

Cleveland Water

2021 ANNUAL REPORT





FRANK G. JACKSON
Mayor

From the Mayor

During my tenure as Mayor over the past 16 years, we have made significant strides toward Cleveland becoming a great city. As a municipal corporation, the bottom line for measuring success has always been quality and quantity of service.

In terms of utility service, the primary concern has been how to provide quality service that customers deserve while maintaining affordable rates. Cleveland Water has done that through sound fiscal management, investment in infrastructure and improved customer service.

The Division of Water has a stable and healthy cash balance, meaning that we did not need to increase rates for four of the last six years, and there is no planned rate increase for the next two years. This was accomplished not only due to smart financial management but also by implementing operational efficiencies such as technological upgrades like automated meter reading (AMR) technology. Thanks to AMR, we're able to provide customers with more accurate reads, improved billing and an expanded level of customer service.

We have invested \$1.3 billion in maintaining and restoring Cleveland Water's infrastructure. This includes investing \$650 million to modernize all four treatment plants and close to \$10 million a year to replace water mains and remove lead service lines. As a result of these investments among other efforts, Cleveland Water is able to deliver safe, high-quality water to residents and businesses year after year.

We have also tried to tackle issues of inequity and disparities by contracting policies that promote local and minority businesses and addressing water affordability. Besides minimal rate increases, affordability measures include transitioning to monthly billing for easier budgeting, billing the first 1,500 gallons of water each month at a discounted rate and offering assistance programs.

I am confident in the sound financial and operational state of Cleveland's water utility and proud of what we've accomplished at Cleveland Water, not only in 2021, but in my entire tenure as Mayor.

A handwritten signature in black ink, appearing to be 'F. Jackson'.

Frank G. Jackson

Mayor, City of Cleveland



KEVIN KELLEY
Council President



BRIAN KAZY
Council Member
Utilities Committee Chair



MARTIN J. KEANE
Director of Public Utilities



ALEX MARGEVICIUS
Commissioner of Cleveland Water

From Cleveland City Council

This year, Cleveland Water celebrated 165 years as the drinking water provider for the residents and businesses of the city of Cleveland. Since its founding, Cleveland Water’s top priority has always been the health and safety of the citizens of Cleveland.

In 1850, Cleveland City Council appointed a committee to address the issue of providing a sufficient supply of “pure water” for the city’s growing population. After two years of research, the recommendations of that committee were presented to and adopted by council. The result was construction of the city’s first waterworks operation, put into service on September 24, 1856.

From that first waterworks made up of a pump station, reservoir, and 11 miles of water mains, to the present day system of four treatment plants, 17 pump stations, and 5,300 miles of water mains, Cleveland Water has worked together with City Council to provide the city with the best quality water and service possible.

Cleveland Water continues to position itself as a leader within the water industry and our community by maintaining its legacy of delivering safe, reliable drinking water to improve the quality of life in Cleveland.

Sincerely,

Kevin J. Kelley
Council President

Brian Kazy
Utilities Committee Chair

From the Director & Commissioner

Cleveland Water celebrated its 165th birthday this year by naming a street in honor of our founding engineer, Theodore R. Scowden. The ceremony was a reminder of both how far we’ve come since then and that our mission remains the same.

Throughout 2021, we continued to work toward that mission by providing high quality drinking water at an affordable rate. Thanks to smart financial management and operational efficiencies, we’re able to have no rate increase for 2022 and 2023 and only a small increase in 2024, which will help support important infrastructure projects and improved service.

Our partnership with Cleveland Fire to streamline their annual inspection of the city’s more than 18,000 fire hydrants continues to have a demonstrable impact on public safety. Thanks to this initiative, the condition of the city’s hydrants has greatly improved, directly helping Cleveland Fire achieve an Insurance Standards Office top rating of 1.

We also began replacing lead service lines at child cares throughout our service area thanks to \$2.5 million in funding from H2Ohio and Ohio EPA. This program will help minimize the potential risk of lead in drinking water for the most vulnerable members of our community.

These are just a few highlights from another year challenged by the coronavirus. We appreciate all our employees who continue to help deliver essential services to our community every day.

