

Recycled Water System Pure Water San Diego Program

Parks & Recreation Board

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Public Utilities Department
September 16, 2021

Point Loma Wastewater Treatment Plant

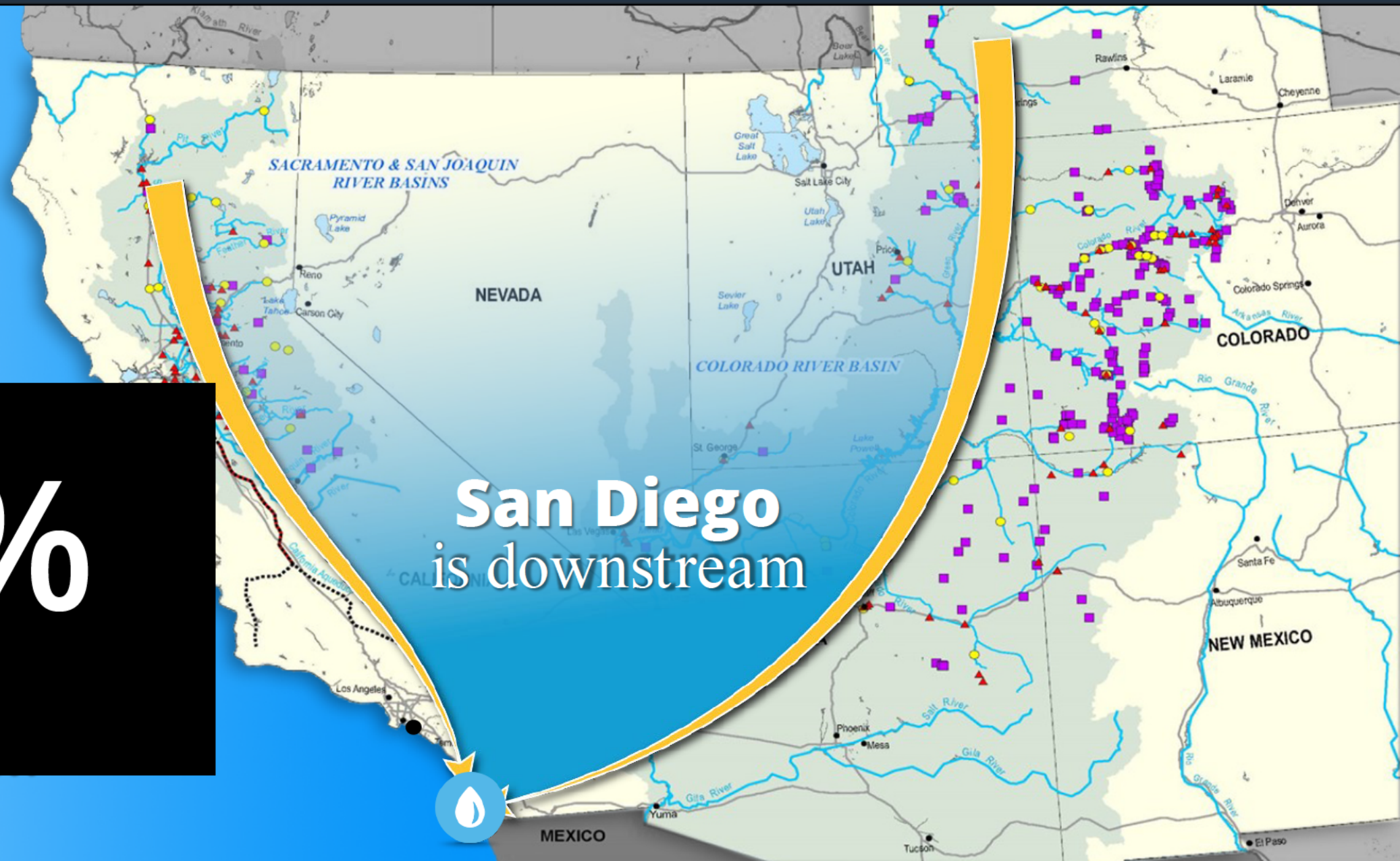
- Enhanced primary treatment
- Requires modified permits
- Secondary treatment is the national standard
- A very challenging location



SD San Diego's Water Supply

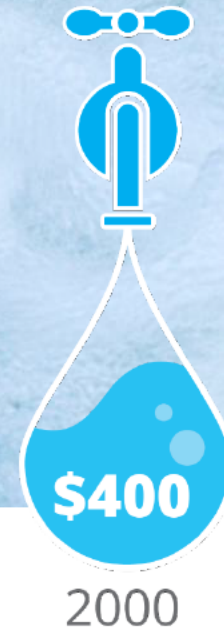
85%

San Diego is downstream



SD We Face Numerous Water Challenges

Imported water cost per acre foot



- Limited local & imported supplies
- Population growth
- Bay Delta constraints
- Natural disaster risk
- Rising imported water costs
- Recurring drought

