



In December, UMJA was the cover story of Municipal Sewer & Water Magazine

Municipal Sewer and Water Magazine is designed for sanitary, storm and water system maintenance professionals in the United States, Canada and Mexico.

The December article featured UMJA's comprehensive overhaul of our wastewater collections and treatment systems, and the associated reduction in our Infiltration & Inflow (I&I) and Sanitary Sewer Overflows (SSO)



Check it out!

If you'd like to read the full article, direct your smartphone's camera to the code on the left and click the link that pops up!

UMJA's Community Communications was featured in the Pennsylvania Municipal Authorities Association (PMAA) bi-monthly magazine.

The Authority is PMAA's publication for PMAA members from authority managers to solicitors, from board members to engineers.

The article, written by Executive Director Jennifer Leister, highlights UMJA's priority and passion for providing exceptional communication to the community we serve.



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MEMBER COMMUNICATIONS

Serving Our Community Through Communication

by Jennifer Leister, Executive Director, Upper Montgomery Joint Authority

Here at the Upper Montgomery Joint Authority (UMJA), we pride ourselves in providing exceptional communication with the community we serve. We recognize how important open communication with our residents is to maintain a positive relationship. We currently serve just over 3,500 customers, with a total population estimated around 8,300. To reach as many of our residents as possible, we use various tools to communicate.

The Authority began publishing newsletters every spring and fall in early 2020. These newsletters are mailed directly to every customer as well as published online, to ensure every resident is reached. The newsletters consist of a message from the Board of Directors, Executive Superintendent & Operators. Additionally helpful tips for customers & yearly statistics are included in the newsletters. The Upper Montgomery Joint Authority recently completed a 29-million-dollar upgrade at the treatment plant and is currently working in collections systems to remediate main sewer lines, manholes and service laterals. We have found that newsletters are a great way to keep customers up-to-date on all the work that is being completed. Other printed publications available at the UMJA office and online

include brochures on Water Conservation, Bio-Solids, Fats Oils & Grease, and Sump Pump and Illegal connection pamphlets. We have also created banners and posters which are on display during open house and community events.

Another form of communication UMJA uses is our website and social media. Our website is updated frequently under the "News" tab. If residents would like to subscribe, they will be emailed every time a new post is created. We often post alerts to notify residents when work is scheduled in collection systems, if there is an office closure or any major change or event that would affect our customers.

During a recent billing upgrade, UMJA launched a customer portal which allows customers to access their account information online. Customers are now able to see previous years account history, consumption history and schedule payments.

The Authority has also partnered with numerous organizations. In combination with the Upper Perkiomen School Districts we have worked with Art & Science students and participated in a trout release. The UPSD Art Students have completed numerous paintings on manholes throughout the plant. The artwork which art students

completed were on our Facebook the recent open house hosted. UMJA staff pleasure of giving students at UPSD plant. There were completed during of June. In May Staff attended a which was co-PA Fish and Bo and PA Trout U students at He School (UPSD) the egg stage to fingerlings handed out a coloring work and discussed is treated.

In conjunction Delaware Estu. of Natural Sci. University and participating in Mussel propagat. The Authority's bypass tank is to into a freshwater to raise mussels. will then be able mussels in local a. The Authority is al to participate in the wildlife festival at Park where we will out biosolids ferti produces and prov fertilizer that can be lawns and gardens.



MARCH 2023

SPRING NEWSLETTER

UPPER MONTGOMERY JOINT AUTHORITY



UMJA: Award-Winning Wastewater Treatment Plant

The Upper Montgomery Joint Authority was recently awarded three recognitions through the Eastern Pennsylvania Water Pollution Control Operators Association (EPWPCOA).

Excellence Award for Plant Operations and Maintenance - 2.0 MGD or More

This award recognizes facilities for their outstanding performance in operations and maintenance. This award is in honor of Walter J. Daly for his involvement in the water pollution control field for more than four decades.