Sincerely,

Martin J. Keane
Director of Public Utilities

Alex Margevicius
Commissioner of Cleveland Water



Cleveland Water Celebrates 165th Birthday with Street Unveiling

On September 24, Cleveland Water celebrated our 165th birthday by unveiling the newly dedicated Scowden Way, named in honor of the father of Cleveland Water, Theodore R. Scowden. The new street, which connects Crescent and Division Avenues between West 45th and West 53rd Streets, was constructed as part of site updates to the Garrett A. Morgan Water Treatment Plant.

Theodore Scowden (1815 – 1881) was a nationally recognized engineer, architect, inventor, and hydraulics expert responsible for the design and construction of the first waterworks facility in Cleveland, as well as waterworks in Cincinnati, OH and Louisville, KY.

Constructed from 1853 to 1856, Scowden’s water system for the city of Cleveland included an intake 300 feet out in Lake Erie, 11 miles of water mains, a 6-million-gallon reservoir, and a two-engine pumping facility located at the same site as our Morgan Water Treatment Plant.

During the ceremony, city officials and Cleveland Water staff honored Scowden and his contributions to Cleveland Water’s history and acknowledged the important role Cleveland Water plays in sustaining our community. Director Keane remarked that the goal of Cleveland’s original water system, to improve the quality of life for residents by providing safe, accessible water, is still the goal of Cleveland Water today.

Other speakers included Commissioner Alex Margevicius, Cleveland City Council President Kevin Kelley, Utilities Committee Chair and Ward 16 Councilperson Brian Kazy, Ward 15 Councilperson Jenny Spencer, Pepper Pike Mayor and Chair of our Suburban Council of Governments Richard Bain, Water Quality Communications Coordinator Brenda Culler, and CWRU Professor of History John Grabowski.

Left, clockwise from top:

The new street signs at the intersection of Scowden Way and Division Avenue. To celebrate our 165th birthday, we held a ceremony to name the road leading to our Garrett A. Morgan Water Treatment Plant in honor of the father of Cleveland Water.

Ward 16 Councilman Brian Kazy, Commissioner Alex Margevicius, Ward 15 Councilwoman Jenny Spencer, and Director of Public Utilities Martin Keane pose by the new sign.

Cleveland Water employees unveil the sign.

Commissioner Margevicius delivers remarks during the ceremony.



Two New Buoys Provided Expanded Water Quality Monitoring

Cleveland Water has two more smart buoys monitoring Lake Erie. These additional buoys expand our capacity to track and quickly respond to water conditions that can affect drinking water quality.

The two new buoys were launched by LimnoTech on June 30, with one positioned near the water intake for the Crown Water Treatment Plant on the westside and the other near the water intake for the Nottingham Water Treatment Plant on the eastside.

They join the other two buoys, which were launched for the season on May 20. One buoy, in use since 2005, one is positioned between the water intakes for our Morgan and Baldwin Water Treatment Plants. The other, in use since 2010, is located 15 miles offshore.

Each buoy is like a floating laboratory, collecting data on lake conditions around the clock and sending it to an online monitoring system. Staff can access this system to track parameters such as water temperature, pH, turbidity, and dissolved oxygen in real-time, enabling them to anticipate and respond to changes in lake water quality hours in advance of the water being drawn into a treatment plant.

With the addition of the two new buoys, we can now monitor raw water quality entering each of our four water treatment plants. Each plant has its own water intake out in Lake Erie which are spread out over 15 miles and pull water from various depths. This means that water coming into one plant may not be the same quality as water coming into another.

Having a buoy near each intake gives us the ability to monitor each plant individually and make targeted treatment adjustments. The ability to receive advance notice of water quality issues and respond on a plant-by-plant basis is a critically important advantage in ensuring our customers receive safe, quality drinking water. It also saves time and money.

Being able to monitor at each intake is particularly important during a hypoxia event. During the summer months, water near the bottom of Lake Erie can become very low in dissolved oxygen, or hypoxic. When water has little or no dissolved oxygen, the pH also drops, changing the chemistry of the water. The hypoxic water pulls naturally occurring metals from the lakebed sediment, particularly iron and manganese, and dissolves them. High levels of manganese can be very difficult to treat and can result in discolored drinking water.