SD Multi-faceted Approach



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

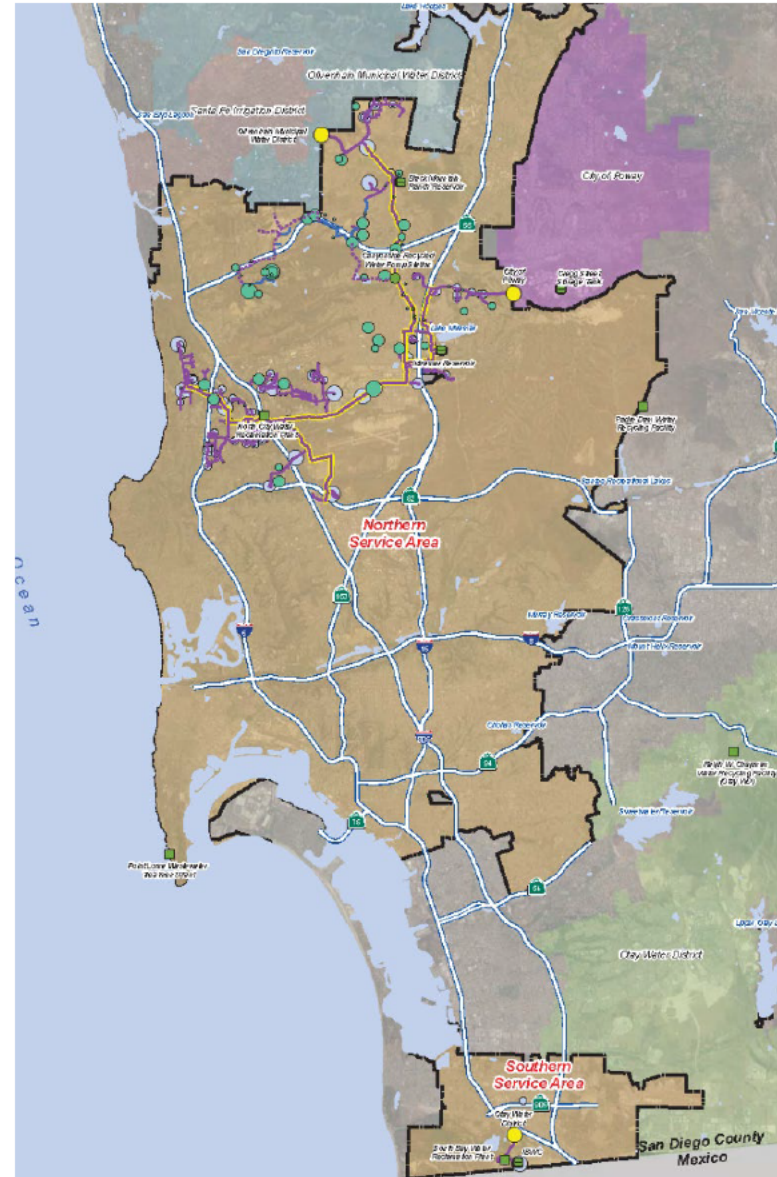
The title is centered on the page. It is flanked by two horizontal white lines, one above and one below. Each line has a solid white circle in the center. The background is a solid blue color with a pattern of overlapping, semi-transparent circles of various sizes in lighter shades of blue, creating a bubbly or cellular effect.

Recycled Water System

SD Recycled Water System

The City's recycled water system provides San Diego with a dependable, year-round, and locally controlled water resource.

- 3 Pump Stations
- 2 Reservoirs
- 96 Miles of Pipes and Appurtenances
- 2 Reclamation Plants



SD Recycled Water Use

- Recycled water is available to the City's commercial customers – over 700 retail customers and 3 wholesale customers
- Approved recycled water uses include the irrigation of parks, playgrounds, schoolyards, residential landscaping, common areas, nurseries, freeway landscape, and golf courses
- Additional uses could include for recreational water bodies, industrial source control, cooling towers, construction, etc.



- Landscape irrigation is the single largest use for recycled water within the City of San Diego
- The Torrey Pines Golf Course uses recycled water for maintaining its landscape



SD Recycled Water and the Pure Water Program

- Recycled water will continue to be provided to the City's commercial customers
- The source water for the Pure Water Program will be recycled water
- The NCWRP will be expanded so the recycled water needs of current customers plus the needs of Pure Water are met



