



Pure Water
San Diego



2024 Annual Report

Construction of the Phase 1 Projects forges ahead for the City of San Diego Pure Water Program, the largest infrastructure project in City history



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Executive Summary

As we reach the end of 2024, construction of the North City Pure Water projects has surpassed 70 percent completion. Construction activity across the treatment facilities, pump stations and pipelines is dynamic with a number of major milestones completed.

Throughout 2024, high-tech water purification equipment such as reverse osmosis vessels, microfiltration units, ozone generators, and ultraviolet reactors were installed. These units are the heart of the treatment process that will produce purified water. If you drive on Eastgate Mall, just east of Interstate 805, you will see the new blue and white Pure Water Operations Building to the north and major construction at the expanded North City Water Reclamation Plant to the south. At the reclamation plant, massive new infrastructure called secondary clarifiers have been water tested and will come on-line shortly, allowing for existing units to be rehabilitated and upgraded. This work is necessary to ensure that high-quality recycled water is produced both for non-drinking water purposes (such as landscape irrigation and industrial uses) as well as to pump across Eastgate Mall to the North City Pure Water Facility, where it will be treated to become drinking water.

More than 60 percent – or about 18 miles – of the pipelines for Pure Water will have been installed by the end of 2024. 8 of the 14 tunnels on the project are completed, and work is underway at all major freeway crossings. There are four crews working on large-diameter pipeline installation in the Morena, Bay Park, Clairemont and University City communities. Work is almost complete on the purified water pipeline along Miramar Road and

in Scripps Ranch that will convey purified water to Miramar Reservoir. Additionally, the subaqueous pipeline, which will disperse purified water throughout Miramar Reservoir, was completed in summer 2024. We appreciate the patience of our community members as construction crews have been working along thoroughfares that you travel frequently.

The Pure Water Program proudly continues to create jobs for San Diegans. Through our Project Labor Agreement (PLA) and associated apprenticeship programs, City residents have earned over \$30 million in wages with over \$20 million being earned by underrepresented groups in the construction industry. We also have 127 craft workers across PLA-covered construction who are veterans of the United States armed forces. In addition, almost two dozen graduates from our Construction Apprenticeship Readiness Program from the San Diego College of Continuing Education and Southwestern College have been employed on Pure Water projects.

As we look to 2025, we are busy readying our existing facilities at the North City Water Reclamation Plant and Miramar Reservoir for system-wide commissioning of the new facilities. We anticipate that recycled water will start flowing from the reclamation plant to the North City Pure Water Facility to begin facility testing by the end of 2025.

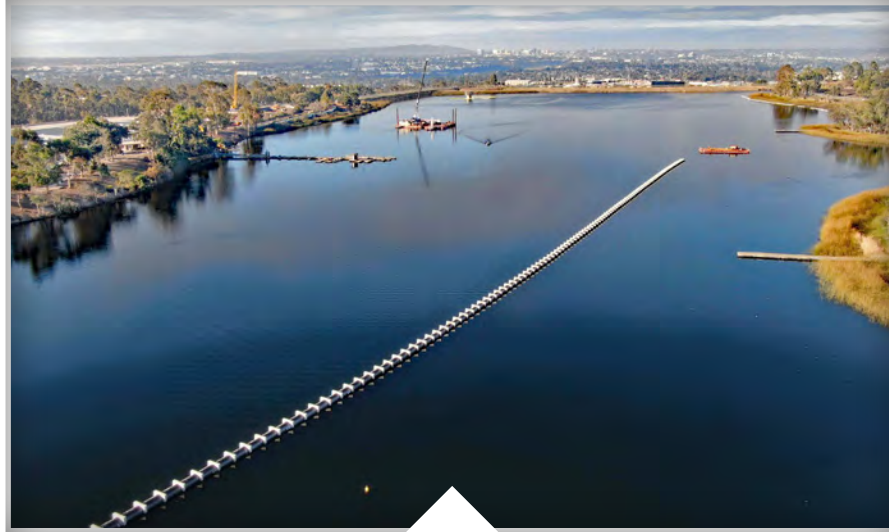
We appreciate your support and look forward to continued significant progress on Pure Water San Diego in 2025!

Juan Guerriero
Director
City of San Diego Public Utilities Department

“Construction of the North City Pure Water projects has surpassed 70 percent completion”

2024 Timeline

March/April



In spring 2024, crews began innovative soil freezing operations at the Morena Pump Station Diversion Structure #3. Soil freezing is a technique that reinforces soil and improves site conditions by installing a closed system of pipes into the ground and running refrigerant through the pipes, freezing the surrounding soil and creating an impermeable wall for construction.

At the North City Pure Water Facility site, delivery and installation of ozone system components was completed.

The pipeline tunnel under the railroad tracks on Miramar Road was completed as part of the North City Pure Water Pipeline, Dechlorination Facility and Subaqueous Pipeline project.



May/June

The Pure Water team began offering tastings of Pure Water at SANDAG's Bike Anywhere Day in May.

Pipeline installation on Executive Drive and Towne Centre Drive was completed as part of the Morena Pipelines Northern Alignment and Tunnels project.

January/February

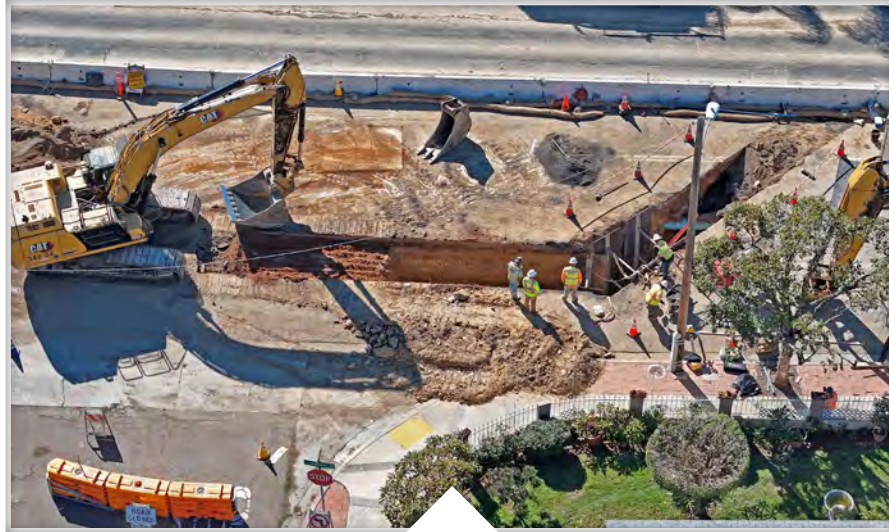
In January, crews sunk the trunk of the subaqueous pipeline from the surface of Miramar Reservoir to the lakebed. Assembly of the branches of the pipeline continued underwater by specialized divers into summer 2024.