All four buoys are used in partnership with Cleveland Water Alliance and their Smart Great Lakes initiative. The data collected is also publicly available and frequently used by boaters for information on wave height and wind levels or anglers interested in water temperature and turbidity levels to determine the best place to catch fish.

Left: The top of one of the two new water quality-monitoring buoys before being launched Lake Erie.



2021 Lead Monitoring Levels Well Below Federal Action Level

Cleveland Water's Lead Compliance Monitoring results show that the drinking water we deliver continues to be safe from lead even in homes that have lead in plumbing.

The testing was conducted earlier this year at homes throughout our service area known to have lead in their plumbing system. The results showed 90% of water samples from these homes had lead levels below 2.1 parts per billion (ppb) and all samples were below the 15 ppb federal action level. This means even if your home has lead in its plumbing system, it should be safe from lead when you use water regularly.

Our Lead Compliance Monitoring levels have been below the federal action level of 15 ppb since 1997 when we began adding orthophosphate to our treatment process and below 5 ppb for more than 12 years. We know, however, that any amount of lead presents a health risk and are working to minimize any possible risk through lead line replacement and lead awareness education.

Lead Compliance Monitoring is one of many routine water quality tests that we're required to perform to ensure safe drinking water. Ohio EPA sets the requirements for sampling and reporting. Because of our effective treatment techniques and history of low lead levels, Ohio EPA has granted Cleveland Water a reduced monitoring schedule requirement for over 20 years.

Water samples are taken from homes throughout our 640-square mile service area that meet Ohio EPA's definition of Tier 1 Sampling Sites. If you have a single-family home and a lead service line you can volunteer to be a part of future Lead and Copper Compliance Monitoring efforts by calling 216-664-2882 or emailing LeadLookup@ClevelandWater.com.

If you're concerned about lead in your drinking water, our Lead Awareness brochure details the three healthy water habits of "Clean. Flush. Consume Cold," which all customers should take in their homes especially those lead service line. It also outlines the steps of "Check. Test. Date." which can help you determine if you have a lead service line or plumbing fixtures that contain lead.



Lead Service Line Research And Removal

Cleveland Water customers can be confident that the water delivered to your home is safe. While some homes and buildings in our service area have lead service lines or plumbing that contains lead, we take several actions to protect you and your family from the risk of lead in drinking water.

While these actions are effective at keeping your water safe, we know that any amount of lead presents a health risk. This year, we undertook several initiatives to better identify and remove lead service lines throughout our system.

Researching Better Ways to Find Lead

Identification of where lead service lines exist in our system is critical for us to be able to develop an accurate inventory and plan for future replacements. However, typical methods for doing so present several issues.

Currently, the only guaranteed method to confirm service line material is through inspection after excavation, which is both an expensive and impractical approach. Another option is historical record review. However, this method is not only time-consuming but also only 70-80% effective in determining the likelihood of service line material. That's why we're working to find innovative methods to better identify where lead service lines are located.

One such method is a research study conducted in partnership with US EPA and Battelle. The goal of this study is to try to determine if scientific analysis of a home's water can be used to determine if a service line is lead or not. We also partnered with Cleveland Water Alliance and other Ohio municipalities in an ongoing open call for innovations in detecting lead service lines without breaking ground.

Replacing Lead Service Lines

We replace city-owned lead service lines and, if they're disturbed, customer-side lead service lines during water main repair and replacement projects. Also, if a customer decides to replace their lead service line on their own initiative, we'll remove the city-owned service line at the same time.

Besides lead line replacement as part of water main repair and replacement, Cleveland Water has established a Child Care Lead Line Removal Program thanks to \$2.5 million we received from H2Ohio and Ohio EPA this year. To start this program, we developed a list of nearly 450 licensed childcares in our service area with the potential for lead service lines. Through a proactive outreach effort, each location was scheduled for service line inspection to confirm if lead lines were present and, if present, replace the lead line with a copper service one.

Left: Researchers collect water samples from the faucet of a volunteer's home. The samples are part of a study to determine if scientific analysis of a home's water can determine if a service line is lead or not.



