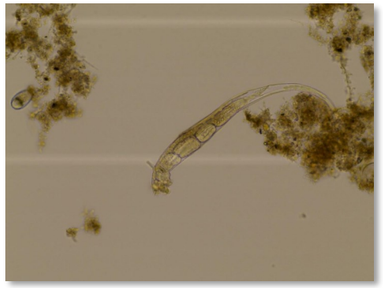
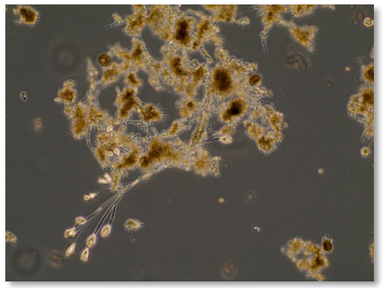
In the Lab...

Activated Sludge is the process of treating wastewater using a biological reaction that involves microorganisms and oxygen. The activated sludge is a brown mud-like substance that is mixed with the incoming wastewater in the aeration tank. We call this “Mixed Liquor”.



It then goes through a series of aerobic (with oxygen) and anaerobic (without oxygen) chambers. These chambers allow the microorganisms to react with the wastewater and remove/ break down certain chemicals and pollutants from the water, including pathogens (microorganisms that cause disease), Ammonia, and Phosphorous.



The mixed liquor is then settled in large tanks called clarifiers. The activated sludge thickens as it settles to the bottom, while the clear liquid stays on the surface. This liquid is further treated before discharge into the reservoir. The settled activated sludge from this process is then pumped back into the aeration tank, to start the process over again. Because the sludge has living microorganisms, some of the sludge will have to be removed to allow for a healthy system. The sludge being removed gets pumped into our digesters. The digesters are large tanks used to hold and stabilize the microorganisms before the requirements for land application are met.

UMJA Biosolids

Upper Montgomery Joint Authority has received the “**2024 Beneficial Use of Biosolids Award**” from the Pennsylvania Water Environment Association for demonstrating exemplary management practices related to biosolids treatment and recycling.

The Biosolids award was established by PWEA to acknowledge extraordinary facilities in the area of biosolids management and compliance with PA DEP regulations

Biosolids are defined as the decomposed solid waste after sewage sludge has been treated chemically and organically at the treatment plant. The resultant biosolids are rich in nitrogen (fertilizing component) and are safe for use in both landscaping and agriculture applications.

In the Newsfeed...

Upper Montgomery Joint Authority

Congratulations to Marie and Sam on their 5 year anniversaries, and Jason on his 10 year anniversary with UMJA!

Check out our Member spotlight article in “The Authority”. Highlighting our after school program with students from Upper Perkiomen Highschool.

Pages 19 and 39

The Perkiomen Watershed Conservancy Summer Camp kayaked over from Green Lane Park to the plant to learn about our process.

OCTOBER 2024

FALL NEWSLETTER

UPPER MONTGOMERY JOINT AUTHORITY

National Weather Service

Did you know that the Upper Montgomery Joint Authority plant location has been part of the National Oceanic and Atmospheric Administration since 1963?

20 Years of Service
Gregory Young

10 Years of Service
Jennifer Leister

10 Years of Service
Jason DiPietro

Bird Town Partnership

UMJA is proud to announce that we are joining forces with Red Hill Borough by partnering with Bird Town Pennsylvania.

Bird Town is an all-volunteer organization that provides a network and resources for residents to create a healthier ecological space where they live. Their mission is to promote community-based conservation actions to create a healthier, more sustainable environment for birds, wildlife and people.

Bird Town coordinate with municipal leaders to engage in many programs such as habitat restoration, renovation of parks and public spaces, and the removal of invasive plants. They work with the community to educate and develop science programs, pop-up gardens, community bird walks, backyard habitat recognition programs, and bird feeding tips.

UMJA staff and visitors will be recording the bird sounds that are seen and heard around the reservoir and reporting them to the Cornell Lab of Ornithology using the Merlin Bird ID.

Download Merlin Bird ID Here

We look forward to our new partnership and living up to our mission of maintaining an environment that protects the health, well-being and quality of life of our residents within the Valley.

Stay tuned for details about our community events!

A Message From The Board

As the Upper Montgomery Joint Authority continues to battle aging infrastructure in collection systems, illegal connections, and storm water, as well as the rising cost of materials, the authority has found that a rate adjustment was necessary.

