



An Inside Look

ANNUAL REPORT 2023





MANAGEMENT TEAM

Nicholas A. Noce
Executive Director

Larry M. Magguilli
Deputy Executive Director

Diane L. Hendrickson
Personnel Director

Christopher J. LaManna, P.E.
Director of Production &
Transmission

Amy A. Molinari
Director of Finance & Business
Services

Stephen M. Savage, P.E.
Director of Engineering

Stephen T. Trotta
Director of Operations

BOARD OF DIRECTORS

(left to right)

Matthew J. Fero
Vice-Chairperson

Marcia Van Vechten

Joseph R. Rulison
Treasurer

Scott D. Nasca
Chairperson

Sheila R. Mason

Sheryal A. Volpe

Allen S. Bernstein



Cover:
Shoremont water tank.

Inside left and right:
Project engineer verifies
coating following tank
rehabilitation.

To Our Customers

MISSION STATEMENT:

The Monroe County Water Authority is a not-for-profit public benefit corporation that reliably provides quality, affordable water that fosters economic vitality and enhanced quality of life for Monroe County and area communities who request service.



The pages of this report offer a glimpse behind the curtain, taking a cursory look at things you may see every day—and yet not realize—the key role they play in bringing that good water to you.

When MCWA customers turn on their home faucets, they expect clean water to be immediately available: safe, ready to drink and at an affordable cost. That expectation is met thanks to our dedicated employees who work 24/7 every day of the year to make it happen.

However, those customers likely never wonder about the path the water took from source to tap—even though physical evidence of its journey lies throughout our entire distribution network. Sometimes the evidence is clearly visible, like water tanks or towers; sometimes it is quietly blended into a neighborhood, like pump stations deliberately camouflaged to be non-obtrusive.

The pages of this report offer a glimpse behind the curtain, taking a cursory look at things you may see every day—and yet not realize—the key role they play in bringing that good water to you. Further looks “behind the scenes” can be found on our website at mcwa.com.

One challenge we face is based on simple geography. Our primary source for water is Lake Ontario, which obviously is at a lower sea level than the communities we serve. The water must be pumped uphill for miles, and energy associated with that effort represents the largest part of our annual budget, an electric bill in the \$5 million range. We manage to mitigate these costs with a combination of technology and ingenuity, helping to maintain the “affordability” part of our Mission Statement promise.

We are always proactive. For example... we have generators at the ready to ensure our ability to keep water flowing... we make prudent capital investments to stay ahead of the “life-cycle curve” of the elements in our infrastructure... we establish an array of solar panels on our 104-acre parcel in Penfield that yield energy credits.

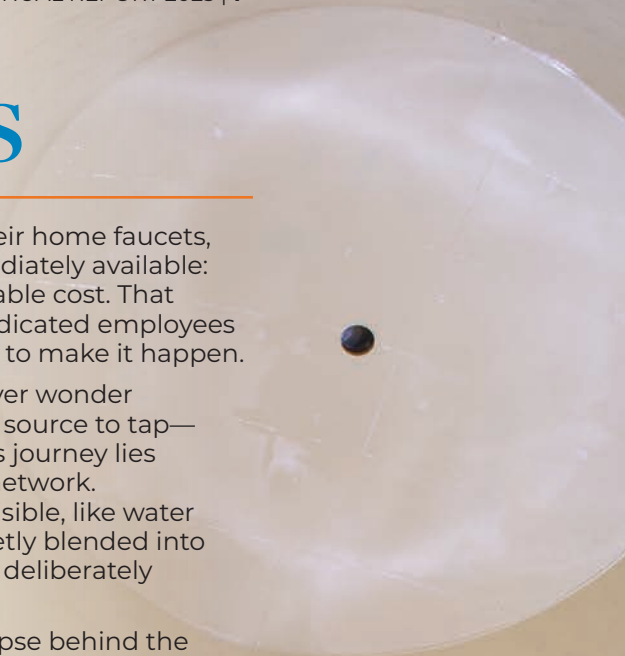
In short, the Mission Statement is our guide and we are proud to do all we can to meet the goals it sets forth. In this report, we invite you to take a behind-the-scenes peek at some of the many elements that bring safe water to you every day of the year.