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Pure Water San Diego

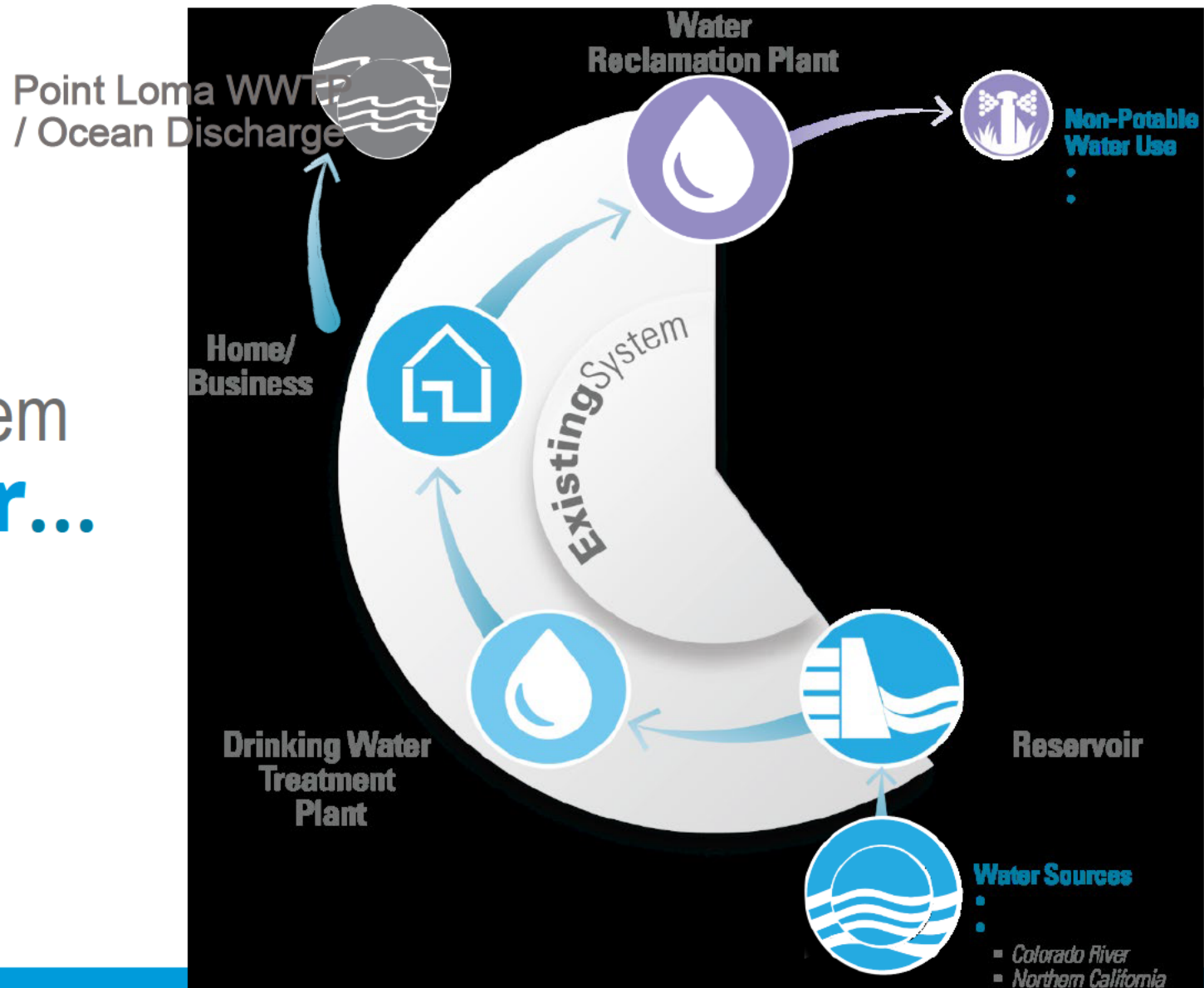
SD San Diego's Water Supply System

Existing System...

Primarily a Single-Use System

Pure Water...

