

City of Newark, Ohio
Division of Water and Wastewater
2020 Hind Sight Annual Report



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City of Newark, OH



“To provide essential services that protect public health, preserve the environment and support sustainable growth of the community”

Every year I take time to think about how to formulate my words for this annual report. Generally I think about how our work relates to our mission statement. The statement begins, “to provide essential services...” and how fitting that is to this past year and to our current situation? In a time like no other, we continue to struggle to keep our own employees healthy so that we can provide those essential services to our customers. Kudos to our essential workers who work under difficult circumstances in order to keep the water clean and flowing.

A major milestone occurred this past year when the Ohio EPA issued us our NPDES permit with a compliance schedule for federally mandated CSO controls derived from our Long-Term Control Plan. In spite of this process being so drawn out, two major projects were started in 2020. The Optimization and Siphon Improvement Project got started in early 2020. This project is designed to maximize the amount of flow that can reach the treatment plant during a rain event. The second major CSO project to have work design started in 2020 was the Fourth Street Separation project. Bids were accepted for this major project located within the downtown area and work began in the 2nd quarter of 2020 after a delay of several month due to Covid concerns. The project will replace existing combined sewer lines with new sanitary and storm sewers. New water lines will be installed as part of this project as well. This project stretches along 4th Street from Granville Street on the North to National Drive at the south.

Work on a project to upgrade the existing control system at the water plant was also started in late 2020. Finally, there was a major upgrade of the anaerobic digesters at the WWTP that we completed in 2020. The upgraded digesters, were initially put on-line in late 2019, and complete operation was achieved in 2020 and they are meeting operational requirements. As we look into the future of the City, we undertook a planning project to determine the cost and feasibility of extending our water system into areas outside the City due to expanding population and potential growth. The final report of that project was nearing completion at the end of the year and discussions into increasing our services will be one area focus in 2021.

The impact of Covid -19 on our department, while not as significant as other experiences, did have an impact and we all look forward to its elimination so we can better continue our work. Throughout all this craziness we continue to feel confident that our **goal of quality and reliable service at an affordable rate will be attainable with a little good planning and personnel** dedicated to provide top quality service. All of our projects are to improve infrastructure which ultimately will provide support to the community for sustainable growth. Long-term planning on the execution of our large capital projects is vital to this affordability. We must continue to be effective and efficient in our utility operation so that we can continue to provide quality, reliable service at rates that citizen can afford, this remains our primary goal.

Financial Pages

“How you pay for it matters”

Wastewater Department

Active Customers	17,193
Million Gallons Treated	2,764
Miles of Sewer Line	182
Miles of Combined Line	57
Lift Stations	16

Water Department

Active Customers	18,696
Total Volume Billed (MG)	1,587
Total Water Produced (MG)	2,798
Miles of Water Line	244
Booster Stations	3
Storage Facilities	2

Expenses: (excluding capital items and projects)

Wastewater – Operating Expenses

Administration	\$2,440,184
Treatment	\$2,483,787
Sewer Maintenance	\$ 521,109
Environmental Lab	\$ 338,115
Debt Retirement	<u>\$3,979,050</u>
Total	\$9,762,245

Water – Operating Expenses

Administration	\$2,033,358
Treatment	\$2,677,143
Distribution	\$1,292,640
Meter Shop	\$ 208,023
Debt Retirement	<u>\$1,601,770</u>
Total	\$7,812,934

Revenues:

Sewer

Rental <i>(sewer service)</i>	\$3,663,043
Administration	\$1,431,621
Debt Retirement	\$3,025,588
Surcharge	\$ 549,235
Capacity Fees	\$ 39,971
Trucked Wastes	\$ 496,089
Transfers	\$ 320,519
Miscellaneous*	\$ 133,721

Totals **\$9,659,780**

Water

Sales	\$5,711,730
Bulk Water	\$ 34,652
Delinquent	\$ 172,365
Meters	\$ 16,940
Permits	\$ 147,564
Capacity Fees	\$ 15,241
Deposits	\$ 147,030
On Account	\$ 362,770
Miscellaneous*	\$1,644,646

Totals **\$8,252,938**

Includes \$1,122,518 in transfers from sewer fund and \$225,000 from stormwater for water administration costs.