Year 1 of Pilot Water Champions Program Completed

Modeled after the success of the Cleveland Climate Ambassadors, the goal of the Water Champions program is to connect with residents on water investments and programs.

Water Champions are community members who conduct outreach and education in vulnerable communities; sharing information on water investments and programs and listening to community perspectives on water management decisions. Water Champions receive training in water systems and utility programs so they can help the community understand water systems and answer residents' questions about utility bills, water quality, cost savings programs, and more.

Perhaps more importantly, the champions undergo equal training in advocacy and consensus-building so they can voice community concerns back to the utilities. This enables them to enhance the utilities' understanding of community needs. The program is designed so that water champions co-create additional programming to deepen community engagement.

The program is funded by Cleveland Water, Northeast Ohio Regional Sewer District, Cleveland Foundation, and Community West Foundation and administered by CHN Housing Partners. It is currently in a two-year pilot phase focused on the neighborhoods of Clark-Fulton, Slavic Village, and Buckeye-Shaker.

Water Champions hold weekly public listening sessions at library branches in our pilot neighborhoods. Community members are encouraged to stop by to learn more about water-related programs and initiatives as well as share their concerns, ideas, and input on all things water.

In 2021, the Water Champions program:

- hosted over 65 listening sessions with local residents.
- Over 310 community members have met with a Water Champion to discuss affordability programs, or to get help applying for them.
- Approximately 850 residents have been exposed to the Water Champions program through public outreach.
- Held a focus group in Slavic Village, to gather input and community project ideas from local residents.

