

# | Pure Water San Diego Program

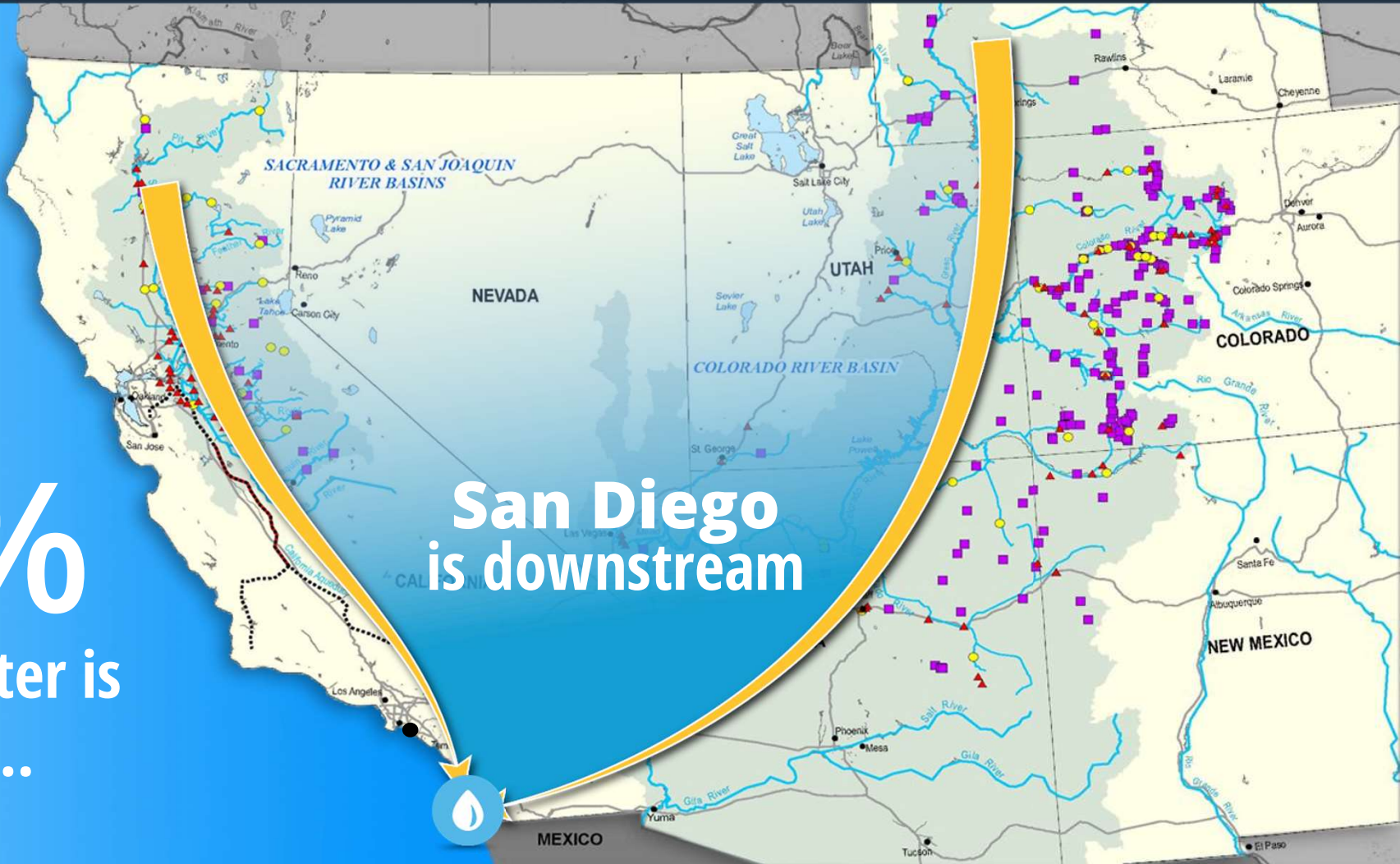
**Public Utilities Department**

*March 13, 2024*

# SD 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

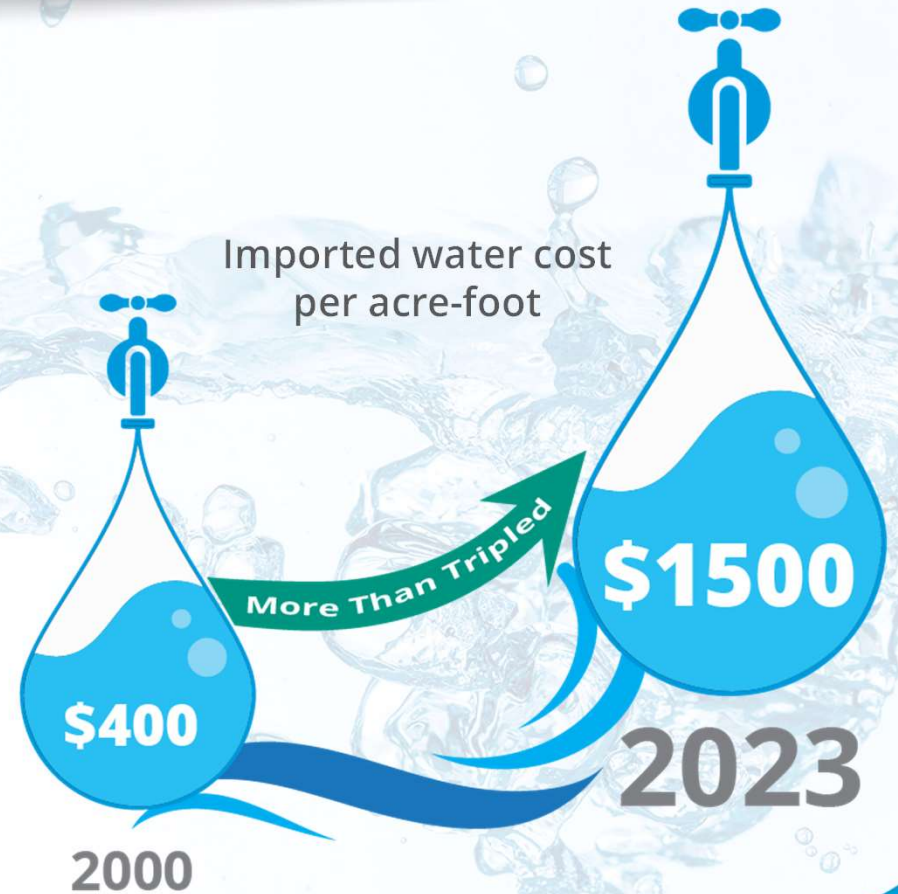
 Bay Delta constraints

 Natural disaster risk

 Rising imported water costs

 Recurring drought

 Climate Change



# Multi-faceted Approach



■ Conservation



■ Desalination



■ Groundwater Development



■ Recycled Water



■ Pure Water Program



# 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



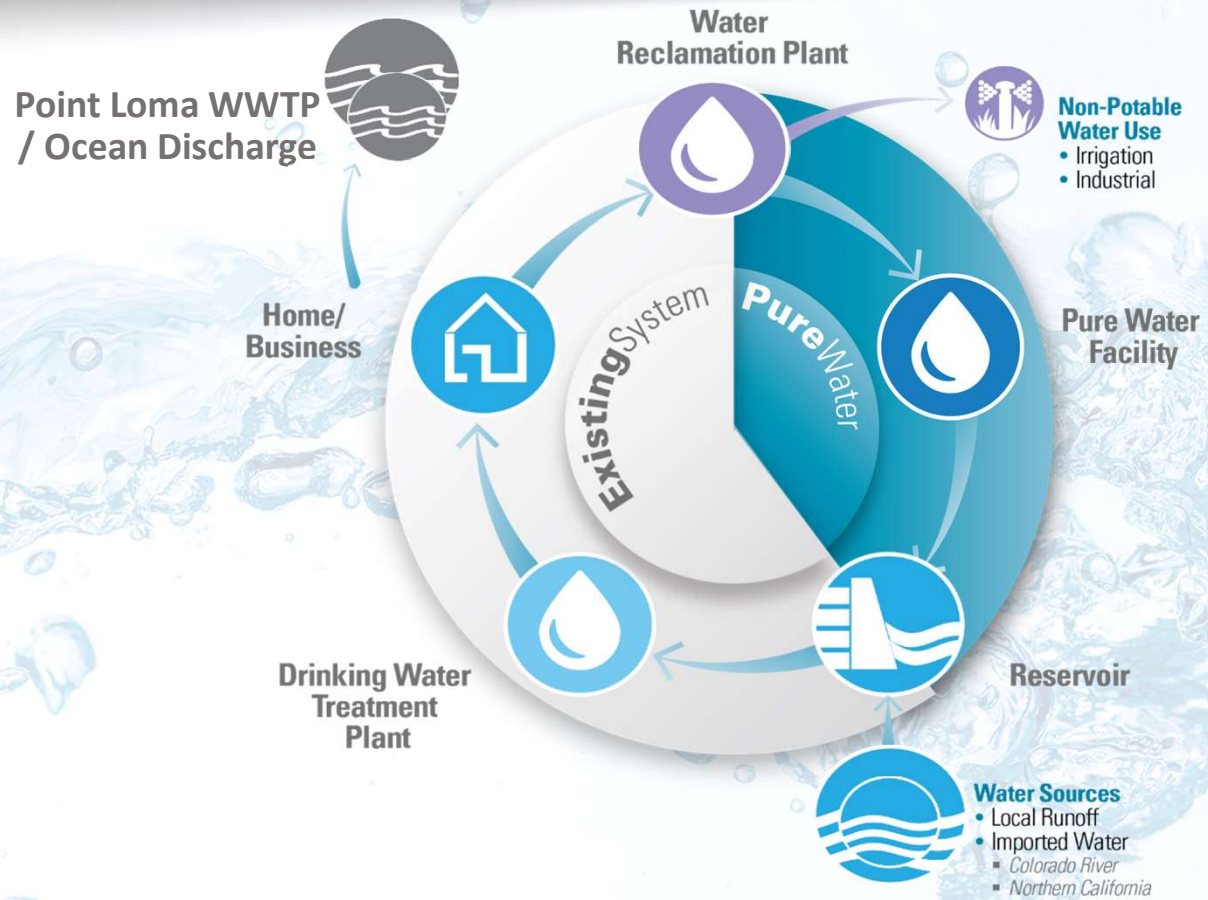
Offer a cost-effective investment  
for San Diego's water needs