Completes Our Water Cycle



Pure Water
will produce

1/2

of your water
locally

Phase 2

- 2035 Completion
- 53mgd
- Central Area PWF to San Vicente or Lake Murray

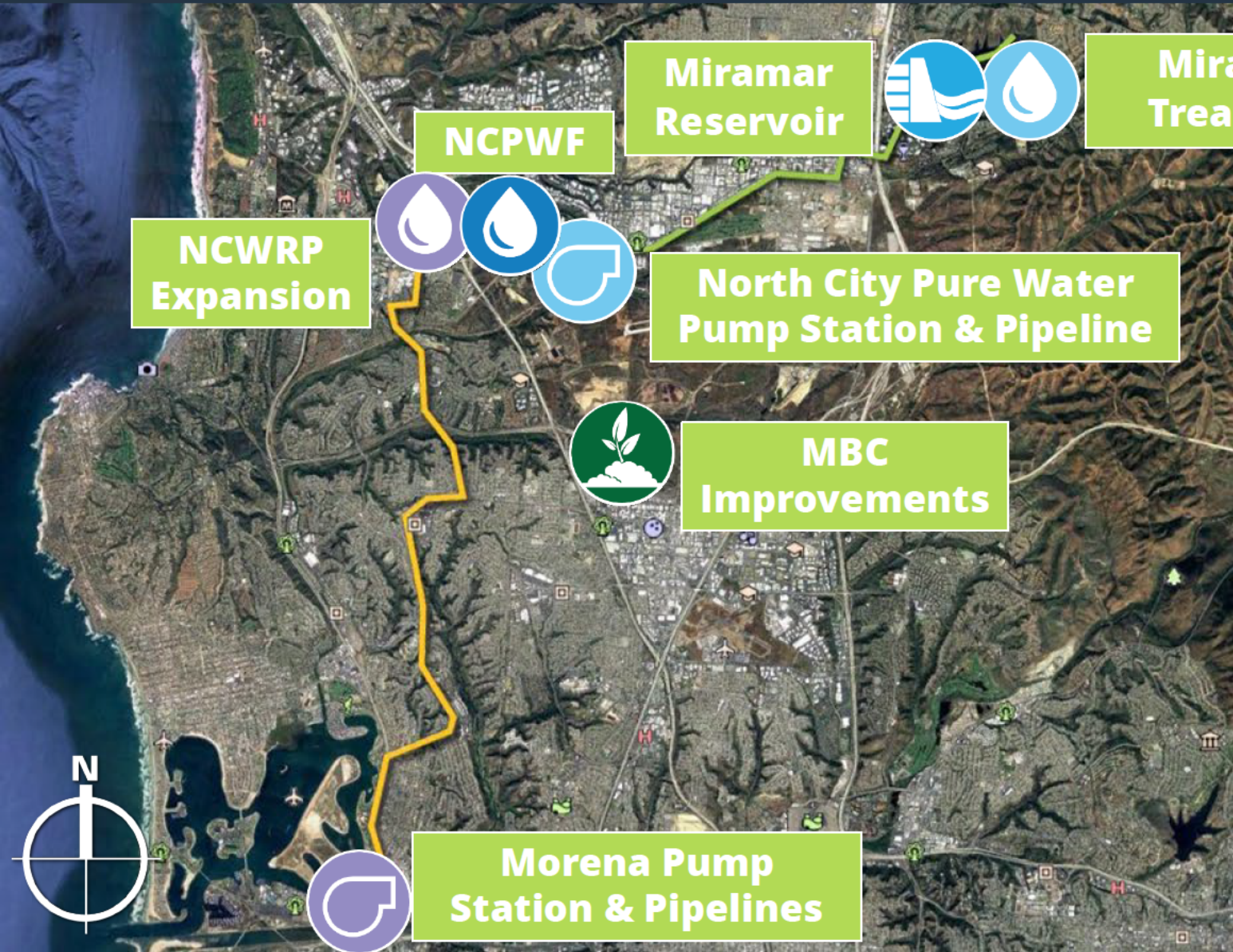


SD Pure Water Runs a Successful Demonstration Facility



- 50,000 lab tests: **Met all standards**
- Water quality: **Exceptional**

SD Phase 1 Projects



Phase 1 – North City will produce 30 mgd of purified water

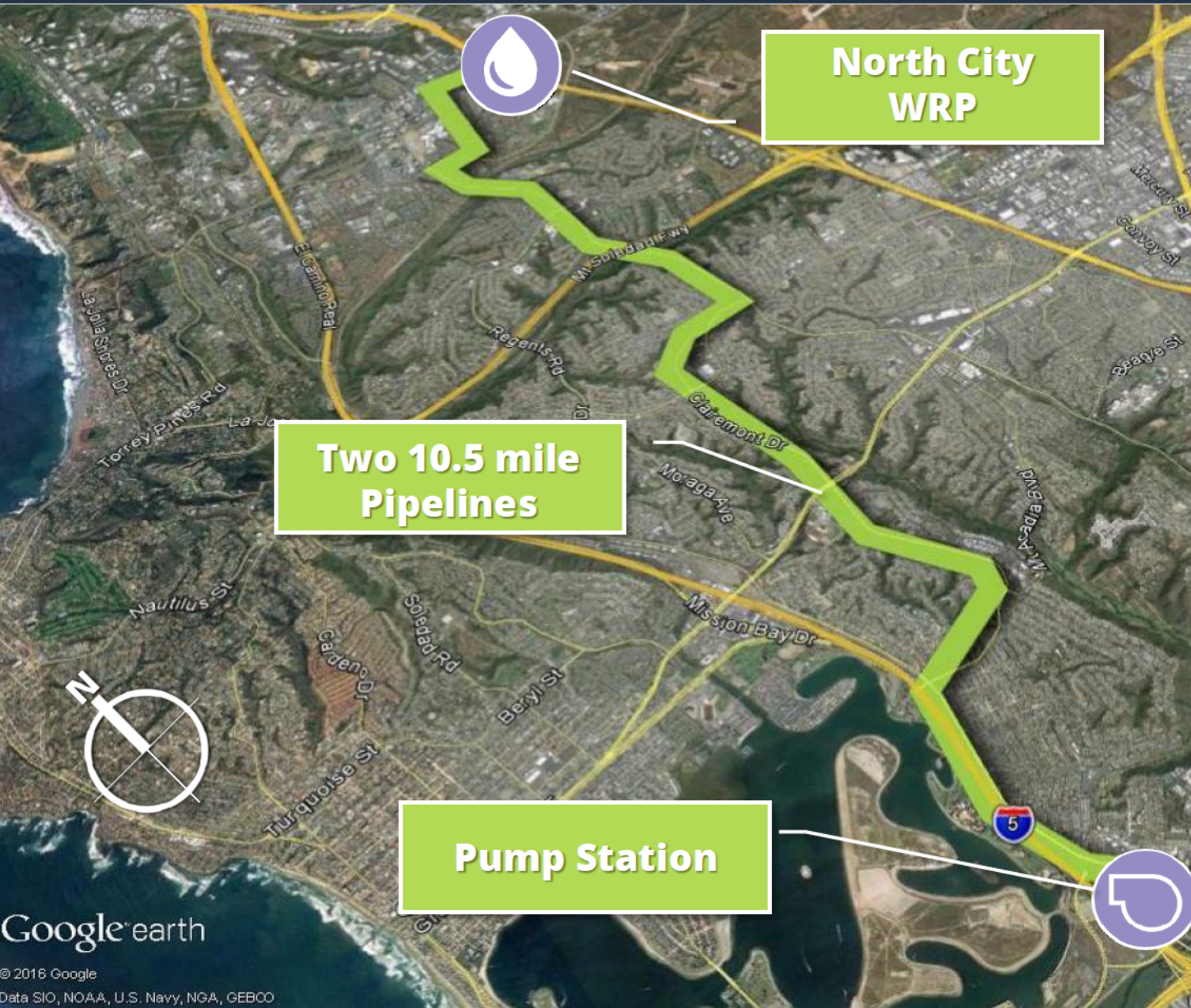
100% Design Completed on all Phase 1 projects