Debt Service Cover Ratio/% Debt/Working Capital Days Wastewater – 2.4, (41%), 288 Water – 5.2, (21%), 94

Water Rate Comparison for 6000 Gallons of Usage (8 Units):

	<i>Granville</i>	<i>Heath</i>	<i>Johnstown</i>	<i>SWLCWS</i>	<i>Cols</i>	<i>Lancaster</i>	<i>Newark</i>
<i>Water</i>	\$36.12	\$48.16	\$60.54	44.73	34.50	\$54.86	\$24.72
<i>Wastewater</i>	\$43.14	\$49.93	\$40.36	93.38	45.38	\$71.30	\$33.62
Total	\$79.26	\$98.09	\$110.90	138.11	79.88	\$126.16	\$58.34



Major Facilities

Annual Report 2020

The Division of Water and Wastewater is made up of six departments at four different base locations throughout the City. Other Facilities include 16 Sanitary Lift Stations, 3 Water Booster Stations, 2 Water Storage Facilities and 2 Auxiliary Water Wells.



Water Treatment Plant:
North Newark on the North Fork of the
Licking River, 164 Waterworks Road.

Wastewater Treatment Plant:
East Newark on the Licking River at East
Main Street and Ecology Row.



***Water Distribution & Sewer
Maintenance Complex:***
East Newark, 1275 East Main Street.

***Water Administration Office &
Meter Shop:***
Downtown Newark, 34 South 5th Street



Goals – 2021

- ③ Upgrade our AMI network control computer to a hosted environment provided by Aclara.
- ③ Reestablish Customer Service Skills Training to assist us with our goal of providing exceptional customer service.
- ③ Moving forward with the front office lobby renovation to provide a safer environment for employees.
- ③ Partnering with HomeServe to promote service line warranty program for the citizens of Newark.

Accomplishments – 2020

- ③ Implemented a \$1.00 fee to encourage email bill presentment and online payments with an emphasis on autopay signups.
- ③ Incorporated tablets to be used in the field for MTU diagnostics and programming.
- ③ Established a weekly newsletter to keep staff informed of important events and procedure awareness.
- ③ Upgraded/installed 592 new meters, which was hindered by the pandemic.
- ③ Finalized 2,814 accounts and activated 2,772 new accounts. Currently have 19,078 active accounts with 6,489 of those being rentals.
- ③ Recuprated \$41,252.24 in unpaid services through liens placed with Licking County.
- ③ Customer Service answered 13,153 phone calls with an average wait time of 1:28.
- ③ Busiest phone day was 7/21/20 with 164 answered calls. Wednesdays are the busiest day of the week with 11:00am -11:59am being the busiest time of day.

Account Delinquency Report

Amount Delinquent as of 12-31-2020 (>90 days) \$153,000

Amount Delinquent as of 12-31-2019 (>90 days) \$152,000

Delinquent Collection: Delinquent amounts are being collected through withholding of services, placing liens on properties and in-house collection services.

