

| Pure Water San Diego Program

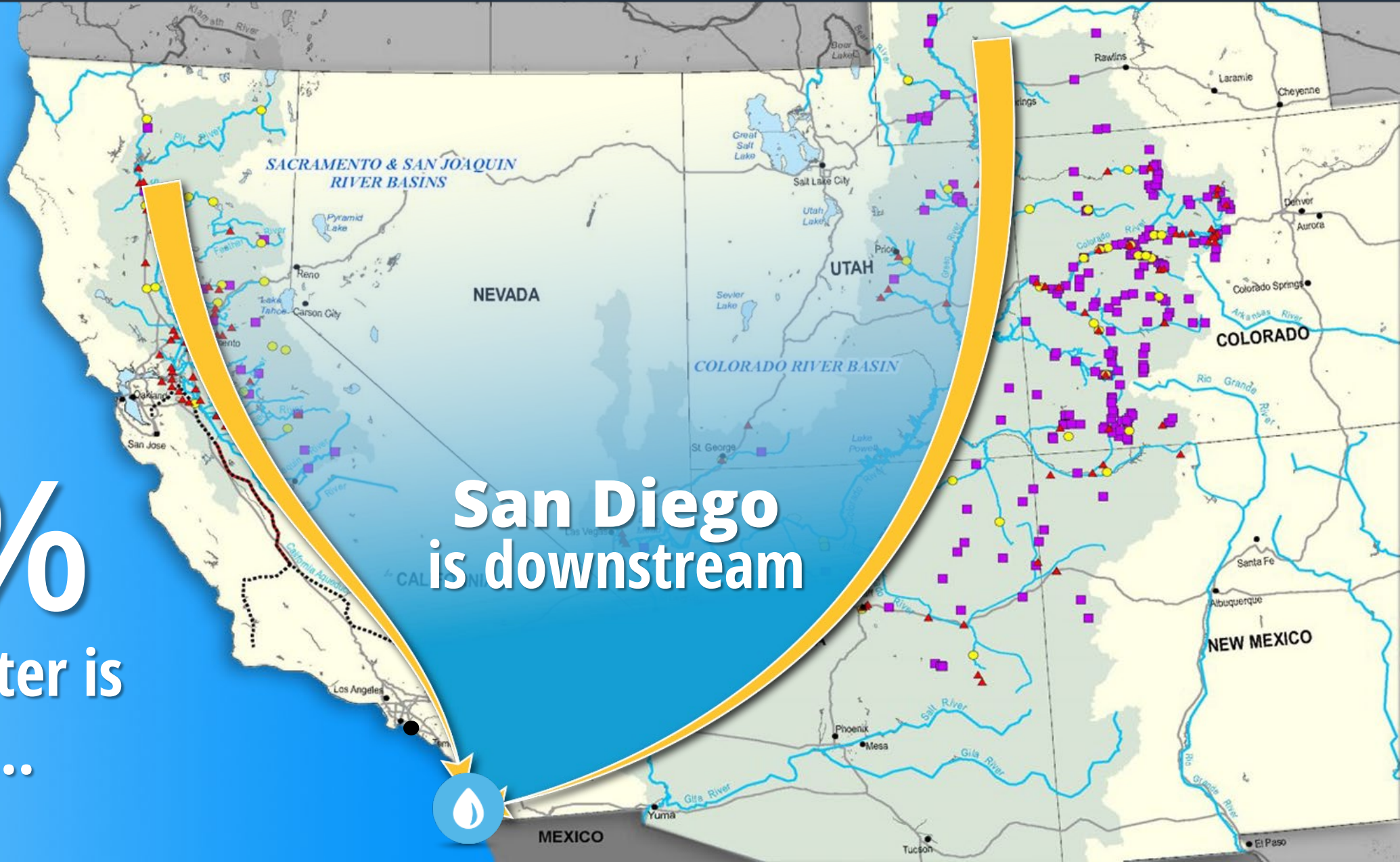
Strategic Capital Projects Department



San Diego's Water Supply

85%
of our water is
imported...