Nicholas A. Noce

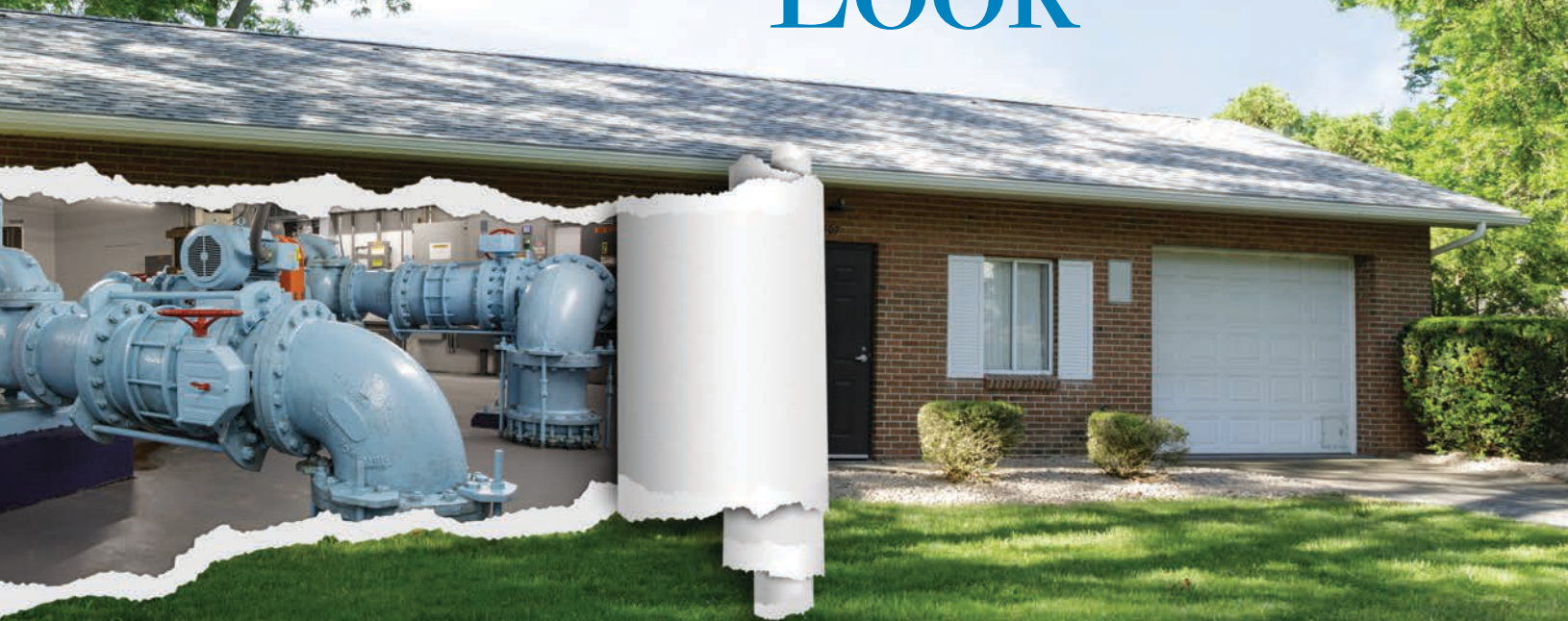
Nicholas A. Noce
Executive Director

Scott D. Nasca

Scott D. Nasca
Chairperson



An Inside Look



As you drive by a particular suburban ranch house in Penfield, you might be impressed by its red brick exterior, attractive white shutters, and neatly trimmed yard.

You'd think: "Nice place to live." Yet you might be surprised to learn that nobody does.



Actually, its residents are three large pumps, ranging from 150-200 horsepower, and it's one of 43 MCWA pump stations that help carry water from the Shoremont and Webster Water Treatment Plants near Lake Ontario to water tanks or reservoirs throughout the Authority's vast distribution area.

The fact that this station looks like a neat suburban home—with no identifying signage—is not by accident, much like the small building in Perinton designed to look like its neighboring church or dozens of other stations that blend into their neighborhoods.

They are part of MCWA's "hidden assets," part of an infrastructure network critical to the Authority's ability to fulfill its mission, yet deliberately designed to be unobtrusive.

"We don't do this for public relations purposes," said MCWA Executive Director Nicholas Noce. "We simply want to be good neighbors to our many customers. People pass by our physical resources every day, yet never realize exactly what they are or the vital role they play in bringing clean, safe water to their homes."

Pumping Water Uphill

Not all of the pump stations are similarly equipped. The structure architecturally complementing the church in Perinton, for example, has three 75-horsepower pumps. But each station is designed to competently do the job required in its particular locale. Most often that task is pumping the already-treated water to a storage tank or reservoir from which the water will be distributed to homes and businesses, although several stations house "booster pumps" that simply relay water to another station as it makes its way uphill from Lake Ontario.