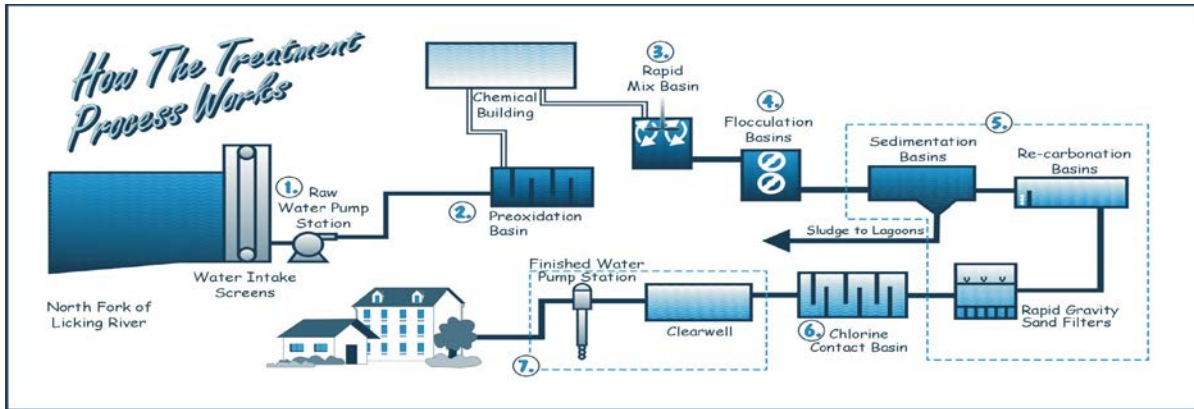
Water Office Staff ③



Top 5 Consumers of Water & Wastewater Services

Owens	515,446 gpd
Anomatic	356,597 gpd
Tamarack Farms Dairy	207,559 gpd
Licking Memorial Hospital	128,424 gpd
Mobile Power Wash (Industrial Water)	49,688 gpd





Ohio EPA Chemical Monitoring Averages for 2020

pH	8.84	S.U.
Phen. Alk.	3.38	mg/L
Total Alkalinity	42.6	mg/L
Stability	-4.46	mg/L
Hardness	112	mg/L
Phosphate	0.78	mg/L
Free Chlorine	1.25	mg/L
Combined Chlorine	0.087	mg/L
Fluoride	0.95	mg/L
Nitrate	2.42	mg/L
Turbidity	0.077	NTU
TOC (raw)	2.55	mg/L
TOC (finished)	1.41	mg/L
Lead (90 th percentile)	0	ug/L
Copper (90 th percentile)	0	mg/L

Production Data for 2020

Daily Average Production	6.25	MGD
Yearly Total Production	2,288.1	MG

Major Project Goals for 2021

- Lime Sludge #3 lagoon hauling (Cont.)
- 3 - UV Control Touch Screen upgrade (Cont.).
- River Dredging (Cont.)
- PLC upgrade
- Fiber optic cable project
- Filter Actuator Replacement
- Filter panel control replacement & programming
- Metal Roof Replacement, Admin buildings
- #2 UVT analyzer replacement
- Replace 1 of 2 Filter effluent Chlorine analyzer
- Lime Silo Power wash/Painting

Major Projects Completed in 2020

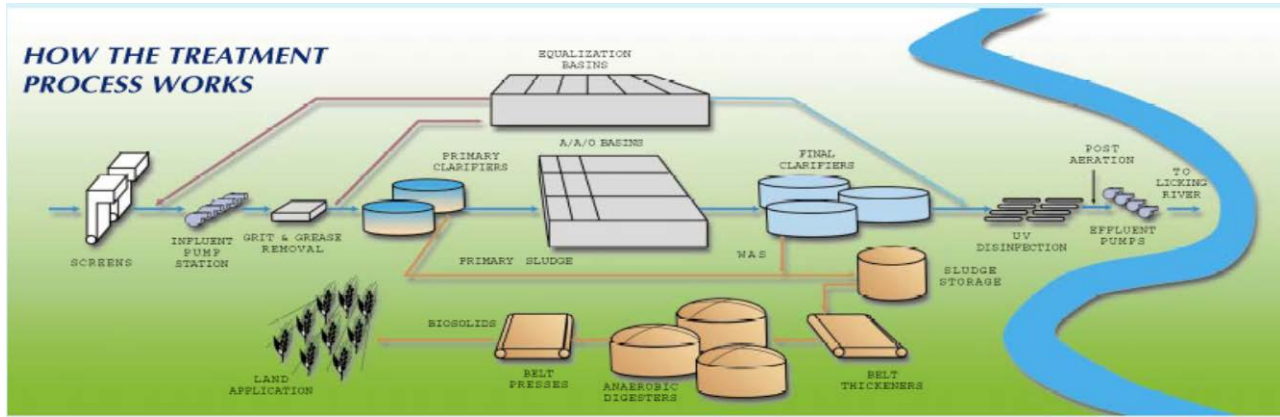
- Lime Sludge Pipe Repair/Replacement Project to Lagoons (picture to the right)
- Concrete pad for Bulk Chemical Unloading Station
- Dredged River
- Raw Water Meter Replacement Project
- Replaced 2 of 5 UV control touch screen
- In-house Filter Floor renovation
- Return Pump Repairs
- Two Filter Flow Controllers Replaced
- Lime Sludge Removed #3 lagoon (2,367 Tons)
- Triennial Lead and Copper Sampling Completed