**San Diego
is downstream**



SD We Face Numerous Water Challenges

 Limited local & imported supplies

 Population growth

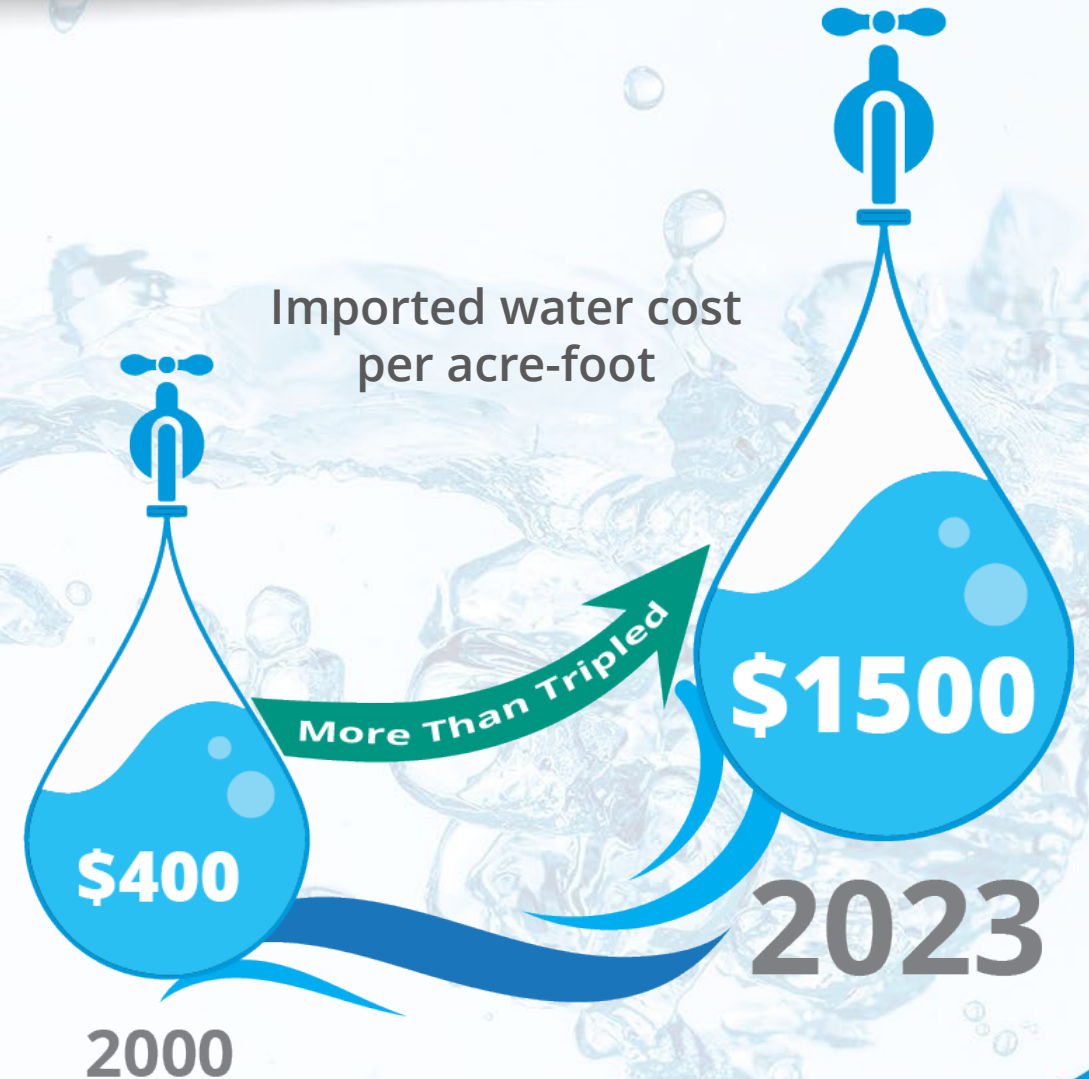
 Bay Delta constraints

 Natural disaster risk

 Rising imported water costs

 Recurring drought

 Climate Change

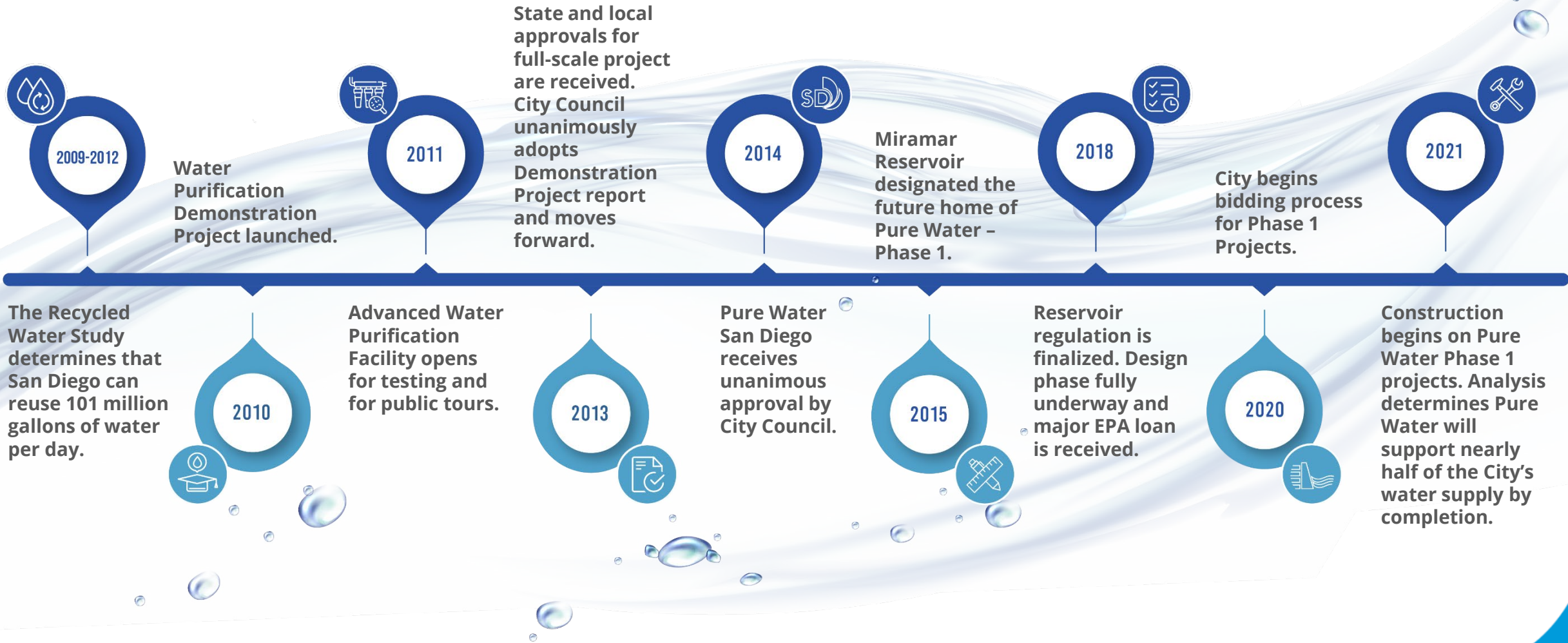


SD Multi-faceted Approach



- Conservation
- Desalination
- Groundwater Development
- Recycled Water
- Pure Water Program

SD Pure Water San Diego Potable Reuse Timeline





What is Pure Water San Diego?

Pure Water will:

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



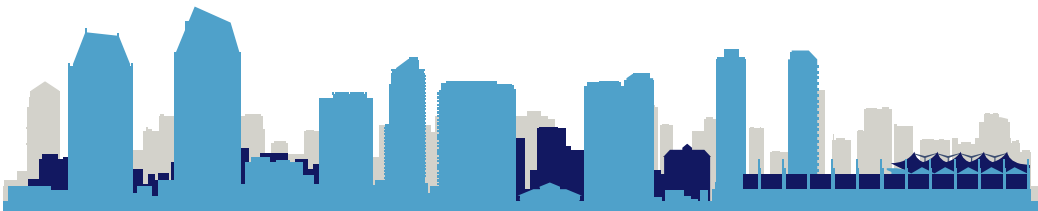
Provide a reliable,
sustainable water
supply



