

2023 Annual Utility Report



Presented March 12, 2024



Water Department

2023 update

Warren Myers, Water Commissioner

It's been a productive year. I'm continually learning and implementing the latest industry practices to enhance the quality of our service to the residents. Lead and Copper has been a significant focus this year, and I've been making considerable efforts to ensure that we are fully compliant with the new Lead and Copper rule.

Last summer, we encountered a significant challenge when two water main breaks occurred, causing considerable inconvenience. Through investigation, we determined that the cause of these breaks was the shutting off of valves, leading to water hammers. The resulting repairs included shutting off the water supply to the affected areas, excavating the ground to expose damaged pipes, and replacing broken sections. We have since taken proactive measures to maintain our water infrastructure appropriately, ensuring that all valves are correctly adjusted to prevent future water hammer occurrences.

Sargent Drilling's annual well and pump test results are as follows: Well #4 had an impressive 82% efficiency rate, producing 54 gallons of water per foot of drawdown. Well #5 had a commendable 73% pump efficiency, producing 77 gallons of water per foot of drawdown. However, there appears to be an issue with the GPM of Well #5, which may indicate a problem such as a hole in the transfer line. Further investigation is needed to determine the root cause of the issue, which will be conducted in the coming weeks.

The replacement of older fire hydrants and the enhancement of firefighting capabilities have been identified as a top priority. Specifically, two outdated hydrants were replaced last year, while another was rerouted to a larger line to improve the water pressure and flow rate of the new hydrant.

We had a productive year with multiple ongoing activities. Looking forward to 2024, I will be working on the several projects that are currently underway. This includes the replacement of a few fire hydrants, continuation of our preventative maintenance program on water main valves and undertaking necessary repairs to valve boxes. With these initiatives, we are confident that we will be able to continue providing high-quality services to our customers.

Thank you for your support and time. Please reach out with any questions or concerns.

Sincerely,

Warren Myers, Water Commissioner

City of Albion Water Department

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Gallons of water pumped

	2021	2022	2023
January	5,527,542	5,552,165	5,596,921
February	4,748,763	4,761,542	4,922,317
March	5,842,872	5,742,763	6,525,631
April	8,329,706	11,792,686	9,742,361
May	12,957,746	12,409,338	15,073,749
June	19,310,697	20,848,974	21,078,083
July	20,278,568	18,957,564	16,474,382
August	20,218,278	22,565,730	18,129,087
September	14,103,156	20,819,023	17,417,231
October	12,944,064	14,043,018	9,048,703
November	4,951,784	5,434,890	5,294,751
December	5,240,467	5,493,763	5,429,205
Total	134,453,643	148,421,456	137,732,421
Daily Average	368,366	406,634	377,349

Water Department

Water Loss

We have the majority of our city facilities now metered, with the exception of the north campground.

2023 Recorded Pumpage	137,732,421	gallons	
Billed Water	106,501,347	gallons	
Unbilled City Facility Water	11,261,058	gallons	8.176% of water pumped
Unbilled Fairgrounds Water	<u>1,633,767</u>	gallons	1.186% of water pumped
Water Loss	18,336,249	gallons	13.313% of water pumped

The 13.313% of unaccounted water loss includes three water main leaks on the north part of town, a house fire, and hydrant flushing.

*According to the latest data provided by the EPA, the avg water loss experienced by a PWS is 16%. Dave Jundt, NDEE field rep stated the goal should be 15% or less and any system will experience at least 5%.

Water Usage Per Household

Estimates vary, but average water usage per household in the U.S. is 300 gallons per day. Based on water billed to residential use meters in the amount of 10,157,800 cubic ft (75,980,344 gallons) in 2023, the City of Albion's residential water usage is approximately 302 gallons per household per day, 70% of which is generally used indoors & 30 % is used outdoors.

Test Results

The City's Water System is tested twice each month for coliform bacteria, monthly for fluoride, annually for nitrates. Other tests are based on the schedules set by Nebraska Dept of Environment & Energy.

