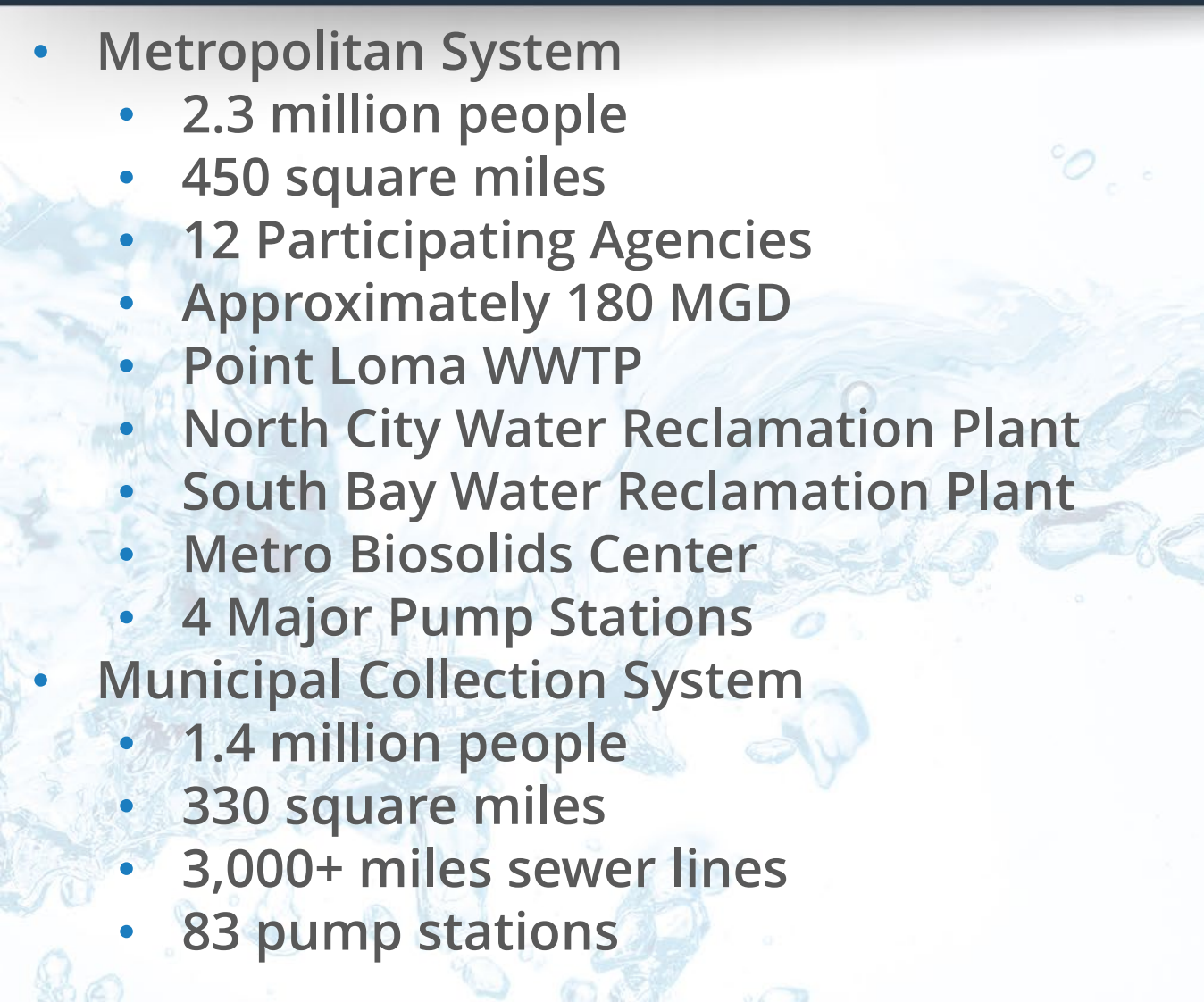
Existing System...

Primarily a Single-Use System

Pure Water...

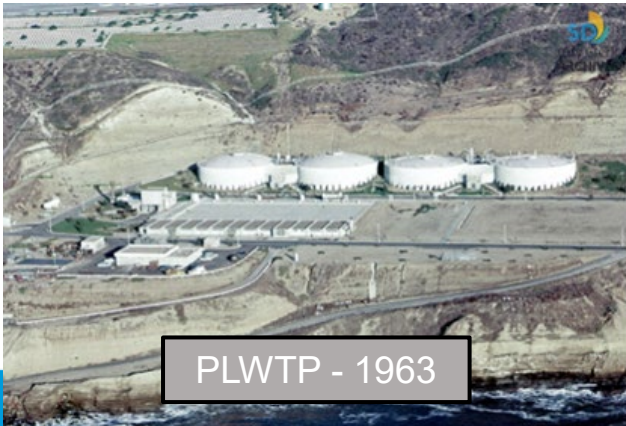
Completes Our Water Cycle



- 
- The background of the slide features a dynamic, artistic splash of water in various shades of blue and white, creating a sense of movement and freshness. The water droplets and splashes are concentrated more towards the right side, while the left side has a more solid, light blue background.
- Metropolitan System
 - 2.3 million people
 - 450 square miles
 - 12 Participating Agencies
 - Approximately 180 MGD
 - Point Loma WWTP
 - North City Water Reclamation Plant
 - South Bay Water Reclamation Plant
 - Metro Biosolids Center
 - 4 Major Pump Stations
 - Municipal Collection System
 - 1.4 million people
 - 330 square miles
 - 3,000+ miles sewer lines
 - 83 pump stations



- Regional treatment and ocean discharge
- Enhanced primary treatment
- Secondary treatment is the national standard
- Modified permit
- A very challenging location