Produce safe,
high-quality
drinking water



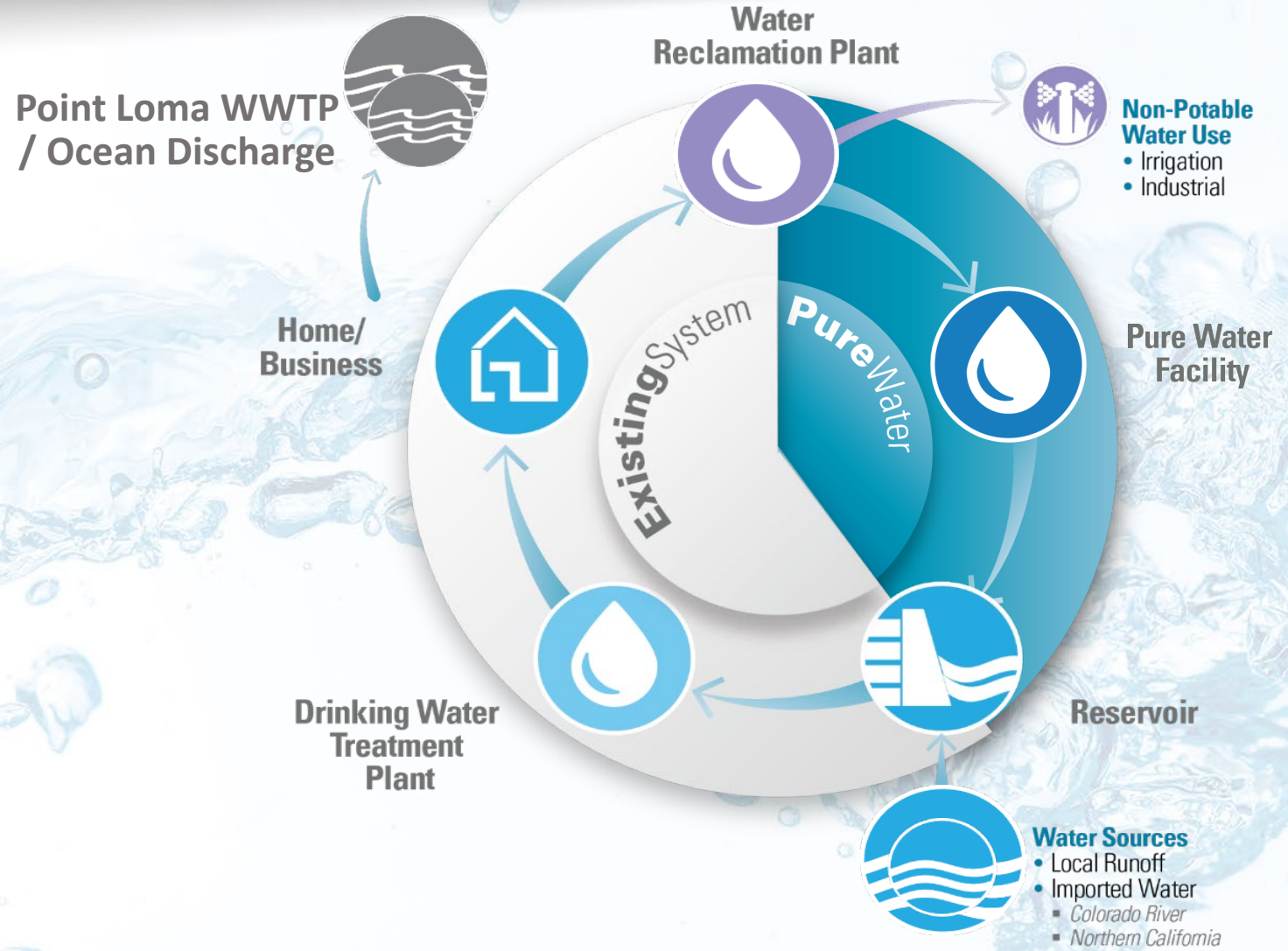
Offer a cost-effective investment
for San Diego's water needs



SD San Diego's Water Supply System

Existing System...
Primarily a
Single-Use System

Pure Water...
Completes Our
Water Cycle



Pure Water
will produce nearly

1/2

of your water
locally

Phase 2

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



SD Pure Water Runs a Successful Demonstration Facility



More than 50,000 lab tests:
Met all standards



Water quality:
Exceptional



North City Pure Water Facility



Ozonation



**Biological
Activated
Carbon
Filters**



**Membrane
Filtration**



**Reverse
Osmosis**



**Ultraviolet
Disinfection
/Advanced
Oxidation**

SD Phase 1 Projects



MBC	Metropolitan Biosolids Center
NCWRP	North City Water Reclamation Plant & Flow Equalization Basin
NCPWF	North City Pure Water Facility & Pump Station
NCPWP	North City Pure Water Pipeline, Dechlorination Facility and Subaqueous Pipeline

 **PUMP STATION**
 **WATER FACILITY**
 **BIOSOLIDS**

Morena Pump Station & Pipelines



Phase 1 Projects Timeline

Phase 1 North City Pure Water Project (listed by start date)	Construction Start
Early Works at the North City Water Reclamation Plant	2019
North City Pure Water Facility and Pump Station	April 2021
North City Pure Water Pipeline	June 2021
Morena Pipelines Northern Alignment and Tunnels	June 2021
Morena Pump Station	June 2021
North City Water Reclamation Plant Expansion	August 2021
Metropolitan Biosolids Center Improvements	September 2021
Miramar Reservoir Automated In-Water Quality Monitoring System	October 2021
North City Water Reclamation Plant Flow Equalization Basin	December 2021
Morena Pipelines Southern and Middle Alignment	October 2022
Miramar Reservoir Pump Station Improvements	October 2022
Peñasquitos Pump Station Oxygenation System	February 2023