RISING/HIGH NITRATE LEVELS

Well #4

2012	2.35	2019	3.61
2013	2.82	2020	3.56
2014	2.84	2021	3.73
2015	2.89	2022	n/a
2016	3.08	2023	3.58
2017	3.25		
2018	3.56		

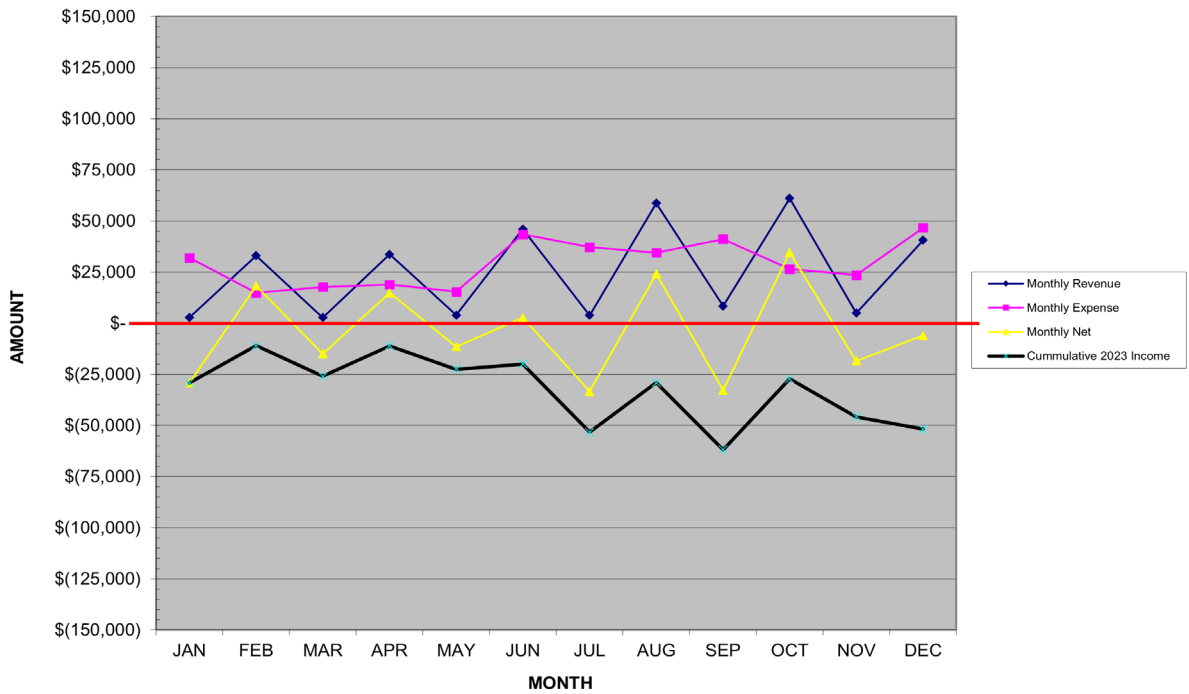
Well #5

2021	3.91
2022	3.92
2023	3.82

Nitrate levels continue to remain high. Although the MCL is 10, which triggers the treatment of water, additional testing becomes necessary when the numbers reach 5. Ron Morearty, past water commissioner, had hopes that decommissioning the stock well at the Fairgrounds Property in 2019 would show us a decrease in Nitrate levels, but that theory hasn't panned out.

2023	WATER CASH FLOW STATEMENT			
	REVENUE	EXPENSE	NET	CUMMULATVE 2023
JAN	\$ 2,754	\$ 31,975	\$ (29,221)	\$ (29,221)
FEB	\$ 33,064	\$ 14,825	\$ 18,239	\$ (10,982)
MAR	\$ 2,755	\$ 17,735	\$ (14,980)	\$ (25,962)
APR	\$ 33,684	\$ 18,853	\$ 14,831	\$ (11,131)
MAY	\$ 3,988	\$ 15,423	\$ (11,435)	\$ (22,566)
JUN	\$ 46,020	\$ 43,411	\$ 2,609	\$ (19,957)
JUL	\$ 3,823	\$ 37,157	\$ (33,334)	\$ (53,291)
AUG	\$ 58,687	\$ 34,530	\$ 24,157	\$ (29,134)
SEP	\$ 8,367	\$ 41,141	\$ (32,774)	\$ (61,908)
OCT	\$ 61,048	\$ 26,424	\$ 34,624	\$ (27,284)
NOV	\$ 4,985	\$ 23,487	\$ (18,502)	\$ (45,786)
DEC	\$ 40,622	\$ 46,681	\$ (6,059)	\$ (51,845)
TOTAL			\$ (51,845)	

WATER DEPT 2023 CASH FLOW



Sewer Department Report 2023

Corey Zoubek, Sewer Commissioner

With my first year in as Sewer Commissioner I have learned some valuable information on the operation of the Sewer Plant, mainly during the wintertime with the cold temperatures. This past year we accomplished the yearly Jetting and Videoing by Johnsons, and they are scheduled to be back this Spring. Also, we will be adding some Manholes on Park Street with line rehab work.

We have sent off information with JEO on the water reel for the application of sludge on the field. This would possibly cut down the man hours it takes to apply sludge to once or twice a month with the number of gallons it could do.