LEGEND

City & Suburbs

 Corporation Limits

Service Suburbs

 Low Service Suburbs

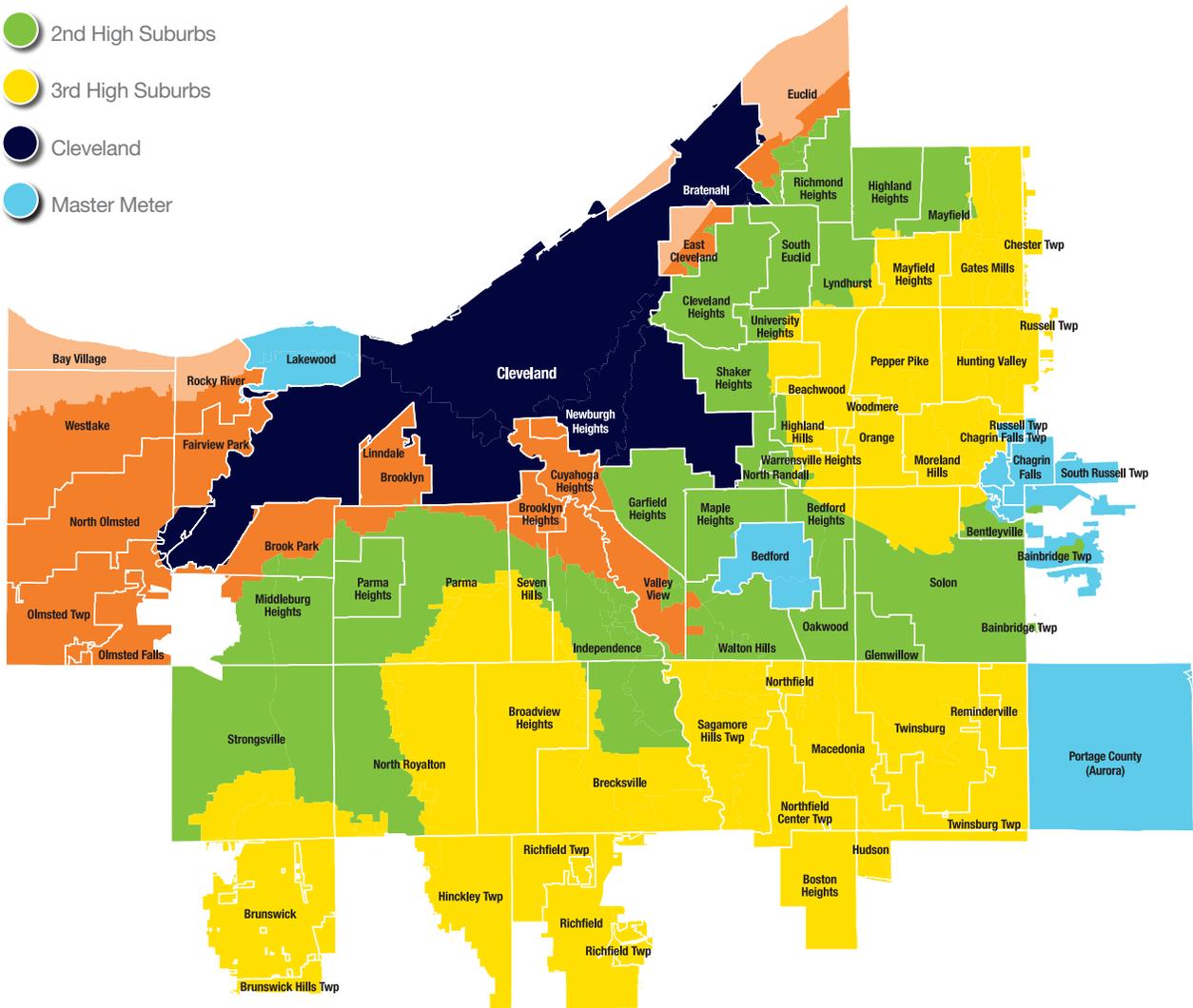
 1st High Suburbs

 2nd High Suburbs

 3rd High Suburbs

 Cleveland

 Master Meter



2021 CLEVELAND WATER SERVICE AREA

At Cleveland Water, we are proud to provide water to over 80 communities throughout Northeast Ohio. In terms of water rates, we divide our service area into four zones. These zones are determined by your distance and elevation from the lake. The farther you are from the lake, the higher your water rates will be because it costs more to pump water to your home. Use the map below to see where your home, business or community falls in our service area and rate zones.

Direct Service

Bay Village	Hunting Valley	Rocky River
Beachwood	Independence	Sagamore Hills Township
Bedford Heights	Linndale	Seven Hills
Bentleyville	Lyndhurst	Shaker Heights
Boston Heights	Macedonia	Solon
Bratenahl	Maple Heights	South Euclid
Brecksville	Mayfield	Strongsville
Broadview Heights	Mayfield Heights	Twinsburg
Brooklyn	Middleburg Heights	Twinsburg Township
Brooklyn Heights	Moreland Hills	University Heights
Brook Park	Newburgh Heights	Valley View
Brunswick	North Olmsted	Walton Hills
Brunswick Hills Township	North Randall	Warrensville Heights
Cleveland	North Royalton	Westlake
Cleveland Heights	Northfield	Woodmere
Cuyahoga Heights	Northfield Center Township	Master Meter
East Cleveland	Oakwood	Bedford
Euclid	Olmsted Falls	Chagrin Falls
Fairview Park	Olmsted Township	Lakewood
Garfield Heights	Orange	Geauga County
Gates Mills	Parma	Emergency Standby
Glenwillow	Parma Heights	Berea
Highland Heights	Pepper Pike	Hudson
Highland Hills	Reminderville	Lake County
Hinckley Township	Richfield Village	Medina County
Hudson	Richfield Township	Portage County
	Richmond Heights	

SUMMARY OF HISTORICAL REVENUES, EXPENSES AND DEBT

Year ended December 31 (Dollars in thousands)

	2017	2018	2019	2020	2021
Operating Revenues	\$301,453	\$306,150	\$320,155	\$327,261	\$325,793
Non-Operating Revenues	4,518	9,146	2,888	3,055	360
Total Revenues	305,971	315,296	323,043	330,316	326,153
Operations Expenses	120,860	127,859	142,497	124,524	120,676
Maintenance Expenses	64,507	70,042	74,855	65,340	72,240
Total Operating Expenses (exclusive of depreciation)	185,367	197,901	217,352	189,864	192,917
Net Revenues	120,604	117,395	105,691	140,452	133,236
Debt Service on Outstanding Bonds	45,365	47,591	42,633	32,568	41,550
Balance Available after Payment of Debt Service	75,239	69,804	63,058	107,884	91,686
Coverage of Debt Service on Outstanding Bonds by Net Revenues	2.66	2.47	2.48	4.31	3.21