# 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



# Pure Water Runs a Successful Demonstration Facility



More than 50,000 lab tests:  
**Met all standards**



Water quality:  
**Exceptional**



# Demonstration Facility Virtual Tour

Learn all about the five-step process from members of the Pure Water team by viewing the Pure Water Virtual Tour at one of the links below.

- [virtualltour.purewatersd.org](https://virtualltour.purewatersd.org)
- [YouTube.com/PureWaterSD](https://YouTube.com/PureWaterSD)

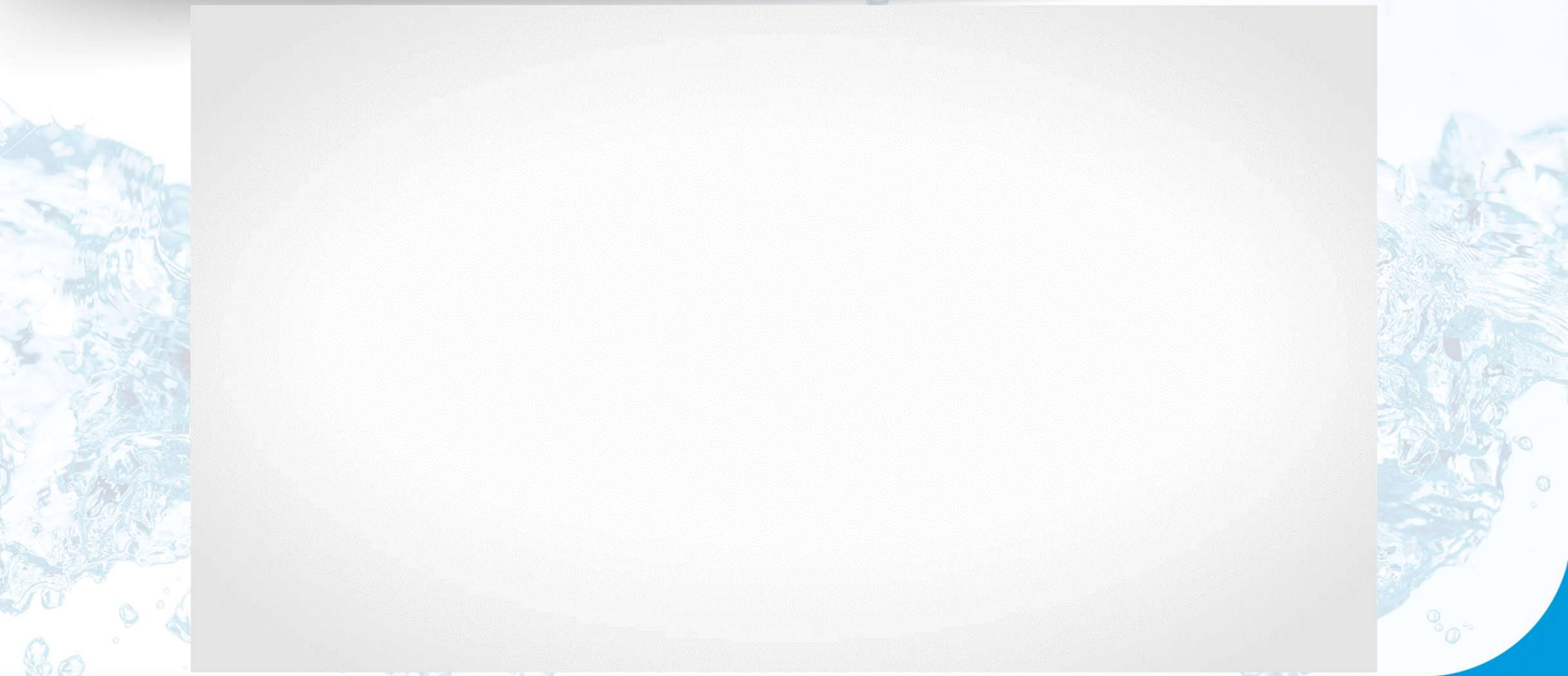


City of San Diego Pure Water Demonstration Facility Virtual Tour

295 views • May 7, 2020

 LIKE  DISLIKE  SHARE  SAVE ...

