



five years of success and improvements

Bayonne, New Jersey





Like many established cities, Bayonne, NJ saw its aging infrastructure as a growing burden on water quality and distribution. At the same time, an upgrade would put a difficult strain on the city's finances. The partnership between SUEZ, private investors and the city eliminated existing debt and improved Bayonne's finances with an initial payment of \$150 million to the Bayonne Municipal Utility Authority in 2012. This agreement between Bayonne and SUEZ would prove to position Bayonne well for future growth. One of the challenges of providing a reliable water supply is to anticipate the unexpected. The improvements made as part of SUEZ' partnership with the city has maintained a high level of service and reliable infrastructure system for the community.

SUEZ has taken great initiative in becoming more involved in the community and a committed stakeholder in Bayonne's continued development. SUEZ takes pride in its community involvement, sponsoring the Bayonne Bike Program, youth soccer and baseball teams through the Police Athletic League (PAL) and volunteering in community projects. Each year, you'll find SUEZ employees participating in Earth Day, the Friends of Special Children's Annual Picnic, the Chamber of Commerce Food Drive and the Mayor's Concert Series. SUEZ proudly supports

rebuilding from the ground up

WomenRising of Hudson County, a non-profit that provides supportive counseling, crisis intervention, workforce development and job placement, shelter for victims of domestic violence, outreach, advocacy and referrals.

This public-private-partnership between SUEZ, private investors and the City of Bayonne has stabilized the city in many ways and continues to improve service reliability and consumer confidence. The partnership has already invested over \$19 million in the city and in December of 2013 celebrated the rebuild of the Oak Street facility. This rebuild included key upgrades in maintenance to the pump station, a complete overhaul of the office space to include training rooms, technology, and a safe work space for employees. SUEZ is honored to continue its partnership with Bayonne. Shoring up the city's water and wastewater infrastructure while providing reliable supply and treatment is what our company was built on over the last 150 years. Furthermore, the long-term commitment of private investors assures that capital is always available to the city for ongoing system improvements.



operational accomplishments & improvements



As part of a major investment from private investors managed by Argo Infrastructure Partners, the SUEZ operations team has been able to implement several projects that have improved Bayonne's water and wastewater system.

NOTICE
Water System Specifications
Pump Size: 100 HP
Pump Pressure: 100 PSI
Pump Capacity: 100 GPM
Pump Operating Hours: 24/7
Pump Location: Bayonne, NJ

operational accomplishments & improvements

MOODY'S
INVESTORS SERVICE

Creating Financial Stability

Moody's Positive Credit Rating

The public-private-partnership between SUEZ and the city has led to positive changes in the city's overall financial health. An immediate result of the partnership was Moody's Investor Service rating changing from Baa1 with a negative outlook to a stable outlook for the first time in five years. Three years after the partnership began, Moody's upgraded Bayonne's viability to A3, reflecting the financial stability the city demonstrated as a result of the upfront payment the partnership provided, and the long-term stability our solution provides.



Managing Aging Infrastructure

Aqueduct Repairs

Water flows into the City of Bayonne through a 13 mile-long pipe called an aqueduct. The water travels from the North Jersey Water Supply District in Wanaque, NJ, where it is treated, into Bayonne. The aqueduct is over 100 years old, which is a major issue requiring constant repairs. SUEZ replaced a problematic valve on the aqueduct allowing the water to flow more efficiently through the system. Improvements such as the valve replacement on the aqueduct has improved service reliability and ensures that quality drinking water is delivered to the residents of Bayonne each day.

operational accomplishments & improvements



Revitalizing Current Infrastructure

North Arlington Gatehouse

A critical infrastructure improvement included the rebuild of the North Arlington Gatehouse and all of the infrastructure within. The gatehouse represents where the Bayonne water system begins. The distribution pipes at the gatehouse were failing and nearly ready to burst their seams. As part of our system wide assessment we identified this near-crisis and immediately put plan into action to fix the broken joints and secure the city's water supply.

SUEZ installed two meters at this location to ensure the water distributed to the city is measured and monitored. Now Bayonne can accurately measure exactly how much water is being used throughout the city.



System Improvements for Operational Efficiency

Hydrant Replacements Throughout The City

SUEZ has worked to repair or replace older hydrants throughout the city. Approximately 35 hydrants have been identified since 2013. Keeping our customers in mind, we relocated a hydrant that was tightly placed between two driveways and periodically leaking into Avenue A. Bayonne has security in knowing the water supply is dependable throughout the City, and water pressure is being maintained 24/7 for fire prevention.