BREAKDOWN OF REVENUE

REVENUE	2021
Billed Sales - Direct Service Suburbs	55%
Billed Sales - Cleveland	18%
Billed Sales - Master Meter & Emergency	3%
Fixed Fee Charges	15%
Other Revenue	9%
Total	100%

BREAKDOWN OF EXPENDITURES

EXPENSES	2021
Personnel	27%
Utilities	10%
Contractual Services	4%
Materials & Supplies	5%
Maintenance	8%
Claims, Refunds, Other	2%
Interdepartmental Service Charges	5%
Interfund Subsidies	0%
Capital Expense	20%
Debt Payments	19%
Total	100%

CONDENSED STATEMENT OF NET POSITION

Year ended December 31 (Dollars in thousands)

	2017*	2018	2019	2020	2021
Assets					
Capital Assets, Net	\$1,709,310	\$1,699,295	\$1,714,641	\$1,728,408	\$1,723,717
Net OPEB Asset	-	-	-	-	7,375
Restricted Assets	67,522	67,506	61,153	34,945	47,012
Current Assets	485,198	489,057	483,369	489,798	496,183
Total Assets	2,262,030	2,255,858	2,259,163	2,253,151	2,274,287
Deferred Outflows	69,832	51,730	60,163	46,027	35,218
Net Position					
Net Investment in Capital Assets	1,051,909	1,090,009	1,154,482	1,228,048	1,259,910
Restricted for Capital Projects	1	1	1	68	-
Restricted for Debt Service	63,904	63,757	57,321	31,078	43,210
Unrestricted	391,547	347,085	\$316,793	309,456	367,394
Total Net Position	1,507,361	1,500,852	1,528,597	1,568,650	1,670,514
Liabilities					
Long-Term Liabilities	729,581	695,924	705,321	631,537	505,289
Current Liabilities	81,378	84,097	83,533	72,307	83,370
Total Liabilities	810,959	780,021	788,854	703,844	588,659
Deferred Inflows	13,542	26,715	1,875	26,684	50,332

SELECT OPERATING INFORMATION

	2017*	2018	2019	2020	2021
Total Water Sales (dollars in thousands)	\$300,386	\$278,794	\$286,429	\$300,670	\$296,826
Total Metered Accounts	430,834	428,778	431,784	432,420	432,935
Total Annual Water Production (million gallons)	71,855	75,518	70,695	71,918	73,559
Average Daily Water Production (million gallons per day)	196	207	194	197	202
Maximum Daily Water Production (million gallons per day)	235	261	257	269	233
Annual Metered Consumption (1,000 MCF†)	6,221	5,853	5,676	5,561	5,530
Number of Employees	919	987	1,006	1,023	986

†MCF equals one thousand cubic feet of water

COLLECTION PERFORMANCE INFORMATION

(Dollars in thousands)

	2017*	2018	2019	2020	2021
Customer Billings	\$307,112	\$287,027	\$294,722	\$307,444	\$305,373
Account Collections	295,100	272,584	283,912	287,016	289,322
Accounts Receivable Balance at year end, net	40,704	40,163	34,202	43,959	47,303
Average Daily Billings	841	786	808	842	837
Account Receivable Outstanding over 90 days at Year End	19,488	20,483	17,397	19,462	24,947
Accounts Receivable Turnover (times)	7.5	7.2	8.6	7.0	6.5

*The transition to monthly billing during the 1st Quarter 2017 caused a one-time increase in customer billings.