Innovations Award

This award recognizes an individual who has demonstrated a unique & innovative approach to treating wastewater or to solving a problem at a plant including collections systems.



Safety Award Class II - 9 or More Employees

This award recognizes facilities/systems which have demonstrated excellence in the development and implementation of safety programs.

Director's Message

The UMJA wastewater treatment plant (WWTP) is permitted for an average daily flow of 2.0 Million Gallons per Day (MGD). The actual hydraulic design capacity is 2.77 MGD, but it is not uncommon for the WWTP to experience peak flows in excess of 11 MGD during heavy wet weather events.

In 2010, the Department of Environmental Protection (PA DEP) determined that the UMJA WWTP was hydraulically overloaded due to excessive Inflow & Infiltration (I&I). In 2012, UMJA submitted a Corrective Action Plan to PA DEP, which included plans for I&I abatement work throughout the collection system. UMJA then purchased equipment to begin making repairs in its system. In 2013, UMJA began its program of flow metering, televising, CIPP repair work, and lateral repair work and began planning to make substantial updates to the WWTP.

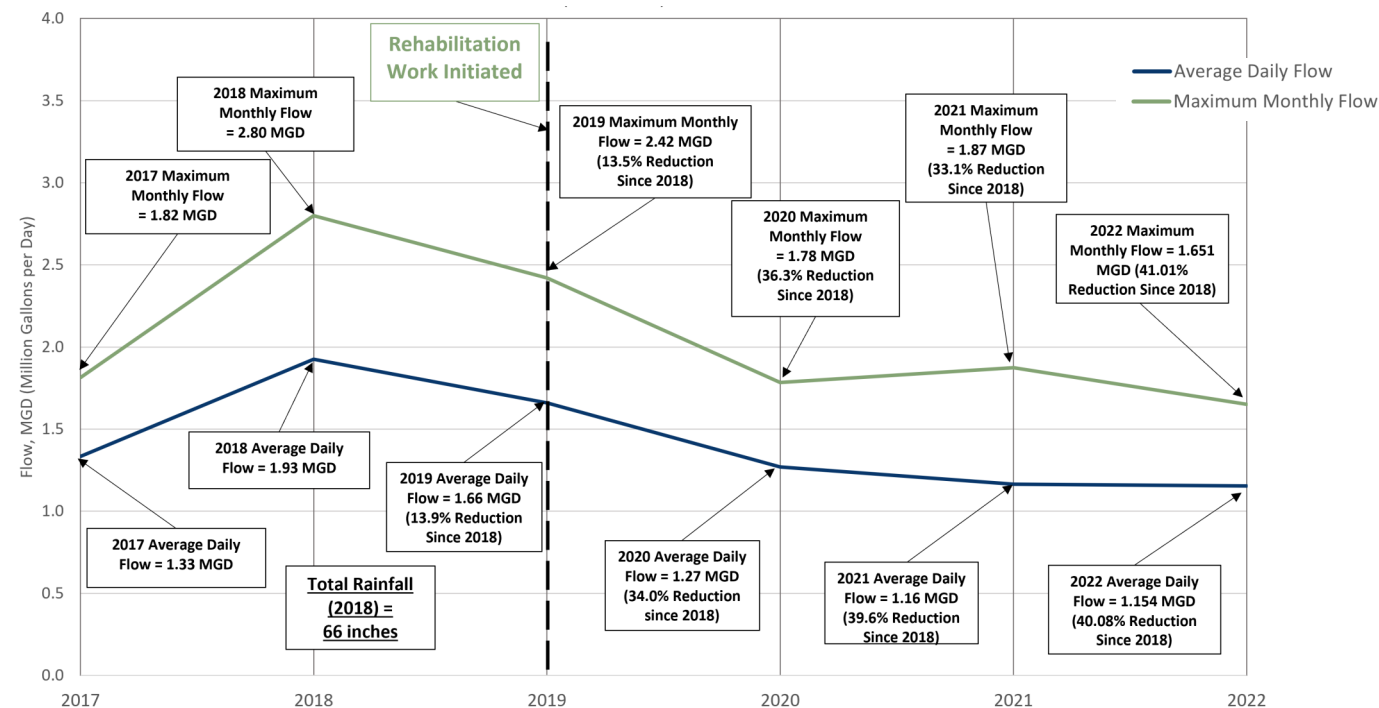
UMJA has undertaken an intensive I&I abatement program, particularly since 2018. We've expended a total of over \$7.64 Million to date on our collection system in order to resolve wet weather I&I and to make the WWTP more efficient and operationally effective. In 2021-2022 alone, over \$3.4 Million was expended and/or allocated to sewer rehabilitation work within the collection system. Some of the work completed today is listed below. This work continues in the collection system and also includes flow metering and smoke testing.