SD 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 Boulevard

Friars Road

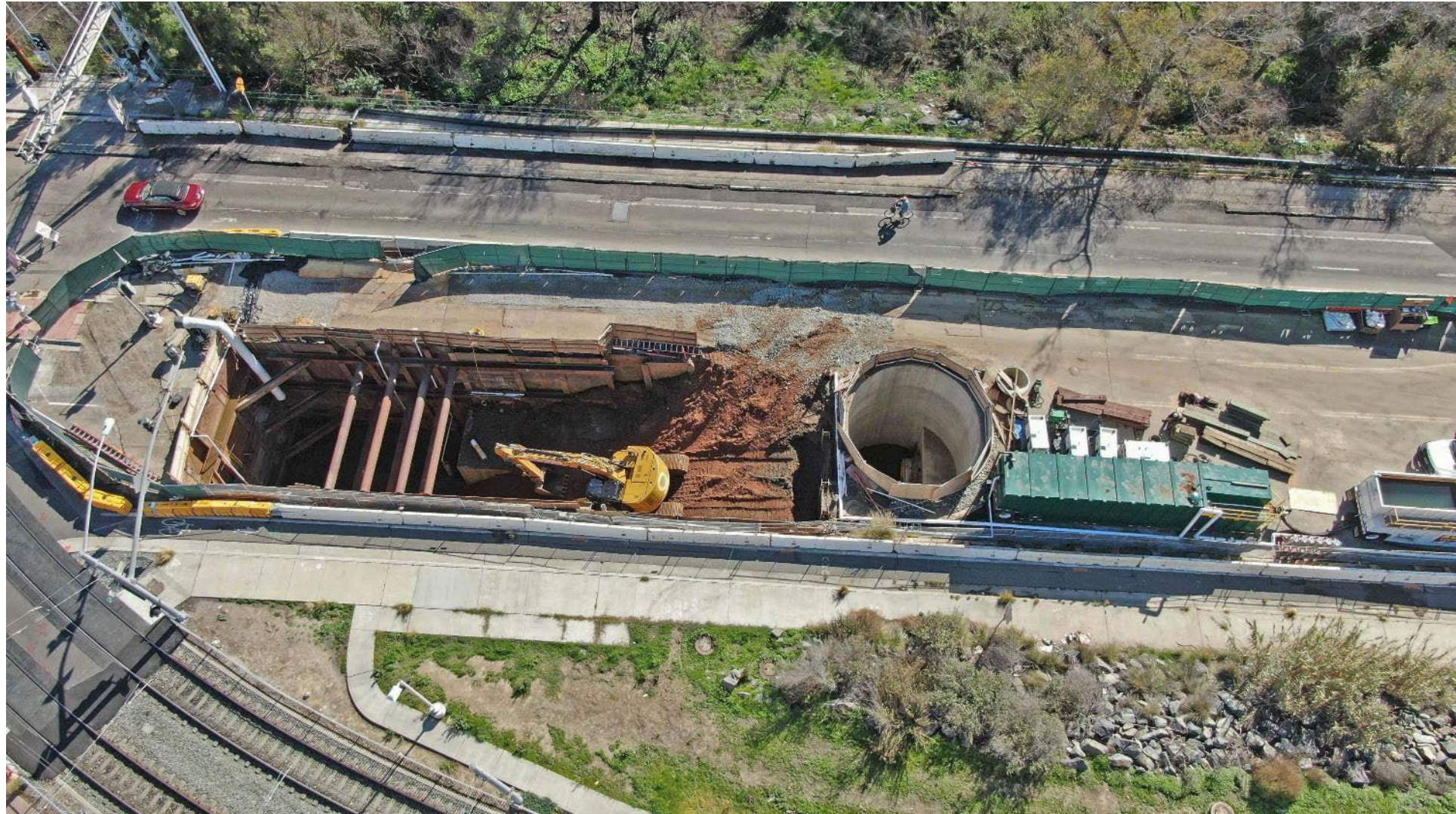


Morena Pump Station





Morena Pump Station





Morena Southern Alignment



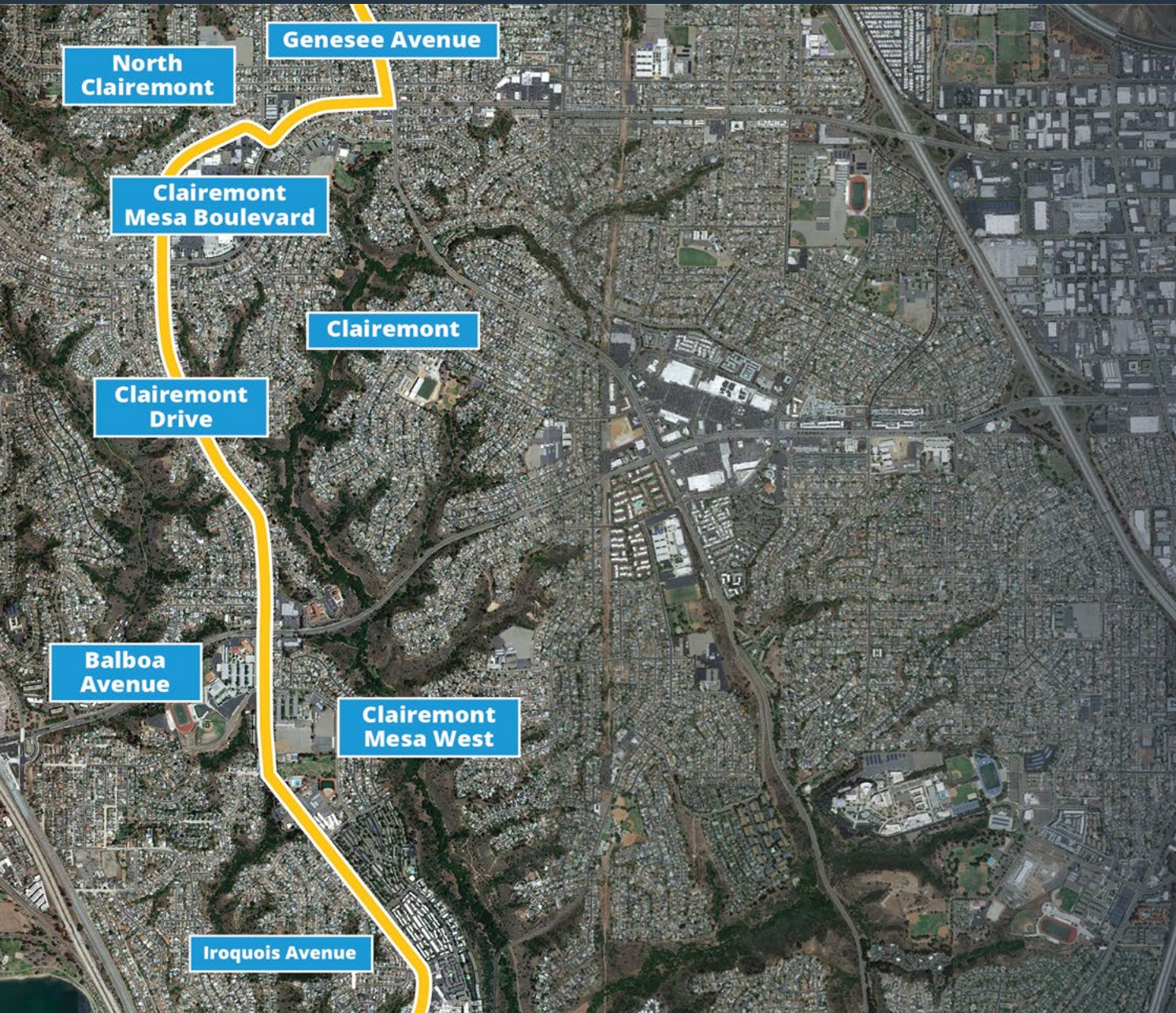
- Will connect the Morena Pump Station at Sherman and Custer Streets in Bay Park with the Morena Pipelines Northern Alignment in University City.
- Construction is underway.



