

YEAR IN REVIEW

2020

A MESSAGE FROM OUR CHIEF EXECUTIVE OFFICER



2020 WAS A REMARKABLE YEAR. The novel coronavirus reminded us time and again of the essential nature of water. From washing your hands, cleaning your home, and preparing meals to fighting fires, keeping health care workers safe, and treating those who are sick, water is our first line of defense. Essential water services and workers can no longer be taken for granted. Everyone learned this past year how critical water is to surviving and thriving.

The pandemic forced the Pittsburgh Water and Sewer Authority (PWSA) to quickly adapt to a new reality while delivering the necessary water services our customers rely on. Our top priority was the health and safety of our workforce and our customers.

With these realities in mind, our board voted unanimously to suspend water shutoffs and we waived many of the requirements to enroll in customer assistance programs. Regardless of ability to pay, customers were protected with access to necessary water services.

We also put in place new protocols to keep our employees safe. We instituted a mandatory work from home policy and established health screenings for employees and contractors working in the field and at our treatment facilities. Because of these decisive actions, our workers stayed safe while continuing to provide essential water services to Pittsburgh residents and businesses.

Despite the challenges 2020 presented, we achieved several milestones throughout the year that demonstrate how PWSA is evolving as an organization.

This report highlights how that is occurring. In **NOTABLE ACCOMPLISHMENTS**, we discuss our prioritized program areas. From reducing lead levels, expanding our customer assistance programs, and implementing the largest capital program in

PWSA's history, these achievements show that we are taking the necessary steps to protect water services for current and future generations of Pittsburgh.

We summarize our **FINANCIAL HEALTH** describing our current financial standing, projections for coming years, and highlight our success in securing state and federal funding to support our infrastructure investment. Our current bond ratings and the completion of two bond transactions provide the credibility and the resources to implement our \$1.2 billion capital program over the next five years.

We include **PERFORMANCE METRICS** that provide information about our daily performance. From the quality and quantity of customer service calls to the miles of pipes, catch basins, and hydrants we replace, you will see the steps we are taking to improve performance and deliver on our commitments to you. Additionally, we highlight pertinent water, sewer, and stormwater **PROJECT ACCOMPLISHMENTS**. These illustrate the work we are doing in the community to replace water mains, improve our infrastructure, rehabilitate sewer pipes, and protect neighborhoods from increasing amounts of rain.

We are proud to share our accomplishments and information about our progress in this annual report. By making this information available, we are continuing to become a more transparent organization that is determined to rebuild public trust and improve the relationship with our customers. We appreciate your support and patience over the years, and I encourage you to contact me with any questions you may have about this report or the organization.

Sincerely,

William J. Pickering

William J. Pickering
PWSA, Chief Executive Officer

NOTABLE ACCOMPLISHMENTS



LOWEST LEAD LEVELS IN DECADES

In July 2020, Pittsburgh Water and Sewer Authority (PWSA) announced lead levels of 5.1 parts per billion (ppb), which is a result well within state and federal regulations. This is approximately 10ppb below the state and federal action level of 15 ppb. At 5.1 ppb, this is the lowest lead level we have measured in 20 years.

The lower lead testing results occurred over time. After adding [orthophosphate](#) to our drinking water treatment process in 2019, lead levels began to decline at a steeper rate and fell into compliance last year. The lower lead testing results show that this commonly used treatment method is effective. We recognize there is no safe level of lead and are working towards our goal of replacing all [lead service lines](#) by 2026.



* A graph showcasing a steep decline in lead levels after we introduced orthophosphate into our water distribution system in 2019.

Since implementing our Community Lead Response in 2016, we have removed 8,319 public lead service lines and 5,391 private lead service lines at no direct cost to ratepayers. Now that lead levels comply with state and federal standards, we will continue to remove lead service lines as water main replacement projects take place across our water service area.

SINCE IMPLEMENTING OUR COMMUNITY LEAD RESPONSE IN 2016, WE HAVE REMOVED 8,319 PUBLIC LEAD SERVICE LINES AND 5,391 PRIVATE LEAD SERVICE LINES AT NO DIRECT COST TO RATEPAYERS.

Our Community Lead Response has been recognized as one of the most effective across the nation. We used historical records and pipe material data from our [Curb Box Inspection Program](#) to identify neighborhoods with a high concentration of lead, as well as community data on areas with large numbers of children under six and women of childbearing age, county blood level data, and income. This approach established an inclusive response that made diverse and lower-income neighborhoods a priority and helped target areas with a higher likelihood of lead pipes.

We remain committed to removing lead from our drinking water system and will continue to remove lead lines, test lead levels at high-risk homes, and use orthophosphate in our water treatment process.