# Virtual Construction Tour Video



# SD Phase 1 Projects



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

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

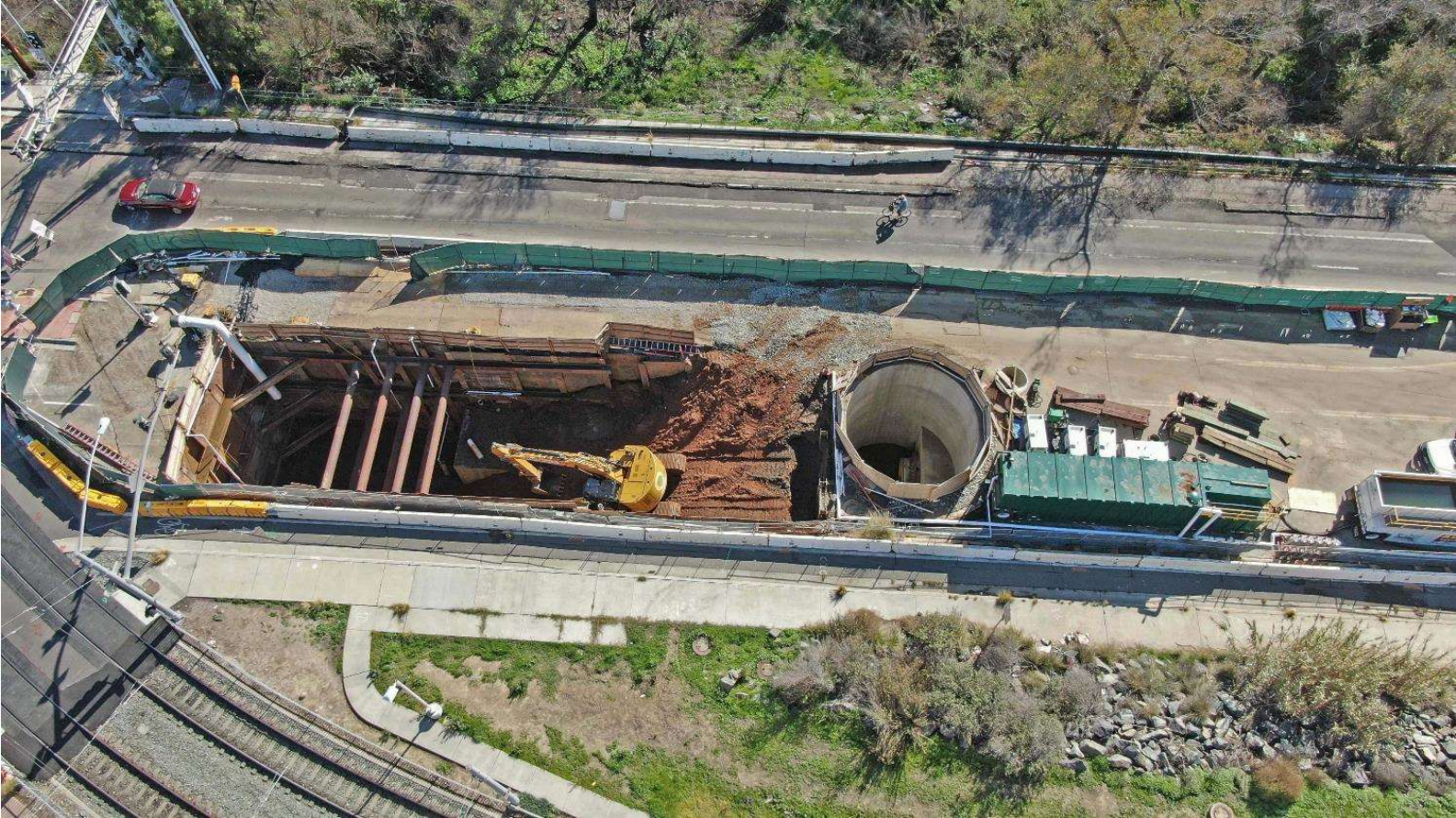


# Phase 1 Projects Timeline

<b>Phase 1 North City Pure Water Project (listed by start date)</b>	<b>Construction Start</b>
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