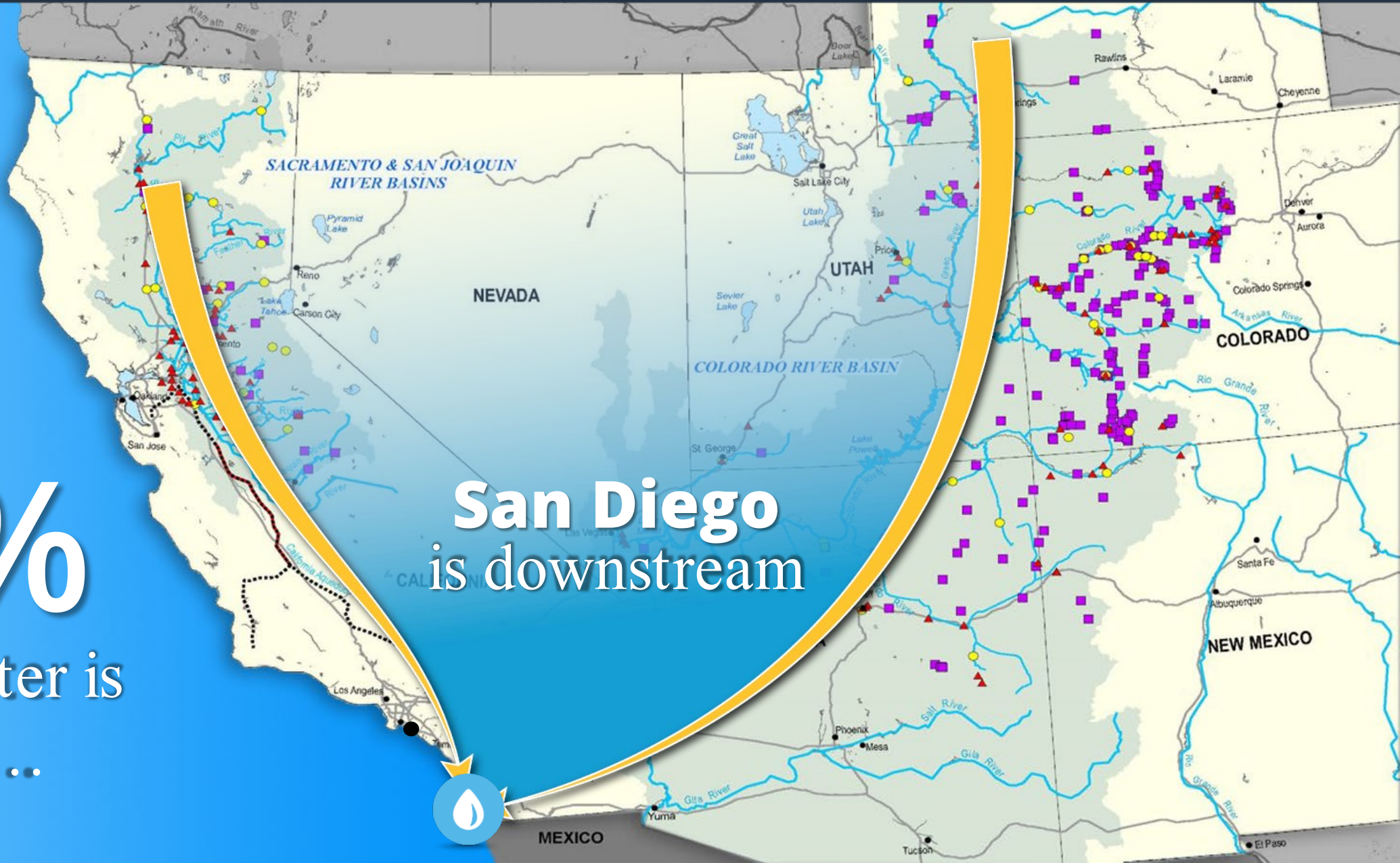


San Diego's Water Supply

85%

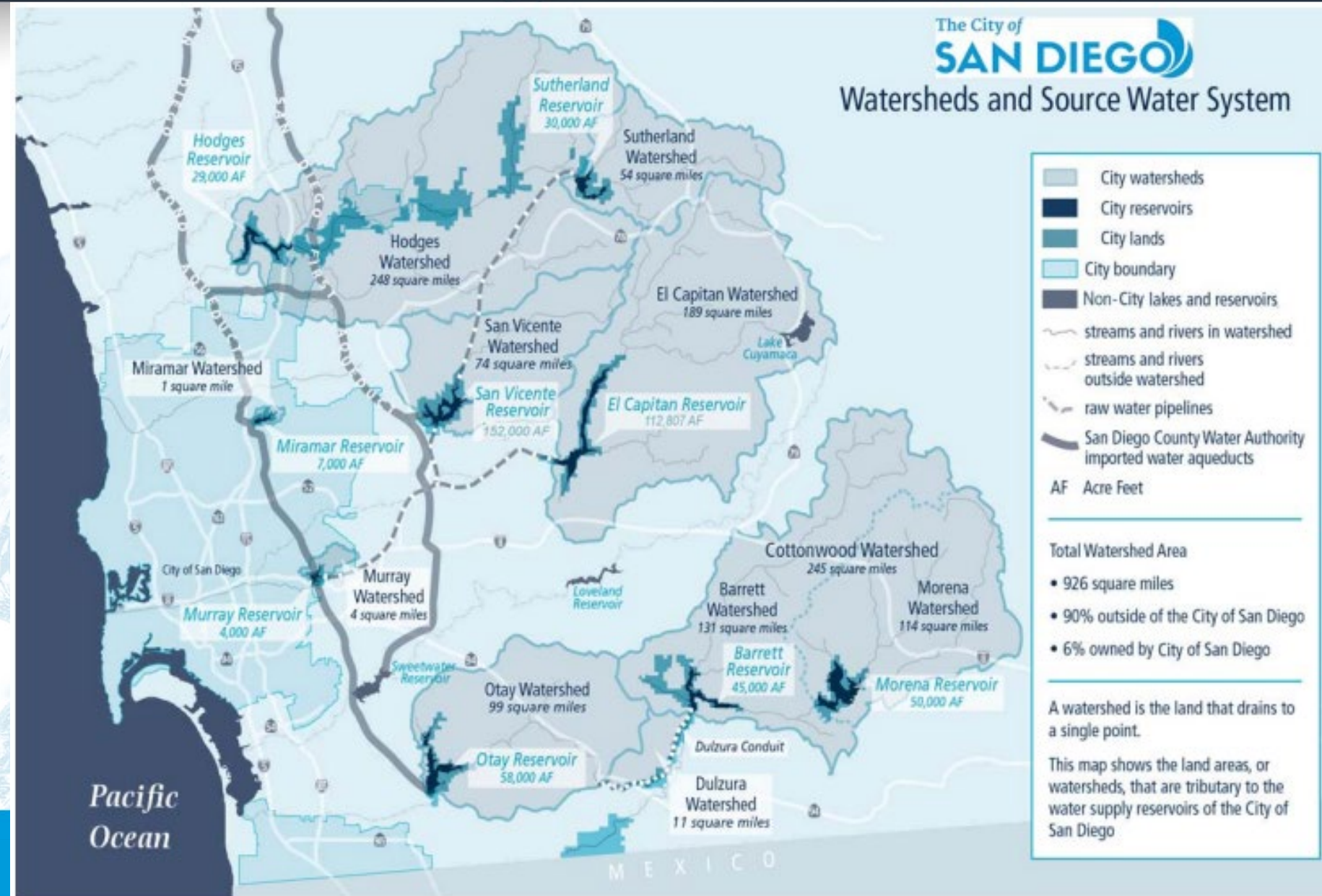
of our water is
imported...

San Diego
is downstream



SD Raw Water Supply

- Nine reservoirs located throughout San Diego county
- Pipelines / conduits / flumes to move water



Drinking Water Supply

- 1.4M customers in San Diego
- Three Potable Water Treatment Plants with 298 MGD total treatment
- 54 Potable Water Pump Stations
- 28 Potable Water Reservoirs
- 371 Pressure Regulating Stations
- 300+ mi of Potable Transmission Mains
- 3,000+ mi of Distribution Mains
- 280,000+ Service Connections
- 136 Pressure Zones
- Retail and Wholesale Service Areas
- 8 Hydrologic Subsystems
- 7 major military bases
- Four cities