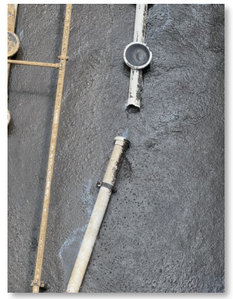
This rate adjustment will help ensure the reliability and sustainability of the authority. As utility costs throughout the industry continue to rise, The Upper Montgomery Joint Authority board is committed to managing these costs while staying efficient, in addition to upholding UMJA's commitment to a sustainable future.

The new rates went into effect for all bills due after June 1, 2024. The base rate has increased from $131.71 to $135.66 per EDU unit. The consumption charge has increased from $6.00 to $6.18 per 1,000 gallons. The consumption charge is intended to recover those costs that do change with flow. For customers that have a well and are non-metered, the rate increased from $256.35 to $264.04. We will continue to make every effort to contain our costs and keep our rates at the lowest level possible.

Annual Aeration Cleaning

UMJA's Biological treatment is completed in two 550,00 Gallons tanks making up 1.1 million gallons of treatment.

Every year during dry weather UMJA staff drains one of these tanks to clean and inspect all of the critical components. The process of draining and cleaning these tanks can be a tall task for the operational staff. This process requires draining the tank completely and having all of the excess sludge via Vac truck. Once that sludge is removed it is hauled off sight to be processed. The cost to clean one side of the tank costs the authority $20,000 per year. Once the tank is cleaned and evaluated, it is filled with clean water and put in standby until the winter when it will be returned to service.



Photos taken after taking tank offline for routine service. Notice a break.

UMJA Spotlight : Trenchless Technology Magazine

Scan for Full Article

The Upper Montgomery Joint Authority serves approx. 8,300 wastewater customers in the boroughs of Red Hill, Pennsburg, East Greenville, and parts of Upper Hanover Township. The authority owns and operates a sanitary sewer collection system and a wastewater treatment plant which is permitted for an average daily flow of 2.0 million gallons per day (MGD). The plant's actual hydraulic design capacity is 2.77 MGD, but it often experiences peak flows exceeding 15 MGD during heavy wet weather events.

Since being established as hydraulically overloaded, UMJA has made significant strides in infrastructure improvements at both the treatment plant and throughout the collection system. This includes substantial upgrades to the wastewater treatment plant, culminating in a $28 million upgrade in 2022, costing over $10/gallon to construct.

The result of this program is that overflows within the collection system – both from an intensity and volume standpoint – have been greatly reduced. The I&I reduction efforts may have saved UMJA millions in additional construction costs, as well as the treatment costs associated with treating the additional 850,000 GPD of wastewater. The rehabilitation work has essentially paid for itself and will continue to do so, by reducing pumping, treatment, chemical, and energy costs in addition to allowing for future development for many years to come.

Operations Corner : UMJA Lateral Inspection Process

What is a sewer Lateral Inspection?

A sewer lateral inspection is a video inspection of the pipe that connects your home's plumbing to the city's main sewer line. During the inspection, an inspector will look for cracks, scaling, sags, clogs or other damage in the sewer line.

Why is it important?

A sewer lateral inspection can help prevent sewage backups. A backup can lead to property damage and potentially health and safety concerns. Untreated issues may grow, which could result in high cost repairs.

When does UMJA require a Sewer Lateral Inspection?

An inspection is required within a year from buying, selling or transferring a property in any of the three boroughs. Inspections can also be preformed upon request by the authority.

How It's Done

Step 1: Property Inspection

A full property inspection is done to verify that no downspouts or sump pumps are connected to the sewer system. During this inspection the clean out is located and the cap is removed.

Step 2: Pipe Cleaning

The lateral is then cleaned with a high pressure jetter. This allows the inspector to remove any heavy debris and scaling from the pipe to get a clear view to ensure any issues are found.

Step 3: Video Inspection

Once the lateral is clean this allows the inspector to insert a push rod camera to view the pipe. The pipe is inspected from the clean out to the house and from the clean out to the main sewer line to ensure every inch of the pipe is inspected.

Step 4: Detailed Report

During the video inspection the inspector fills out a detailed report that includes pipe condition, pipe material, total lengths, and any deficiencies found during the inspection. All operators who conduct lateral inspections are NASCO certified.

Step 5: Final Review

UMJA staff have a total of 40+ years of experience with sewer lateral inspections. The final inspection report is reviewed by this team and if it fails the homeowner is given a detailed description of the issues and how to resolve the problem.