Morena Southern Alignment



SD Morena Middle Alignment

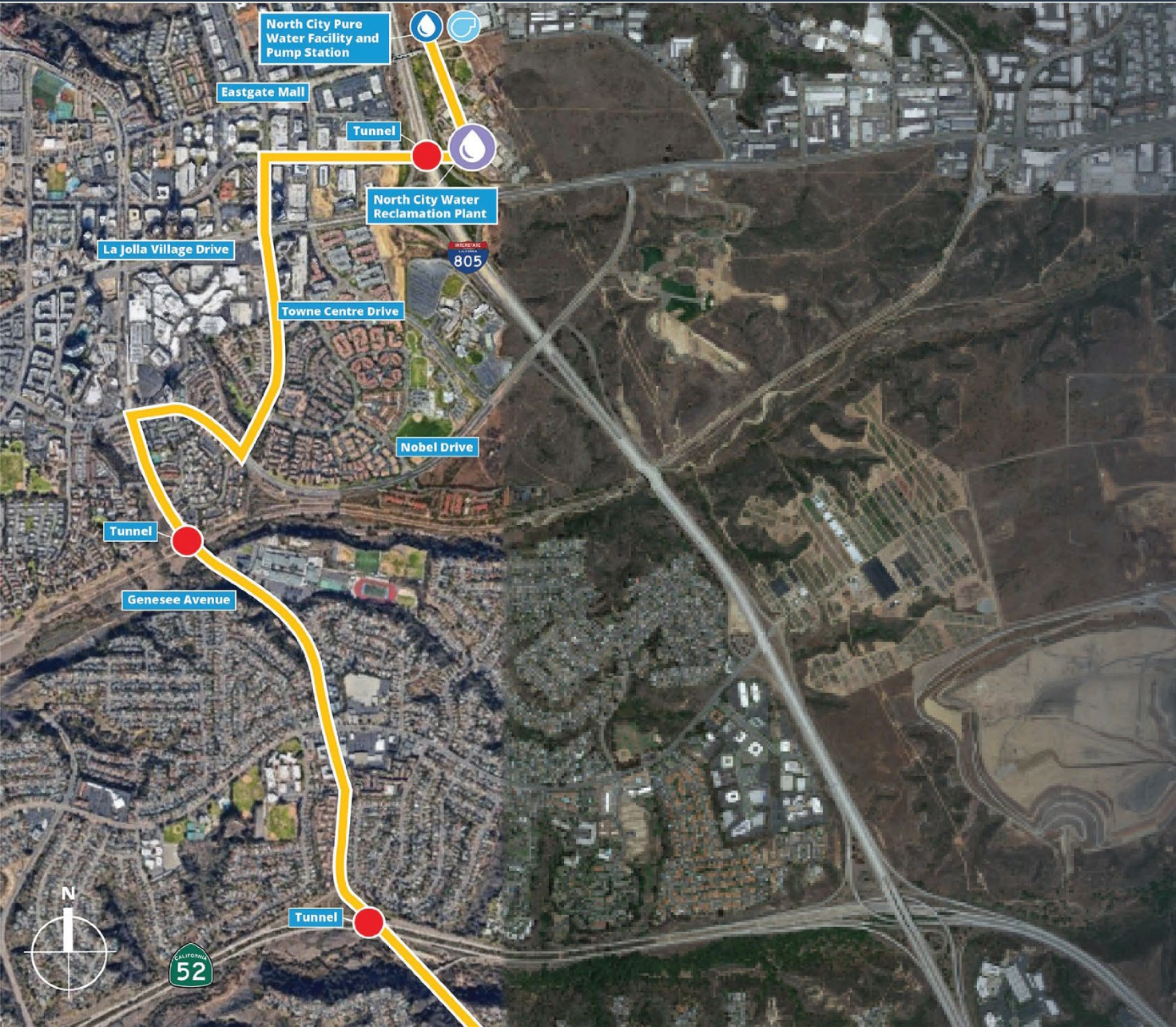


- Will connect the Morena Pipelines Southern Alignment in Bay Park to the Morena Pipelines Northern Alignment and Tunnels in University City
- Construction is underway

Morena Middle Alignment



SD Morena Northern Alignment & Tunnels



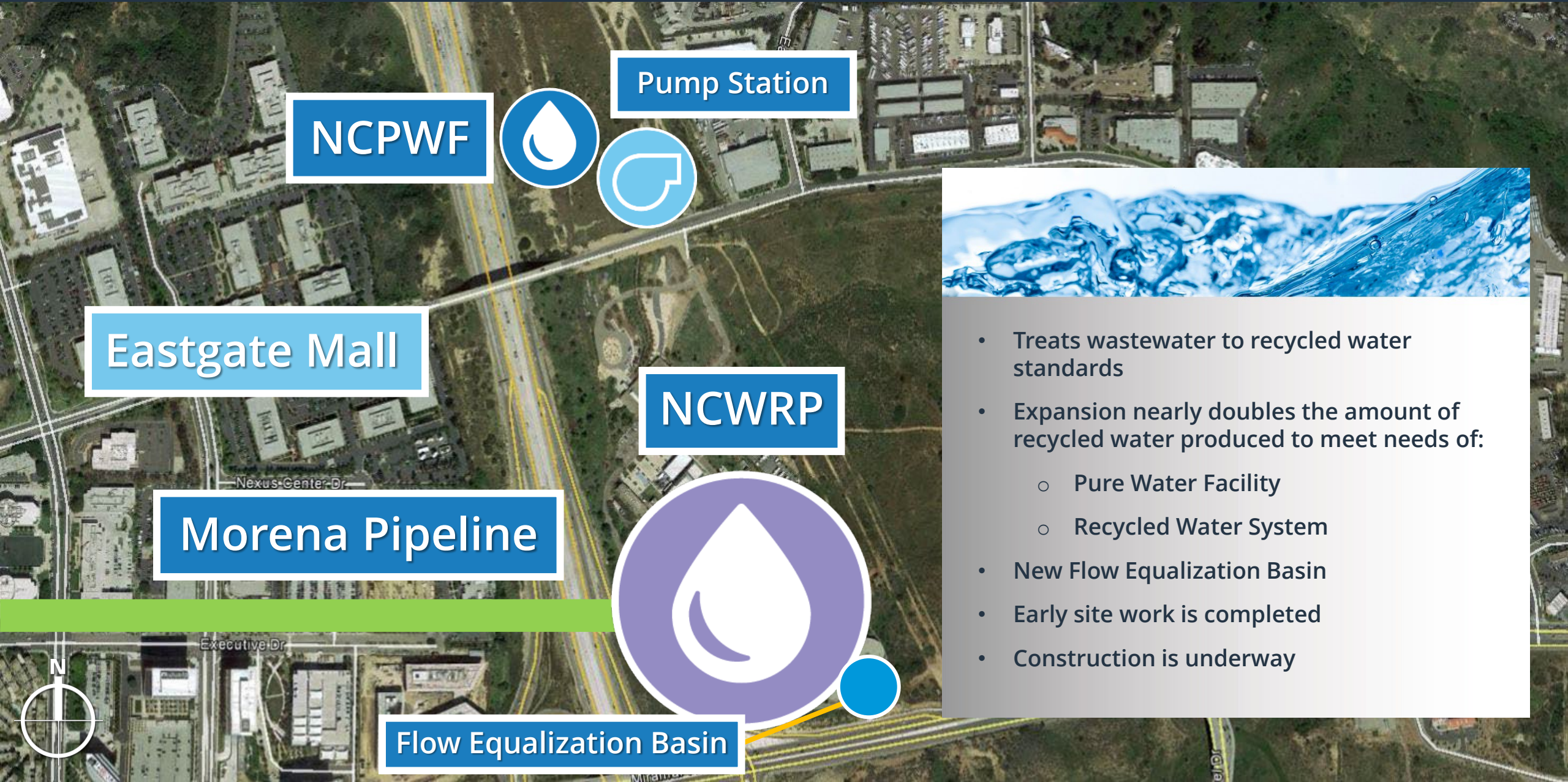
- This project will connect to the Morena Pipelines Middle Alignment to the south and the North City Water Reclamation Plant to the north
- Begins on Genesee Ave. and Appleton St. and continues on Genesee Ave, Nobel Drive, Towne Centre Drive and Executive Drive
- Construction is underway



Morena Northern Pipelines and Tunnels



SD 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
- Early site work is completed
- Construction is underway