Construction on the structural steel joists and deck in the main process building at the North City Pure Water Facility was completed.

On the Phase 1 pipeline projects, 52,700 linear feet – or nearly 10 miles – of total pipeline were installed through February 2024.



2024 Timeline

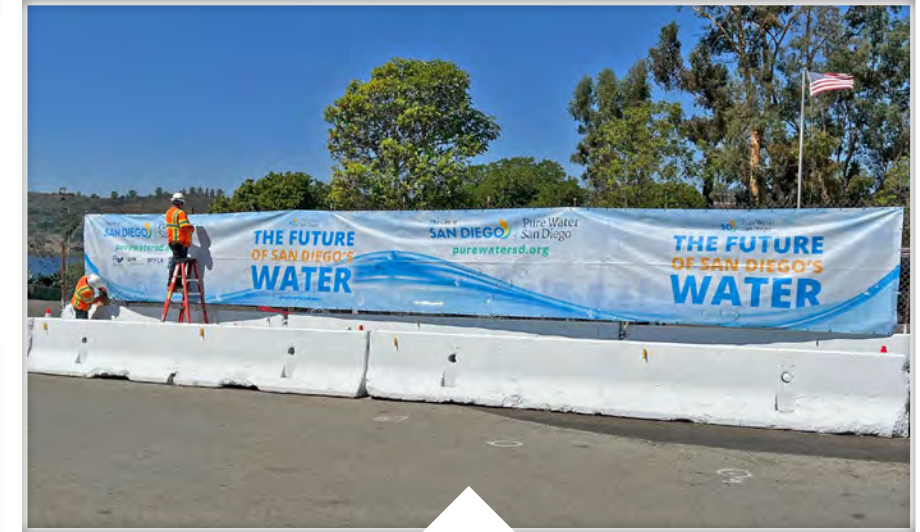


September/October

On the North City Water Reclamation Plant Expansion, leak tests have been completed on the remaining two of four clarifiers. Installation of the clarifier 3 mechanism, a system that removes solids from water, has begun

The Tecolote Creek pipeline crossing was completed as part of the Morena Conveyance South & Middle and Bike Lanes project.

On the Phase 1 pipelines projects, 91,927 linear feet of total pipeline – or about 17.5 miles – was installed through October 2024.



July/August

In July, Miramar Reservoir reopened to on-water recreation activities following the successful installation of the 1-mile-long subaqueous pipeline.

Construction of the Morena Conveyance South & Middle and Bike Lanes project also began in July in the Clairemont neighborhood.

Construction crews completed a 500-foot tunnel under Interstate 15 as part of the North City Pure Water Pipeline, Dechlorination Facility and Subaqueous Pipeline project.



November/December

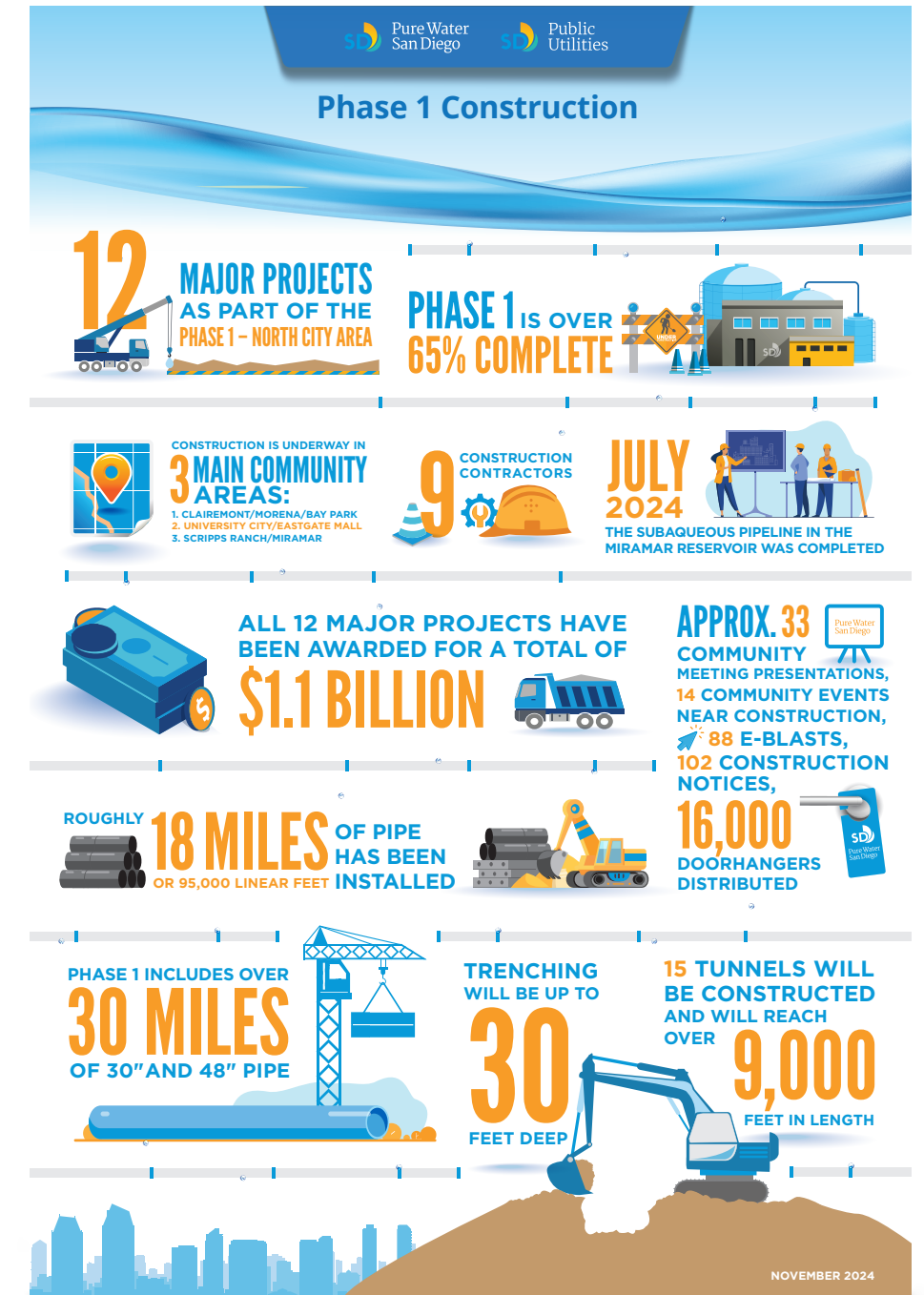
Crews successfully completed pipeline installation and tunneling at Rose Canyon on Genesee Avenue as part of the Morena Pipelines Northern Alignment and Tunnels project.