# Morena Pump Station





# North City Pure Water Facility





# North City Water Reclamation Plant



# Metropolitan Biosolids Center





# North City Pure Water Pipeline





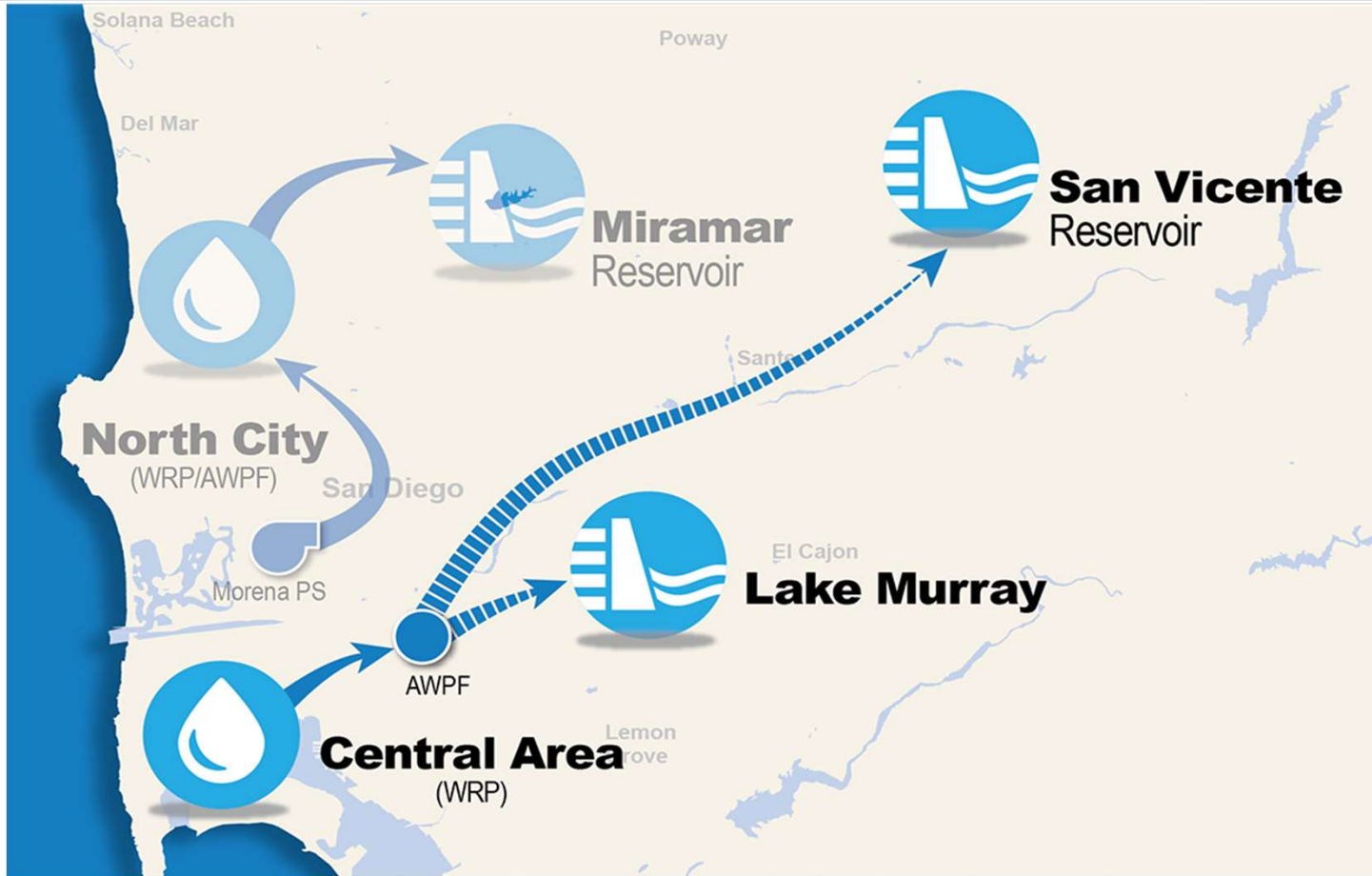
# North City Pure Water Pipeline



# North City Pure Water Pipeline



# 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?



# What Can I Do?

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



**@PureWaterSD**

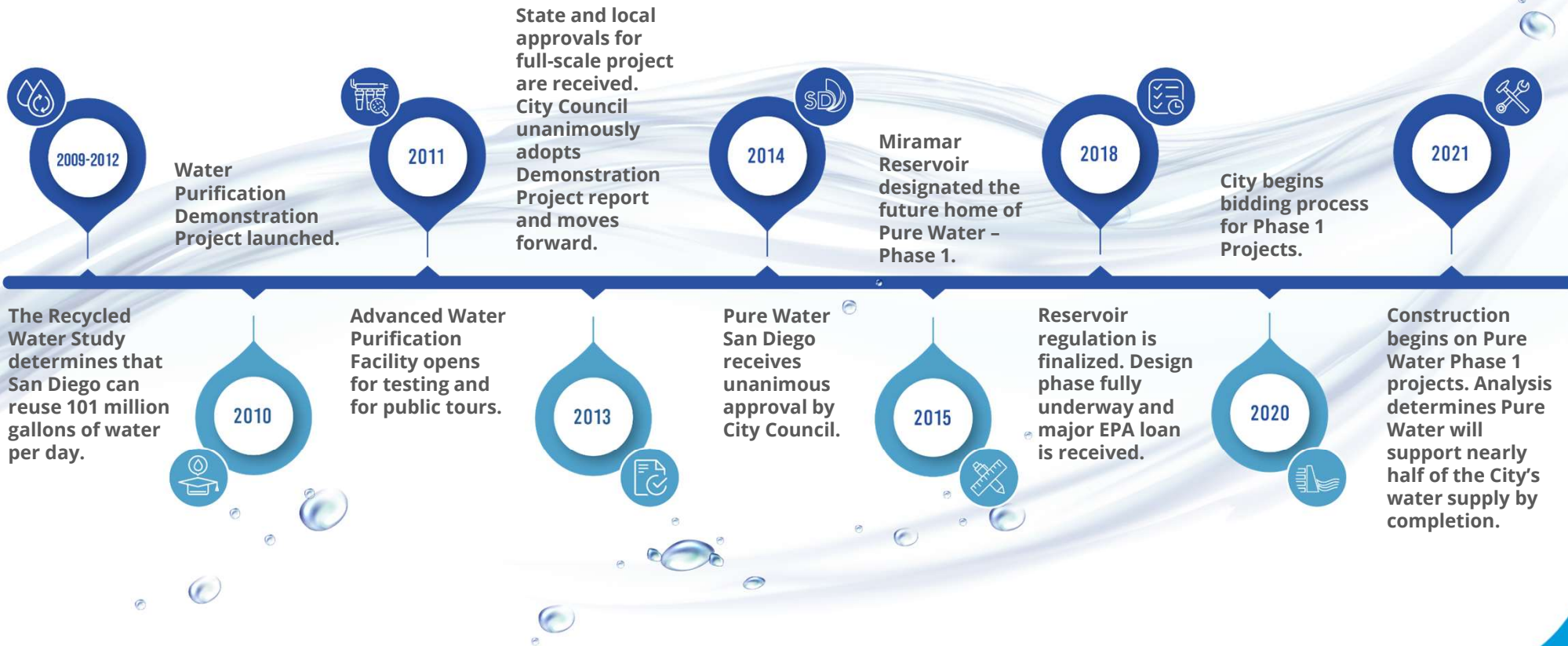
Visit [purewatersd.org](https://purewatersd.org) to learn more about the Pure Water Program.