Visit our website for more information on your water

<http://www.newarkohio.net/city-services/water-wastewater-main>





2020 Plant Operation Data

Annual Average

Ave. Flow MGD	Raw Suspended Solids mg/l	Final Suspended Solids mg/l	% Removal Suspended Solids	Raw CBOD mg/l	Final CBOD mg/l	% Removal CBOD	Raw Ammonia mg/l	Final Ammonia mg/l	% Removal Ammonia
8.7	131.5	2.0	98.3%	96.4	2.6	97.1%	9.6	0.19	98.0%

Major Projects Completed in 2020

- Rebuilt #4 Influent pump and refurbished the Variable Frequency Drive (VFD) powering the pump.
- Completed the upgrade of the Anaerobic Digesters.
- Replaced ONE Influent Pump Variable Frequency Drive (VFD).
- Replaced 30 plus year old Truck Scales with new scales used for our Trucked Waste program.
- Replaced large bearing assembly on Schreiber primary tank.
- Replaced pump seal and impeller on Return Activated Sludge pump #2.
- Continued engineering and planning for replacement UV system.
- Rebuilt several pumps and motors.

Major Project Goals for 2021

- Replace Impellers on Return Activated Sludge pumps.
- Recommission #1 Thickener - New PLC and flow meter.
- Replace air flow controllers for all three aeration basins.
- Replace mag meters for Dewatering presses and Sludge storage pumping.
- Replace 30 plus year old main generator control panel.
- Replace #1 Influent pump wear rings.
- Inspect building roofs and replace or repair as needed.



Schreiber Primary Process Tank Bearing Replacement

The Schreiber primary tank consists of one bridge on a center pier consisting of one large bearing assembly. The whole assembly rotates on the center bearing and is driven by drive wheels on the top edge of the tank wall. Due to the sheer size and weight of the bridge we needed one 250 ton crane and a 45 ton crane to complete the bearing replacement. Schreiber employees replaced the bearing in one day and the tank was only out of service for two and a half days. The treatment plant has two primary tanks for just such an occasion, giving us the ability to continue the treatment process.



Bearing Assembly Replacement



Trucked Waste Scale Replacement

The Wastewater Treatment Plant has been accepting all types of trucked waste streams since 1990. Part of the process that trucked waste goes through, is to weigh the tanker that is hauling the waste before and after they off load. This difference between the two weights is known as the net weight. The net weight is the amount of liquid waste that is disposed of at the treatment plant. The information is transmitted to the Water office once a week for billing purposes. Due to the fact that we may process in excess of twenty septic trucks per day, it is essential that the scales be in good working order.



The previous scale was in operation over 30 years even though we had painted the structure several times, it had deteriorated in the areas underneath that were not accessible.



Water Distribution

Accomplishments: 2020

- Completed OEPA Lead and Copper Replacement Program Inventory.
- Renewed 147 water services.
- Maintained street and property maintenance.
- Installed 5 new water taps.
- Discontinued 18 old abandoned water services.
- Repaired 38 water main breaks.
- Replaced 7 Fire Hydrants.
- Repaired 17 Fire Hydrants.
- Completed 2020 annual fire hydrant flushing program.
- Painted 509 Fire Hydrants.
- Helped with 4th project, Line stops new valves etc.
- Leak detection, 70 miles of water main completed.
- Worked Valve Maintenance program, repaired 21 Valves, Worked 751 Valves, Replaced 9 Valves.