The uphill run presents a key challenge. In total, 111 pumps operate within the 43 pump stations, representing a total of about 15,500 horsepower. This expended energy represents a big share of a \$4-5 million annual electricity bill. To help mitigate costs, the pumps are run at off-peak times at a lower electrical rate whenever possible. And, the stations don't require personnel on site daily. They are run remotely from the Shoremont Plant.

A regular schedule of preventive maintenance for both the buildings and the pumps is essential to keep all in working order, and generators are physically on site or readily available in case of power outages.

The destination for water pumped from any station other than a booster pump is either one of 51 storage tanks or one of two earthen embankment-covered reservoirs.

Pump stations are designed to completely fill the storage tanks and reservoirs to which they pump. The design capacity of a pump station considers the overall demand and pressure requirements of the zone in which it resides. The time it takes for a pump station to completely fill a tank varies and depends on the number of pumps operating and the system demand in the pressure zone at the time.

Storage Tanks and Towers

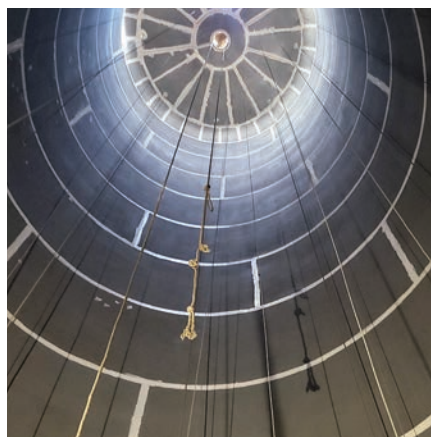
Of the storage tanks, seven are elevated—the old, familiar "water tower." Forty-three are ground storage and standpipe-style tanks, and one is buried underground. Forty of the 51 tanks are made of steel, the other 11 concrete, each material presenting varying benefits and challenges. All tanks are coated, especially important for steel tanks to prevent corrosion.

The capacity of the tanks varies greatly, from a minimum of 100,000 gallons to a maximum of 15 million gallons. The elevated tanks and the 40 ground and standpipe tanks are geographically situated to provide gravity-fed distribution throughout the localities they serve.

The age of the tanks varies, reflecting to a degree the growth of MCWA as various municipalities asked the Authority to take over

water distribution in their areas. The oldest tank still in use dates back to the early 1950s; the newest, an elevated steel tank, went into service in 2021. A new concrete ground storage tank is under construction in Pavilion, NY.

The tanks are generally painted in light colors since darker colors can absorb summer heat and cause problems with the water quality inside. They are sized and constructed to meet domestic demands of the system as well as fire flow demands. For example, fire



Top:
An elevated storage tank.

Bottom:
Interior of a ground storage tank,
which can hold up to 15 million gallons.

flow demands may be higher in a densely populated area than a more rural setting.

When a tank is taken offline for maintenance, the work is scheduled during the non-peak usage time of year. The water supply is maintained in the area by other tanks within the pressure zone, or, if other tanks are not available, by manipulating valves and pumps and keeping the downtime as short as possible. Whenever a tank is to be taken offline, local fire departments are notified in advance so that they may make contingency plans if necessary during that period. They are also informed when workers will be climbing the tanks, so they can pre-plan for an emergency rescue should one ever be needed.

Two Well-Protected Reservoirs

Water not stored in tanks can be found in MCWA's 5-million gallon Parrish Road Reservoir in Mendon or, on a much larger scale, in its 9-acre, 55-million gallon William Denise Reservoir southwest of the Village of Pittsford.

Yet, much like the "hiding-in-plain-sight" pump stations, the Denise Reservoir, also referred to as the Southeast Reservoir, is not visible from the road that runs past the grassy, 85-acre site. A pump station sits along a driveway that leads uphill to the vast, manmade storage facility constructed in the late 1960s and carefully maintained and updated ever since.

In 2006, at a cost of more than \$4 million, a cover was installed. This impermeable, synthetic geomembrane floats on the surface of the potable water beneath. Tension on the top of the cover is maintained as the water level varies through a series of chains that create troughs, from which stormwater can be collected and pumped away from the cover.

The smaller Parrish Road Reservoir also is covered. The original cover was installed in the 1990s, and, when it was replaced in 2012, the old cover became a liner at the bottom.