This past August we had the Parshall Flume calibrated for the Influent coming into the plant. You will see on the total flow chart below after the calibration that our numbers decreased for overall daily flow.

On the Maintenance side, we have a pump that needs new seal work. I will also start changing oil in gearboxes throughout the summer. We did have both Lift Stations in town looked over and some work on pumps that need to be done. I found a cost efficient way to make wipers for the Clarifiers that will save the city money.

Overall, in closing I'm still learning new things everyday here and will be retaking my Class 1 Operating license this summer.

Thank you for the opportunity to work for the City of Albion and if you have any questions, please feel free to contact me.

Corey Zoubek
Sewer Commissioner

CITY OF ALBION

Wastewater Department

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Gallons of wastewater treated

	2021	2022	2023
January	3,354,689	4,404,235	4,283,821
February	3,610,010	3,824,390	3,818,303
March	4,788,663	4,051,560	4,117,943
April	4,237,410	4,008,281	3,579,403
May	4,235,993	3,923,081	3,857,747
June	4,440,217	3,964,934	3,894,816
July	4,221,874	4,345,172	4,462,074
August	4,156,954	4,461,291	4,472,655
September	3,999,851	5,198,008	3,822,641
October	4,262,105	4,858,101	3,791,958
November	4,062,109	4,053,357	3,429,997
December	4,268,593	4,365,018	3,547,767
TOTAL	49,638,468	51,457,428	47,078,732
Daily Average	135,996	140,979	128,982

NEBRASKA DEPARTMENT OF ENVIRONMENTAL CONTROL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

2023

	BOD mg/L	TSS mg/L	AM mg/L	PH
January	3.0	<4	<0.10	7.89
LMA	(25)	(30)	(report)	(6.5-9)
February	3.0	<4	<0.10	8.19
LMA	(25)	(30)	(report)	(6.5-9)
March	4.0	4.0	<0.10	7.76
LMA	(25)	(30)	(report)	(6.5-9)
April	3.4	<4	<0.10	8.09
LMA	(25)	(30)	(report)	(6.5-9)
May	3.0	<4	<0.10	7.90
LMA	(25)	(30)	(report)	(6.5-9)
June	5.8	12.0	<0.10	7.81
LMA	(25)	(30)	(5.66)	(6.5-9)
July	6.2	4.0	<0.10	7.76
LMA	(25)	(30)	(5.66)	(6.5-9)
August	4.7	<4.0	0.12	7.74
LMA	(25)	(30)	(5.66)	(6.5-9)
September	3.7	8.0	0.10	7.53
LMA	(25)	(30)	(5.66)	(6.5-9)
October	4.3	8.0	<0.10	8.30
LMA	(25)	(30)	(5.66)	(6.5-9)
November	2.9	12.0	0.10	7.98
LMA	(25)	(30)	(report)	(6.5-9)
December	4.1	6.0	<0.10	7.84
LMA	(25)	(30)	(report)	(6.5-9)

NOTES

BOD - Biological Oxygen Demand

TSS - Total Suspended Solids

AM - Ammoniacal Nitrogen

(Nitrogen, ammonia total (as N))

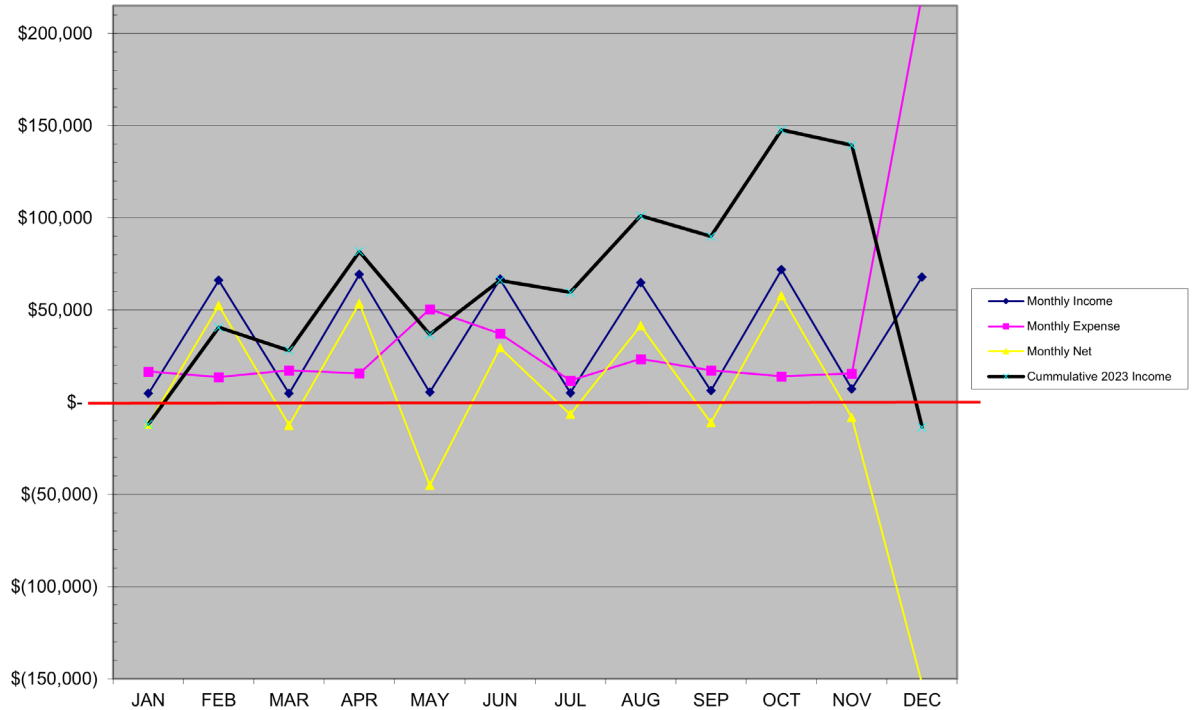
(Req. Mon. MO AVG)

