2022

CITY OF MANCHESTER

WATER DEPARTMENT ANNUAL REPORT

WATER DEPARTMENT

2022 Annual Report

WATER DEPARTMENT STAFF

Water Superintendent

Chad Wulfekuhle
Office Address: 525 Williams Street
Mailing Address: 208 E Main Street
Phone Number: 563.920.5313
Email: comiawaterdept@gmail.com

Qualifications

- Grade 3 Water Treatment
- Grade 3 Water Distribution
- AWWA Region 1 Treasurer

Hire Date: 2008

Water Operator

Jeremy Robinson

Qualifications

- Grade 1 Water Treatment
- Grade 1 Water Distribution

Hire Date: 2019

OPERATING COSTS

Total Water Department Expenses	**$1,074,082.43**
Total Operating Cost to Treat/Pump Water	**$177,085.13**
Total Gallons of Water Pumped	**179,152,000**
Total Water Department Expense per Thousand Gallons	*$5.99 ($0.00599 per gallon)*
Total Cost per Thousand Gallons to Treat/Pump Water	*$0.99 ($0.00099 per gallon)*

Breakdown of Operating Cost to Treat/Pump Water

- Electricity $ 38,345.33
- Heating Fuel $ 4,857.58
- Testing $ 8,571.26
- Chemicals/Salt $ 20,310.96
- Nitrate Reduction Plant Debt $ 105,000.00

Water Utility Rate Base Monthly Service Charge Inside Water	**$6.79**
Water Utility Rate per thousand Gallons of Inside Water	**$3.60**
Water Utility Rate Base Monthly Service Charge Outside Water	**$0.92**
Water Utility Rate per thousand Gallons of Outside Water	**$4.22**
Water Utility Rate per thousand Gallons of Bulk Water	**$4.22**
Water Utility Excise Tax	**6%**

WATER DEPARTMENT PROJECTS

2022 Projects Included

- SRF Loan Payments on principal and interest
- Water Tower Maintenance

WATER PUMPAGE REPORT

	Well #4 525 Williams St	Well #5 301 Anderson St	Well #6 901 S 10th St	Well #7 201 W Honey Creek Dr	Well #8 412 Vine St	TOTAL
January	3130000	2984000	3066000	704000	4766000	14650000
February	3199000	2002000	2758000	1059000	4060000	13078000
March	3333000	2153000	2770000	1051000	5038000	14345000
April	3625000	1950000	2877000	745000	4489000	13686000
May	3234000	2449000	3180000	2249000	4864000	15976000
June	3282000	1453000	3032000	3615000	6190000	17572000
July	2842000	1653000	2995000	4036000	5534000	17060000
August	2792000	2924000	2996000	2355000	5802000	16869000
September	2439000	2685000	3212000	2300000	4902000	15538000
October	4479000	1388000	2879000	931000	4638000	14315000
November	2487000	2756000	2616000	815000	4065000	12739000
December	4202000	1787000	2588000	597000	4150000	13324000
TOTAL	**39044000**	**26184000**	**34969000**	**20457000**	**58498000**	**179,152,000**

Average Gallons of Water Pumped per Day **490,827**

Average Gallons of Water Pumped per Person, per Day **96.91**

Population **5,065**

WATER LOSS REPORT

Total Water Loss **9.7%**

Total Gallons of Water Pumped **179,152,000**

Total Gallons of Water Metered **174,447,000**

- Consumption metered water 137,453,000 gallons
- Wastewater Treatment Plant 10,276,000 gallons
- Parks/ City Facilities 2, 867,000 gallons
- Bulk water station 783,800 gallons

Water loss takes into account water used in various ways, including:

- *Hydrant flushing and flushing new construction water mains*
- *Water main breaks, service line leaks*
- *City Properties (ie, fire station, city hall, library, parks & park features, etc.)*
- *Measures are being made to keep better track of some City entities that use water to make this a more accurate calculation.*

GOALS

Water Superintendent, Chad Wulfekuhle

Obtain Grade 4 License
Continue to serve as Treasurer for AWWA, Region 1

Water Operator, Jeremy Robinson

Obtain Grade 1 License, Waste Water License

Department Goals

- Source Water/ flood mitigation projects: Stormwater Wetland Project, and Roger Beck property
- Continue to Update Source Water Protection Emergency Response Plan
- Implement new mapping
- Water meter reading equipment upgrades
- Water main replacement
- Lead Inventory
- Increase Water Rates to balance affordability with the financial requirements to adequately operate treatment facilities and infrastructure

WATER QUALITY REPORT

In compliance with the Safe Drinking Water Act Amendments, the City of Manchester water system provides customers with an annual Water Quality Report. This report explains where water comes from, what the water contains, and how water provided by the City of Manchester compares to standards set by regulatory agencies.