Phase 1 North City Construction

Pure Water Phase 1 construction involves 12 major projects, one of which is completed. The table below shows each project and the anticipated completion dates. To learn more about Pure Water Phase 1 construction, visit the [Phase 1 Projects](#) page.

Project Name	Anticipated Completion	Current Status	Construction Award Date	Prime Contractor	Contract Amount
Early Site Work and Mass Grading	-	Completed	Apr-19	AECOM Energy & Construction, Inc.	\$16.4M
Morena Pump Station	2026	Ongoing	Apr-21	Flatiron	\$110.4M
Morena Conveyance South & Middle and Bike Lanes	2025	Ongoing	Aug-22	Sukut Construction	\$129.7M
Morena Pipelines Northern Alignment and Tunnels	2025	Ongoing	Apr-21	OHL	\$95.2M
North City Reclamation Plant Expansion	2026	Ongoing	Jun-21	Kiewit	\$255.1M
North City Water Reclamation Plant Flow Equalization Basin	2025	Ongoing	Nov-21	Kiewit	\$11.9M
Metropolitan Biosolids Center Improvements	2025	Ongoing	Aug-21	PCL	\$40.1M
North City Pure Water Facility and Pump Station	2025	Ongoing	Mar-21	Shimmick	\$356.7M
North City Pure Water Pipeline, Dechlorination Facility and Subaqueous Pipeline	2025	Ongoing	Apr-21	W.A. Rasic	\$102.7M
Miramar Reservoir Pump Station Improvements	2025	Ongoing	Aug-22	Shimmick	\$12.7M
Miramar Reservoir Automated In-Water Quality Monitoring System	Ongoing Monitoring of Reservoir	Ongoing	Oct-21	Soundnine Inc.	\$1.0M
Peñasquitos Pump Station Oxygenation System	2025	Ongoing	Feb-23	Blue Pacific	\$4.4M

TOTAL **\$1.14 Billion**

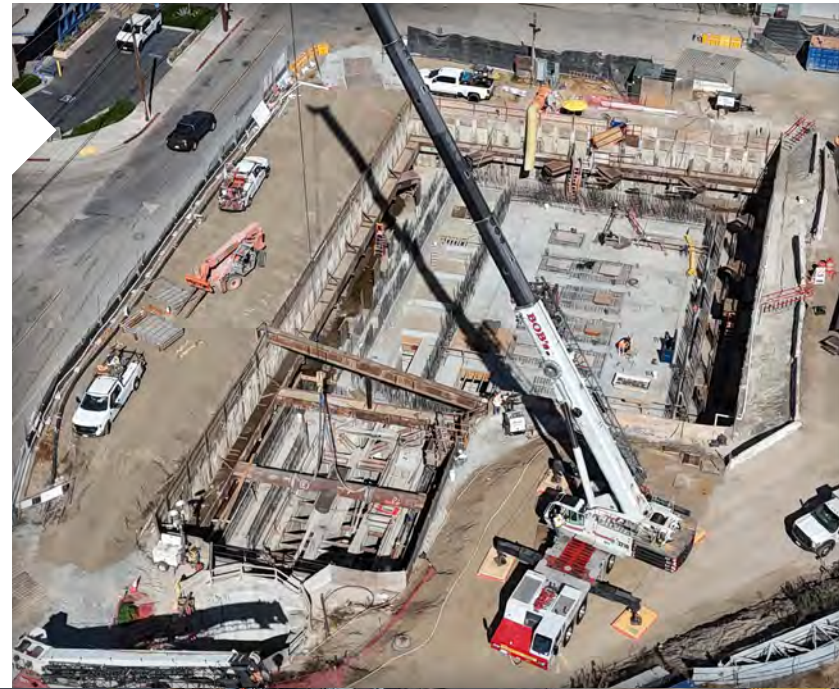


Pure Water San Diego 2024 Active Construction Projects

Morena Pump Station

Construction began in June 2021

Morena Pump Station will divert an average of 32 million gallons of wastewater per day through the Morena Pipeline to the North City Water Reclamation Plant for treatment and the North City Pure Water Facility for purification. In 2024, crews installed the lower concrete slab, walls and concrete support columns at the pump station, and began work on the intermediate deck level. The 60-inch diameter influent pipeline has been partially installed. Soil freezing operations continue on Friars Road at two diversion structures.



Morena Conveyance South & Middle and Bike Lanes

Construction began in October 2022

The Morena Pipelines Southern/Middle Alignment and Conveyance Bike Lanes project will connect the Morena Pump Station to the Morena Pipelines Northern Alignment and Tunnels. In 2024, crews completed the pipe section on Clairemont Drive between the South and Middle segments, while work is ongoing north of Balboa Avenue on Clairemont Drive. Crews have installed pipeline on Morena Boulevard and completed the Tecolote Creek pipeline crossing.