RECORD CAPITAL INVESTMENT

The Pittsburgh Water and Sewer Authority (PWSA) is increasing its spending on critical water infrastructure improvements. Despite construction delays due to the pandemic, our total capital investment in 2020 totaled approximately \$127 million, an increase from 2019 and our largest annual investment. The investment will continue as we renew large water infrastructure and rehabilitate our network of water and sewer pipes that carry water to and from homes and businesses.



▲ Crews build the original Clearwell in 1906.

This investment reflects the work outlined in our 2021-2025 Capital Improvement Plan. Budgeted at \$1.2 billion, the Capital Improvement Plan is a strategic document that guides the improvements we are making to Pittsburgh's water, sewer, and stormwater infrastructure.

Over the next several years, we will complete the [PWSA Water Reliability Plan, Pittsburgh's blueprint for high-quality infrastructure](#). This series of projects will renew key components of our water production and distribution systems, combined with the complete restoration of the Clearwell, a large, century-old water storage facility. Together, these projects will strengthen our water system, add needed redundancy, and ensure an uninterrupted supply of quality water.

DESPITE CONSTRUCTION DELAYS DUE TO THE PANDEMIC, OUR TOTAL CAPITAL INVESTMENT IN 2020 TOTALED APPROXIMATELY \$127 MILLION, AN INCREASE FROM 2019 AND OUR LARGEST ANNUAL INVESTMENT.

Contractor crews from Pure Technologies inspect water mains that run from our Aspinawall Water Treatment Plant, through the Pittsburgh Zoo, to the covered Highland II Reservoir.



Additionally, we are replacing water mains to improve reliability, improve water pressure, maintain water quality, and minimize disturbances caused by breaks. We will continue to replace lead lines as we replace water mains.

The Capital Improvement Plan also brings attention to our sewer system and stormwater infrastructure. We are rehabilitating aging sewers and making improvements to prolong their life. Construction will also begin on several stormwater improvement projects. Those budgeted for construction in 2021 include the second phase of Wightman Park in Squirrel Hill, Maryland Avenue in Shadyside, Thomas and McPherson in North Point Breeze, and Lawn and Ophelia in Oakland.

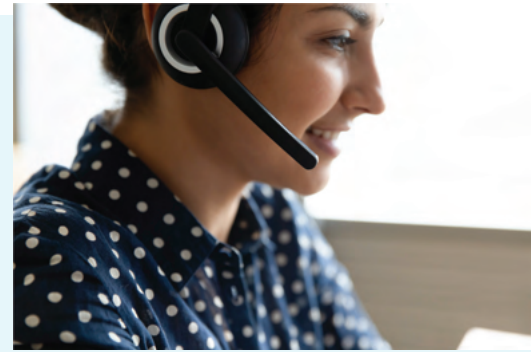
As more construction activity takes place within our service area, it is important to recognize this is a positive step for Pittsburgh's water future that will lead to a more secure, reliable water system with fewer service disruptions and higher quality water.

EXPANDED CUSTOMER ASSISTANCE PROGRAMS

Our [customer assistance programs](#), established in 2018, support our most vulnerable customers. During our 2020 rate-setting process with the Pennsylvania Public Utility Commission (PUC), we worked with community stakeholders and state agencies to incorporate several enhancements to simplify the enrollment process and expand access to more customers.

The program expansions went into effect on January 14, 2021 and are available to income-qualified customers. Our goal in 2021 is to increase awareness and enrollment in these programs. Though 4,300 households enrolled in the Bill Discount Program, many more are eligible.

We are offering a generous discount through the Bill Discount Program of \$35.78—a 100% discount on the first 1,000 gallons of fixed water charges. An additional rate reduction on water usage is also available for very low-income customers enrolled in the program. Customers enrolled in this program who use up to 5,000 gallons of water per month will see a reduction in their total monthly bill.



DURING THIS CHALLENGING TIME, NO ONE SHOULD HAVE TO CHOOSE BETWEEN PAYING A WATER BILL AND ANOTHER ESSENTIAL EXPENSE.

Additionally, we expanded eligibility for the Winter Hardship Moratorium to customers at 300% of the federal poverty level and launched [PGH2O Cares](#), an expanded outreach program to increase enrollment and help customers reduce their bills.



During this challenging time, no one should have to choose between paying a water bill and another essential expense. We are making every possible effort to protect our most vulnerable customers.

BALANCED RATE STRUCTURE

On January 14, 2021, new water and wastewater rates approved by the Pennsylvania PUC went into effect. The new rates result from a long process with state regulators and community stakeholders and balance the needs of our most vulnerable customers and the improvements we need for our water and sewer systems.

The rate increase resulted in an additional \$14,150,000 in water revenue and an additional \$4,850,000 in wastewater revenue. The additional funding goes towards improving our drinking water treatment and distribution system, rebuilding aging sewer lines, and designing innovative stormwater mitigation projects.