City of San Diego Drinking Water Service Area



We Face Numerous Water Challenges



Limited local & imported supplies



Bay Delta constraints



Natural disaster risk



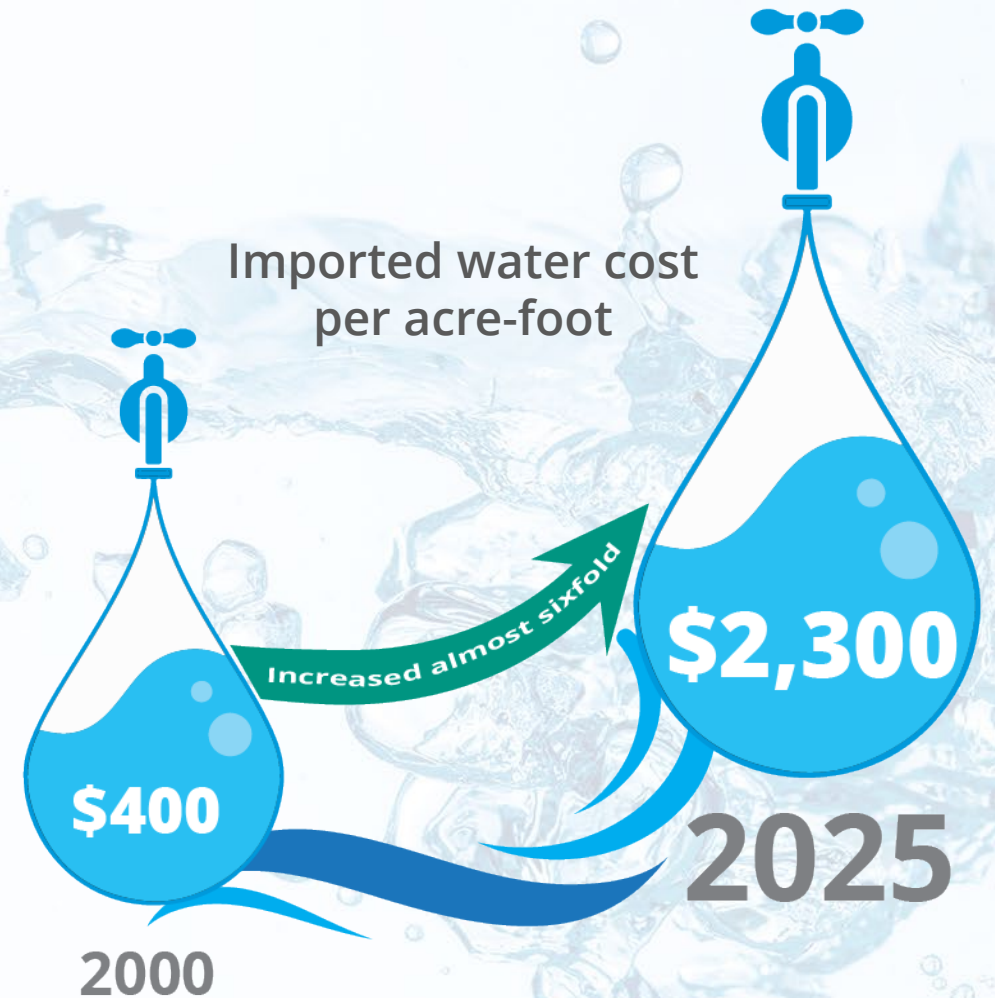
Rising imported water costs



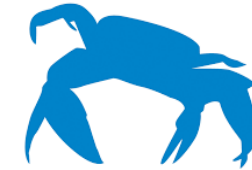
Recurring drought



Climate Change



- Environmental Groups
 - San Diego Coastkeeper
 - Surfrider Foundation
 - Coast Environmental Rights Federation
 - San Diego Audubon Society
 - ❖ Parties to 2014 Cooperative Agreement
- Metro JPA
 - 12 Participating Agencies
 - Serviced by City of San Diego Metro System
 - Share in Metro System capital and O&M costs, ~33%
- Participation in Pure Water Planning