Morena Pipelines Northern Alignment and Tunnels

Construction began in June 2021

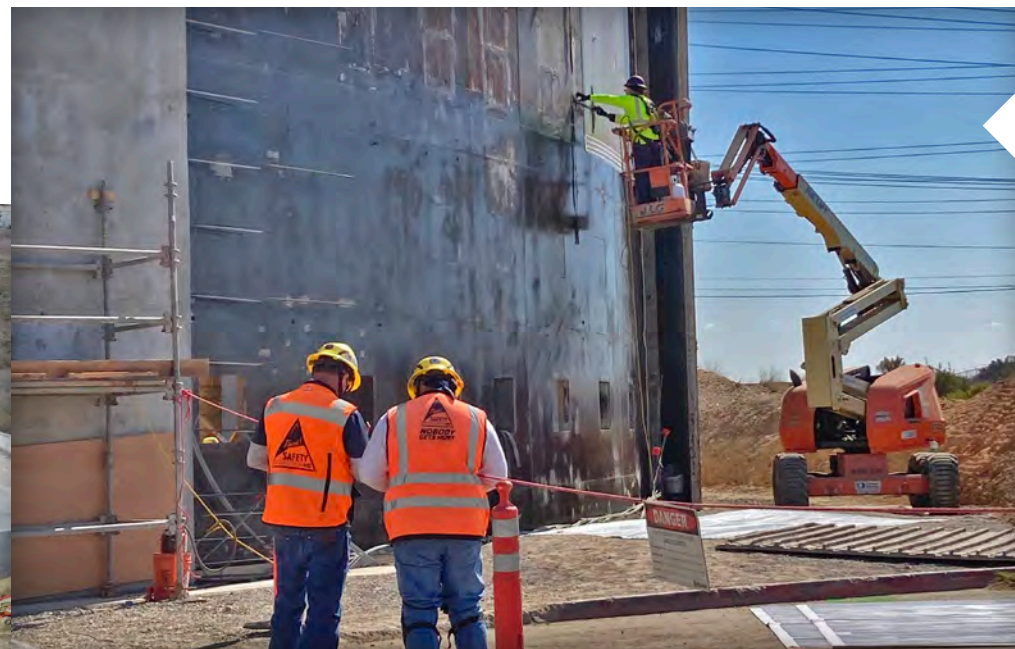
Morena Pipelines Northern Alignment and Tunnels will connect to the Morena Pipelines Middle Alignment and the North City Water Reclamation Plant. In 2024, crews began tunneling under Interstate 805 and Rose Canyon, and completed the tunnel under San Clemente Canyon and State Route 52. Pipeline construction is complete on Genesee Avenue from Appleton Street to Rose Canyon. The sections on Executive Drive and Towne Centre Drive are complete. Pipeline construction is ongoing on Nobel Drive.



North City Water Reclamation Plant Expansion

Construction began in August 2021

The North City Water Reclamation Plant is being expanded to increase production capacity from 30 million gallons per day to 52 million gallons per day. In 2024, crews completed the concrete walls for the primary sedimentation tanks and the first stage bioreactors. The construction crew completed the concrete work and hydro testing of four new secondary clarifiers that are nearing commissioning.



North City Water Reclamation Plant Flow Equalization Basin

Construction began in December 2021

A 2.35 million gallon Flow Equalization Basin is being built on the North City Water Reclamation Plant site and will regulate the peak wastewater flow rates to allow for a more constant flow through the plant's treatment processes. This volume is equivalent to almost four Olympic-sized swimming pools. In 2024, crews completed the foundation and majority of wall sections.



Metropolitan Biosolids Center Improvements

Construction began in September 2021

To accommodate increased biosolids to the Metropolitan Biosolids Center due to the expansion at the North City Water Reclamation Plant, upgrades at the Metropolitan Biosolids Center are necessary. Most of the construction is taking place on City-owned property and work to install the dewatering centrifuge, dewatering sludge feed pump and associated polymer pump has been completed. In 2024, crews worked on commissioning activities of centrifuge systems, feed pumps, pump systems and digesters.

North City Pure Water Facility and Pump Station

Construction began in April 2021

The North City Pure Water Facility and Pump Station will produce an annual average of 30 million gallons per day of purified water, which will be conveyed by the pump station to Miramar Reservoir for storage. In 2024, crews continued working on structural work focusing on the biological activated carbon filters, product water tank and the administration building areas. Work continues on the chemical facility and main electrical building. The operations building exterior is complete and the interior space is being built out. Advanced treatment equipment including ozone generators, ultrafilters, reverse osmosis and ultraviolet light reactors have also been installed. The contractor is also planning and coordinating for startup and testing.



Miramar Reservoir Pump Station Improvements

Construction began in October 2022

The existing Miramar Reservoir Pump Station moves water from Miramar Reservoir to the Miramar Drinking Water Treatment Plant. This pump station is being rehabilitated to ensure that it can continually pump 30 million gallons per day on an annual average basis. In 2024, crews worked on vertical turbine pump refurbishments and electrical switchgear improvements.



North City Pure Water Pipeline, Dechlorination Facility and Subaqueous Pipeline

Construction began in June 2021

The North City Pure Water Pipeline will convey an annual average of 30 million gallons per day of purified water to Miramar Reservoir. The dechlorination facility will remove chlorine necessary for disinfection before it is delivered into the reservoir. In 2024, crews completed nearly 6 miles of pipeline installation. The 500-foot tunnel under Interstate 15 is complete and the subaqueous pipeline in Miramar Reservoir was installed and tied in. Work is ongoing at the dechlorination facility and the team is looking ahead to startup and testing.

Construction Workforce

In total, almost 1,959,105 labor hours have been invested in Phase 1 construction through October 2024. The Project Labor Agreement coordination team has provided monthly updates regarding progress toward the Pure Water Program’s hiring goals of City resident and targeted workers for the construction workforce. These reports have kept the Pure Water team apprised of the Project Labor Agreement goals and enhanced connectivity and communication.

Differentiated by project, the table demonstrates the current hiring percentages of City residents and targeted workers, through October 2024. The 10 active Phase 1 construction projects have a workforce that is comprised of at least 23% City residents. 7 of the 10 projects exceed the 10% goal of targeted worker representation.