# Back-Up Slides



# Pure Water San Diego Potable Reuse Timeline



# Morena Pump Station



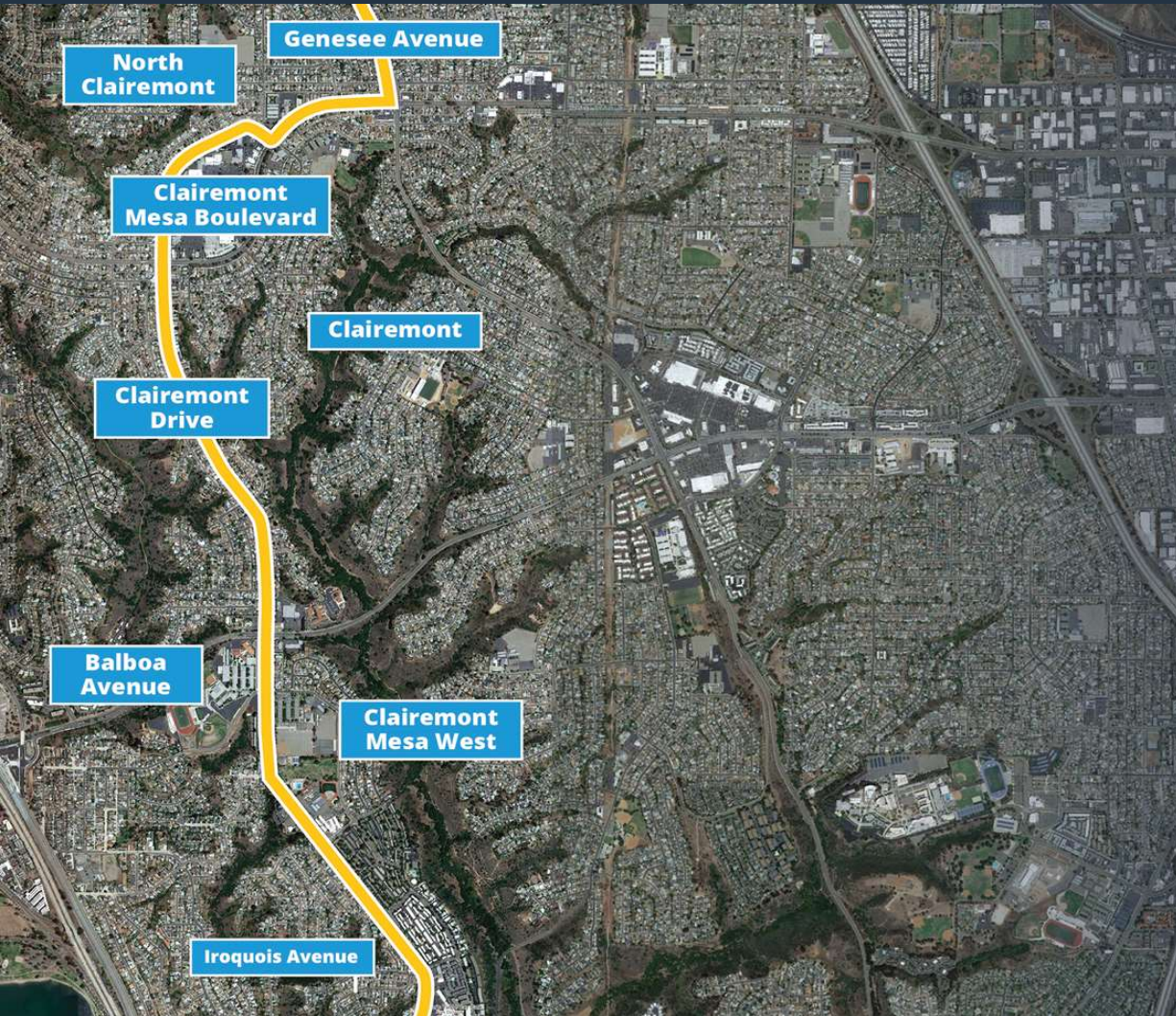
- Pump station will convey wastewater to the North City Water Reclamation Plant
- Supports Phase 1 recycled water and purified water production
- Includes work on Friars Road between Sea World Drive and Napa Street
- Construction is underway

# Morena Southern/Middle Alignment



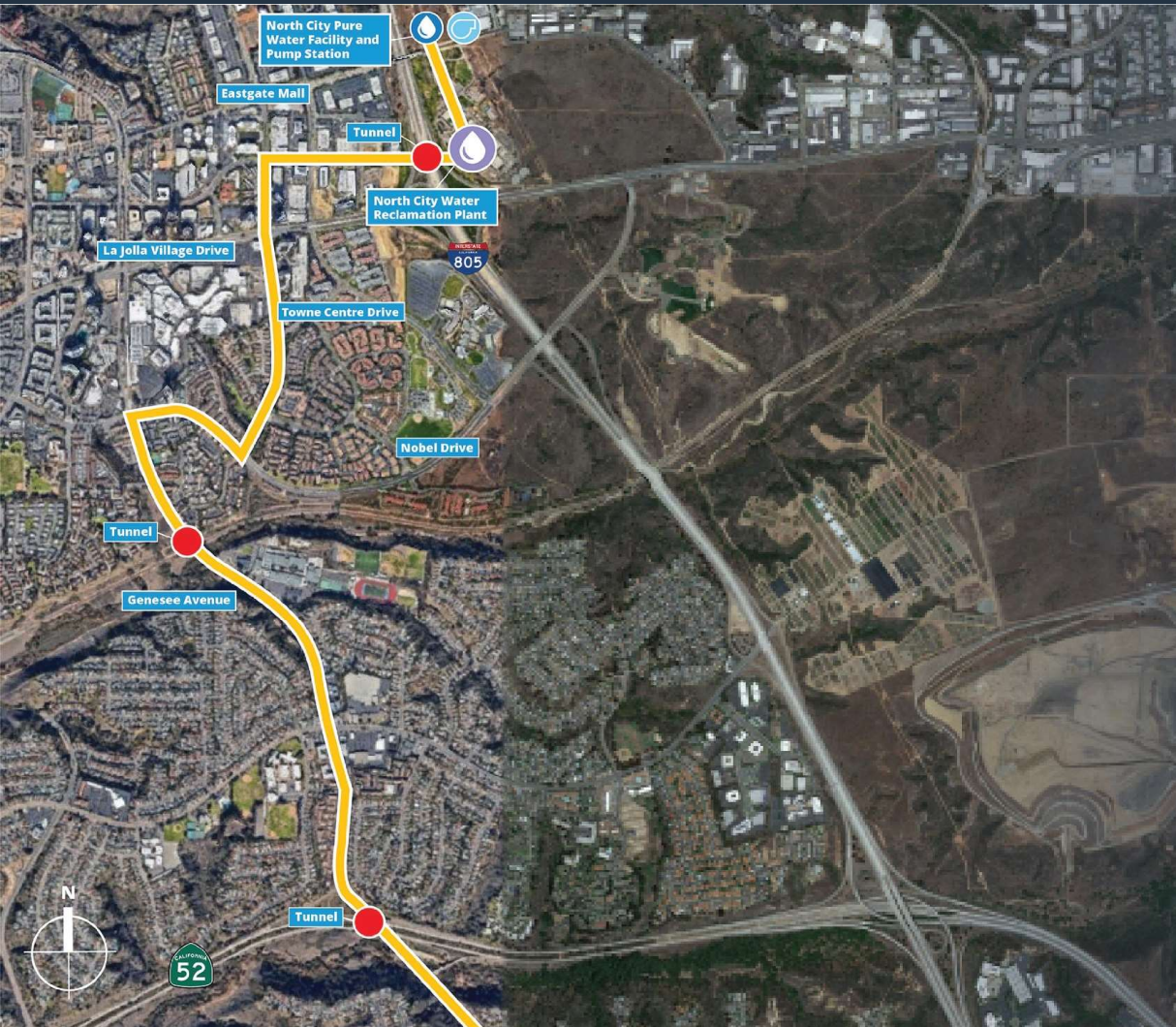
- Will connect the Morena Pump Station at Sherman and Custer Streets in Bay Park with the Morena Pipelines Northern Alignment in University City.
- Construction is underway.