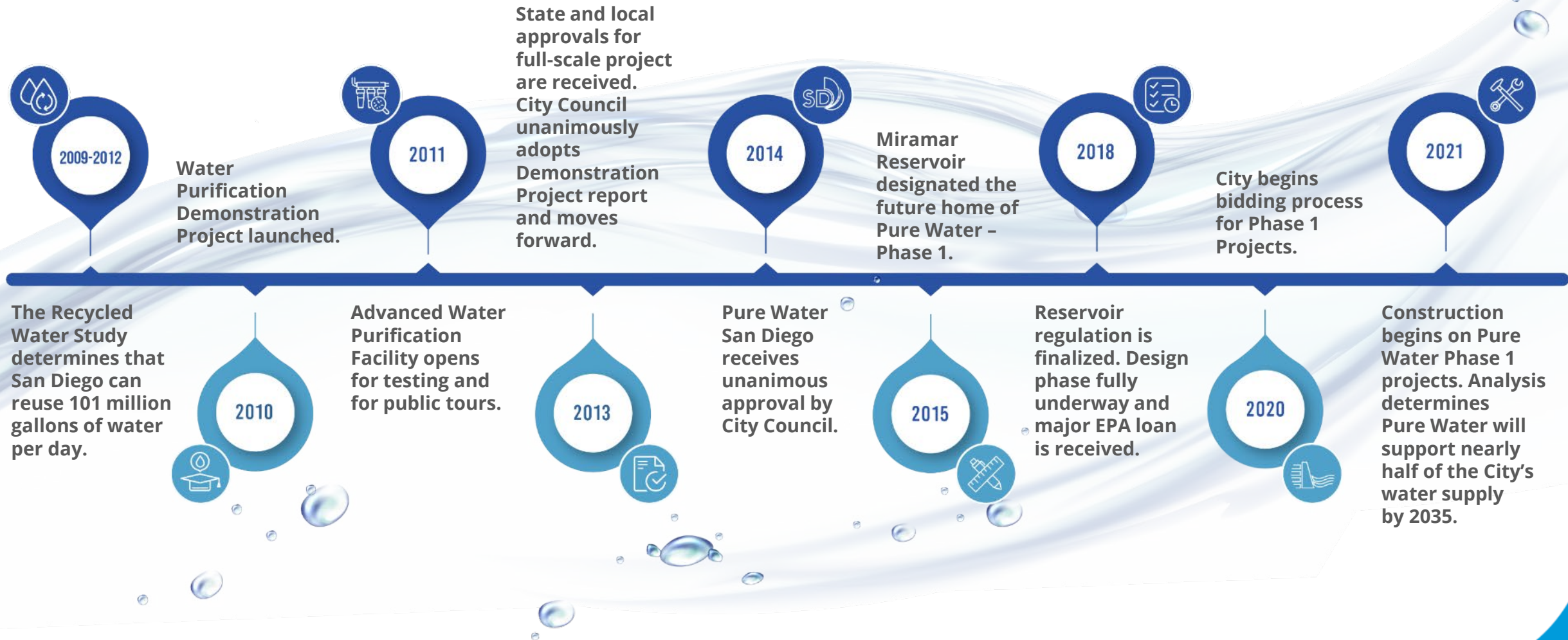


SAN DIEGO
COASTKEEPER



METRO JPA

Pure Water San Diego Potable Reuse Timeline



Pure Water Runs a Successful Demonstration Facility



More than 50,000 lab tests:
Met all standards



Water quality:
Exceptional

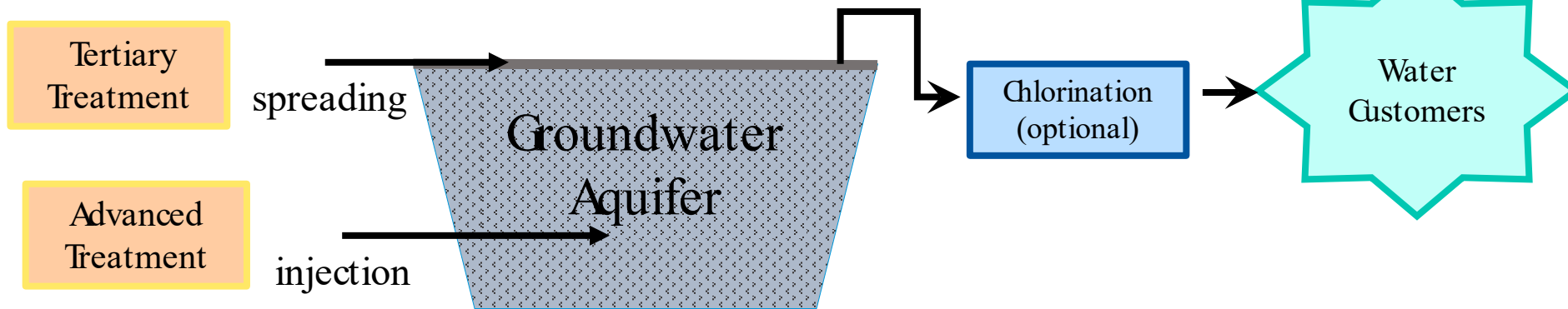
SD Public Outreach and Education



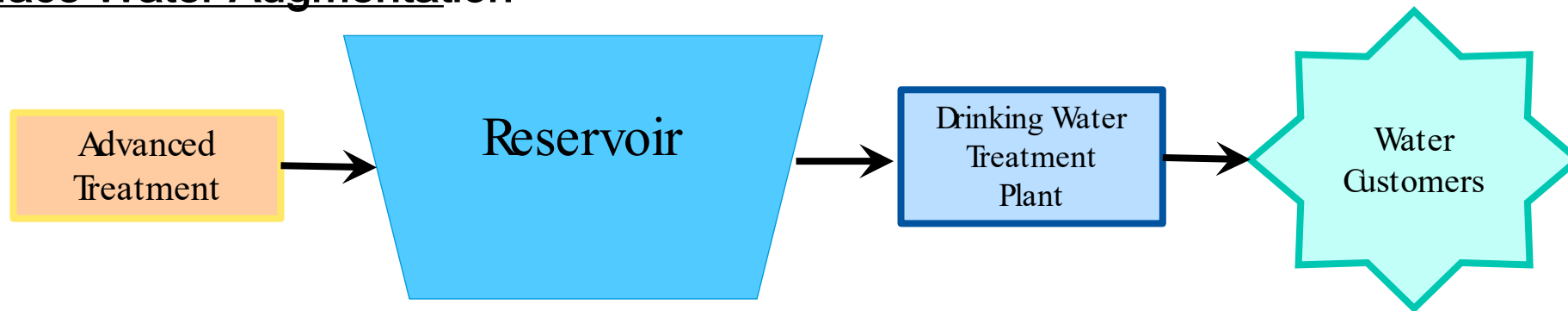


- Pure Water Phase I developed in the absence of regulations
- San Diego's project and California's SWA regulations "co-evolved"
- SWA regulations adopted by California in March 2018
- First Permitted Surface Water Augmentation (SWA) project in California

Groundwater Replenishment



Surface Water Augmentation



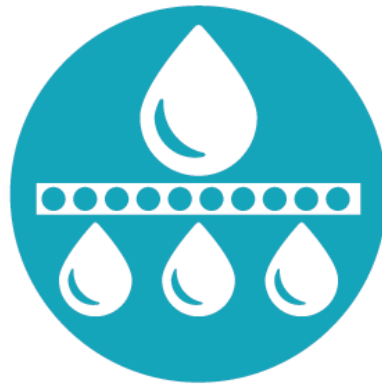
North City Pure Water Facility Processes



Ozonation



**Biological
Activated
Carbon
Filters**



**Membrane
Filtration**



**Reverse
Osmosis**



**Ultraviolet
Disinfection
/Advanced
Oxidation**

SD Phase 1 Projects





Pure Water Phase 1 is over 70% complete!



Miramar Water Treatment Plant

Construction Contract	Bid Award	Contractor
Morena Pump Station	\$110.4M	Flatiron
Morena Southern/Middle Alignment	\$129.7M	Sukut
Morena Northern Alignment	\$95.2M	OHL
Penasquitos Pump Station Oxygenation System	\$4.4 M	Blue Pacific Engineering
Water Reclamation Plant Expansion	\$255.1M	Kiewit
Water Reclamation Plant Equalization Basin	\$11.9M	Kiewit
Metro Biosolids Center Improvements	\$40.1M	PCL
NCWRP/NCPWF Early Sitework	\$16.4M	AECOM/Shimmick
Pure Water Facility and Pump Station	\$356.7M	Shimmick
Pure Water Pipeline	\$123.5M	W.A. Rasic
Miramar Reservoir Water Quality Monitoring System	\$1M	Soundnine, Inc.
Miramar Reservoir PS	\$12.7M	Shimmick
Total	\$1,157.1 M	Authorized: \$1,212.2M



Phase 1 Projects Timeline

Phase 1 North City Pure Water Project (listed by start date)	Estimated Completion Date
Early Works at the North City Water Reclamation Plant	2021
North City Pure Water Facility and Pump Station	2025
North City Pure Water Pipeline	2025
Morena Pipelines Northern Alignment and Tunnels	2025
Morena Pump Station	2026
North City Water Reclamation Plant Expansion	2026
Metropolitan Biosolids Center Improvements	2025
Miramar Reservoir Automated In-Water Quality Monitoring System	Monitoring Ongoing
North City Water Reclamation Plant Flow Equalization Basin	2025
Morena Pipelines Southern and Middle Alignment	2025
Miramar Reservoir Pump Station Improvements	2025
Peñasquitos Pump Station Oxygenation System	2025

Morena Pump Station



- Pump station will convey wastewater to the North City Water Reclamation Plant
- Supports Phase 1 recycled water and purified water production
- Includes work on Friars Road between Sea World Drive and Napa Street
- Construction is underway

