

# SD Phase 1 Projects & Construction Packages



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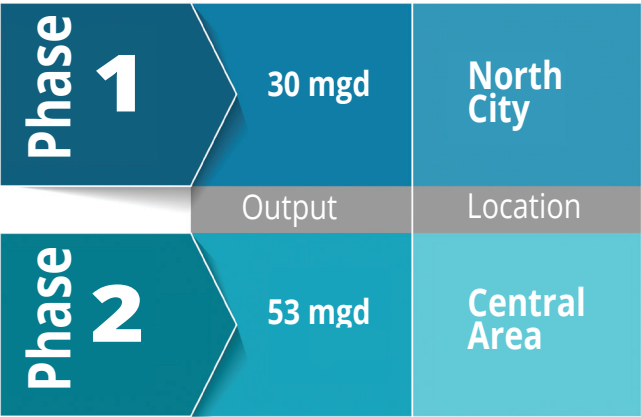
# Pure Water San Diego Phase 1 Projects



## What is Pure Water San Diego?

Pure Water San Diego is the City of San Diego's phased, multi-year program that will provide nearly one-half of San Diego's water supply locally by 2035. The Pure Water Program will include a system of treatment facilities, pump stations and pipelines that will be constructed in multiple phases and will:

- Use proven technology to clean recycled water to produce safe, high-quality drinking water
- Offer a cost-effective investment for San Diego's water needs
- Provides a dual value for San Diegans: reliable, sustainable drinking water and avoided wastewater costs

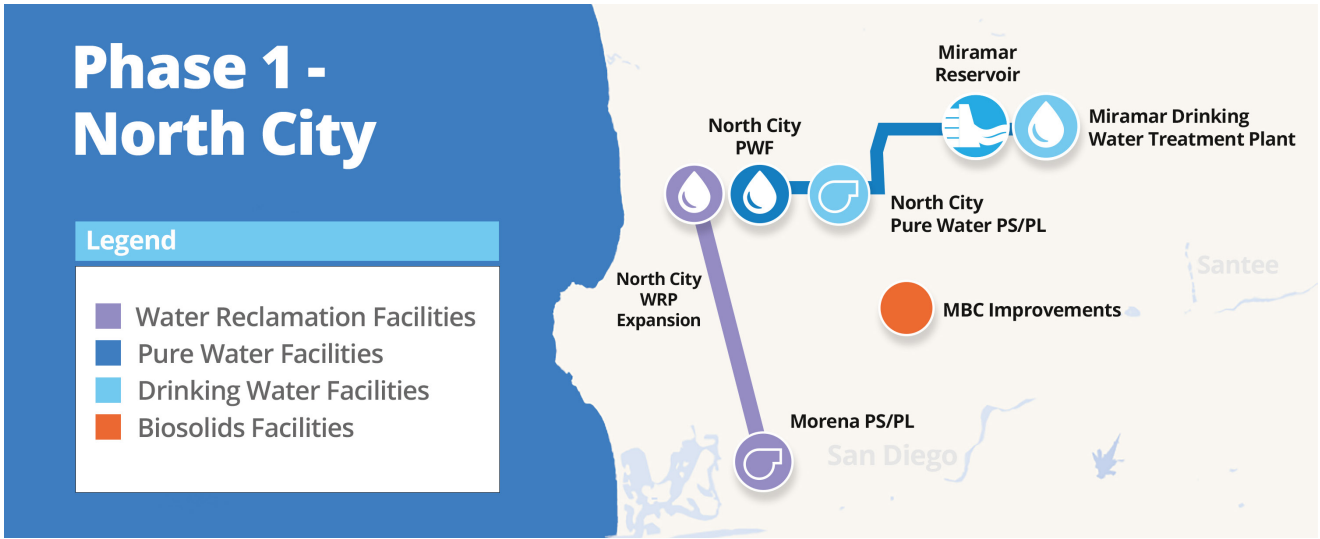


Total: **83 mgd** by 2035  
*\*mgd = million gallons per day*

## What Does Phase 1 Include?

The Pure Water Program is the largest integrated infrastructure program the City of San Diego has ever undertaken. Phase 1 - North City is comprised of several projects that will deliver 30 million gallons per day (mgd) of purified water for San Diego. The purified water will be piped to the Miramar Reservoir for storage and then will be treated again at the Miramar Drinking Water Treatment Plant before it is distributed to the public.

The projects under construction as part of Phase 1 include the Morena Pump Station, Morena Conveyance South & Middle and Conveyance Bike Lanes, Morena Pipelines Northern Alignment and Tunnels, North City Water Reclamation Plant Expansion and Flow Equalization Basin, the North City Pure Water Facility and Pump Station, the Miramar Reservoir Automated In-Water Quality Monitoring System, the Peñasquitos Pump Station Oxygenation System, the North City Pure Water Pipeline and Metropolitan Biosolids Center Improvements. A detailed map of the project locations can be viewed at [phase1.purewatersd.org](https://phase1.purewatersd.org).