# Morena Southern/Middle Alignment



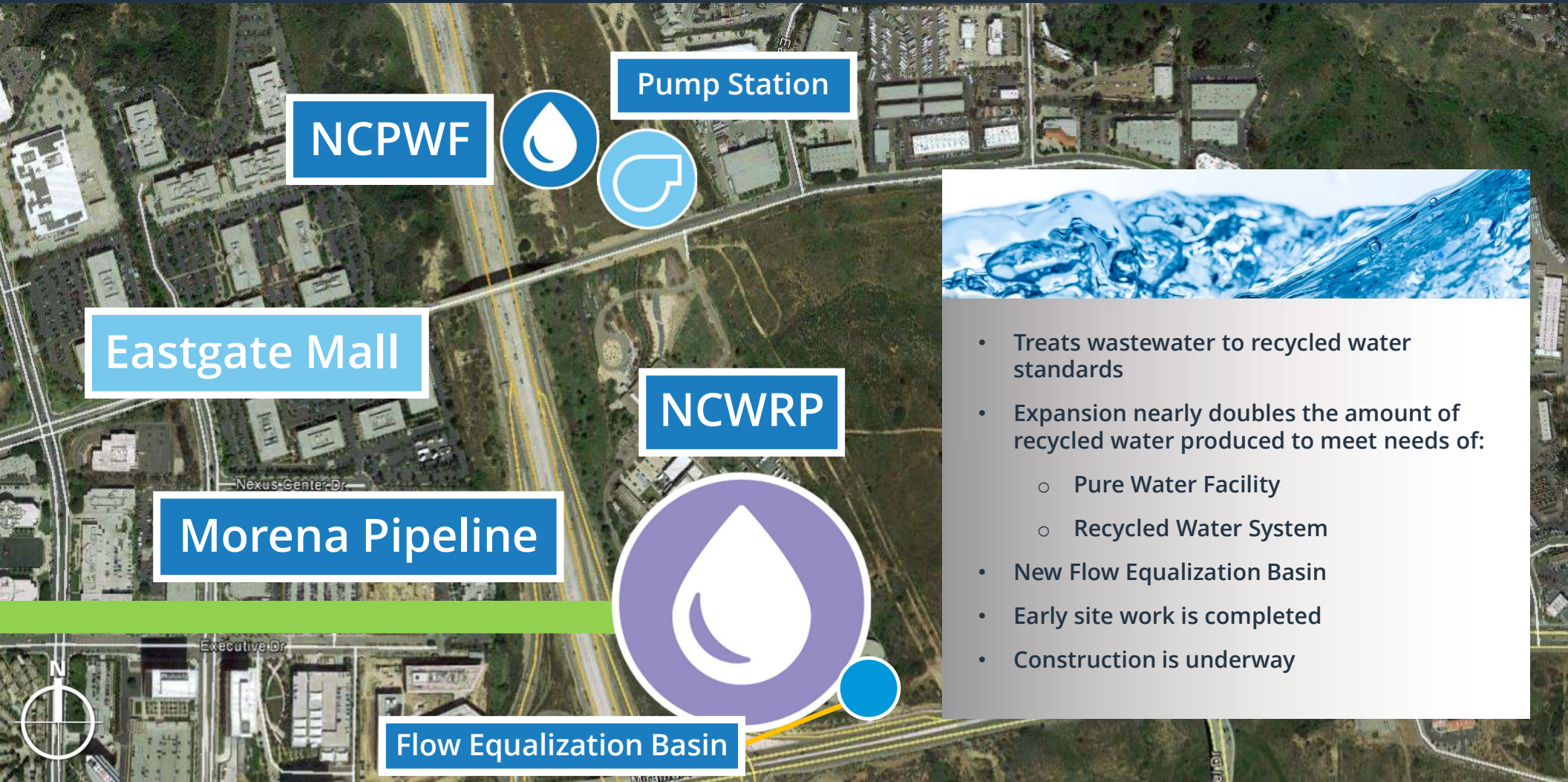
- Will connect the Morena Pipelines Southern Alignment in Bay Park to the Morena Pipelines Northern Alignment and Tunnels in University City
- Construction is underway

# Morena Northern Alignment & Tunnels



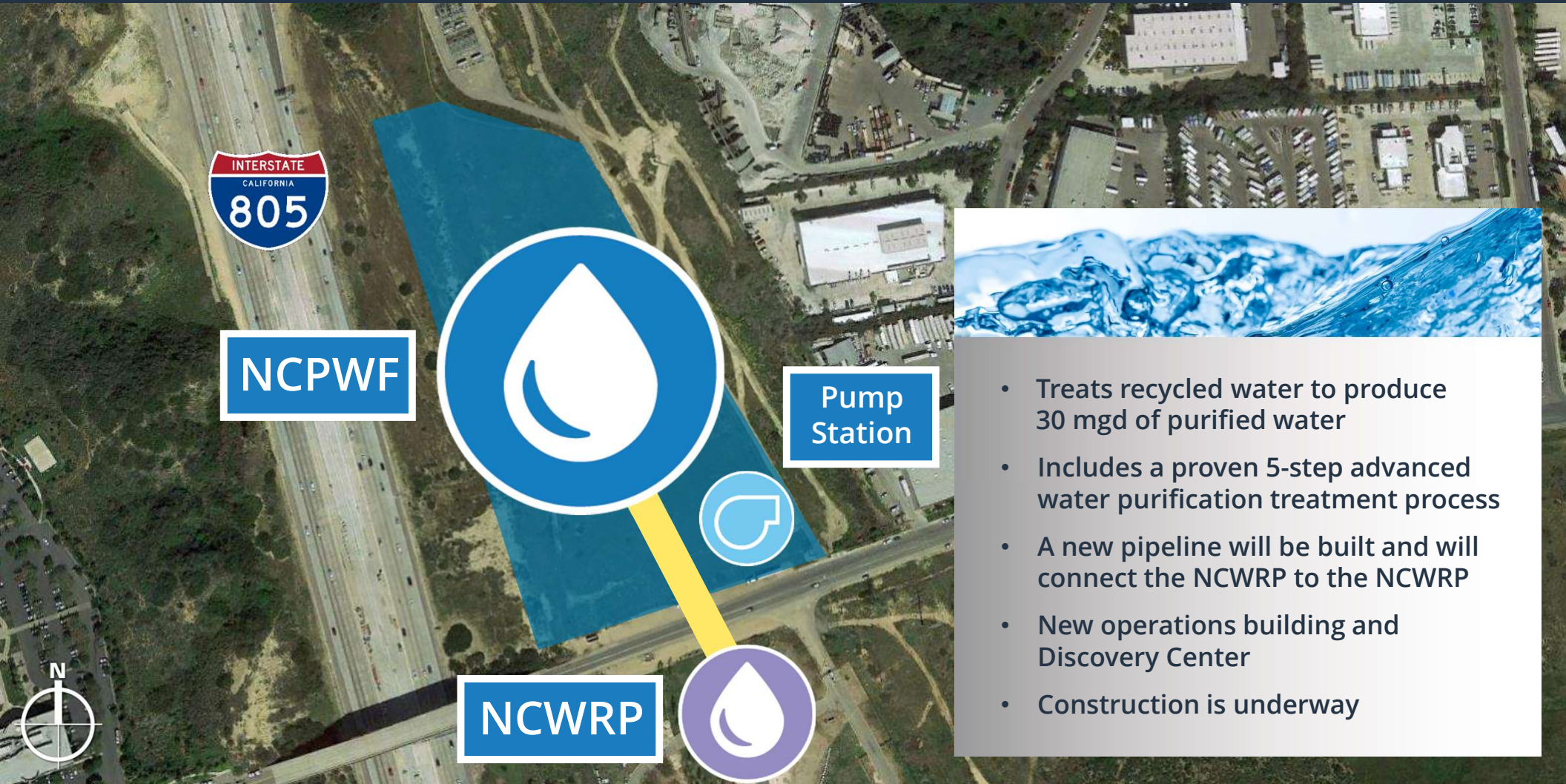
- This project will connect to the Morena Pipelines Middle Alignment to the south and the North City Water Reclamation Plant to the north
- Begins on Genesee Ave. and Appleton St. and continues on Genesee Ave, Nobel Drive, Towne Centre Drive and Executive Drive
- Construction is underway