Goals for 2021

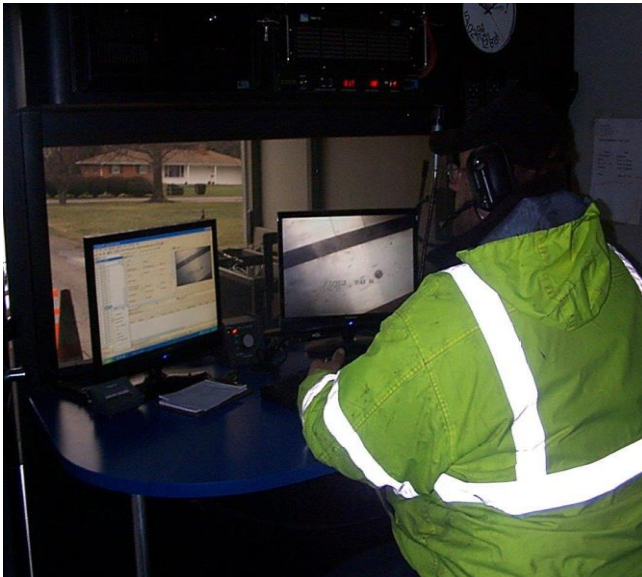
- Upgrade water main on Pierce Ave.
- Continue to upgrade old galvanized water services.
- Continue fire hydrant flushing in warmer months.
- Resume valve maintenance program.
- Continue valve and leak detection program.
- Continue high quality service to water customers of Newark.
- Reduce water loss.



SEWER MAINTENANCE 2020

Accomplishments

- Responded to 17 plugged sewer orders on city mains
- Responded to 50 plugged orders on owners.
- Televised 18.84 miles of sewer main.
- Cleaned 27.94 miles of sewer main.
- Inspected CSO overflows 67 times after rain events
- Manholes Worked, 71 repaired or replaced
- Manhole inspections 625 completed.



Goals for 2021

- Continue televising sewer mains to determine if repairs are needed in a effort to reduce the chances of catastrophic sewer failure.
- Complete upgrade of sanitary and storm lift stations with SCADA monitoring system.
- Continue to monitor for long term control plan.
- Continue with preventive maintenance work on manholes and sewers to provide customers with reliable and uninterrupted service.



SAFETY & TRAINING

Annual Report 2020

Safety continues to be an important part of our daily duties. Training whether done under the category of “Safety” or “Education” is tracked by this department. Training time is then logged as “contact hours” which are then used by employees to re-new individual job required OEPA licenses. During the first couple of months of 2020, the Division of Water and Wastewater made available a total of 13 contact hours per employee. In all, employees earned 412.5 creditable hours. Safety training accounted for 162.5 of the 412.5 hours.

In February we provided an Adult CPR and First Aid class. 32 employees participated and received CPR certification. Patrick Thompson did an excellent job teaching the class and everyone was very receptive to learning a skill that could save a life if called upon to do so in the future.



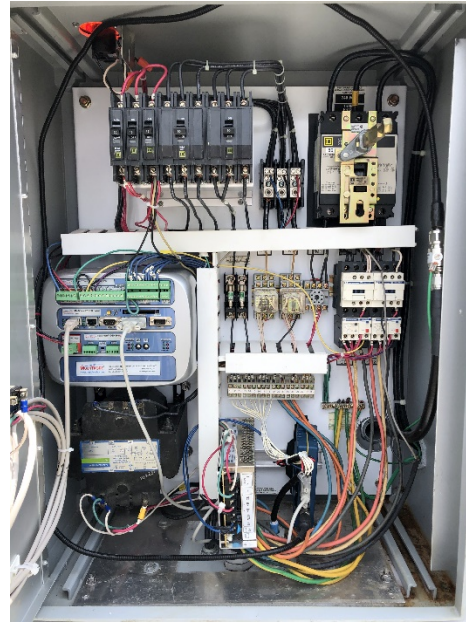
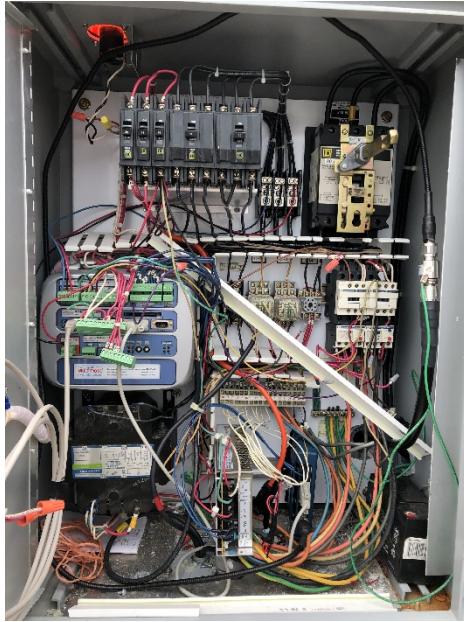
MSDS at Water Administration received a complete overhaul, including updating the existing information and adding new information. A digital copy was added to the M: drive and the paper copies received a new binder and station which was mounted on the wall in the lunchroom so all employees can access it when needed.