The Water Quality Report is published in the Manchester Press, placed on the City's website, and is made available at the City Office. Notification of availability is made through the Manchester Press, KMCH, the City website, and via a message on City utility bills.

WATER QUALITY DATA TABLES

The water quality data tables on the next page list all the contaminants that were detected during monitoring for the 2022 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Definitions of the terms used in the table and explanations of the abbreviations are as follows:

Definitions

MCLG Maximum Contaminant Level Goal, or the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MCL: Maximum Contaminant Level, or the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

AL: Action Level, or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.

TT: Treatment Technique, or a required process intended to reduce the level of a contaminant in drinking water.

Abbreviations

ppb: parts per billion or micrograms per liter

ppm: parts per million or milligrams per liter

n/a: not applicable

NTU: Nephelometric Turbidy Unit, used to measure cloudiness in drinking water

MFL: million fibers per liter, used to measure asbestos concentration

Nd: not detectable at testing limits

BACTERIA CONTAMINANTS

Bacteria	MCL	MCLG	Level Found	Range of Detection	Sample Date	Violation	Typical Source of Contaminant
Fecal Coliform	Routine sample is coliform positive	0	0	0 of 72	1-21 12-21	N	Human and animal fecal waste
Total Coliform Bacteria	Coliform bacteria in 5% of monthly samples	0	0	0 of 72	1-21 12-21	N	Contaminant naturally present in the environment

INORGANIC CONTAMINANTS

Inorganic Contaminant	MCL	MCLG	Level Found	Range of Detection	Sample Date	Violation	Typical Source of Contaminant
Arsenic	10	0	1	NA	4/04	N	Erosion of natural deposits
Nitrate (as N) (ppm)	10	(10)	9.3	6.5-9.3	2021	N	Run off from fertilizer use; leaching from septic tanks; erosion of natural deposits
Barium (ppm)	2	2	0.09	0.09	9/18	N	Erosion of natural deposits
Fluoride (ppm)	4	4	0.22-1.76	0.25-1.24	2021	N	Erosion of natural deposits; Water additive which promotes strong teeth
Sodium (ppm)	NA	NA	7.8	7.8	7/21	N	Erosion of natural deposits
Copper (ppm)	AL=1.3	1.3	.2	0.03-0.29	2020	N	Corrosion of within house plumbing systems
Lead (ppb)	AL=15	0	5	ND-6	2020	N	Corrosion of within house plumbing systems
Chlorine (ppm)	4.0	4.0	0.9	0.29-1.49	2021	N	Water additive used to control microbes

*** one home exceeded the lead action level**

ORGANIC CONTAMINANTS

Organic Chemical Contaminants	MCL	MCLG	Level Found	Range of Detection	Sample Date	Violation	Typical Source of Contaminant
Atrazine (ppb)	3	3	0.10	0.10	4/07 & 7/07	N	Run off from herbicide used on row crops
TTHMs Total Trihalomethanes (ppb)	80	NA	16	16-16	9/20	N	By product of drinking water disinfection
Di (2-ethylhexyl) phthalate (ppb)	6	0	2.40	0-2	3/13	N	Discharge from rubber and chemical factories
Di (2-ethylhexyl) adipate (ppb)	400	400	0.9	1-1	5/14	N	Discharge from chemical factories

INFO AT A GLANCE

	2022	2021	2020	2020	2018	2017	2016
Total Miles of Water Main	44	42					
Water Main Breaks Repaired	9		9	0			
Total Fire Hydrants	324	314	314	314			
Total Valves Exercised	773	753	753	753			
Average Annual Pumpage (Gallons/year)	179,152,000	205,359,000	202,504,000	186,647,000	186,879,000	201,959,000	187,352,000
Average Daily Pumpage (Gallons/Day/Person	96.91	103	102	99	98	101	99
Frozen Water Lines							
Bulk Water Usage	783,800	1,087,000	850,000	255,000	674,000	401,900	479,075
Water Connections	29	32	23				
Water Rates	6.79/3.60	6.16/3.27	6.04/3.21	6.04/3.21	5.93/3.15	5.81/3.09	5.81/3.09
UTIITY BILLING MONTHLY STATISTICS							
Service Orders	60	649/yr	537/yr	558/yr	452/yr	529/yr	504/yr
Bills Mailed	2160 USPO 284 EMAIL	2400	2400	2400			
Reminder Notices	375	500	500	500			
Door Notices	50	72	70	90			
Disconnect (Non-Payment)	8	6	6	7			
Pay Via Bank Drafts	845 Bank 51 CC						
Pay Via Website	280						
Pay with Check	1200						
Pay with Cash	130						