# Phase 1 - North City Projects

## Morena Pump Station

The Morena Pump Station will be constructed at the southwest corner of Sherman Street and Custer Street off Morena Boulevard, just north of Interstate 8 and east of Interstate 5. When completed, the pump station will divert 32 million gallons per day (mgd) of wastewater to the North City facilities for purification.

## Morena Conveyance South & Middle and Conveyance Bike Lanes

The Morena Conveyance South & Middle and Conveyance Bike Lanes project will connect the Morena Pump Station at Sherman and Custer Streets in Bay Park with the Morena Pipelines Northern Alignment and Tunnels in University City. This project includes portions of two 10.5-mile pipelines: one 48-inch wastewater pipeline, which will carry wastewater north to the North City facilities for purification, and one 30-inch brine line that will carry the biproduct from water purification south to the Point Loma Wastewater Treatment Plant.

The Morena Pipelines Middle Alignment includes Clairemont Drive from Iroquois Avenue to Clairemont Mesa Boulevard (north of Clairemont Town Square), Clairemont Mesa Boulevard to Genesee Avenue and Genesee Avenue to between Appleton Street and State Route 52.

The Morena Pipelines Southern Alignment begins at the Morena Pump Station at Sherman Street and Custer Street and continues north on Morena Boulevard, Milton Street, Chicago Street and Denver Street to Clairemont Drive. This project will install improved bikeways along the following impacted roads within the project limits: Genesee Avenue, Clairemont Mesa Boulevard, Clairemont Drive, Morena Boulevard and West Morena Boulevard.

## Morena Pipelines Northern Alignment and Tunnels

The Morena Pipelines Northern Alignment and Tunnels will connect to the Morena Pipelines Middle Alignment to the south and the North City Water Reclamation Plant to the north. This project begins on Genesee Avenue between Appleton Street and state Route 52 and continues on Genesee Avenue, Nobel Drive, Towne Centre Drive and Executive Drive. Tunneling will be completed at Genesee Avenue and State Route-52, at Genesee Avenue and Rose Canyon, and under Interstate 805. It will also carry wastewater north to the North City facilities for purification and the biproduct from water purification south to the Point Loma Wastewater Treatment Plant.

## North City Water Reclamation Plant (NCWRP) Expansion

This project will increase the amount of recycled water the NCWRP produces. The NCWRP is located on Eastgate Mall and treats wastewater to recycled water standards for irrigation and industrial uses. The plant capacity will increase from 30 mgd to 52 mgd to continue to meet non-potable water demands, as well as supply to the NCPWF. A new pump station located at the NCWRP will convey recycled water to the new NCPWF across the street for further purification.

## NCWRP Flow Equalization Basin

As part of the North City Water Reclamation Plant (NCWRP) expansion, a new Flow Equalization Basin will be constructed to expand the capacity of the primary effluent storage. The Flow Equalization Basin will expand the capacity of the primary effluent storage and it will regulate the peak wastewater flow rates in order to balance flow rates to the plant treatment processes.

## North City Pure Water Facility (NCPWF) and Pump Station

A new Pure Water Facility will be built on Eastgate Mall across the street from the existing NCWRP to clean the recycled water further to produce 30 mgd of safe, high-quality water that meets all state and federal drinking water standards. The NCPWF will use the proven five-step water purification process of ozonation, biological activated carbon filters, membrane filtration, reverse osmosis, and ultraviolet disinfection with advanced oxidation. Upon completion, the pump station will convey purified water to the Miramar Reservoir for storage.

## Peñasquitos Pump Station Oxygenation System

The Peñasquitos Pump Station (PQPS) pumps flow to the North City Water Reclamation Plant (NCWRP). To improve the quality of the water and reduce the likelihood of process upsets at NCWRP, the City of San Diego plans to add high purity oxygen at PQPS. The high purity oxygen will reduce septicity and help to maintain aerobic conditions in the wastewater arriving at NCWRP.

## North City Pure Water Pipeline, Dechlorination Facility & Subaqueous Pipeline

This project will transport purified water produced at the NCPWF to Miramar Reservoir. An 8.4 mile long pipeline will convey 30 mgd of purified water and will start on Eastgate Mall, follow Miramar Road, and continue through Scripps Ranch and end in the Miramar Reservoir for storage.

## Miramar Reservoir Pump Station Improvements

Operational improvements associated with the treatment of purified water will be made to the Miramar Reservoir Pump Station. The Miramar Reservoir Pump Station will convey 30 mgd of purified water to Miramar Reservoir.

## Automated In-Water Quality Monitoring System

The primary goal of the Automated In-Water Quality Monitoring System (AIWQMS) is to monitor the dynamics and quality of water at Miramar Reservoir during construction activities to ensure water quality continues to meet regulations.

## Metropolitan Biosolids Center (MBC) Improvements

MBC is the City's regional biosolids facility that receives and processes solids from both the NCWRP and the Point Loma Wastewater Treatment Plant. To accommodate the increase in flows and loadings that will result from the NCWRP expansion, this project involves upgrades at MBC, including equipment replacements and improvements.

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