Trash Talking

22nd Street Pump Station

For safety reasons, the bar screens at the 22nd Street pump station had to be updated and replaced. Bar screens serve as a wastewater screen that removes debris, washes it, and compacts it. The bar screen minimizes the volume of trash diverted to landfill by compacting the waste. The compacter washes the organics out before it reaches the dumpster, eliminating odor before it reaches the outside trash bin. The new bar screens provide a safer and more efficient process for the employees as well as minimizing the environmental impact on the city.



Net Results

Netting Chamber Improvements

Netting chambers are floatable waste management nets that capture bottles, bags, and other materials commonly discarded into sewers. In Bayonne, the netting chambers are located at the wastewater outfalls. SUEZ removed old nets and replaced with new ones providing added protection to the system and employees. Grading around each vault of nets and harnesses were installed as additional safety measures to protect employees from falling. Netting chambers are inspected routinely for wear and tear and specifically after a hard rainfall, to ensure they remain in proper working order.

essential enhancements

Oak Street Facility

As part of the improvements made in Bayonne, SUEZ has continued to clean up and clear out not only the dirt spoils at the Oak Street facility, but debris around the outfalls and other locations. These rehabilitation projects have added to the beautification of Bayonne, making the City a healthy and safe environment for residents.

Health and safety is both a priority for the surrounding community and for our employees who operate the system in Bayonne. SUEZ employees live locally and ensuring their safety during day-to-day operations decreases incidents and health concerns for each individual. Updates to employee protocols and procedures including Personal Protective Equipment (PPE) and employee career advancement have been key to improving the efficiency of Bayonne operations.

The new training area at the Oak Street facility has allowed for SUEZ staff in Bayonne to regularly participate in training activities to ensuring compliance, safety and investment in our employees.

before & after



Employee Entrance Before



New Entrance



Work Area Before



Work Area After



Meeting Room Before



Training Room After



moving toward a smart utility

the switch to smart metering

One of the biggest accomplishments to Bayonne's infrastructure has been the change to an Automatic Metering Investment (AMI) system. AMI is an aggressive leak detection tool used to drive down unaccounted for water. Water meters are now read electronically, in real-time, which allows leaks to be detected in homes or businesses quickly and helps to protect budgets. SUEZ has an experienced staff of qualified and properly trained customer service representatives who have successfully provided the City of Bayonne with water and wastewater support over the past five years.

The success of the switch to AMI metering and the role that customer service play in providing key notifications via letters, calls or emails, has a significant impact on community members and their monthly bills.

"I arrived home today from an extended business trip. I found a note in my front door from SUEZ about a possible water leak in our house. The note was written on a form showing a read out of a drastic spike in water consumption. Thank you for the attention you gave to us on our issue and the quick warning. I am sure this warning saved us a pretty penny."

- Bayonne Customer

AMI stats

✓ 11,000 smart meters installed to-date



✓ Consumption* decreased

38%

✓ Total City demand* decreased

4.4%



Attn: Michael Jasinski
Dear Mr. Jasinski,
Thank you for your letter of April 30th.
Yes we did have a leak in the first
floor bathroom.
Our plumber, Angelo L., fixed the
problem on May 7th, and checked
the plumbing on the two floors and
in the basement.
Thank you for notifying us.

Water is relatively inexpensive in the context of your overall household budget. On average, the cost of water is less than a penny a gallon. That makes it all too easy to waste.

Right now, in your basement or in your backyard, there's that one spigot that won't completely shut off. And you're paying more for water service than you have to as a result.

If that sounds familiar, you don't live in Bayonne, NJ, where United Water has installed over 11,000 new and smarter meters for 95 percent of the city's residents and businesses. High-resolution Sensus SR11 meters and Aclara endpoints enable meter data to be constantly gathered by several collectors on poles and rooftops throughout the city. Data is then transmitted to United Water servers for calculation and consumption reports.