# North City Water Reclamation Plant Expansion



- 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

# 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 NCWRP
- New operations building and Discovery Center
- Construction is underway

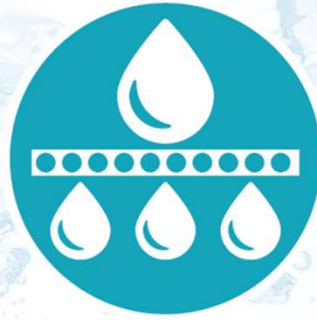
# North City Pure Water Facility



**Ozonation**



**Biological  
Activated  
Carbon  
Filters**



**Membrane  
Filtration**



**Reverse  
Osmosis**



**Ultraviolet  
Disinfection  
/Advanced  
Oxidation**



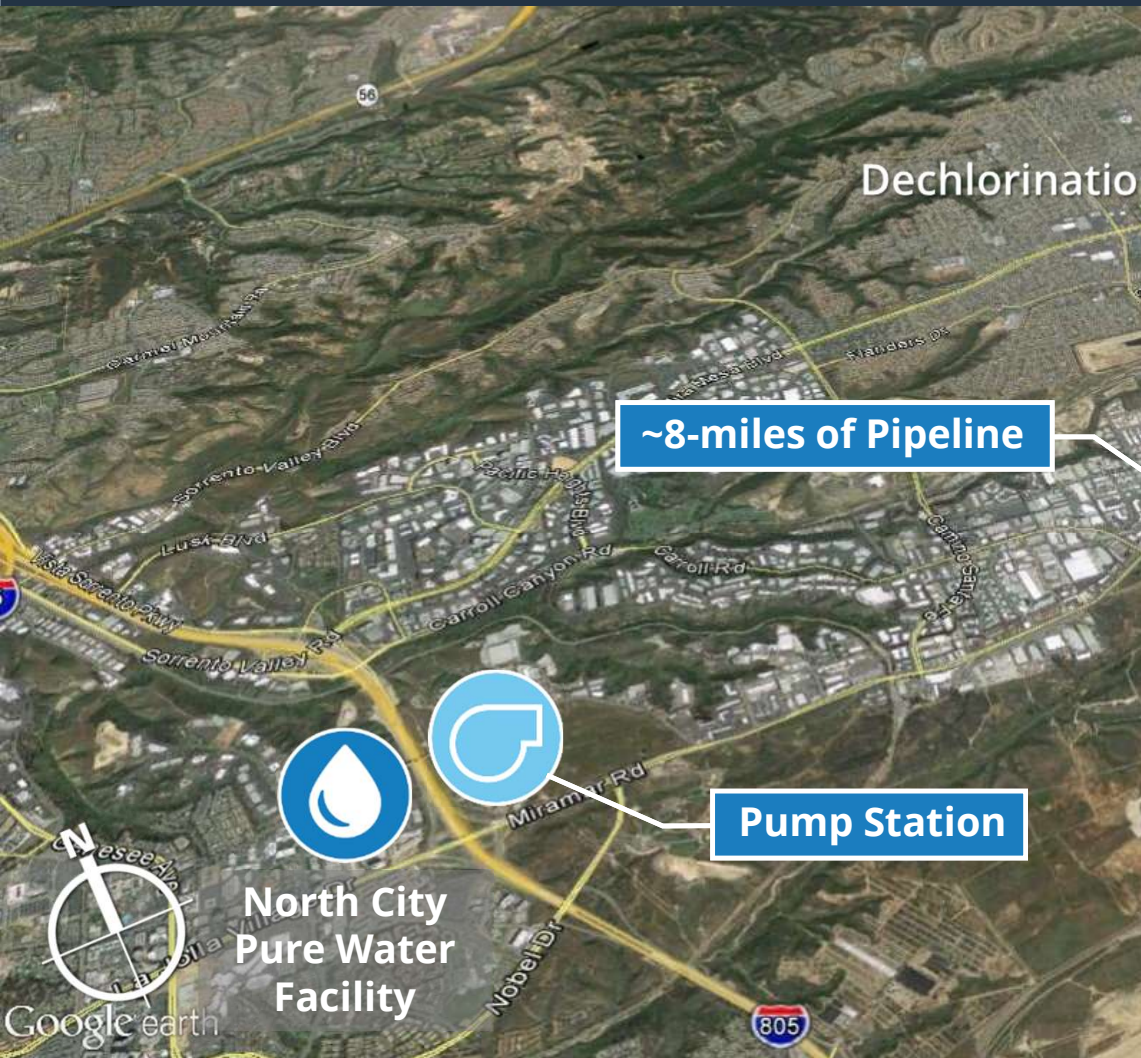
# Metropolitan Biosolids Center

- Regional biosolids facility that receives and processes solids from both the North City Water Reclamation Plant (NCWRP) the Point Loma Wastewater Treatment Plant
- The NCWRP will undergo an expansion, upgrades and improvements, increasing biosolids flows and loadings to the Metropolitan Biosolids Center
- Construction is underway