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Linear feet of 8" and 10" di. sewer main has been CIPP lined.	Laterals have been CIPP lined.	Linear feet of main line and laterals have been televised.	Manholes have been lined.	Manholes have been raised to grade in low-lying areas.	Properties have been inspected for illegal connections.

The flow summary below outlines the changes in plant flow as a result of these efforts. In particular, the average daily flows decreased from **1.93 MGD** in 2018 to **1.15 MGD** in 2022, which is primarily due to these substantial abatement efforts. Between 2019 and 2022, approximately \$7.64 Million spent produced an overall **40% reduction** in average daily flows. Furthermore, the *maximum* daily flow decreased significantly from **2.42 MGD** in 2019 to **1.65 MGD** in 2022, a **41% reduction** in *maximum* daily flow due to I&I abatement efforts.

Due to our extensive I&I reduction efforts, the WWTP was able to eliminate its wet weather bypassing operations and treat all wastewater influent to the WWTP. Overall, the WWTP has experienced a **40% reduction** in average daily influent flows since 2018 and over **40% reduction** in maximum monthly flows since 2018.

WASTEWATER TREATMENT PLANT FLOW SUMMARY (2017-2022)



Operator's Corner



EPIDEMIOLOGICAL STUDY

Beginning in February, UMJA is participating in a Covid-19 epidemiological study taking place throughout Pennsylvania.

Samples will be collected from our untreated influent and sent to Biobot, a facility located in Massachusetts known for its analytics in wastewater pathogens. Because individuals shed viruses in fecal matter, this facility can test the samples to detect the levels of SARS-CoV-2 present. This allows for detection without citizens showing symptoms.

The purpose of these tests is to provide information to public health professionals to determine the extent of the ongoing Covid-19 pandemic. Levels of the pathogen in the wastewater could help determine which county is experiencing the worst influx of Covid-19, which could help to mitigate the outbreak.

UMJA will continue to monitor the results sent to our facility by Biobot. We are trying to do our part for the safety of the community. Hopefully this program will allow more understanding of the virus and outbreaks.



MAINTENANCE SOFTWARE

Protecting UMJA's Investment through maintenance software.

Prior to the \$27 million upgrade, the staff at UMJA implemented a maintenance program called eMaint. eMaint is an award-winning Computerized Maintenance Management System (CMMS).

This program was put in place early to allow our staff time to learn the ins and outs of the program, and allow for the proper integration of the new process equipment as it went online.

Today the program has over five hundred individual assets that range from the treatment plant to the collection system. And to this date, UMJA staff have completed over five thousand individual work orders that generate daily.

UMJA's Operations and Maintenance staff strives to protect the investment that the Authority and its rate payers have made.



UNDERSTANDING INFILTRATION & INFLOW (I&I)



I&I can overload our sewer system causing overflows of raw sewage, reducing the level of treatment at our plant and causing an increase in operating costs. **INFILTRATION: Groundwater entering the sewer system** through defects in the piping system such as: broken sewer laterals, root intrusion into laterals, and leaky sewer lateral connections. **INFLOW: Surface water entering the system** through: manholes, flooded sewer vents, storm drains, sump pumps, rain gutters, downspouts, or cleanouts.