“7 of the 10 active Phase 1 construction projects exceed the 10% goal of targeted worker representation”

Project Name	Contractor	City Resident % (Goal = 35%)	Targeted Worker % (Goal = 10%)
North City Pure Water Facility and Pump Station	Shimmick Construction Inc.	28%	19%
Morena Pump Station	Flatiron	18%	7%
Morena Pipelines Northern Alignment and Tunnels	OHL USA Inc.	19%	25%
North City Pure Water Pipeline	W.A Rasic Construction	33%	19%
North City Water Reclamation Plant Expansion	Kiewit Infrastructure West Co.	18%	15%
Metropolitan Biosolids Center Improvements	PCL Construction Inc.	37%	26%
North City Water Reclamation Plant Flow Equalization Basin	Kiewit Infrastructure West Co.	18%	14%
Morena Conveyance South & Middle and Bike Lanes	Sukut Construction	7%	11%
Miramar Reservoir Pump Station Improvements	Shimmick Construction Inc.	24%	8%
Peñasquitos Pump Station Oxygenation System	Blue Pacific Engineering	22%	0%
Pure Water Program Phase 1 Projects Total		23%	17%



Meet Tytiana

Tytiana Alicea is a U.S. Navy Veteran and City of San Diego resident. She is currently sponsored by Shimmick Construction Co. as a painter, second period apprentice, on the North City Pure Water Facility and Pump Station project. After completing her service with the Navy and returning to civilian life, she knew construction was the path for her. She enjoys the camaraderie as well as the ability to work with her hands and express her creative side. During her time in the Navy, Tytiana learned the importance of safety and following direction. These learned skills allowed for an easy transition into the construction industry. Since joining the union she says, “I feel proud of my work, I feel happy and satisfied.”

The percentage of City residents employed on Pure Water projects continues to increase; currently, there are 1,161 City residents employed on Pure Water projects. City residents constructing Pure Water projects have earned \$32,767,681 through September 2024. It is critical that the City’s largest infrastructure undertaking supports local San Diegans with jobs.

Veterans of the United States armed forces and apprentices make up a significant proportion of currently employed targeted workers. Multiple project sites sponsor Helmets to Hardhats, a career program for veterans of the United States armed forces making the transition to civilian employment in the construction industry: the North City Pure Water Facility and Pump Station; the North City Water Reclamation Plant Expansion; the North City Pure Water Pipeline, Dechlorination Facility and Subaqueous Pipeline; and Metropolitan Biosolids Center Improvements.

In total, more than 95,990 hours have been worked by veterans on the Pure Water projects through October 2024. In May, the 2024 class of apprentices graduated from the San Diego College of Continuing Education and Southwestern College Apprenticeship Readiness Programs. On their way to becoming journeypersons, apprentices support the construction of Pure Water projects while completing their final hours to certification.





Program Funding

The City has received and continues to apply for grants and loans from both the federal and state governments, which will accrue direct savings to ratepayers. Grants do not have to be repaid, but loans must be repaid over time. To fund Phase 1 projects, the City has been diligent in pursuing and securing as much federal and state funding as possible. Water Infrastructure Finance and Innovation Act loans from the U.S. Environmental Protection Agency are currently providing \$733.5 million for Phase 1 construction. The larger loan – \$614 million – has an interest rate of only 1.29%, and the second loan – \$119.5 million – has a low-interest rate of 1.82%.

U.S. EPA
currently providing
\$733.5M
for **PHASE 1**
CONSTRUCTION

In April 2024, the State Water Board signed the last of four separate loans for a total of \$664 million to further support Phase 1 construction. The State Water Board loans have very favorable interest rates between 0.8% and 1.1%.

To date, the City has received \$349 million from Water Infrastructure Finance and Innovation Act and \$198 million from the Clean Water and Drinking Water State Revolving Fund loans. In addition to these loans, the City has received \$81.5 million in grants from funding agencies.

CITY HAS RECEIVED
\$81.5M
IN GRANTS



Phase 2 Lookahead

The City is beginning to prepare for the second phase of the Pure Water Program. The construction of a small-scale facility is currently underway to demonstrate appropriate treatment options including for a potential direct potable reuse application, as well as reassessing the facilities needed for Phase 2 of the program.

PHASE 2 RE-ASSESSMENT

The original Phase 2 plan was conceived during the development of the 2012 Recycled Water Study. Since that time, several important factors have changed to an extent that it merits re-examination of the plan. These factors include water supply and demand, wastewater flows and availability, water supply dam conditions, climate change and sea level rise, regulatory developments, and affordability for customers.



WATER SUPPLY & DEMAND



WASTEWATER FLOWS & AVAILABILITY



WATER SUPPLY DAM CONDITIONS



CLIMATE CHANGE & SEA LEVEL RISE



REGULATORY DEVELOPMENTS



AFFORDABILITY

PURE WATER PHASE 2 CENTRAL AREA SMALL-SCALE DEMONSTRATION FACILITY

The small scale facility is under construction at the Point Loma Wastewater Treatment Plant. As with Pure Water Phase 1, a demonstration facility is a regulatory requirement for Pure Water Phase 2 because it will treat flow from a different wastewater collection area with different wastewater characteristics. In addition, the City will demonstrate the ability of the advanced treatment processes to meet the new requirements for direct potable reuse.

The Public Utilities Department has submitted a detailed testing and monitoring plan for the Central Area Small-Scale Facility to state regulators, together with a Quality Assurance Project Plan. Both documents require regulatory review before data collection can begin.