This rate settlement is a thoughtful compromise between investing in our aging infrastructure and addressing affordability concerns for our lower-income customers. As a publicly owned and managed water and sewer authority, we reinvest every dollar we receive from ratepayers back into our infrastructure so we can provide high-quality and reliable water and wastewater services.

THE ADDITIONAL FUNDING GOES TOWARDS IMPROVING OUR DRINKING WATER TREATMENT AND DISTRIBUTION SYSTEM, REBUILDING AGING SEWER LINES, AND DESIGNING INNOVATIVE STORMWATER MITIGATION PROJECTS.

FINANCIAL HEALTH

THE PITTSBURGH WATER AND SEWER AUTHORITY HAS A POSITIVE FINANCIAL OUTLOOK. Despite the economic downturn caused by COVID-19, we maintained our cash balance and achieved a record level of capital investment as we continue to boost our reserve funding to ensure maximum financial flexibility. In the long-term, these accomplishments will help to reduce costs and create a more sustainable financial future for PWSA.

Two [bond transactions](#) completed in 2020 provide a sustainable financial outlook for PWSA. With this funding in place, we have the finances to implement our \$1.2 billion [Capital Improvement Plan](#). We also maintained our investment-grade bond rating of A3, as ranked by Moody's, and an A with a stable outlook by S&P. The investment-grade rating results in lower interest rates that will, over time, save money for PWSA and its ratepayers. PWSA will continue to improve upon this rating in 2021.

Additionally, we secured a \$65,220,000 loan from the Pennsylvania Infrastructure Investment Authority (PENNVEST). Its low-interest rate of one percent will reduce our costs and, in the long-term, save customers money. Since 2019, we have saved ratepayers roughly \$80 million by using these federal and state funding programs over traditional bond financing. We will continue to pursue federal and state funding in 2021 and beyond.



SINCE 2019, WE HAVE SAVED RATEPAYERS ROUGHLY \$80 MILLION BY USING THESE FEDERAL AND STATE FUNDING PROGRAMS OVER TRADITIONAL BOND FINANCING.

ACTUAL ANNUAL CAPITAL INVESTMENT 2017-2020



PERFORMANCE METRICS

CUSTOMER SERVICE



23 SECONDS

AVERAGE ANSWER SPEED

CALL HANDLING RATE

98.9%
OF 130,050 CALLS



**4 MINUTES
8 SECONDS**

AVERAGE HANDLING TIME



ABANDONMENT RATE

1.1% OF TOTAL CALLS



HUMAN RESOURCES

AVERAGE NUMBER OF TRAINING HOURS PER EMPLOYEE

**17 HOURS
55 MINUTES**



51 POSITIONS FILLED

PUBLIC AFFAIRS



62 MEETINGS
HOSTED/ATTENDED

SOCIAL MEDIA REQUEST RESPONSE

NEARLY **100%** WITHIN
3 BUSINESS DAYS

SOCIAL MEDIA & NEWSLETTER

12,061
SUBSCRIBERS



MANAGEMENT INFORMATION SYSTEMS



AVERAGE CRITICAL INFORMATION TECHNOLOGY INFRASTRUCTURE AVAILABILITY

>99% OF THE TIME

3,123

SUPPORT
REQUESTS
RECEIVED

ENGINEERING



WATER

- 8.9 MILES** OF WATER MAIN REPLACED
- 4,619** SERVICE LINES REPLACED
INCLUDING LEAD AND NON-LEAD MATERIAL
- 95** HYDRANTS REPLACED
- 455** VALVES REPLACED
- 2.3 MILES** OF PIPE INSPECTED



SEWER

- 843** STORM DRAINS REPLACED
- 1.1 MILES** OF SEWER REPLACED/
RECONSTRUCTED
- 13.3 MILES** OF SEWER LINED



OPERATIONS



WATER

- 5,550** WATER METERS REPAIRED/REPLACED
- ZERO** MAJOR SERVICE DISRUPTIONS
*THAT AFFECTED MORE THAN 2,000 CUSTOMER
ACCOUNTS FOR LONGER THAN 6 HOURS*



SEWER

- 4,426 TONS** OF DEBRIS REMOVED
FROM STORM DRAINS
- 19.2 MILES** OF SEWER PIPE INSPECTED



WATER TREATMENT PLANT & LAB

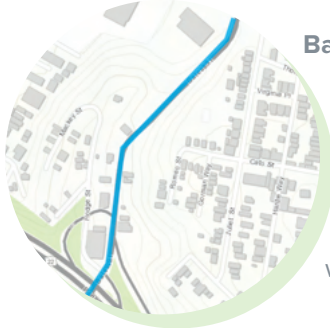
69.6
MILLION GALLONS

DAILY AVERAGE OF FINISHED WATER PRODUCED





WATER



Bates Water Main Replacement Project

On a busy stretch of Bates Street, between Boulevard of the Allies and Second Avenue, we replaced approximately 1,500 feet of an aging water main. These improvements will provide more reliable service to our customers in this critical area of our water distribution system.