Morena Pump Station



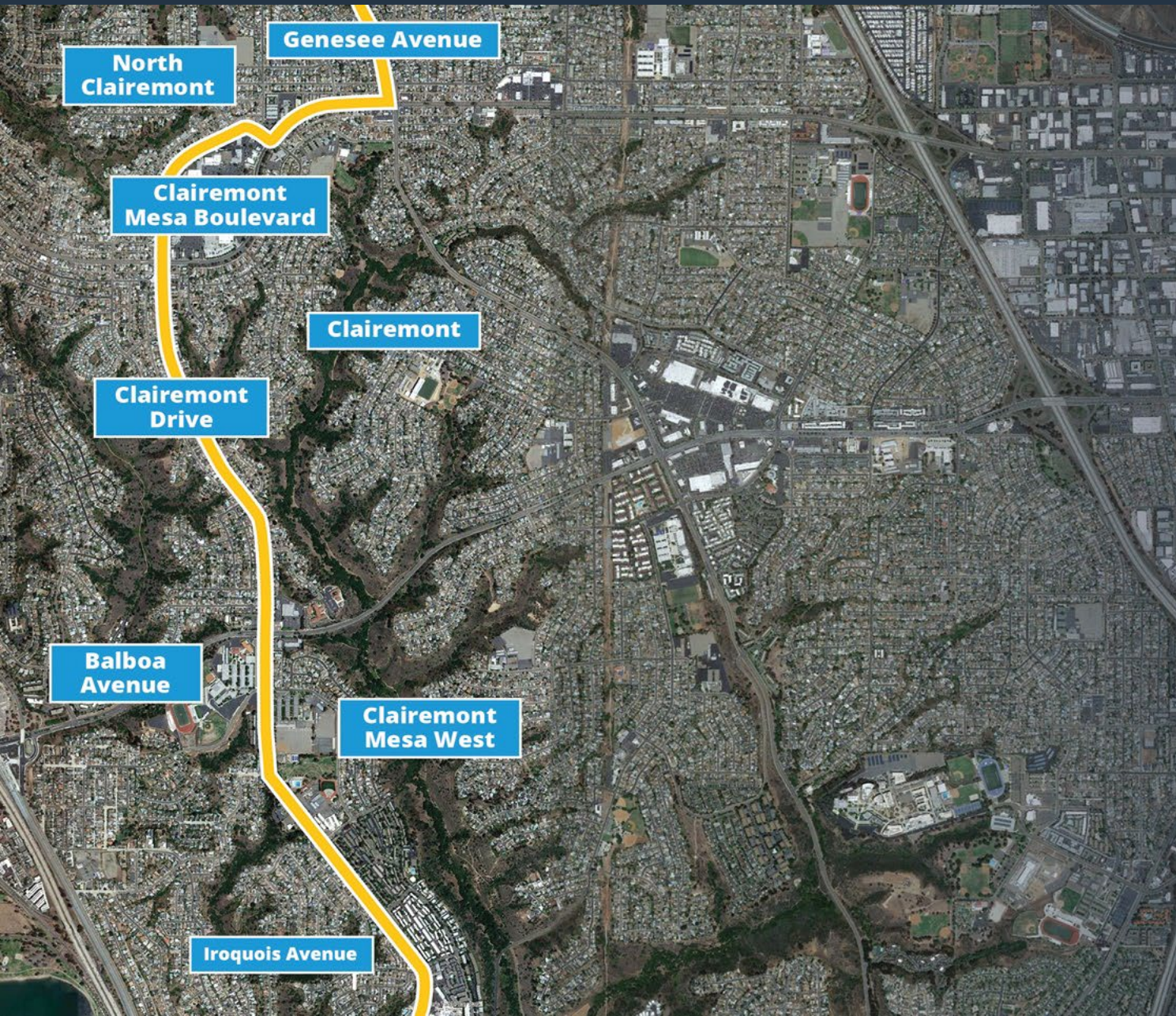
SD Morena Southern & Middle Alignment



- Will connect the Morena Pump Station at Sherman and Custer Streets in Bay Park with the Morena Pipelines Northern Alignment in University City.
- Construction is underway.



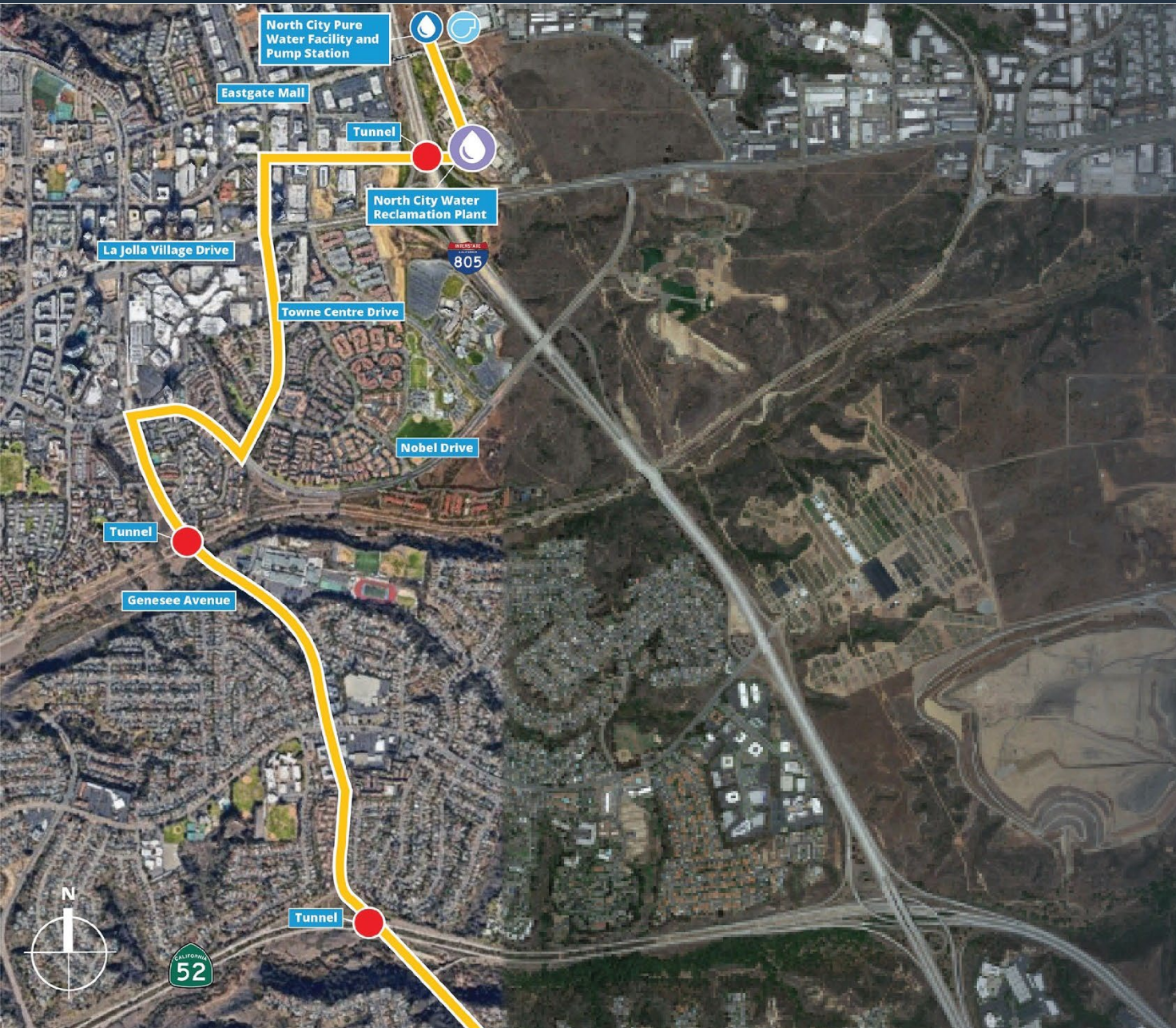
Morena Southern & Middle Alignment



- Will connect the Morena Pipelines Southern Alignment in Bay Park to the Morena Pipelines Northern Alignment and Tunnels in University City
- Construction is underway