Operations and Maintenance Updates

Specific readiness tasks for different staffing areas include:

HIRE STAFF FOR THE NORTH CITY PURE WATER FACILITY:

Hiring progress remains on target as Pure Water Operations continues to implement wide-reaching, industry-targeted advertisement of open positions and utilizes a variety of recruitment events to improve candidate pools. Currently, eight out of nine Operations and Maintenance supervisor positions have been filled. Following the schedule laid out in the North City Pure Water Operations and Readiness Master Plan, the Operations team recently completed the hiring and onboarding of a Program Manager, five Senior Pure Water Plant Operators, and a Plant Technician III. Thus far, the division has accomplished the following:

- *Operations Positions: 13 filled out of 20*
- *Maintenance Positions: 9 filled out of 17*
- *Engineering and Administrative Positions: 5 filled out of 7*

OBTAIN ADVANCED WATER TREATMENT OPERATOR CERTIFICATION:

To ensure operators have the proper knowledge base to operate an Advanced Water Treatment facility, the City partnered with the American Water Works Association, the California Water Environment Association and agencies across the state to develop the Advanced Water Treatment Operator certification program. This certification is designed to ensure certified drinking water and wastewater operators are equipped to operate potable reuse facilities in compliance with regulations. All senior operations staff must obtain this new certification. There are three levels of certification, Advanced Water Treatment 5 being the highest and Advanced Water Treatment 3 the lowest. To date, Pure Water Operations has hired for all the operator supervisory and lead positions that require Advanced Water Treatment Operator certification. Only two Pure Water Operator positions require Advanced Water Treatment 4 or higher, and both staff in these positions have the required certifications. Six out of 10 staff have obtained Advanced Water Treatment 3 certification or higher. The remaining four are on pace to receive certification prior to systemwide integration, ahead of the original schedule.

PERFORM CONTRACTS PLANNING:

Pure Water Operations has initiated the effort to execute contracts for chemicals, services, and other specialized parts and labor required for the North City Pure Water Facility. The contracting process is being evaluated holistically to ensure optimal pricing and flexibility. Pure Water Operations will partner with the other Public Utilities Department operating divisions on chemical contracts to take advantage of large-scale pricing and ensure the efficient use of ratepayer funds. North City Pure Water Facility requirements will be included in a department-wide contract renewal for sodium hypochlorite that is currently in process, and sodium hydroxide, liquid oxygen, and liquid ammonium sulfate will be included in future contract processes. These contracting efforts will include the latest chemical cost estimates and will allow for phased implementation, synching with the facility flow ramp up requirements.

The Pure Water Operations Division is working to ensure City staff are prepared to operate and maintain the North City Pure Water Facility 24 hours per day, 365 days per year.

Regulatory and Environmental Progress

MIRAMAR RESERVOIR NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT AND WATER SUPPLY PERMIT:

The City continues to address the approximately 40 conditions under the National Pollutant Discharge Elimination System permit for Miramar Reservoir that must be met prior to release of purified water into the reservoir. In 2024, the City began receiving comments from the California Division of Drinking Water and the Regional Water Quality Control Board regulators on three first-of-their-kind reports under the Indirect Potable Reuse Surface Water Augmentation Regulations: the North City Pure Water Project Operations Plan, Operational Ramp-Up Plan, and Joint Plan. These plans are the foundation for operating the Pure Water Phase 1 integrated system and managing the release of purified water to Miramar Reservoir, the first reservoir augmentation project in the State.

In the meantime, the City prepared for the five-year renewal of the Miramar National Pollutant Discharge Elimination System Permit permit. A Report of Waste Discharge was submitted to the Regional Water Quality Control Board at the end of December, six months prior to the expiration of the NPDES permit on June 30, 2025. The Board will use the information in the Report of Waste Discharge to prepare and amend a renewed Miramar permit.

In addition, the Public Utilities Department is required to do an Enhanced Local Limits study that is an extension of the existing local limits in place for the Point Loma Wastewater Treatment Plant. Local limits are restrictions on industrial discharges for contaminants that could adversely affect treatment plant operations or jeopardize compliance with the permit. The Public Utilities Department is wrapping up the second and final stage of a study to determine whether any additional local limits are required on discharges to the collection system to protect the Pure Water facilities and reservoir water quality. The results have been submitted to Division of Drinking Water and the Regional Water Quality Control Board for their review. In general, the findings show that the current local limits, coupled with the extensive treatment provided in the North City Pure Water facilities, allows the City to meet all Miramar Reservoir National Pollutant Discharge Elimination System requirements to protect public health.



In August, the Office of Administrative Law approved the Direct Potable Reuse regulations, and signed them into effect in October 2024.

DIRECT POTABLE REUSE REGULATIONS

This year, the State Water Board proceeded with its legislative review of the Direct Potable Reuse regulations that were finalized in late 2023. Direct Potable Reuse involves putting purified recycled water directly into a potable water supply distribution system downstream of a drinking water plant or into the source water supply immediately upstream of the drinking water plant. In August, the Office of Administrative Law approved the regulations and they were written into the California Code of Regulations on Oct. 1, 2024. These regulations provide the definitive framework for the development of Phase 2 alternatives, should a direct potable reuse approach be selected. The regulations incorporated many changes requested by the City, notably in the areas of alternative treatment for pathogen control and the benefits of reservoir storage before transfer to a drinking water treatment plant. The leadership position that the City has taken in bringing issues with defined examples to the regulators will benefit the application of potable reuse in San Diego and elsewhere in California.

POINT LOMA WASTEWATER TREATMENT PLANT PERMIT

The renewal of the National Pollutant Discharge Elimination System permit for the Point Loma Wastewater Treatment Plant continues. The treatment plant has a modified permit for enhanced primary treatment that is jointly issued by the Environmental Protection Agency and the Regional Water Quality Board.

In 2024, the Regional Water Quality Board released a draft for public comment and a Board hearing was held on March 13. The Coastal Commission is expected to hold a hearing in 2025 to determine consistency with the Coastal Zone Management Act and pending approval, it will go forward to final approval by the Board and Environmental Protection Agency. Once approved, the permit will cover a period of five years from the effective date.



The Pueblo South site created 2.46 acres of native grassland, of this, the North City Project required 1.30 acres of mitigation, providing an additional 1.16 acres of mitigation for the City of San Diego.

OCEAN POLLUTION REDUCTION ACT II

On March 22, 2023, Congressman Scott Peters reintroduced the Ocean Pollution Reduction Act II (H.R.1720), which proposes modifying the permitting requirements for discharge of pollutants from Point Loma Wastewater Treatment Plant. This bill contains required milestones in line with projected reductions in both the treated discharges from the treatment plant and the production of potable water expected with Pure Water Phase 1 and Phase 2.

Congressman Peters continues to work with staff from the Committee on Transportation and Infrastructure to schedule a hearing for the Ocean Pollution Reduction Act II, similar to the last two Congresses. The bill must go through the Committee before the House floor and then on to the Senate for consideration.