MBC = Metro Biosolids Center

NCWRP = North City Water Reclamation Plant

NCPWF = North City Pure Water Facility

SD Morena Pump Station and Pipelines



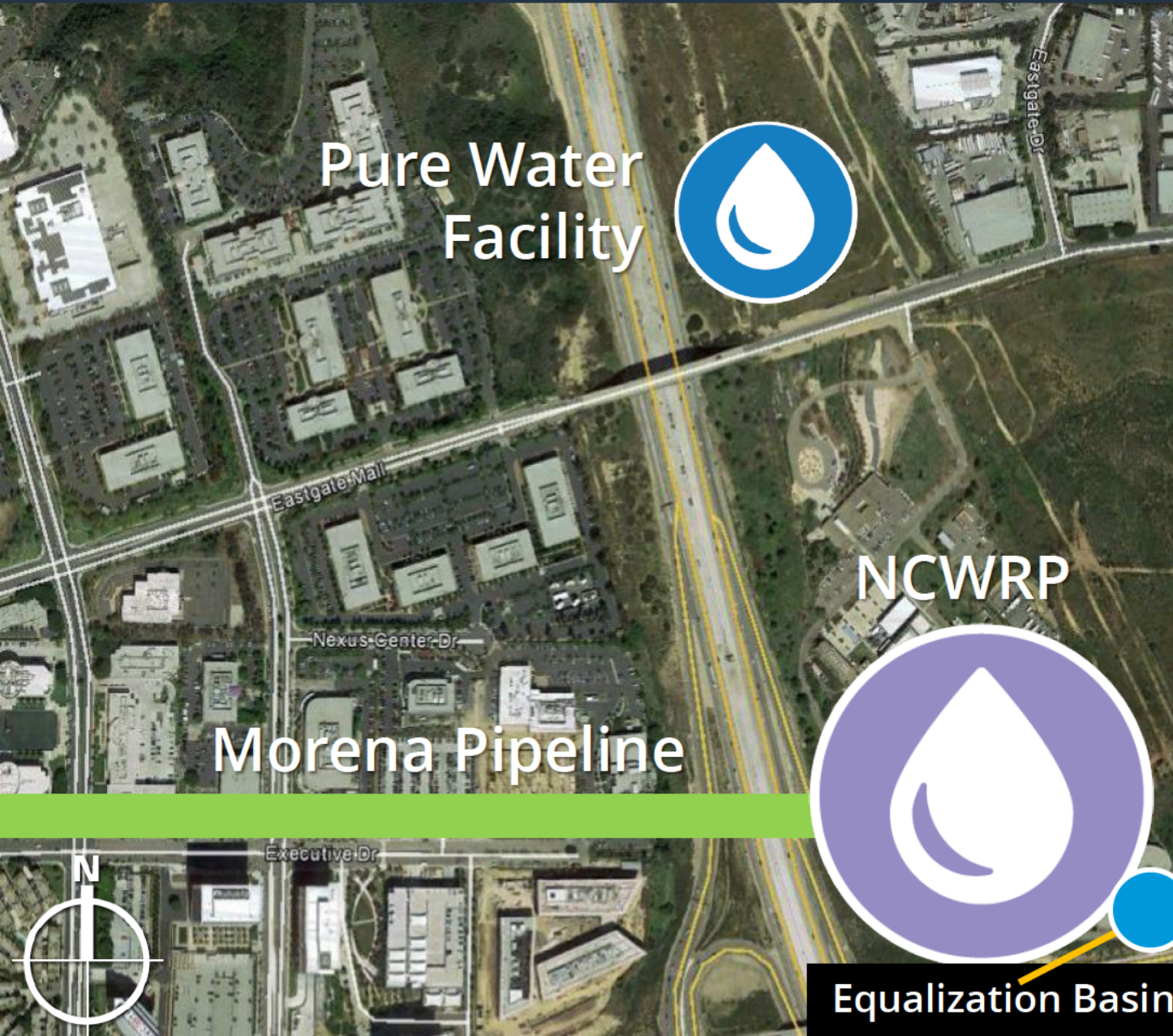
- Conveys wastewater to North City Water Reclamation Plant (WRP)
- Supports Phase 1 purified water and recycled water production

Trenchless construction will be used to avoid:

environmentally sensitive areas

- *freeway crossings*
- Construction is underway

SD North City Water Reclamation Plant Expansion



Pure Water Facility



NCWRP

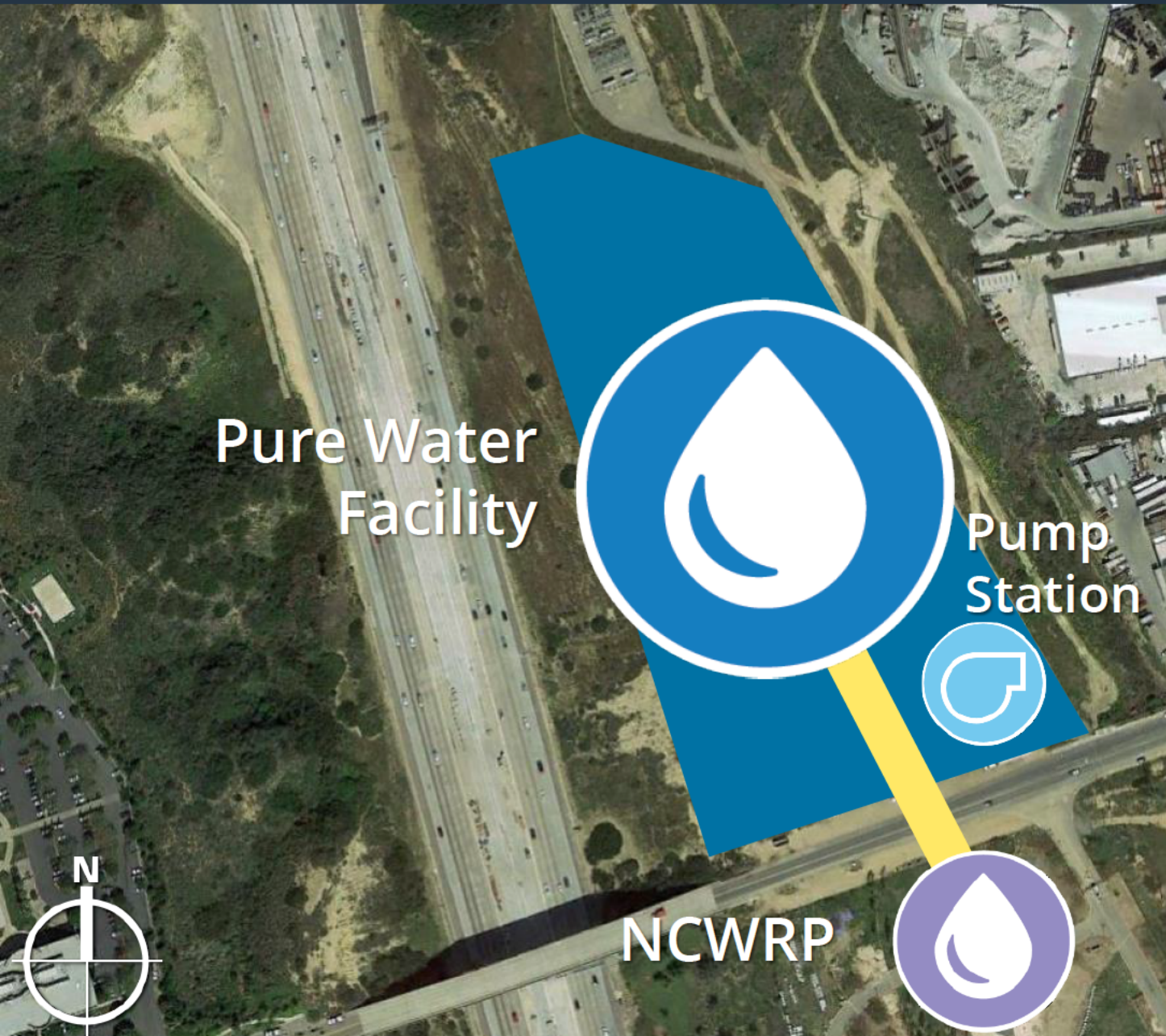


Morena Pipeline

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*
- Early site work is being completed
- Construction begins in **summer 2021**

SD North City Pure Water Facility & Pump Station



- Treats recycled water to produce 30 mgd of purified water
- Includes a proven 5-step advanced water purification treatment process
- Construction began in April 2021