Highland Park Microfiltration Plant

The Highland Park Microfiltration Plant is the backbone of the Highland I Reservoir. The Microfiltration Plant allows the reservoir to stay uncovered, as it functions as a water retreatment plant by drawing water from the open reservoir and treating it again via sophisticated microfiltration and ultraviolet light disinfection processes. We made the following improvements, totaling \$14 million, before its reopening in September 2020:



- Installation of the ultraviolet disinfection technology.
- Maintenance of the microfiltration system including replacement of microfilters.



Highland I Reservoir Security Improvements

To further maintain the open Highland I Reservoir as a public amenity for all to enjoy, we completed the following series of projects to meet stricter state water quality regulations and improve security around the reservoir:

- Restoration of the parapet wall surrounding the reservoir.
- Installation of 360-degree security cameras to ensure the safety of the reservoir and visitors.
- Repaving of the walkway, thanks to our partners at the City of Pittsburgh.

SEWER

Edgerton Avenue Sewer Relocation Project

In response to a 15-inch sewer collapse on Edgerton Avenue in the Point Breeze neighborhood, we successfully relocated the collapsed sewer into the edge of the Homewood Cemetery and restored the street to its original condition.



STORMWATER

Saw Mill Run Stream Restoration



We restored two sites along Saw Mill Run in Overbrook as part of the larger Saw Mill Run Integrated Watershed Management Plan. This project will improve water quality and stormwater management in these sections of the stream. The following are specific improvements:

- Restoring the heavily eroded streambanks and stabilization of the streambank slope.
- Using natural channel design techniques that provide environmental benefits.
- Repairing storm sewer outlets that discharge directly into the stream.

Wightman Park Phase I Stormwater Improvements

The stormwater improvements in Wightman Park were part of the master planning process for Wightman Park, completed in collaboration with Council District 8 and the City of Pittsburgh. The stormwater improvements in the park included re-grading the park to improve drainage, installing underground storage below a new ball field, and constructing a rain garden. These improvements provide better stormwater management in Squirrel Hill.



- The underground storage system holds up to 300,000 gallons of rainwater.
- The rain garden can capture up to 52,000 gallons of stormwater.

SPECIAL PROJECT

10th Street

Per a cost-share agreement with the City of Pittsburgh, we successfully helped to restore the segment of 10th Street Downtown following a large sinkhole that collapsed in late October 2019. In addition to clearing approximately 2,500 tons of debris with a Vactor machine sitting on a river barge and a diver to remove debris from the riverbed, crews also:

- Added approximately 746 tons of stone backfill to the sinkhole.
- Replaced 2,097 square feet of bricks.
- Poured approximately 395 tons of concrete.
- Logged over 1,100 hours of work to complete the project.



AWARDS & RECOGNITIONS

The Pittsburgh Water and Sewer Authority was the recipient of several awards and recognitions in 2020.



WATER ENVIRONMENT FEDERATION
UTILITY OF THE FUTURE TODAY



MARCH OF DIMES PITTSBURGH
SPECIAL PROJECT OF THE YEAR
COMMUNITY LEAD RESPONSE



MAPPS
GEOSPATIAL EXCELLENCE AWARD FOR SURVEYING/FIELD DATA COLLECTION
CURB BOX INSPECTION PROGRAM



ASCE PITTSBURGH
2020 SUSTAINABILITY AWARD
WIGHTMAN PARK STORMWATER IMPROVEMENT PROJECT



* In 2020, PWSA was recognized by the March of Dimes Pittsburgh for its Community Lead Response.

BOARD MEMBERS

Paul Leger
Chair, Retired March 2021

Jim Turner
Secretary

Audrey Murrell
Board Member

Rosamaria Cristello
Board Member

Erika Strassburger
Vice Chair

Michael Domach
Assistant Secretary/Treasurer

BJ Leber
Board Member

EXECUTIVE LEADERSHIP

Will Pickering
Chief Executive Officer

Edward Barca
Director of Finance

Jason Felser
Director of Information Technology

Barry King
Director of Engineering and Construction

Rick Obermeier
Chief of Operations

Jennifer Presutti
Chief Operating Officer

Logan Carmichael
Director of Human Resources

Lee Haller
Chief of Technology and Performance

William "BJ" McFaddin
Director of Operations

Julie Quigley
Director of Administration

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