PURE WATER PHASE 1 PROJECTS ENVIRONMENTAL COMPLIANCE

Biological, archaeological and paleontological monitoring is conducted for active Pure Water Phase 1 construction projects in accordance with the Mitigation, Monitoring and Reporting Program adopted as part of the Final Environmental Impact Report/Environmental Impact Statement for Pure Water Phase 1.

The SANDER Vernal Pool and Upland Mitigation Site, which offsets impacts to sensitive biological resources at the North City Pure Water Facility, completed year four of a seven-year maintenance and monitoring program. Maintenance work in 2024 focused on weed control by removing non-native biomass throughout the site. In addition, new signage was installed throughout the site and anthropogenic trash removal and boundary fence repairs also occurred.

The five-year maintenance and monitoring program at the Pueblo South Native Grassland Mitigation Creation site was completed.

Maintenance work for 2024 continued to ensure successful completion of the final year and included weed control to meet the annual performance standard. The Pueblo South site created 2.46 acres of native grassland, of this, the North City Project required 1.30 acres of mitigation, providing an additional 1.16 acres of mitigation for the City of San Diego. The site will be maintained in perpetuity.



Engineering and Process Optimization Support Studies

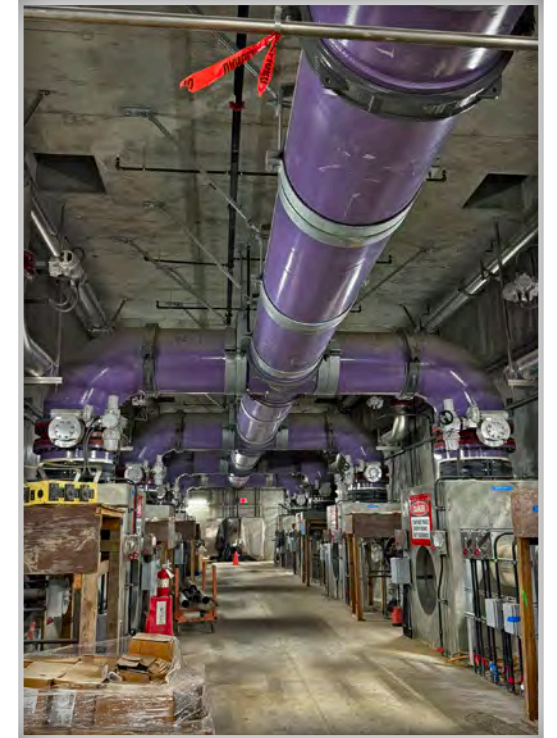
NORTH CITY PURE WATER FACILITY RESEARCH

The City continues to address the approximately 40 conditions under the National Pollutant Discharge Elimination System permit for Miramar Reservoir that must be met prior to release of purified water into the reservoir. In 2024, the City began receiving comments from the California Division of Drinking Water and the Regional Water Quality Control Board regulators on three first-of-their-kind reports under the Indirect Potable Reuse Surface Water Augmentation Regulations: the North City Pure Water Project Operations Plan, Operational Ramp-Up Plan, and Joint Plan. These plans are the foundation for operating the Pure Water Phase 1 integrated system and managing the release of purified water to Miramar Reservoir, the first reservoir augmentation project in the State.

The City continues to operate and maintain the Pure Water Demonstration Facility, a 1 million gallon per day plant that comprises the advanced treatment processes that will be used in the North City Pure Water Facility. The current research focus is the potential to increase the recovery, or throughput, of water for the reverse osmosis units. The current process that is being installed at the North City Pure Water Facility can achieve 85 percent recovery, which means that 15 percent of the water is rejected as brine and is returned to the wastewater collection system for treatment and discharge from the Point Loma Wastewater Treatment Plant. Given improvements in membrane materials and the high performance of processes preceding the reverse osmosis units, the current study is evaluating whether the recovery can be improved to between 90 and 95 percent. If successful, this will increase the volume of purified water that can be produced and reduce the volume of the reverse osmosis brine waste stream.

TRACER STUDY FOR MIRAMAR RESERVOIR

In addition, the Public Utilities Department has continued to work with the project's Independent Advisory Panel to prepare a testing protocol for the tracer study that will be performed once purified water is released to Miramar Reservoir. A tracer study is required to validate a 3D reservoir model that demonstrates that Miramar reservoir can provide the required dilution prior to further treatment at the Miramar Drinking Water Treatment Plant. The tracer study protocol was prepared and presented to the limnology subcommittee of the Independent Advisory Panel in December.

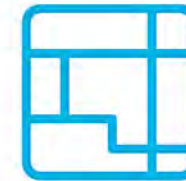


Informational Materials

PHASE 1 WEBSITE IMPROVEMENTS



In 2024, the website was enhanced to highlight progress on Phase 1 projects and improve the user experience. As Pure Water progresses, we will continue to update and improve items on the website.



GIS MAP

The regularly updated Phase 1 North City interactive construction map enables users to quickly find information on road closures, detours and impact-related information by project.



FACT SHEETS IN NEW LANGUAGES

The accessibility of Phase 1 information has been expanded into Japanese. Fact sheets are available on the Informational Materials page of purewatersd.org.