SD Morena Northern Alignment & Tunnels



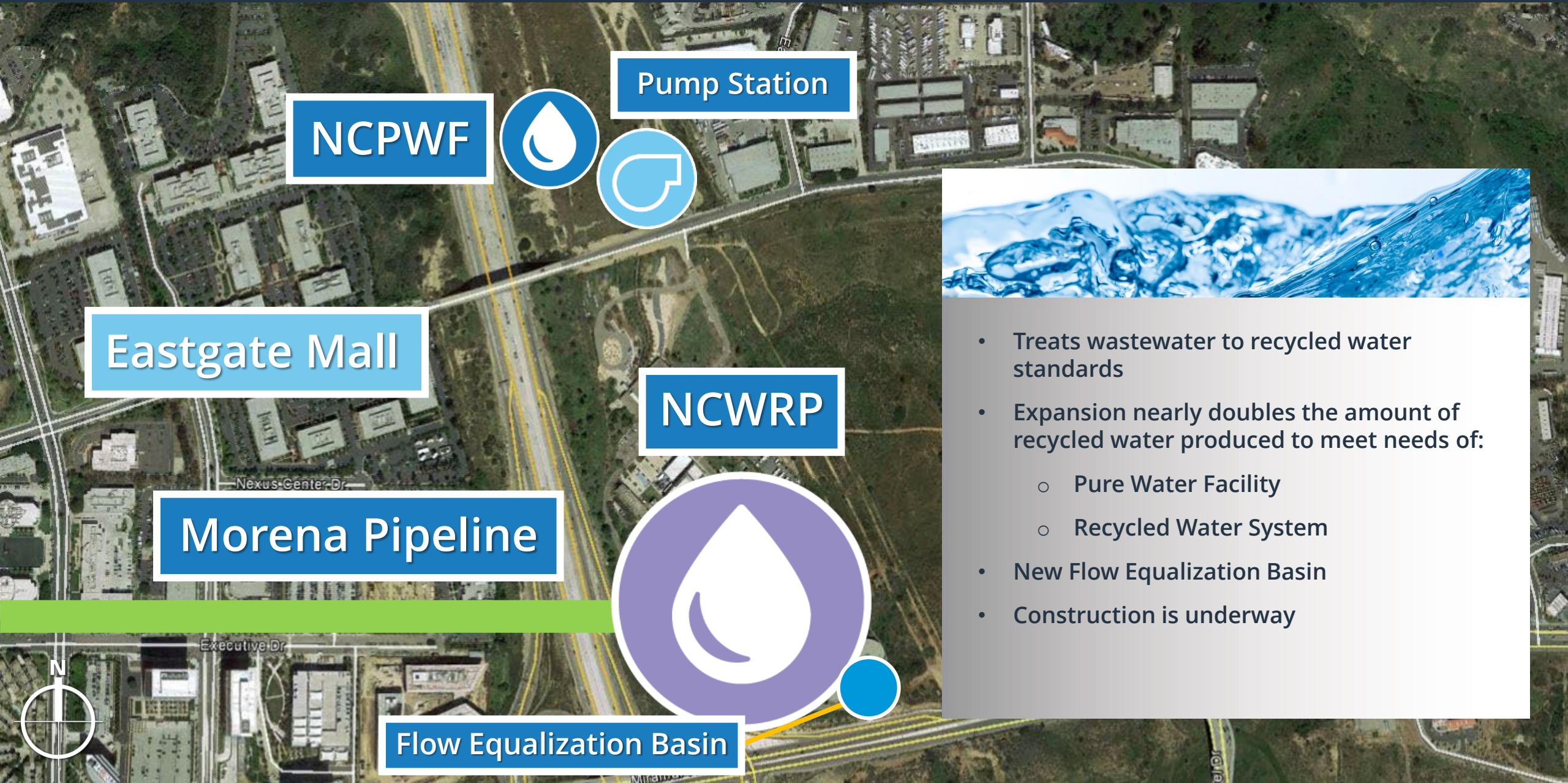
- This project will connect to the Morena Pipelines Middle Alignment to the south and the North City Water Reclamation Plant to the north
- Begins on Genesee Ave. and Appleton St. and continues on Genesee Ave, Nobel Drive, Towne Centre Drive and Executive Drive
- Construction is underway

Morena Northern Alignment & Tunnels





North City Water Reclamation Plant Expansion



NCPWF

Pump Station

Eastgate Mall

NCWRP

Morena Pipeline

Flow Equalization Basin



- Treats wastewater to recycled water standards
- Expansion nearly doubles the amount of recycled water produced to meet needs of:
 - Pure Water Facility
 - Recycled Water System
- New Flow Equalization Basin
- Construction is underway

North City Water Reclamation Plant Expansion





North City Pure Water Facility & Pump Station



NCPWF



Pump
Station



NCWRP



- Treats recycled water to produce 30 mgd of purified water
- Includes a proven 5-step advanced water purification treatment process
- A new pipeline will be built and will connect the NCWRP to the NCPWF
- New operations building and Discovery Center
- Construction is underway