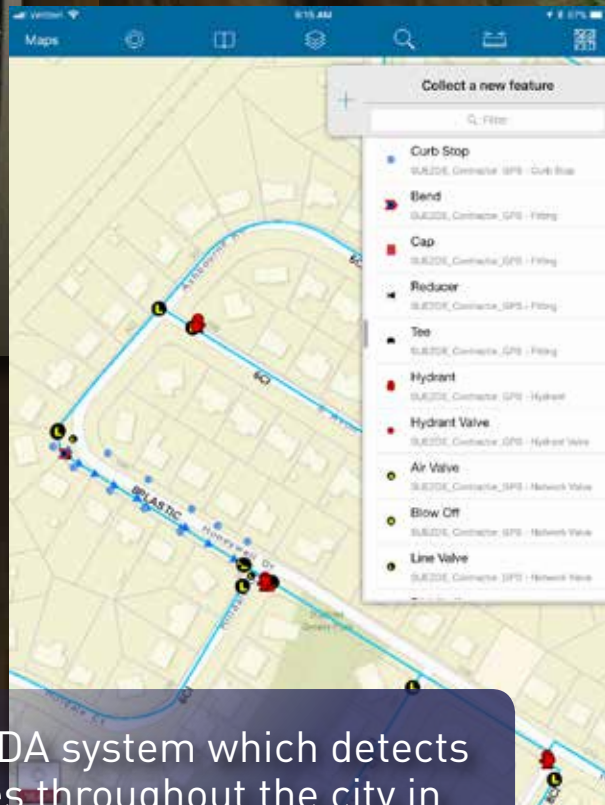
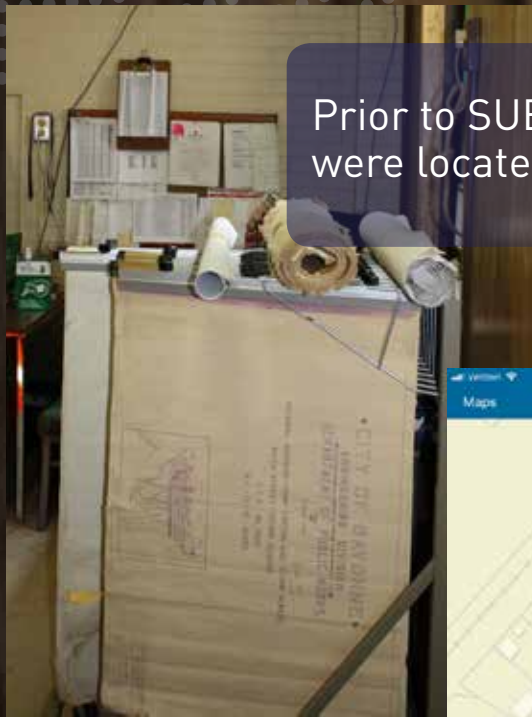


*Consumption is the amount of water the consumer uses. *Demand is the amount of water coming into the city.

more smart stuff

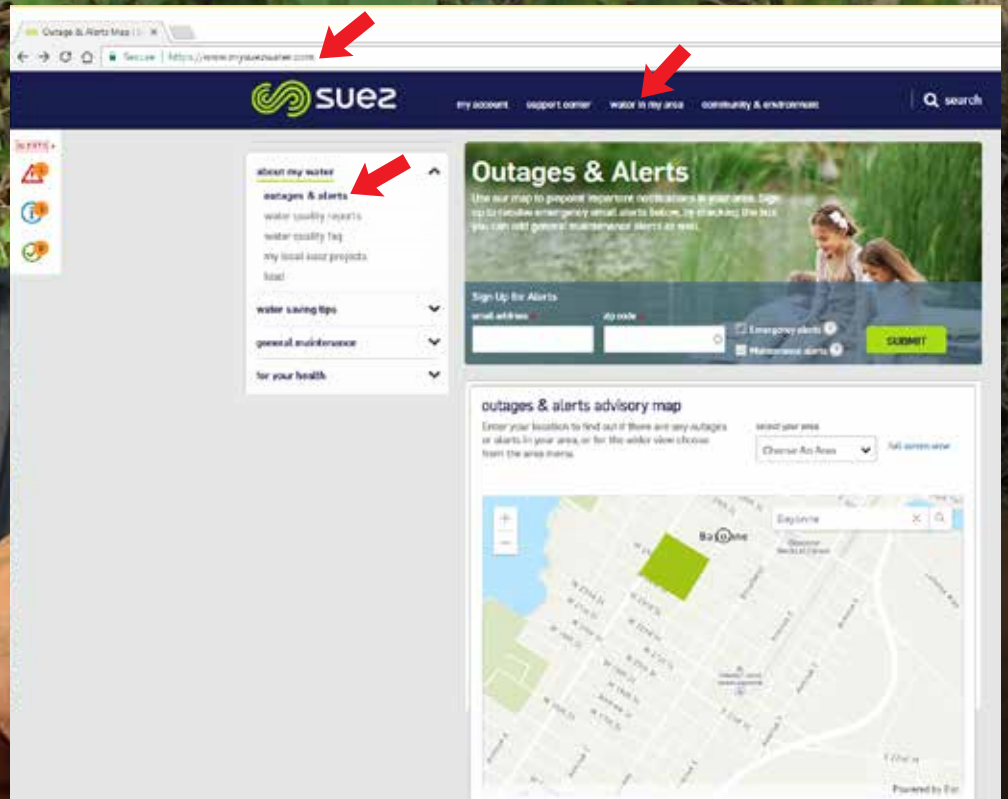
Soon after the partnership began with the City of Bayonne, one of the immediate needs included the digitization of the infrastructure. Prior to SUEZ, underground assets were located by reviewing paper maps. SUEZ installed a Supervisory Control and Data Acquisition (SCADA) system which detects any abnormalities in water and wastewater flow. SUEZ built the system out to include assets across the city. SCADA provides the ability to monitor water and wastewater usage in real time. This has proven to be a valuable addition when a main break occurs. SCADA allows the team to see the spike in water pressure alerting SUEZ crews immediately to view and address an issue. SCADA provides enhanced productivity and eliminates lost, damaged, and outdated paper maps.