North City Water Reclamation Plant Expansion





Metropolitan Biosolids Center



SD 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



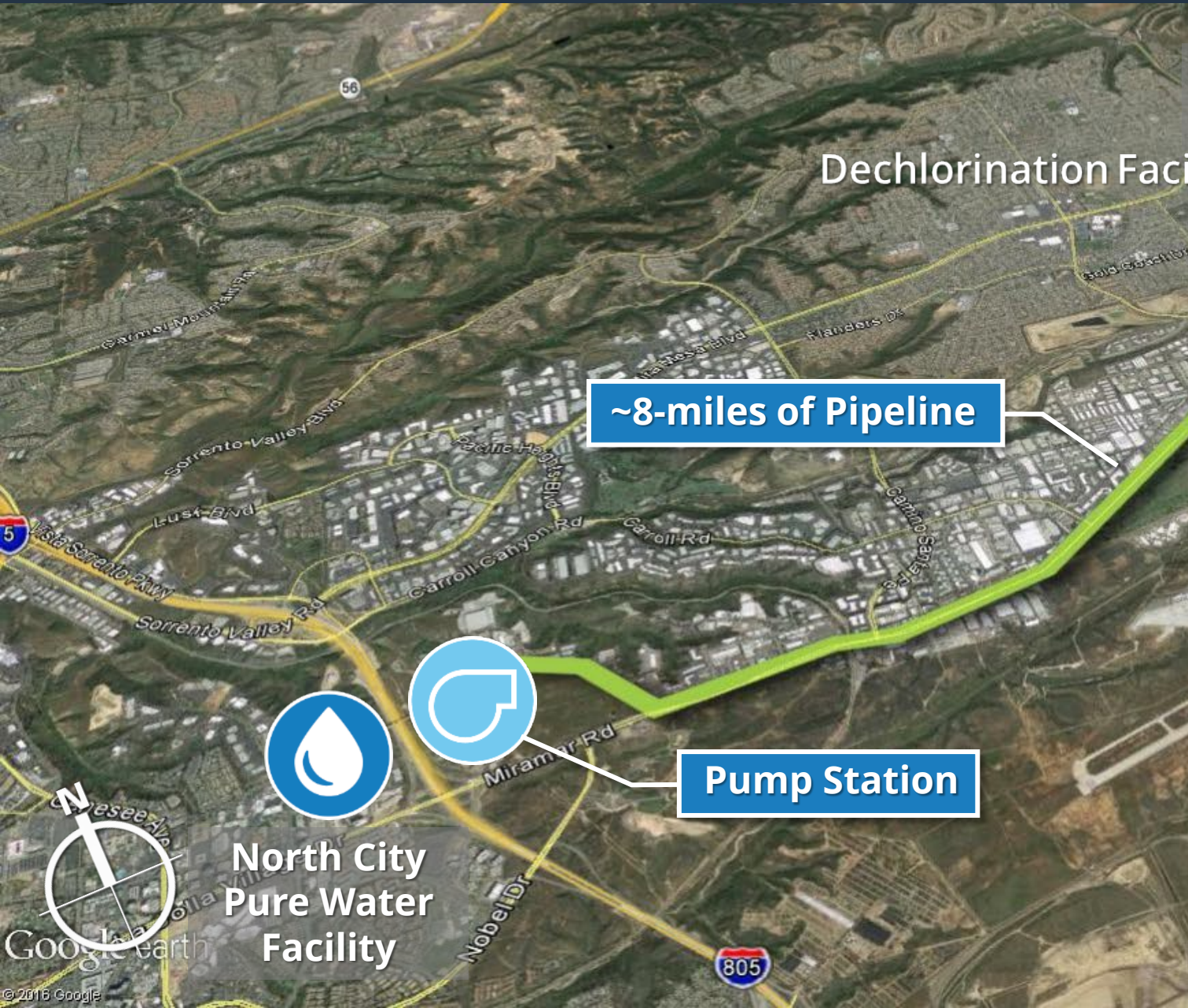


North City Pure Water Facility





North City Pure Water Pipeline



Miramar Reservoir



Dechlorination Facility

~8-miles of Pipeline

Pump Station

North City Pure Water Facility



- 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
- Construction is underway