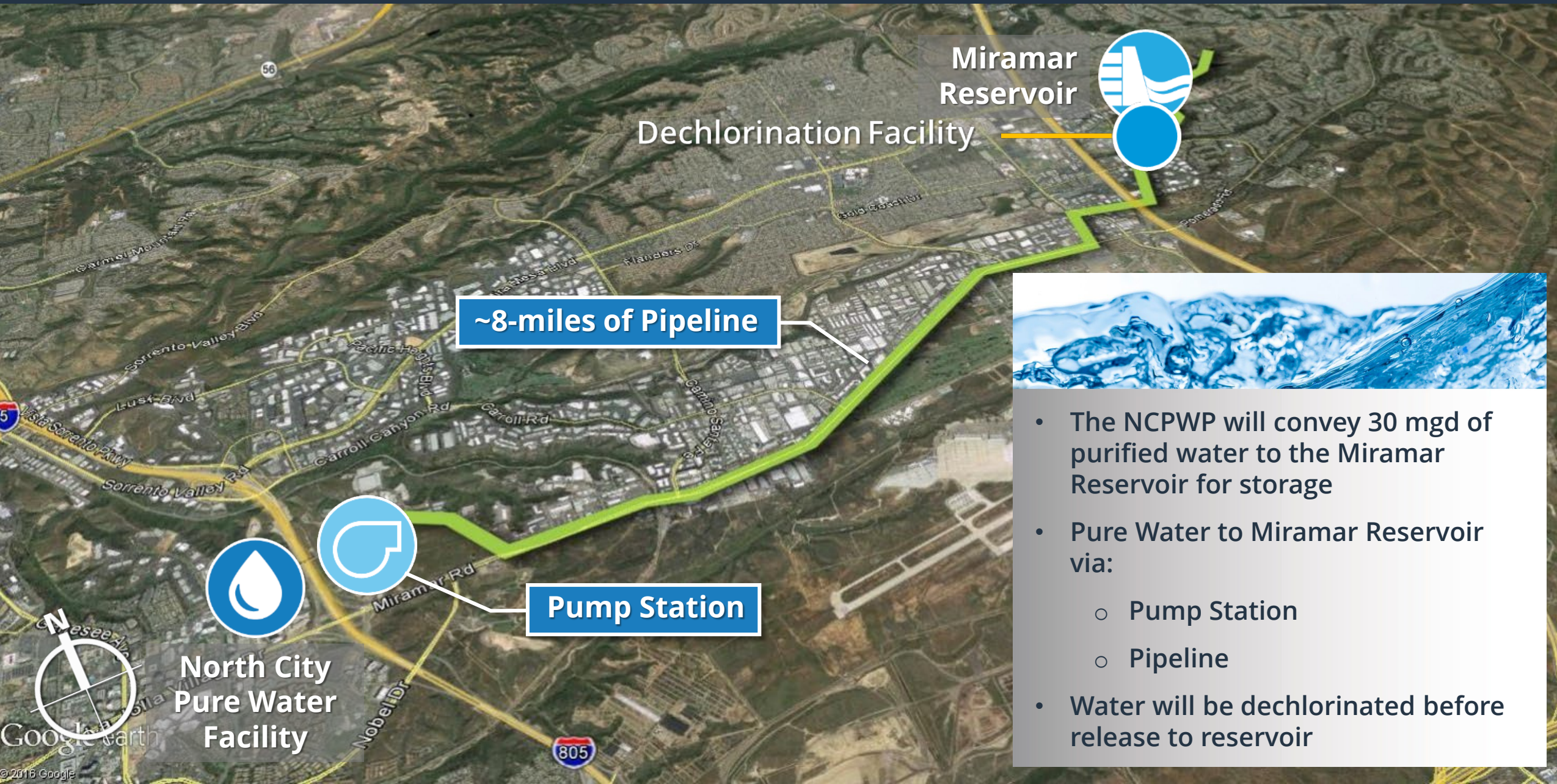




North City Pure Water Facility



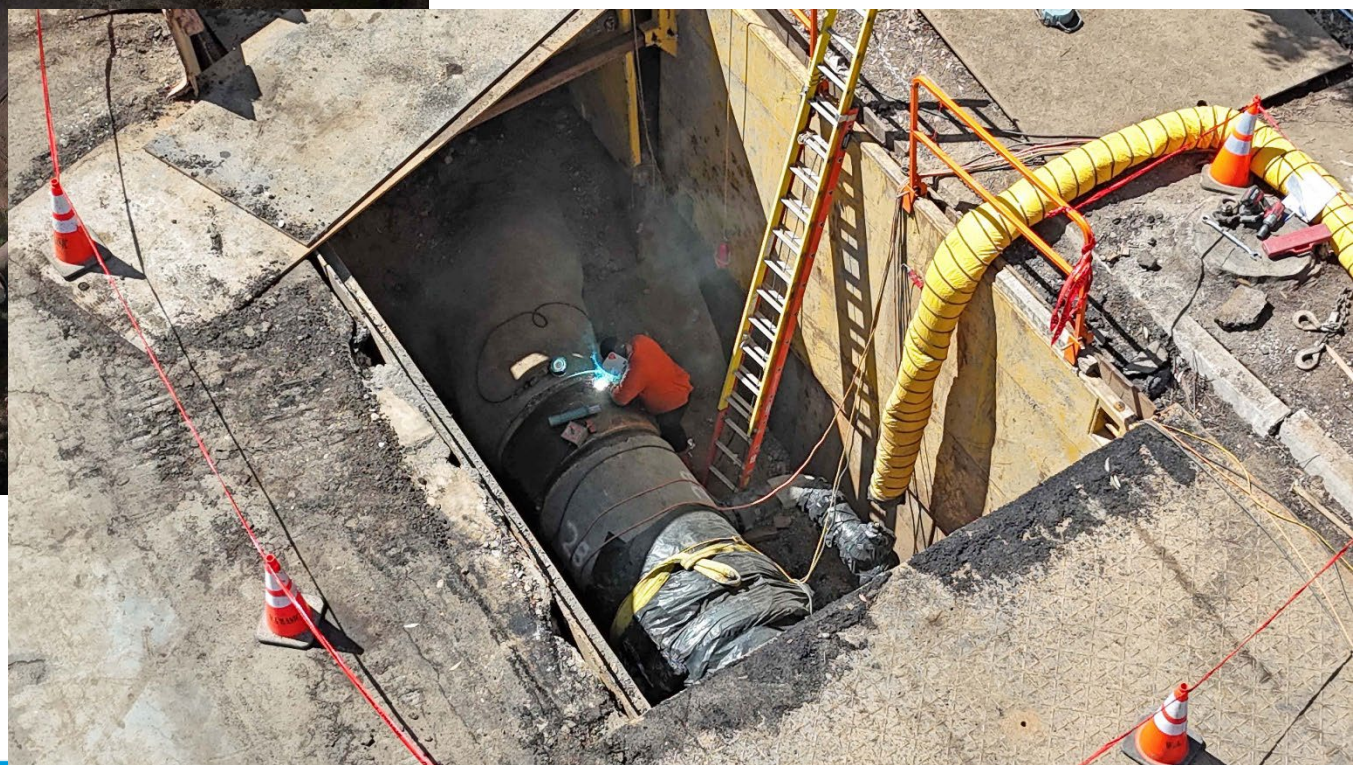
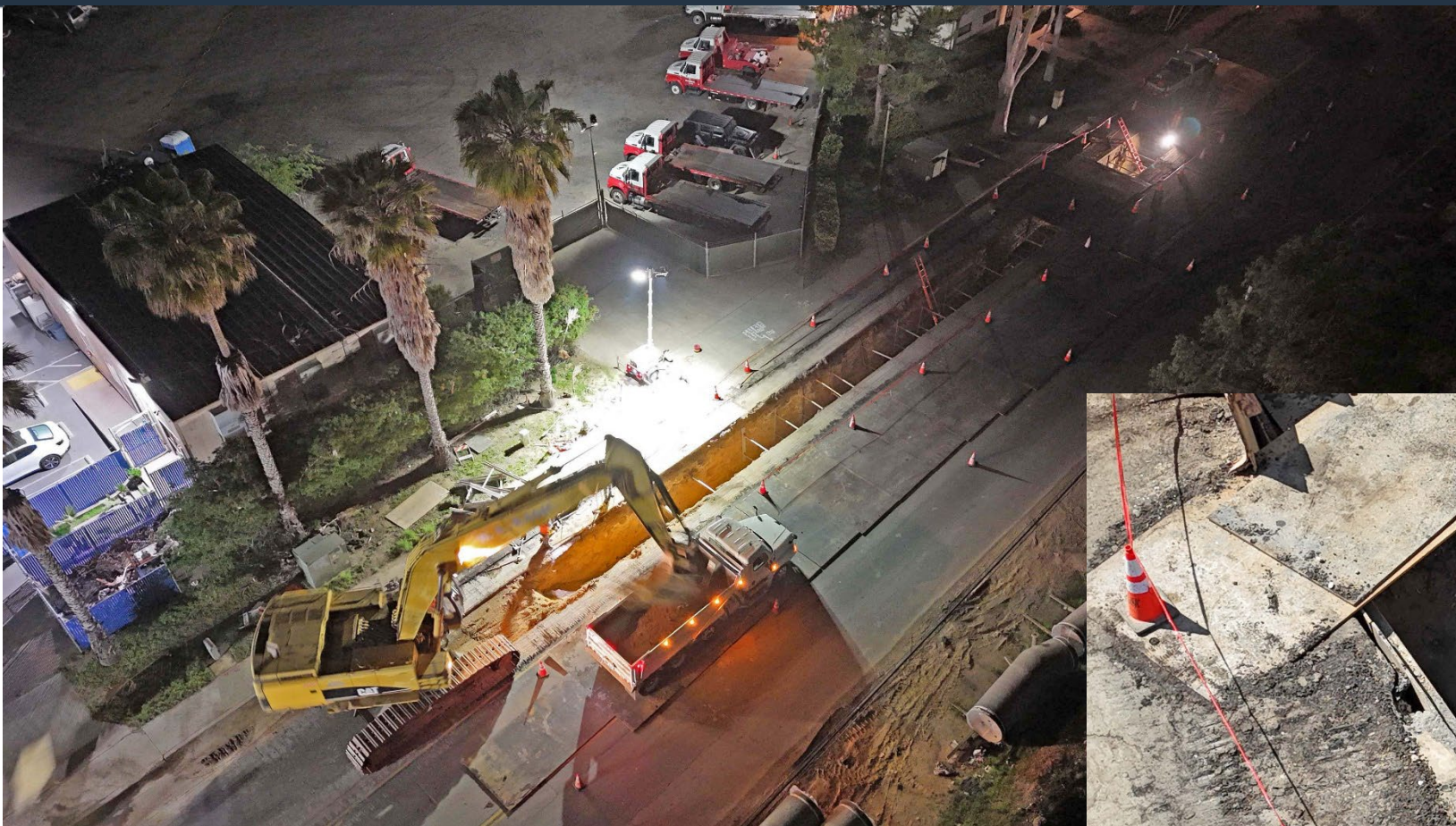
SD North City Pure Water Pipeline