Prior to SUEZ, underground assets were located by reviewing paper maps.



SUEZ installed a SCADA system which detects any flow abnormalities throughout the city in real time.

The addition of a Geographic Information System (GIS) has allowed SUEZ to properly manage assets by geo-plotting in order to access them electronically from a mobile device. Much like Google maps, GIS provides a rich online and mobile mapping environment. The upgrade has also made it easier for customers to view service interruptions and other advisories in their neighborhood. GIS includes a customer facing portal where residents can type in their zip code and look up outages in their area. Creating a smarter system has not only improved service but increased communication between customers and SUEZ.





Together;

SUEZ, Argo Infrastructure Partners and the City of Bayonne set goals that:

- 1) **Benefit local customers**
- 2) **Promote sustainability by finding lost water**
- 3) **Position the city to move forward with economic development**

A partnership between private investors has assured that capital will continually be made available to modernize and improve the system in Bayonne. Such investment allows Bayonne to address the challenges of a 21st century city with ease. The commitment to guaranteeing reliable, safe, and clean drinking water has become imperative to attract new business and build a smart city for future generations. As SUEZ continues to improve infrastructure, the city continues to grow its customer base and expand its economic development program without finding additional sources of supply.

By finding **2,932 leaks** among
12,000 customers SUEZ
has helped the city save over **150
thousand gallons per day.**

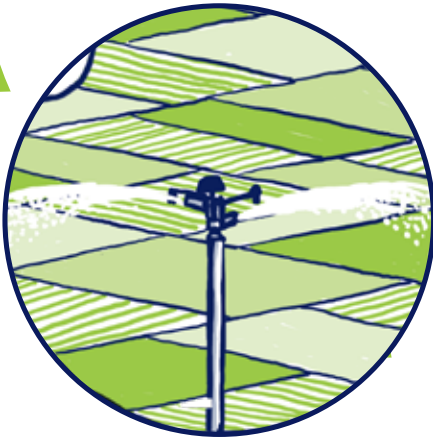
Footnote: Pursuant to a long-term Concession Agreement, Bayonne Water is operated by SUEZ. The Concession Agreement is a partnership between the City of Bayonne and Bayonne Water Joint Venture, an entity that includes SUEZ and private investors managed by Argo Infrastructure Partners LLC.



SUEZ

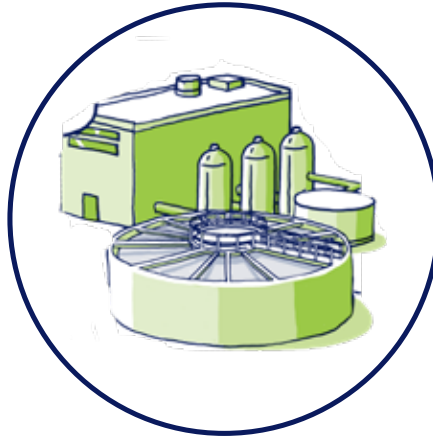
drinking water

Every day we provide safe, reliable drinking water to communities across North America. Using innovative filtration, clarification and disinfection techniques, we provide millions of homes and businesses with water that consistently meets or exceeds the highest state and federal standards. And we support the towns and cities we serve, working hand-in-hand with local officials to operate, maintain and manage their complex water services.



treatment and reuse

Through a range of wastewater treatment services, SUEZ is able to safely return treated water to rivers, lakes and streams. And our innovative solutions are helping recast wastewater as a primary source for agriculture, industrial and commercial purposes. Together, these two services help ease North American demand on this vital resource.



wastewater services

As part of our commitment to our stakeholders and the environment, we help ensure that the wastewater that leaves customers' homes is handled with care. Our wastewater systems are designed to meet the strictest government regulations, while maximizing efficiencies, technology and energy usage.

Project Headquarters
Bayonne Operations
110 Oak Street
Bayonne, NJ 07002
mysuezwater.com

North American Headquarters
SUEZ
461 From Road, Suite 400
Paramus, NJ 07652
201-767-9300
suez-na.com