The floor of the Denise Reservoir is asphalt, and the maximum depth of the water is 29 feet. To avoid a number of problems, including icing in the winter, the reservoir is not filled to the brim, but only to one

foot below the overflow point. If filled to absolute full capacity, the reservoir would hold 79 million gallons.

Inspection of the covers and the reservoirs is ongoing and takes many forms, including "walking the cover" to check for tears or problems. For this effort, the water level is temporarily increased to near capacity. In a normal year, some 50 to 70 small holes or tears in seams may be detected and securely patched.



Top:
The covered, 55-million gallon reservoir.

Bottom:
Scuba divers check below the surface, for an annual underwater inspection.

Scuba Divers Check Things Out

A more dramatic check occurs each summer when scuba divers do a visual, underwater inspection. For a number of years, the divers were volunteers from the Monroe County Sheriff's Department who used the effort as a training exercise. In recent years, divers trained to do such inspections have been contracted. They take video footage in the reservoir to be reviewed by Water Authority staff after the inspection. This information can be used to troubleshoot issues in the reservoir or in the development of improvement plans when needed.

The reservoir is filled from the local potable water distribution system. The pump station on the property houses pumps, valves and piping used to control inflow and outflow.

The Denise Reservoir is impounded on three sides by a constructed earthen embankment. The height for each side varies because of the natural slope of the property. The north end was dug into the existing grade, while the south slope is a constructed embankment.

Because all four sides are elevated from the surrounding grade, there is no upland contributing drainage. However, because of the size of the constructed embankment as well as the significant volume of

water retained, the New York State Department of Environmental Conservation considers the reservoir a dam, and permits must be renewed each year. Operating and maintaining a dam also requires significant effort.

Steep slopes, especially on the bank between the station and the reservoir, mean a riding lawn mower isn't suited to keep the grass neatly cut. The solution: a robotic mower, which churns away on its own, maintaining the neatness and beauty of the hillside.



PERFORMANCE METRICS

MCWA is always seeking to improve. As a result, we compare ourselves, whenever possible, to national standards of performance, as well as our own from previous years.

REINVESTMENT

Maintaining infrastructure

MCWA's goal is to implement a budget that reinvests a minimum of 2% of annual revenues in the renewal and replacement of our infrastructure. In 2023, our reinvestment in infrastructure replacement exceeded 21%.

MCWA
21%

RELIABILITY

Supply capacity outages over 4 hours

Continuity of production capacity is paramount. In 2023, MCWA had **no** unplanned outages lasting more than four hours that led to a significant reduction in capacity.

MCWA
0

SYSTEM INTEGRITY

Water main breaks/100 miles of pipeline

The AWWA benchmark for system integrity is less than 18.5 combined leaks and breaks per 100 miles of pipeline per year. MCWA's distribution system includes 3,465 miles of water main.

MCWA
14.9
(per 100 miles of pipeline)

National Median
18.5
(for utilities of similar size)

COST

2023 rate comparison

MCWA customers pay less per month than our neighbors.

Onondaga County	\$42.99
Erie County	\$40.43
City of Rochester	\$39.18

MCWA
\$36.30

National Median
\$42.92

RESPONSIVENESS

Call center wait time (seconds)

MCWA answers your calls faster. In 2023, the average wait time for customers to talk to a customer service representative was a fraction of the national median.

MCWA
11.8
seconds

National Median
90
seconds

EFFICIENCY

Accounts per employee

In 2023, MCWA employees handled nearly double the number of customer accounts as the national median.

MCWA
905

National Median
480

QUALITY

of inquiries/1,000 customers

MCWA's Customer Service Information System includes tracking mechanisms for categorizing and measuring the number of customer calls specific to water quality.

2023
1.8
(per 1,000 customers)

1993
26
(per 1,000 customers)



OPERATING STATISTICS (2014-2023 unaudited)