MONTHLY WATER RATE SCHEDULE FOR DIRECT SERVICE ACCOUNTS

Fixed Charge	2020	2021	2022	2023	2024
5/8" to 1"	9.20	9.20	9.20	9.20	9.50
1-1/2" to 2"	18.05	18.05	18.05	18.05	18.70
3" to 4"	61.35	61.35	61.35	61.35	63.50
6"	109.05	109.05	109.05	109.05	112.90
8"	163.55	163.55	163.55	163.55	169.30
10"	207.85	207.85	207.85	207.85	215.10
12"	248.75	248.75	248.75	248.75	257.50
Homestead (all meter sizes)	5.80	5.80	5.80	5.80	6.00

Water Consumption Charges (expressed in dollars per MCF)		2020	2021	2022	2023	2024
City of Cleveland	0 to 0.2 MCF	21.85	21.85	21.85	21.85	22.65
	Additional MCFs	37.14	37.14	37.14	37.14	38.49
Homestead	All MCFs	14.20	14.20	14.20	14.20	14.72
"Low and 1st High Service Suburbs"	0 to 0.2 MCF	28.41	28.41	28.41	28.41	29.45
	Additional MCFs	48.28	48.28	48.28	48.28	50.04
Homestead	All MCFs	18.46	18.46	18.46	18.46	19.13
2nd High Service Suburbs	0 to 0.2 MCF	34.96	34.96	34.96	34.96	36.23
	Additional MCFs	59.44	59.44	59.44	59.44	61.61
Homestead	All MCFs	22.72	22.72	22.72	22.72	23.55
3rd High Service Suburbs	0 to 0.2 MCF	40.42	40.42	40.42	40.42	41.89
	Additional MCFs	68.72	68.72	68.72	68.72	71.22
Homestead	All MCFs	26.27	26.27	26.27	26.27	27.23

MONTHLY MASTER METER WATER RATE SCHEDULE

Water Consumption Charges by Community (expressed in dollars per MCF)	2020	2021	2022	2023	2024
Bedford	36.69	36.69	36.69	36.69	37.97
Chagrin Falls	42.42	42.42	42.42	42.42	43.90
Lakewood	29.81	29.81	29.81	29.81	30.85
Geauga County	42.60	42.60	42.60	42.60	44.09

EMERGENCY STAND-BY WATER RATE SCHEDULE

Water Consumption Charges by Community (expressed in dollars per MCF)	2020	2021	2022	2023	2024
Berea	39.44	39.44	36.69	36.69	37.97
Lake County	38.36	38.36	29.81	29.81	30.85
Medina County	45.72	45.72	42.60	42.60	44.09
Hudson	45.72	45.72	42.60	42.60	44.09
Portage County	45.72	45.72	42.60	42.60	42.60

1 MCF = 1,000 cubic feet = 7,480 gallons
 All rates effective January 1 of each year.



2021 DIRECTORY OF OFFICIALS

City of Cleveland

Frank G. Jackson Mayor
Sharon Dumas Acting Chief of Staff
Darnell Brown Chief Operating Officer
Michael Cox Chief of Public Works
Valarie J. McCall Chief of Government & International Affairs
Monyka S. Price Chief of Education
Natoya J. Walker Minor Chief of Public Affairs
Edward W. Rybka Chief of Regional Development
Jason Wood Chief of Sustainability

Cleveland City Council

Kevin J. Kelley President of Council
Patricia J. Britt Clerk of Council
Joseph T. Jones Ward 1
Kevin L. Bishop Ward 2
Kerry McCormack Ward 3
Marion Anita Gardner Ward 4
Delores Gray Ward 5
Blaine A. Griffin Ward 6
Basheer S. Jones Ward 7
Michael D. Polensek Ward 8
Kevin Conwell Ward 9
Anthony T. Hairston Ward 10
Brian Mooney Ward 11
Anthony Brancatelli Ward 12
Kevin J. Kelley Ward 13
Jasmin Santana Ward 14
Jenny Spencer Ward 15
Brian Kazy Ward 16
Charles J. Slife Ward 17

Department of Public Utilities

Martin J. Keane Director
Margreat Jackson Interim Chief of Public Affairs
Frank Badalamenti Chief Financial Officer
Hernando Harge Chief of Human Resources
Mark Lasic Chief Information Officer
Christopher Warren Chief Safety Officer

Cleveland Water

Alex Margevicius Commissioner of Water
Kim Thompson Chief of Water Distribution
Maggie Rodgers Manager of Plant Operations



Cleveland Water

1201 Lakeside Avenue • Cleveland, Ohio 44114
clevelandwater.com