# North City Pure Water Pipeline



Miramar Reservoir



Dechlorination Facility

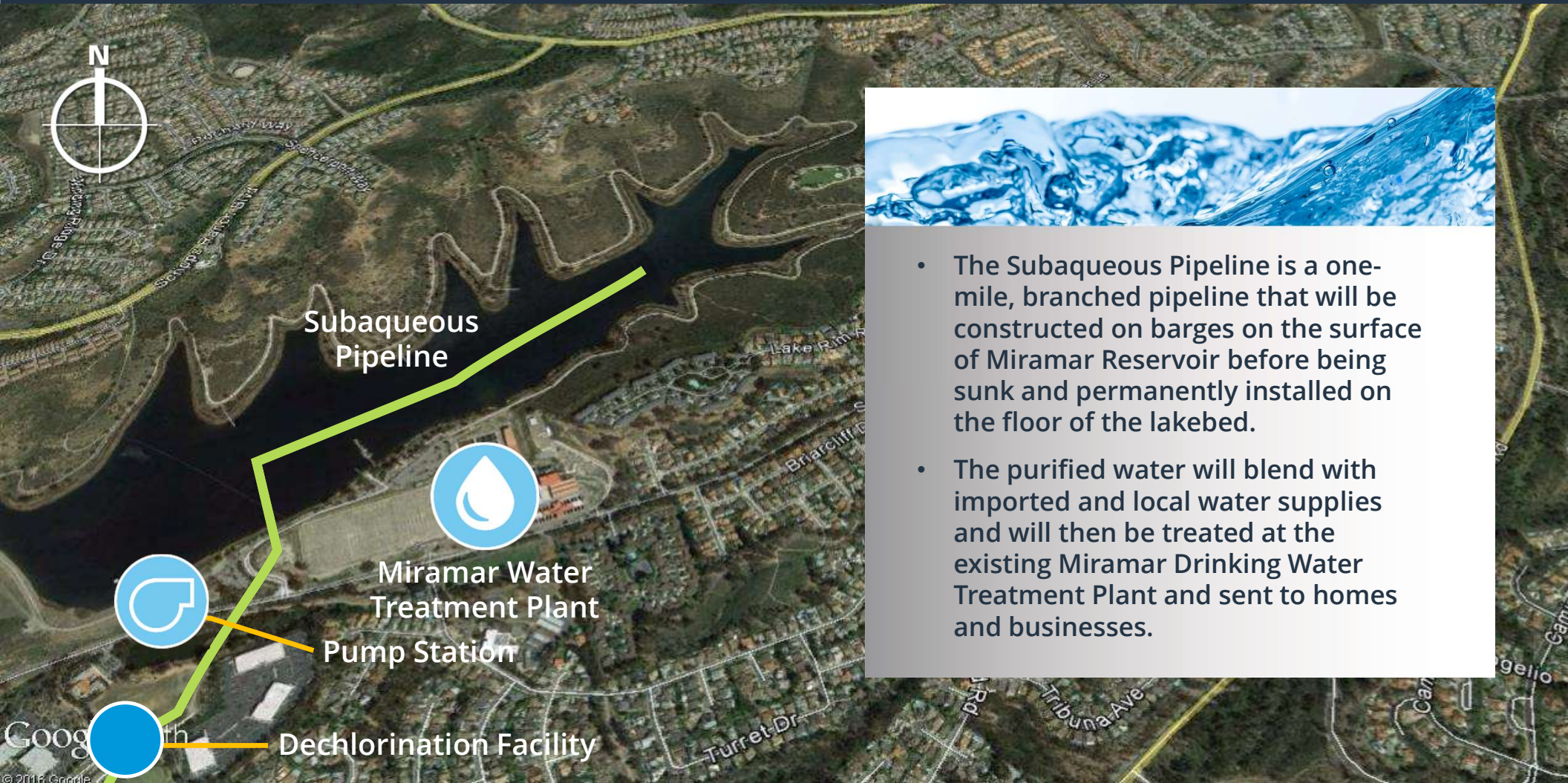
~8-miles of Pipeline

Pump Station



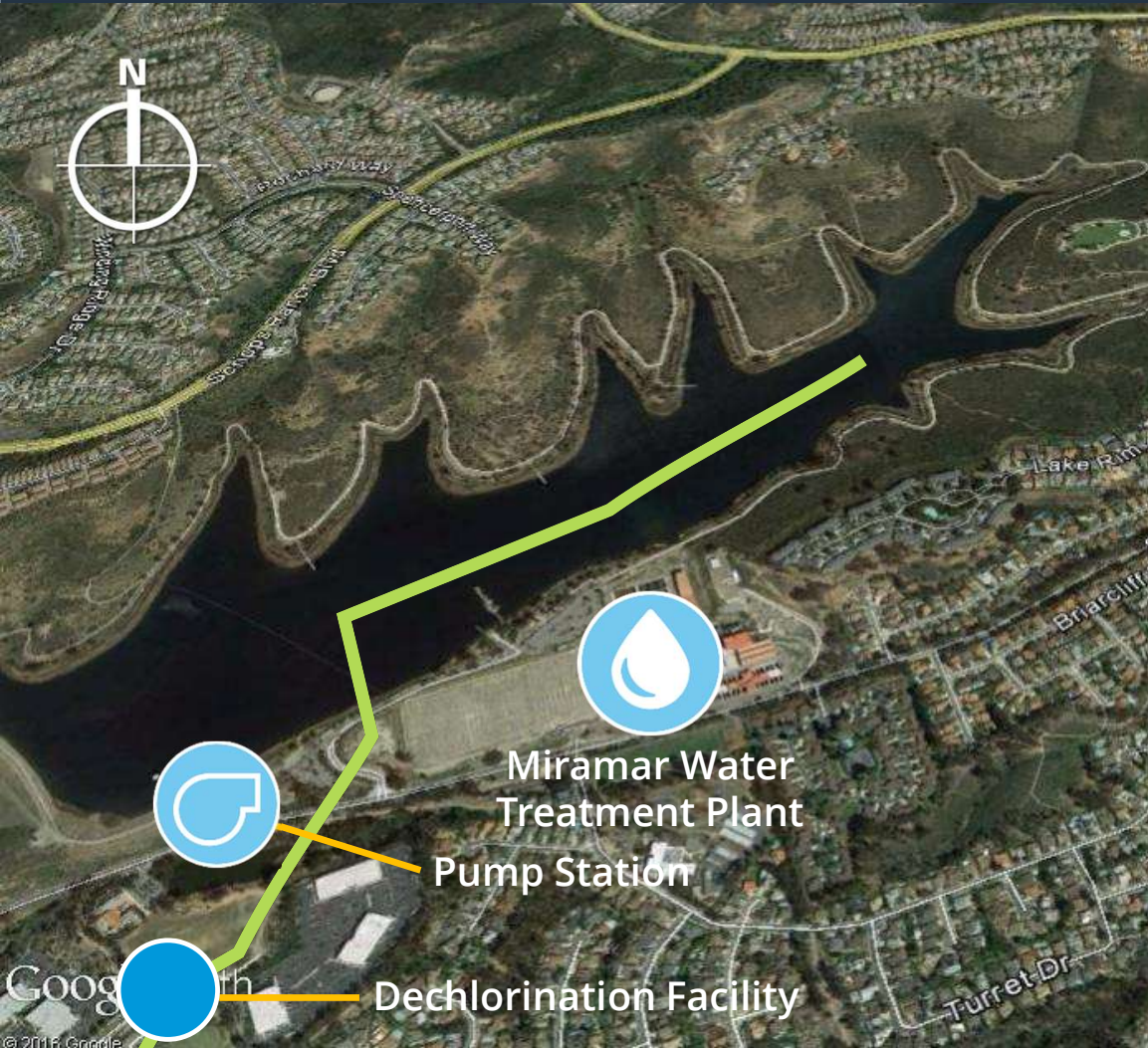
- The NCPWP will convey 30 mgd of purified water to the Miramar Reservoir for storage
- Pure Water to Miramar Reservoir via:
  - Pump Station
  - Pipeline
- Water will be dechlorinated before release to reservoir
- Construction is underway

# 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 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