	2014	2015	2016
Total Water Output (Million Gallons)			
Lake Ontario Production	17,811	18,063	18,483
Miscellaneous Purchases & Production	165	144	156
Active Customers			
Retail	181,677	182,394	183,651
Wholesale	17,603	18,125	18,608
Total	199,280	200,519	202,259
Water Sales (Million Gallons)			
Residential & Commercial	12,733	12,686	13,729
Large Commercial & Industrial	2,495	2,382	2,588
Wholesale	1,338	1,375	1,512
Total	16,566	16,443	17,829
Water Purchases (Net Exchange)	2,718	2,361	2,983
Revenues (000s omitted)			
Residential & Commercial	\$47,300	\$48,987	\$53,741
Large Commercial & Industrial	5,439	5,308	5,901
Wholesale	2,646	2,829	3,205
Total Metered	55,385	57,124	62,847
Fire Service	1,225	1,250	1,275
Interest Earnings	115	98	145
Federal Int. Subsidy Series 2010B Taxable Build America Bonds	1,859	1,852	1,865
Other	3,391	3,608	3,608
Total	\$61,975	\$63,932	\$69,740
Operating Expense (000s omitted)			
Production/Transmission	\$12,904	\$12,282	\$13,102
Engineering	3,373	3,554	3,709
Facilities, Fleet & Operations	12,975	12,933	11,671
Finance & Business Services	6,013	6,036	6,136
Administration	6,865	8,217	8,629
Total	\$42,130	\$43,022	\$43,247
Net Revenue	\$19,845	\$20,910	\$26,493
Cash Capital Program	\$9,364	\$16,443	\$18,878
Capital Lease Payments	\$1,231	\$641	\$620
Water Revenue Debt Service	\$10,568	\$10,619	\$10,837
Coverage Excluding Obligations on Lease Facilities	1.88	1.97	2.44

	2017	2018	2019	2020	2021	2022	2023
	16,552	17,761	16,400	17,622	18,146	18,265	17,498
	155	162	155	143	173	156	258
	184,718	185,751	186,311	187,498	188,375	189,134	190,056
	18,570	24,449	24,775	28,905	30,042	25,590	30,515
	203,290	210,200	211,086	216,403	218,417	214,724	220,571
	12,466	13,031	12,509	13,506	12,850	13,130	12,364
	2,505	2,532	2,465	2,141	2,236	2,286	2,133
	1,461	1,515	1,518	1,551	1,813	1,884	1,949
	16,432	17,078	16,492	17,198	16,899	17,300	16,446
	3,537	3,211	3,242	3,045	2,705	3,041	3,154
	\$52,189	\$55,737	\$56,587	\$63,284	\$63,986	\$67,471	\$68,745
	5,865	6,520	6,644	6,222	6,855	7,346	7,306
	3,245	3,673	3,848	4,024	4,728	4,788	5,385
	61,299	65,929	67,079	73,530	75,569	79,605	81,436
	1,299	1,312	1,333	1,361	1,357	1,378	1,433
	193	1,005	1,571	722	74	1,417	5,092
	1,876	1,860	1,833	1,798	1,906	1,711	1,523
	2,773	2,780	2,743	2,935	3,976	3,959	4,490
	\$67,440	\$72,886	\$74,560	\$80,346	\$82,882	\$88,070	\$93,974
	\$12,673	\$14,479	\$13,275	\$14,161	\$13,839	\$15,949	\$15,611
	3,448	3,786	3,423	4,237	3,534	3,250	4,515
	12,831	13,728	13,046	14,873	13,398	13,890	14,161
	6,494	6,824	6,961	8,449	7,416	6,973	7,658
	7,437	4,671	4,149	4,049	10,441	3,776	3,963
	\$42,883	\$43,488	\$40,854	\$45,769	\$48,628	\$43,838	\$45,908
	\$24,557	\$29,398	\$33,706	\$34,577	\$34,254	\$44,232	\$48,066
	\$14,662	\$16,345	\$13,502	\$15,266	\$13,487	\$13,504	\$22,699
	\$586	\$341	\$331	\$0	\$0	\$0	\$0
	\$10,863	\$11,511	\$11,899	\$11,078	\$11,936	\$11,958	\$11,876
	2.26	2.55	2.83	3.12	2.87	3.70	4.05



CUSTOMER BASE

LARGE COMMERCIAL AND INDUSTRIAL	Sales 1000 Gallons
Lidestri Foods Inc. (2 meters)	299,669
Rochester Institute of Technology (3 meters)	153,706
Xerox	149,349
Six Flags Darien Lake	63,752
Wegmans-1500 Brooks Ave. (2 meters)	52,800
Tech Park Owner LLC (2 meters)	49,375
Nortera Foods USA Inc (was Bonduelle)- Bergen (2 meters)	47,335
Bonnaterra Farms	36,503
Unity Hospital	26,091
St John Fisher University	23,121
Subtotal	901,701
Remaining 365 Accounts	1,378,490
Total	2,280,191