- The NCPWP will convey 30 mgd of purified water to the Miramar Reservoir for storage
- Pure Water to Miramar Reservoir via:
 - Pump Station
 - Pipeline
- Water will be dechlorinated before release to reservoir



North City Pure Water Pipeline



SD Pure Water Subaqueous Pipeline



- The Subaqueous Pipeline is a one-mile, branched pipeline that was constructed on barges on the surface of Miramar Reservoir before being sunk and permanently installed on the floor of the lakebed.
- The purified water will blend with imported and local water supplies and will then be treated at the existing Miramar Drinking Water Treatment Plant and sent to homes and businesses.

Pure Water Subaqueous Pipeline

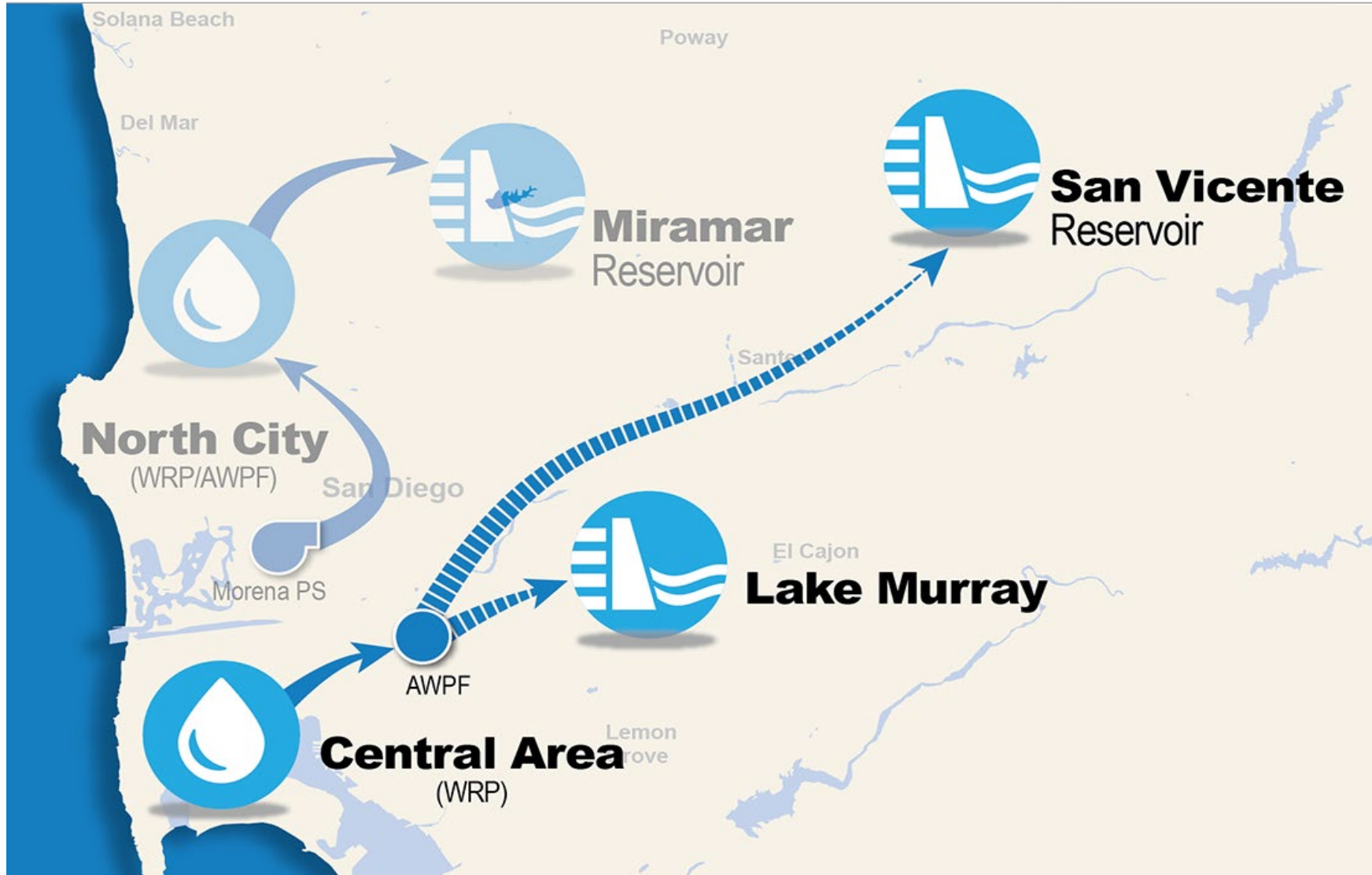


SD NCPWF Operational Readiness

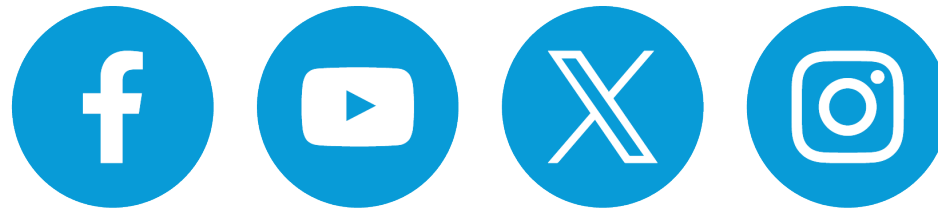
- Hiring Progress
- Pure Water Operator classification series
- AWTO Certification Training
 - *City recognized as a “founding agency” of the State’s certification program*
- Engagement in Construction
- Vendor Trainings
- Commissioning



Phase 2 Central Area Planning Update



The City of San Diego continues to provide safe, high quality drinking water for its customers each and every day.



@PureWaterSD

Visit purewatersd.org to learn more about the Pure Water Program.

Questions

**To ask a question, please use the
raise hand feature.**



MET Report



Linda Ackerman
MWDOC MET Director



ACWA Report



Upcoming ACWA Events:

- ACWA Spring Conference, Monterey – May 13-15



Cathy Green
President, ACWA
Director, OCWD



Announcements

Have something to share?





Thank you

Next WACO meeting:

Friday, June 6, 2025

7:30am via Zoom

Next WACO planning meeting:

Tuesday, May 20, 2025

7:30am via Zoom