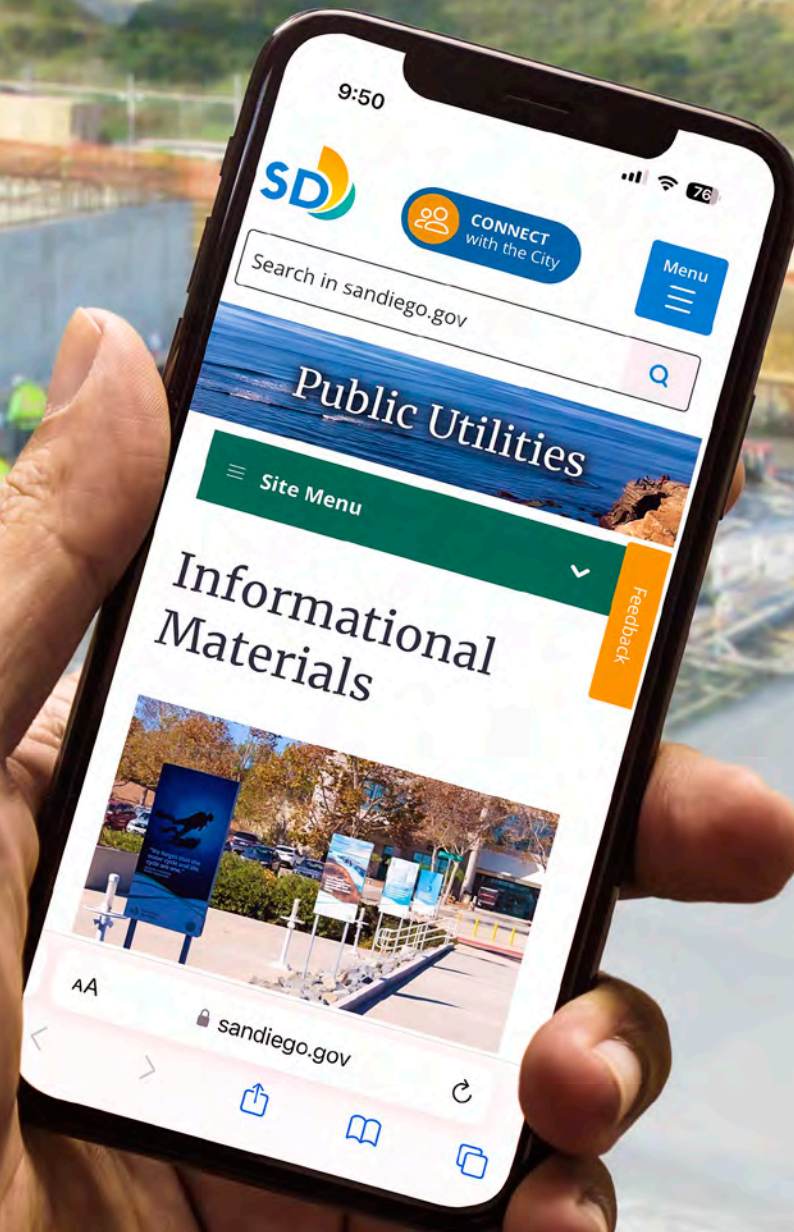
VIDEO AND PHOTOS

As part of the Phase 1 projects, the City has increased the use of video and photos to show construction progress. A timelapse camera at Miramar Reservoir captured the subaqueous pipeline construction and the team takes aerial photos of active construction on a regular basis.



WANT TO LEARN MORE ABOUT THE PROGRAM?

View the Informational Materials page for the latest Pure Water materials including the refreshed speakers bureau presentation, Pure News newsletters and more.





Community and Industry Outreach

HIGHLIGHTING PURE WATER SAN DIEGO IN THE INDUSTRY

At the 2024 National Water Reuse Symposium in March, the Pure Water team presented details on how the Pure Water San Diego project has evolved over the past 30 years. In September, the Pure Water team presented program insights and lessons learned at the 2024 National Water Reuse Symposium and the 2024 Water Reuse California conference.

COMMUNITY EVENTS

The Pure Water outreach team engaged with the community members at 12 community events: The Tet Festival, San Diego Festival of Science and Engineering Expo, Linda Vista Multi-Cultural Fair & Parade, SONY Earth Day Fair, Clairemont Garden Tour, Bike Anywhere Day, Asian Pacific Cultural Fair, Scripps Ranch 4th of July, Mayor Gloria’s Back to School Celebration, Clairemont Family Day, Mira Mesa Street Fair and Walter Munk Oceans Day. These events provided a fun and engaging way for the team to meet face-to-face with community members and residents, answer questions and share updates about the program.

In summer 2024, we relaunched our water tasting program at SANDAG’s Bike Anywhere Day. This was the first time since before the pandemic that community members were able to taste samples of Pure Water outside of the Pure Water Demonstration Facility. We are excited to have had more than 150 people participate in our tasting program and look forward to bringing Pure Water to events in the future.

SPEAKERS BUREAU PROGRAM

As construction among Pure Water Phase 1 projects progressed, the speakers bureau continued to expand to include new speakers and a refreshed presentation with engaging, interactive maps and timely construction updates. The Pure Water team delivered 19 presentations and answered questions about the program to a variety of organizations, community groups, elected officials, and planning groups such as the San Diego Environmental Business Professionals and the Japanese American Citizens League.

During these presentations, we spoke on a wide range of topics, including program regulations, project maps, wastewater treatment processes, the history of recycling drinking water and timely project updates.

CONSTRUCTION OUTREACH

Proactive, robust construction outreach is ongoing as part of the Pure Water Phase 1 projects in Morena, Bay Park, Clairemont, University City, Miramar and Scripps Ranch. The construction outreach team fielded and resolved approximately 150 construction-related stakeholder inquiries in 2024 via the three community phone lines and dedicated email address: purewatersd@sandiego.gov.

To inform Phase 1 communities, the outreach team strategically distributed project and schedule information via construction notices, website updates, social media content, flyers, doorhangers and e-blasts. Each outreach liaison worked together with the City construction management team, contractor and community groups, stakeholders and residents to ensure the timely delivery of construction-related information.

Monthly meetings and updates resumed to the University Community Planning Group and University City Community Association. Ad-hoc presentations were provided to the University City Civic Association, Clairemont Planning Group, Clairemont Town Council, Scripps Ranch Planning Group, Scripps Ranch Civic Association, Mira Mesa Planning Group, Mira Mesa Town Council, University of San Diego, and the Miramar Ranch North Planning Committee.



2024 Construction Outreach Recap

150+ CONSTRUCTION INQUIRIES RECEIVED AND RESOLVED

50+ CONSTRUCTION NOTIFICATION E-BLASTS DISTRIBUTED TO OVER 5,000 RECIPIENTS

29 PHASE 1 PROJECT PRESENTATIONS GIVEN TO COMMUNITY GROUPS, INFORMING APPROXIMATELY 750 PEOPLE IN VARIOUS COMMUNITY ORGANIZATIONS

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

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



Pure Water San Diego Program

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