LMA - Limits Monthly Average

2023 SEWER CASH FLOW STATEMENT				
	REVENUE	EXPENSE	NET	CUMMULATIVE 2023
JAN	\$ 4,755	\$ 16,576	\$ (11,821)	\$ (11,821)
FEB	\$ 66,049	\$ 13,648	\$ 52,401	\$ 40,580
MAR	\$ 4,725	\$ 17,254	\$ (12,529)	\$ 28,051
APR	\$ 69,285	\$ 15,659	\$ 53,626	\$ 81,677
MAY	\$ 5,357	\$ 50,397	\$ (45,040)	\$ 36,637
JUN	\$ 66,754	\$ 37,259	\$ 29,495	\$ 66,132
JUL	\$ 5,101	\$ 11,715	\$ (6,614)	\$ 59,518
AUG	\$ 64,932	\$ 23,450	\$ 41,482	\$ 101,000
SEP	\$ 6,185	\$ 17,261	\$ (11,076)	\$ 89,924
OCT	\$ 71,811	\$ 14,060	\$ 57,751	\$ 147,675
NOV	\$ 7,166	\$ 15,515	\$ (8,349)	\$ 139,326
DEC	\$ 67,912	\$ 220,774	\$ (152,862)	\$ (13,536)
TOTAL	\$ 440,032	\$ 453,568	\$ (13,536)	

*WWTF Principal Payment is made each December.

2023 Sewer Dept Cash Flow



Utility Billing Department

Since implementation in August of 2016, emailed bills continue to be a viable option for billing, both for consumers relying on paperless options, and for the City Office as a way to cut costs and processing times. This option continues to grow at a steady pace, currently accounting for approximately 17.50% of our bi-monthly bills at the end of 2023. After remaining stagnant at 35% in 2022, ACH (Automated Clearing House) Bank Draft has again seen an uptick in customer interest, closing 2023 at 38%. Online bill payments remain a viable, popular option, giving the customer the advantage of setting up their payment to draft from their account, on a date of their choosing. It is much like ACH Bank Draft, but instead of the City Office and the bank being in control of their payments, the customer is in control, and they can stop, start and change payments easily and whenever they choose.

Many companies have been reviewed as an online payment option for customers, and with the implementation of our new website, this should be fairly seamless to incorporate. One company looks promising, and I have hopes to implement this in the near future.

At the end of 2023 we had two utility billing customers and one non-utility billing customer on cash only basis.

The Low Income Household Water Assistance Program (LIHWAP), which began in 2021 has now ended. Over the course of the program, we had 7 fulfilled requests for water and wastewater assistance, totaling \$1637.37 and at least twice as many unfulfilled requests. Our Utilities Disconnection Prevention Program (UDPP) has also provided relief to several of our residential consumers over the last year. Information regarding the UDPP program is printed in our disconnection notice and is verbally shared on a case-by-case basis.

The final cross connection surveys for back flow hazards were received and reviewed with a 97% completion rate. The survey process was initially started in early 2022. We are considering splitting the surveys between residential and commercial properties in the future and conducting them at different times to spread out the workload.

Thank you for your time. Please contact any one of us for more information or clarification.

Respectfully Submitted,
Amber Wynn,
Utility Billing Clerk