As The Derry Township Municipal Authority Finds New Ways To Use Waste For Energy, IntermixIT Is Establishing Sustainable Technology Initiatives In The Organization

Company Name:
Derry Township Municipal Authority

Name & Title:
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Location:
Hershey, PA

Website:
DTMA.com

Industry:
Public Services

The year 2023 was a record-breaking growth year for the biogas industry. In the United States, there are 2,251 biogas projects currently underway. These projects, which process organic waste—think food waste from grocery stores, restaurants, and hotels—are leading the conversation on how to reduce the amount of food waste in landfills and produce energy in a renewable way. In Hershey, Pennsylvania, the Derry Township Municipal Authority (DTMA) is showcasing just how effective biogas initiatives can be on a local level.

Both a wastewater and stormwater service provider to nearly 20,000 residents in Hershey and surrounding municipalities, DTMA often plays a behind-the-scenes role, but it's time to bring waste-processing innovation into the limelight. "We accept food waste from local grocery stores that's processed off-site by a third party and hauled to our facilities. It's then mixed with the municipal sludges for co-digestion in the egg-shaped anaerobic digester. This process produces methane—a biogas—which is utilized on-site as a renewable energy source to fuel a combined heat and power (CHP) cogeneration system, which in turn, offsets our energy costs entirely," explains Bill Rehkop, the Executive Director of DTMA. "In the wastewater treatment industry, self-sustaining operational plants are more commonly referred to as resource recovery facilities instead of wastewater treatment facilities because of our role in the circular economy approach to water reuse and material and energy recovery."

Accustomed to working at the forefront of facility management and wastewater engineering, Bill spent his first four years at DTMA as the Facilities Director, overseeing the technical and operational functions of the organization to include

implementation of design and construction projects. When he stepped into his current leadership role in 2020, overseeing IT was a new responsibility in his day-to-day oversight. "We had one in-house IT employee, and I very quickly realized that IT projects, such as cyber and infrastructure security needs, were not being addressed. Project deliverables were behind schedule, and in a space that's constantly changing like IT, we needed to improve upon our vulnerabilities and begin implementing solutions to protect and reduce our risk posed by malicious cyberattacks," shares Bill.

So, in late 2022, the DTMA engaged with IntermixIT to perform a penetration test on its network infrastructure and security. "The goal of this testing," says Bill, "was to simulate what a hacker could gain access to when someone in our organization is phished. They were able to get through our firewall, circumvent our VPN, and access all the files on our network." It wasn't long before Bill made the decision to contract with IntermixIT to provide complete IT support services for DTMA. In less than a year, the impact of IntermixIT has been astronomical.

FROM BUDGETING TO IMPLEMENTATION

For so long, DTMA had one in-house IT employee, and while there was a lot of familiarity with that model, there was also a lot of risk. "I kept thinking, what happens if the IT employee leaves abruptly and we don't have redundancy or a backup plan? I don't know the access passwords, and I'm not familiar with the network infrastructure. The organization would be in a bad spot immediately," Bill says. "Now that IntermixIT is fully engaged, the organization has full redundancy and backup support, and IT ticket requests are resolved typically within hours. As for larger projects, such as infrastructure improvements, they have a team of IT experts and engineers to assist in planning, budgeting, and implementation."

The budget process—everyone's favorite activity—was completed just a few months ago. IntermixIT got down to brass tacks with prioritizing IT upgrades in 2024. How much does a firewall replacement cost? What will it cost the organization, from a professional services and hardware perspective, to complete a server replacement project? With all those questions answered from the start, DTMA was able to step into 2024 with a solid plan in place and hit the ground running.

"We're a few months into the year and we're already ahead of schedule with our IT projects," Bill says with a bit of shock. "It's a significant culture change for us, honestly. We've entered into the modern day of technology with upgraded software and devices." Even things that seem simple—such as implementing Microsoft 365—have made a massive difference in the last year. "The way we engage internally is so much smoother and efficient," notes Bill. "The other day, inclement weather was forecasted, and I was able to communicate a delayed start over Microsoft Teams instead of contacting our entire staff by e-mails or phone call."

CYBERSECURITY FROM THE GROUND UP

When most people think of wastewater treatment plants, cybersecurity isn't something that crosses their minds. In fact, it's rare that people do much thinking about wastewater plants at all. Most people flush the toilet and never think of their waste again. But there's been an increase in the number of cyberattacks on water and wastewater treatment plants and other government-run agencies in the United States. The water and wastewater treatment industry relies on digital technology for facility monitoring and controls automation. Hackers can take over the systems, pollute the water, inject high levels of chemicals into the area, and more, causing harm to the surrounding populations and ecosystems. The Cybersecurity and Infrastructure Security Agency (CISA) and the Environmental Protection Agency (EPA) have developed a toolkit to assist water and wastewater systems in proactively assessing and developing cybersecurity strategies.

When IntermixIT conducted the initial cybersecurity test, there was a chain reaction of certain events. "We actually lost our cybersecurity insurance coverage momentarily because we weren't using two-factor authentication," says Bill. Today, most cybersecurity insurance providers require a minimum threshold of protection mechanisms before they'll provide coverage to businesses, and two-factor authentication is non-negotiable. With a weakened system and lapsed insurance policy, DTMA needed IntermixIT to kick it into high gear and help the organization get back on track.

"In less than a year, Intermix IT has turned around our IT infrastructure completely," says Bill. "We now have insurance coverage again, our network security is top-notch, and our most critical hardware has been updated. Having IntermixIT lead the way on IT allows our organization to focus on our core mission of providing a reliable service to our community."

ENERGY EFFICIENT AND OPERATIONALLY EFFICIENT

"I can't say enough about how we've improved as an organization from an efficiency standpoint," Bill admits. Because his staff aren't waiting around to get the resources they need, they're able to continue pushing the envelope when it comes to innovation in wastewater and stormwater management. To DTMA, organizational efficiencies directly support the energy efficiencies that are changing the conversation around waste processing in the US.

Both DTMA and IntermixIT are accustomed to operating in the background. Not many people spotlight waste management, and those same people often forget about IT entirely. But it's powerful forces in the background that make all forward progress possible. Together, DTMA and IntermixIT are forging a secure, sustainable path forward in Hershey and beyond. ∎