RESIDENTIAL AND SMALL COMMERCIAL	Customers by Town	Sales 1000 Gallons
Town of Greece	33,688	2,108,864
Town of Henrietta	13,923	999,246
Town of Irondequoit	16,677	948,540
Town of Perinton	14,301	900,209
Village of Fairport	2,073	114,313
Town of Penfield	12,935	872,730
Town of Webster	14,459	861,206
Village of Webster	1,624	125,684
Town of Brighton	10,147	813,087
Town of Pittsford	9,203	670,901
Village of Pittsford	673	46,066
Town of Gates	10,495	653,023
Town of Chili	9,774	612,090
Town of Victor	4,872	370,422
Town of Ogden	5,172	316,808
Village of Spencerport	1,335	79,003
Town of Parma	3,882	203,175
Village of Hilton	195	6,238
Town of Hamlin	2,732	156,377
Village of East Rochester	2,408	135,149
Town of Clarkson	1,909	126,660
Town of Sweden	1,397	122,578
Town of Mendon	2,036	121,884
Village of Honeoye Falls	884	64,073

WATER DISTRICTS	Customers by Town	Sales 1000 Gallons
Genesee County	10,589	827,056
Wayne County Water & Sewer	9,100	332,235
Village of Brockport	1,835	228,482
Sea Breeze Water District	3,044	199,210
Village of Hilton	1,847	131,267
Village of Victor	1,004	64,323
Livingston County Water & Sewer	39	74,091
Town of Clarendon	895	39,699
Village of Holley	1,000	29,757
Town of Murray	375	12,700
Town of Canadice	775	9,447
Town of Farmington	12	280
Total	30,515	1,948,547

	Customers by Town	Sales 1000 Gallons
Town of Riga	1,217	78,661
Village of Churchville	907	43,628
Town of LeRoy	847	78,230
Village of LeRoy	1,700	102,260
Town of Rush	1,146	59,146
Town of Wheatland	629	52,262
Village of Scottsville	754	48,523
Town of Pembroke	626	51,487
Village of Corfu	288	11,489
Town of Richmond	1,083	41,065
Town of Bergen	538	34,684
Village of Bergen	417	20,491
Town of Kendall	837	34,439
Town of Byron	553	28,057
Town of West Bloomfield	304	27,828
Town of Stafford	569	27,543
Town of Darien	381	20,553
Town of Pavilion	343	20,186
Town of Caledonia	32	2,215
Village of Caledonia	10	1,163
Town of Covington	11	1,236
Town of Bethany	38	1,176
Town of East Bloomfield	20	972
Town of Lima	12	907
Total	190,056	12,216,527

FINANCIAL HIGHLIGHTS

WATER SALES (million gallons)	2023 Metered Consumption	Increase (Decrease) From 2022
Residential & Commercial	12,364.1	(765.6)
Industrial	2,132.6	(153.3)
Water Districts	1,948.5	64.6
City of Rochester	3,154.9	113.8
Total	19,600.1	(740.5)

OPERATING REVENUES (000s omitted)	2023 Actual	Increase (Decrease) From 2022
Residential & Commercial	\$68,746	\$1,275
Industrial	7,306	(41)
Water Districts	5,385	597
Fire Service	1,433	55
Other	4,490	532
Total	\$87,360	\$2,418

OPERATING EXPENSES (000s omitted)	2023 Actual	Increase (Decrease) From 2022
Operating Departments		
Administration	\$ 3,963	\$ 187
Production/Transmission	15,611	(338)
Engineering	4,515	1,265
Facilities, Fleet & Operations	14,161	271
Finance & Business Services	7,658	685
Total	\$45,908	\$2,070



To review our audited
financial statements,
please visit

mcwa.com



MONROE COUNTY
WATER AUTHORITY

475 Norris Drive
Rochester, New York 14610-0999

RETURN SERVICE REQUESTED

A FEW FUN FACTS ABOUT Your Water Supply

MCWA's average residential customer uses approximately one ton of water per day.

Examples of objects weighing about one ton:
American bison,
adult rhinoceros,
1975 Volkswagen Beetle.



MCWA uses approximately 50 million kilowatt hours (kWh) per year of electrical energy, roughly equivalent to the total annual amount of kWh used by some 6,600 residential houses.

Almost all of the 50 million kWh is used for pumping water.



Water produced at MCWA treatment plants is pumped up to eight times to deliver it to the customer.

The pumping demand depends on a customer's distance from the water treatment plants and the customer's elevation above Lake Ontario.