SAFETY & TRAINING

Annual Report 2020

Keith Doles (an Electrician from the Wastewater Treatment Plant) did a great job cleaning up some of our wastewater and stormwater lift station control panels. He was able to remove any unneeded wires, find loose connections, and organize the panel so that it is safer and it will be easier to troubleshoot any electrical issues in the future. Here are a couple of before and after pictures that show the increase in overall aesthetics, ease of troubleshooting capabilities, and definite improvement in safety.



With the introduction of the Corona Virus Pandemic in the early part of 2020, we were forced to temporarily put a stop to in-person safety meetings and webinars to meet social distancing requirements to proactively prevent the inner department spread of Covid 19. The last thing we want to happen is to have an entire department forced to quarantine because of a safety meeting. With that being said, it allowed our operators to utilize our online training provider Newark360Water.com to obtain the needed contact hours to renew their OEPA licenses. Through Newark360water.com, employees have access to a total of 81 courses that are site-specific to our Wastewater Treatment Plant, Water Treatment Plant, High Rate Treatment Plant, and Safety Training. This past year employees earned 250 hours of EPA-approved training from the use of this website.

A goal for 2021 is to incorporate remote safety meetings and webinars via Microsoft Teams for Water Distribution/Sewer Maintenance, Water Treatment Plant, Wastewater Treatment Plant, and Water Administration.

Human Resources

Over 30 Years of Service

Don Dyar	Water Plant	1977 & 11
Roger Loomis	Water Office	1985
John Kreager	Dist./Collection	1986
Randy McDaniel	Env. Lab	1988
Jon Moulton	Wastewater	1989
Trent Johnson	Meter Shop	1990
Nancy Taylor	WW Lab	1990

25 to 29 Years of Service

Jeff Krauskopf	Wastewater	1992
Bryan Curry	Wastewater	1993
David Wells	Distribution	1993

20 to 24 Years of Service

Joe Hickman	Water Office	75 & 06
Jeff Postle	Distribution	1996
Paula Glosser	Water Office	1996*
Andrea Beichler	Water Office	1997
Lori Bane	Water Office	1997*
Ed Metzger	Water Plant	1997
Catherine Austin	Water Office	2000
Keith Hampshire	Water Plant	2000

15 to 19 Years of Service

Mary Hull	Water Office	2001*
Clint White	Wastewater	2001
Jay Fisher	Wastewater	2002
Drew Forgrave	Dist/Collection	2003
Bill Charles	Water Plant	2004
Jeremy Moore	Distribution	2004
James Robb	Collection	2004
Angela Reischman	WW Lab	2004
Trophy Iler	Water Office	2005*
Shawn Wagner	Water Plant	2005
Jay Fisher	Wastewater	2005*

10 to 14 Years of Service

Mark Patznick	Water Office	2006
Josh Wilson	Dist/Collection	2006
John Lee II	Water Plant	2007
Leslie Redman	Water Office	2007*
Kevin Rodenizer	Distribution	2008
Patrick Thompson	Collection	2008*

Avg. Age as of 1/2020 – 48.65

Avg. Years of Service with the City – 14.46

*includes service time outside

Division of Water and Wastewater

2020 Retirements

Stan Vinning	Wastewater	1974
Elizabeth Beckman	Water Office	1995*