SD North City Pure Water Facility



Ozonation



Biological
Activated
Carbon
Filters



Membrane
Filtration



Reverse
Osmosis

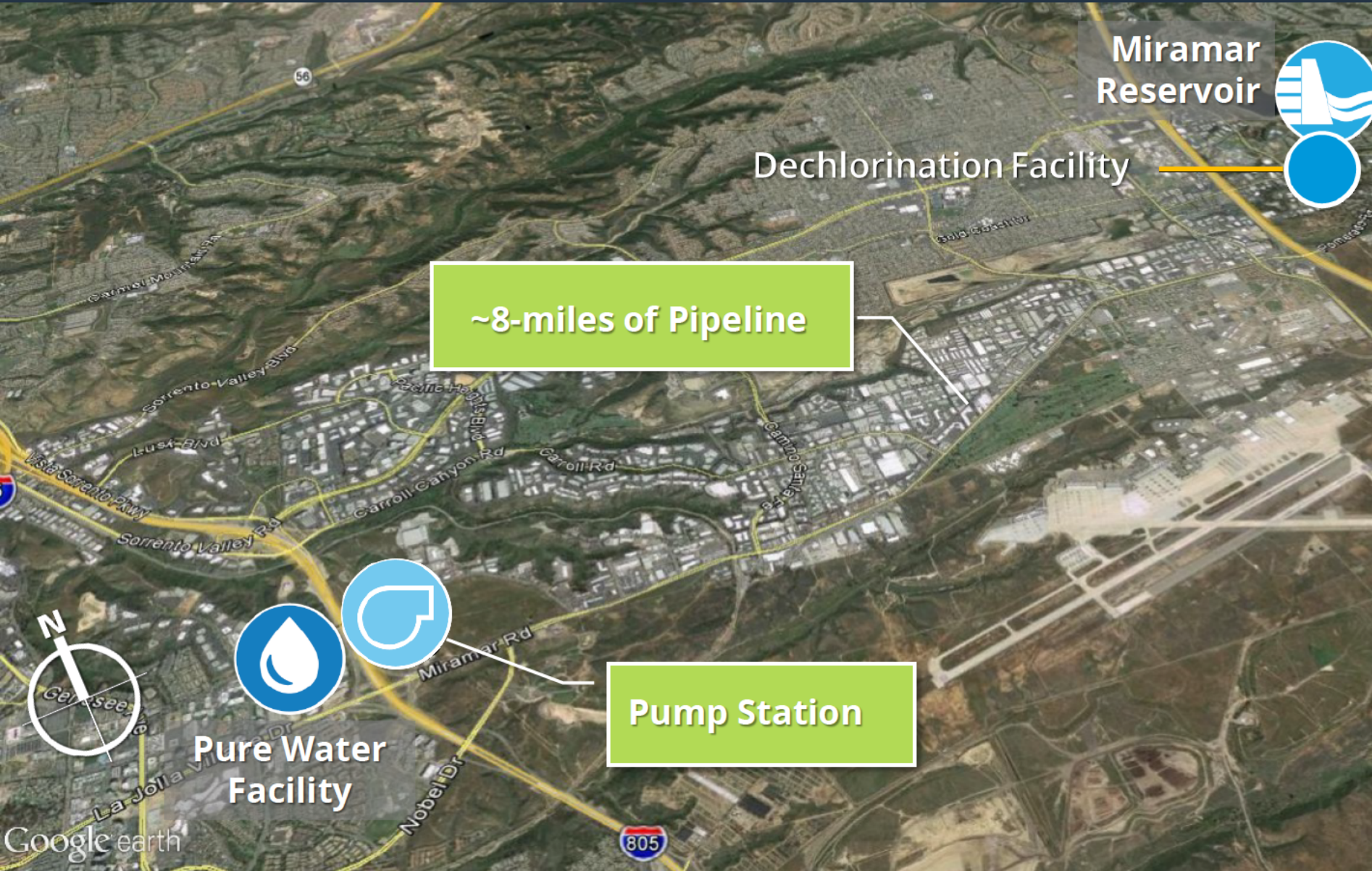


Ultraviolet
Disinfection
/Advanced
Oxidation





North City Pure Water Pipeline



Miramar Reservoir



Dechlorination Facility

~8-miles of Pipeline

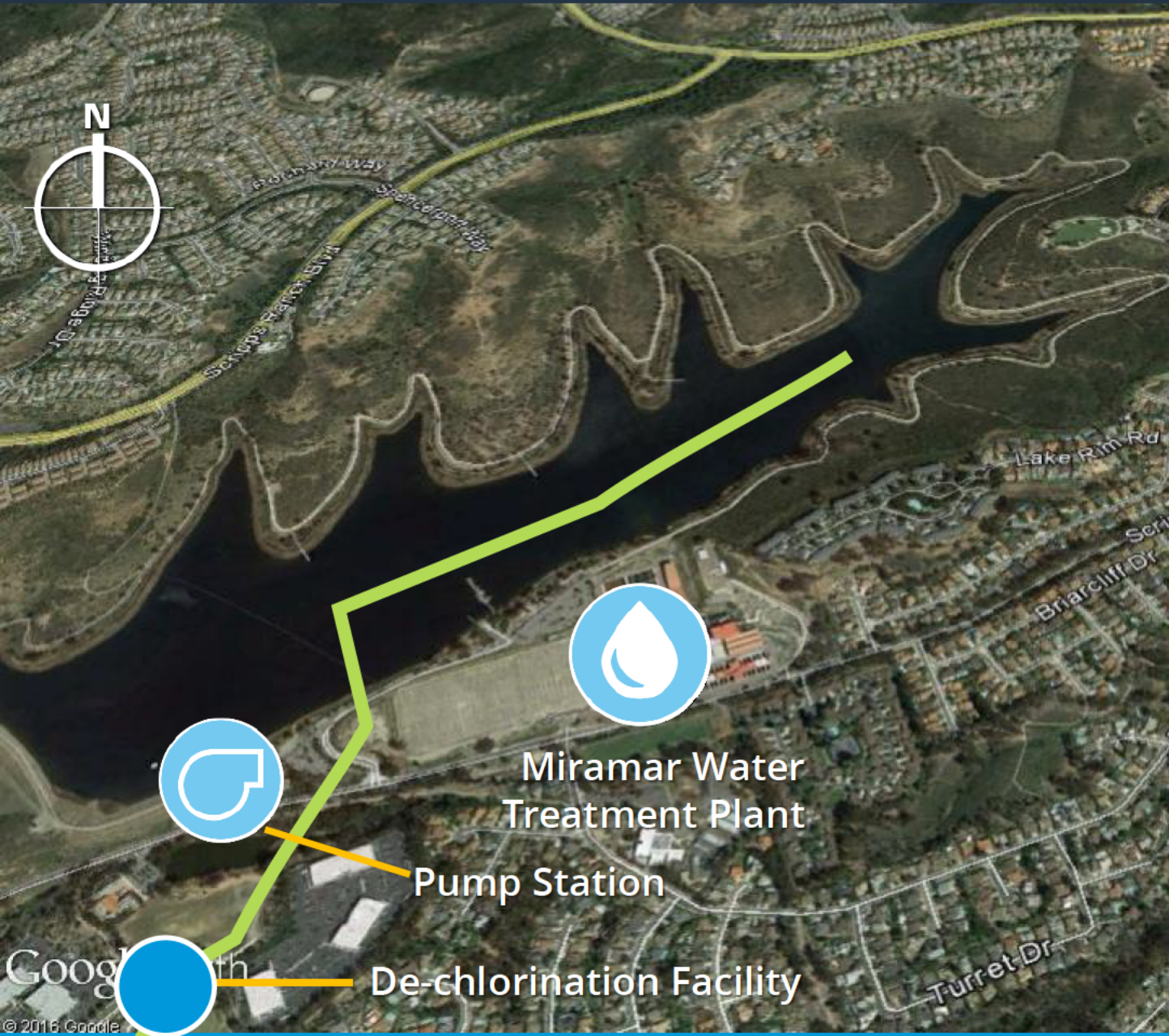


Pure Water Facility

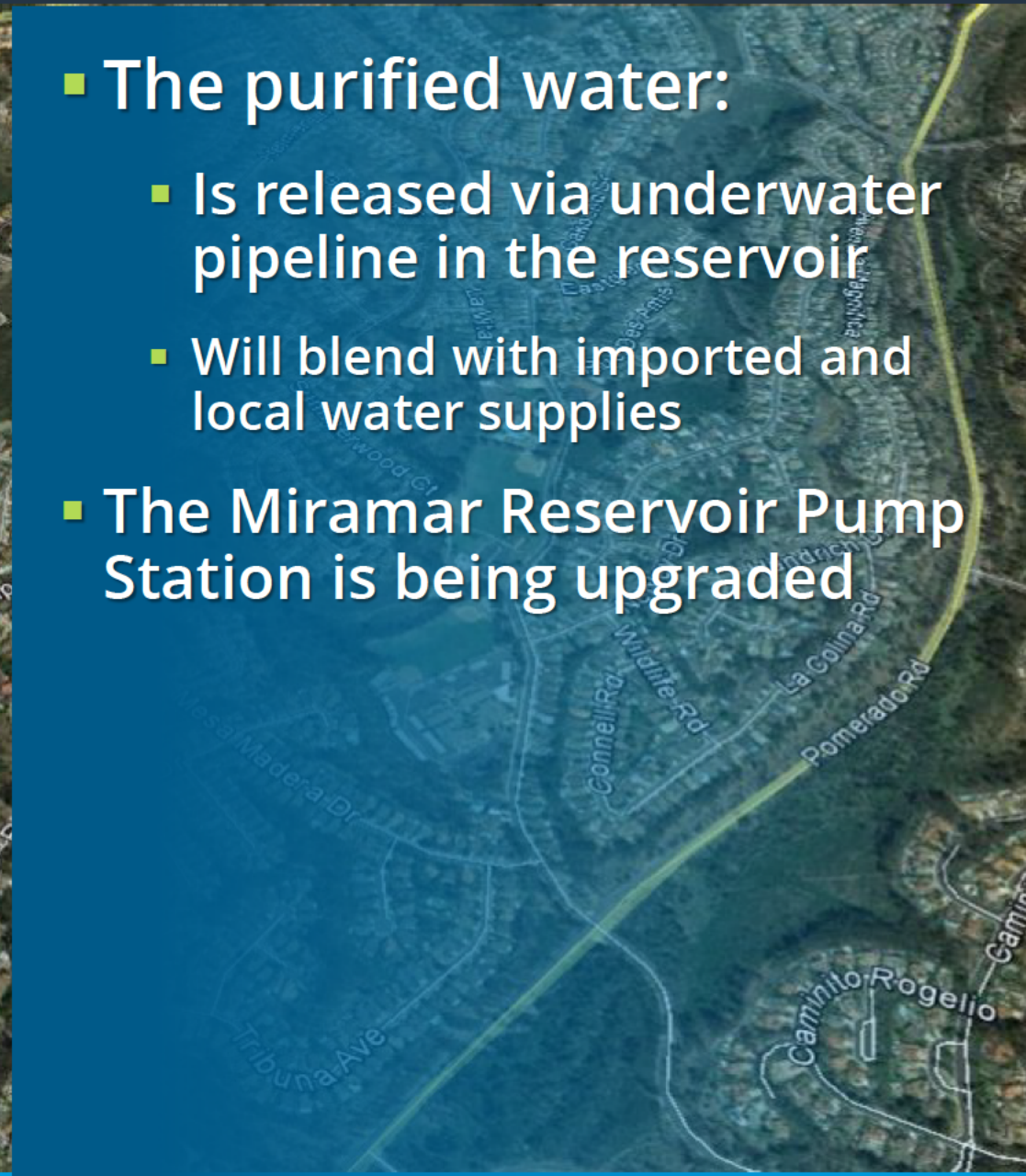
Pump Station

- Pure Water to Miramar Reservoir via:
 - Pump Station
 - Pipeline
- Water will be dechlorinated before release to reservoir
- Construction begins in summer 2021

SD Miramar Reservoir



- The purified water:
 - Is released via underwater pipeline in the reservoir
 - Will blend with imported and local water supplies
- The Miramar Reservoir Pump Station is being upgraded





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

SD Who Supports Pure Water?



Want to take a guided tour of the Pure Water Demonstration Facility? 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
[YouTube.com/PureWaterSD](https://www.youtube.com/PureWaterSD)



City of San Diego Pure Water Demonstration Facility Virtual Tour

295 views · May 7, 2020

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phase1.purewatersd.org



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Sign up for **construction updates** and take the **virtual tour**