North City Pure Water Pipeline

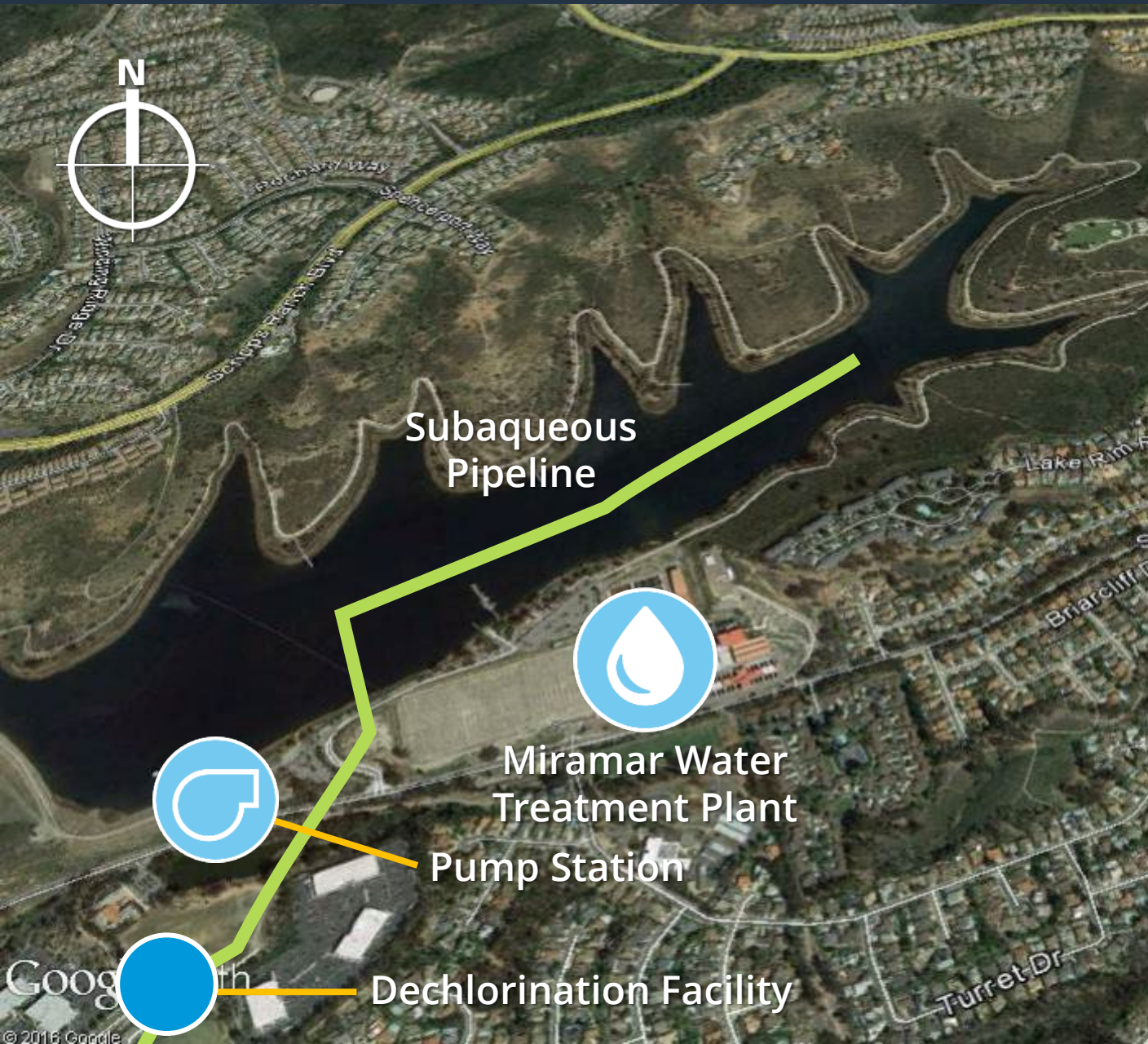




North City Pure Water Pipeline

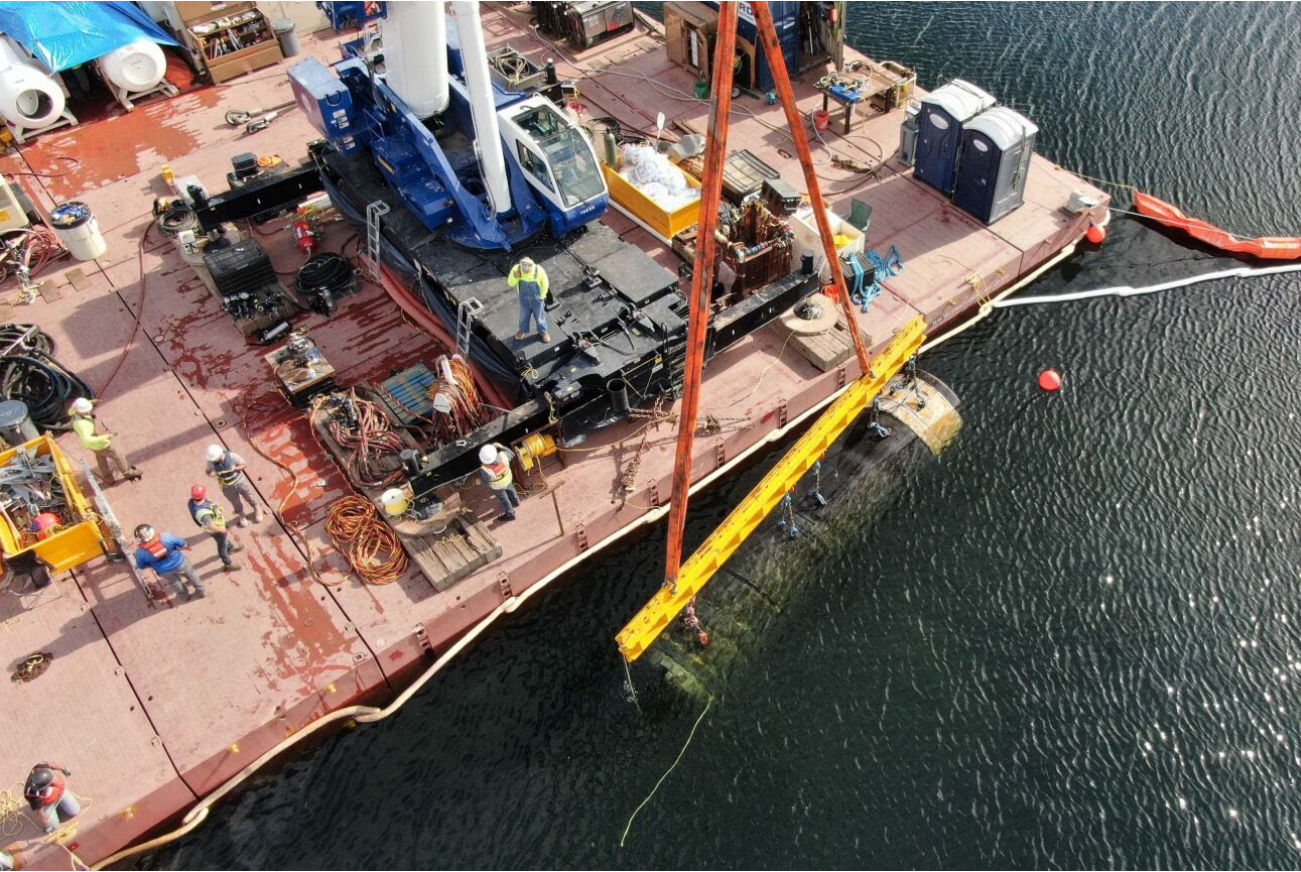


SD Subaqueous Pipeline

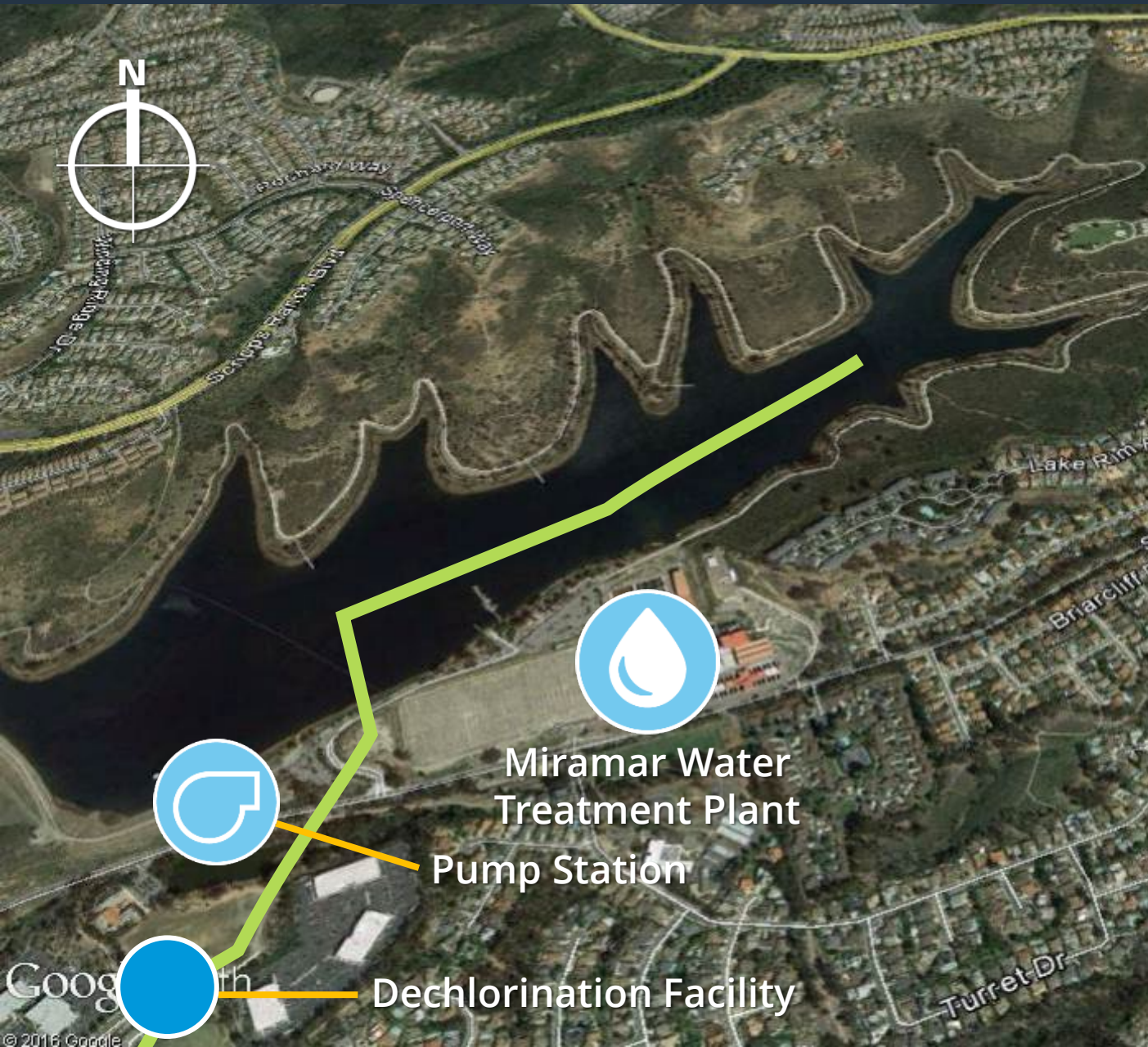


- The Subaqueous Pipeline is a one-mile, branched pipeline that will be constructed on barges on the surface of Miramar Reservoir before being sunk and permanently installed on the floor of the lakebed.
- The purified water will blend with imported and local water supplies and will then be treated at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

SD Subaqueous Pipeline

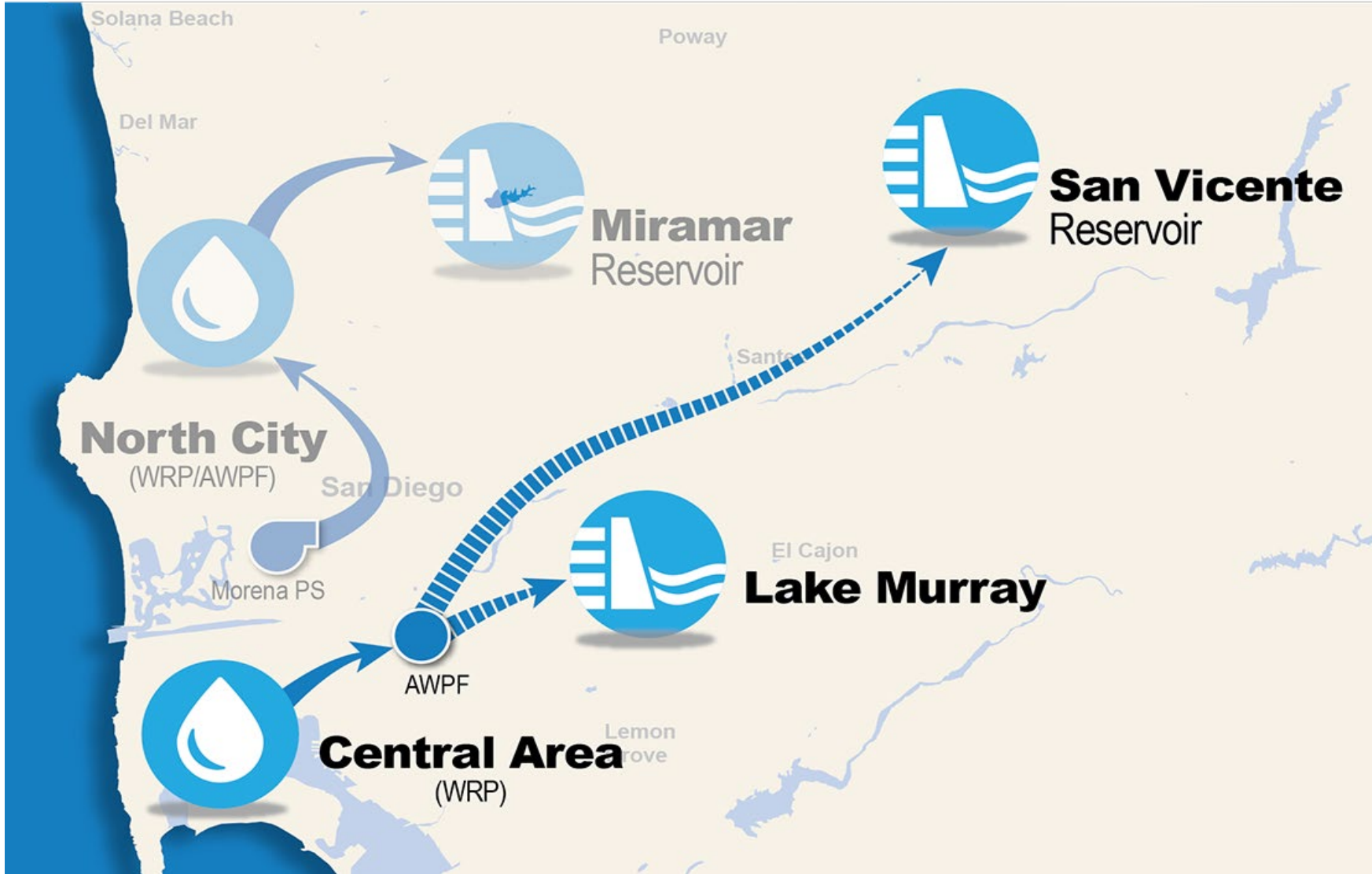


SD Miramar Reservoir Pump Station Improvements



- The Miramar Reservoir Pump Station is being upgraded through the improvements project
- Upgrades include operational improvements associated with the treatment of purified water
- The purified water will be treated again at the Miramar Water Treatment Plant before distributed to the public

SD Phase 2 Central Area Planning Update



Sustainability is Key

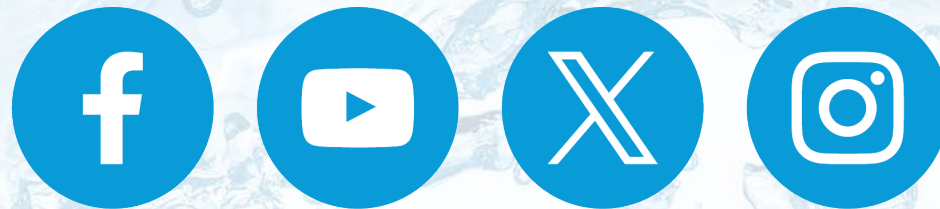


Pure Water provides the City with a safe, local, reliable and sustainable water supply.

SD Who Supports Pure Water?



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



@PureWaterSD

Visit [purewatersd.org](https://www.purewatersd.org) to learn more about the Pure Water Program.