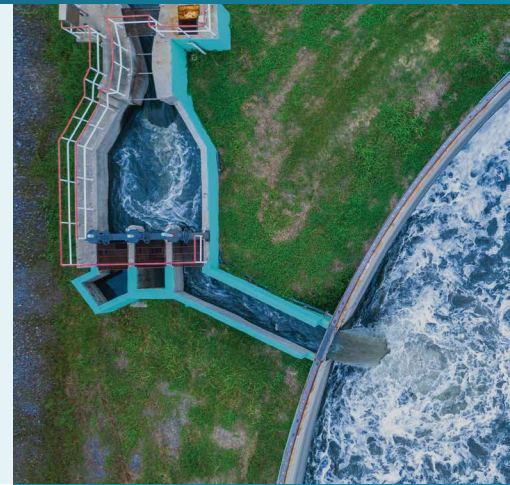# MultiConnect Routers Advance Wastewater Technologies

Protecting Public Health with Data Solutions for Wastewater Management

We don't often think about how the wastewater in our cities or municipalities is handled. Many citizens assume that wastewater disappears forever. However, as those in wastewater management know, this is not the case. Concerns about hygiene and public health have raised concerns about wastewater management solutions. Wastewater technologies need to ensure effective, zero-risk wastewater processing.

Receiving real-time and accurate data from the IoT sensors in wastewater treatment facilities is essential to controlling your systems and assessing the quality of the water at your facility.

A wastewater treatment facility recently reached out to USAT for assistance in engineering and installing a networking solution to obtain better data. We were asked to make certain that this facility had always-on connectivity to monitor and assess the processing of wastewater.

Protecting your municipality's wastewater from contamination is not only critical to public health, but ensuring that you don't break any local or EPA regulations. With our data solutions, you can continuously monitor and assess processes for improved workflow and operations.

The Challenge | Maintaining Internet Service Throughout Your Wastewater Facility

The biggest challenge by far in monitoring your wastewater system is maintaining consistent data communications throughout the entire treatment process. Leveraging the information from the IoT sensors and devices in your system is of critical importance.

They enable you to proactively address breakdowns in your treatment process and keep the public protected. But what happens when your facility lacks reliable Internet service at certain sites? What happens when your primary Internet Service Provider (ISP) loses coverage?

Per the McKinsey & Company report regarding the Bipartisan Law, much of our nation's water and wastewater infrastructure was built in the 1970's and 1980's. On average, 14-18 percent of total daily treated potable water in the United States is lost through leaks. Which is even more impactful as the demand for healthy drinking water has increased.

Strategically placed IoT sensors monitor pressure flows within pipelines, water levels in storage tanks, chemical processes and more. Each of those sensors that help reduce water loss and improve operational efficiencies depend upon connectivity to properly function and report real-time data.

When you can't rely on your primary ISP for dependable connectivity, you need a wireless broadband solution that gives you the always-on connectivity upon which your systems depend for continuous operation.

The Solution | Ruggedized Routers and Antennas Paired with Expert Engineering Services

USAT specializes in designing and deploying wireless data communication solutions, for water and wastewater utilities across the USA — complete with implementation, training, proof of concept *(POC)*, system auditing, and RF site surveying services as paired with the availability for short and long-term engineering maintenance contracts. We not only help you select, provision, and activate devices, we make sure they work in practical applications and real-life situations.

One of the devices we recommend to overcome the aforementioned challenges, is the MultiConnect rCell 100 Series industrial router — optimized for machine-to-machine (M2M) and Internet of Things (IoT) applications. They offer both a serial and Ethernet interface platform as well as optional Wi-Fi, Bluetooth, and Cat M1 connectivity options.

Using the rCell router, the wastewater facility that partnered with us was able to provide continuous connectivity to locations where conventional Internet coverage didn't extend. Many of the locations where our client needed Internet connectivity were not (and could not easily be) equipped with wired hardline Internet after conducting feasibility and affordability analyses.

Industry Profile

- Wastewater Utilities
  - Water Treatment Facilities
  - Sewer and Drainage Lines
  - Water Reclamation

Technology Solutions

- MultiTech rCell 100 Series
- MultiTech DeviceHQ
- mPower Edge Intelligence
- Mobile Mark LTMG402

Targeted Results

- Rugged and Reliable Devices
- Real-Time Sensor Data
- Lower Power Wide Area
- Easy Use and Integration
- Remote Management
- Cost Savings and ROI

USAT delivers public and private wastewater utilities the end-to-end communications solutions they need to support their mission-critical water treatment and reclamation operations.

MultiTech rCell 100

Mobile Mark LTMG402

Paired with Mobile Mark LTMG402 antennas that contain four separate antennas, all in one compact and extremely durable antenna housing, it's a great match for the rCell 100 with two LTE antennas, one dual-band WiFi antenna, and one GPS antenna.

LTE MIMO modems like those in the rCell 100 offer greater speed and capacity than earlier modem generations. They achieve this by sending RF signals on multiple antenna elements to maximize the amount of information transmitted and received.

MultiTech's embedded mPower Edge Intelligence, managed via their Device HQ, and with coverage enhanced by rugged antennas from Mobile Mark (like the LTMG402), the rCell presents a complete data connectivity solution that is well suited for wastewater utility applications.

The Results | Reliable, Secure, and Cost-Effective Solutions for Maintaining IoT Devices

The wastewater treatment facility found that leaks were detected sooner, significantly reducing water loses. They were also able to observe a sizable decrease in the number of truck-rolls and site visits to fix breakdowns in machines and processes.

With MultiConnect rCell routers many of the issues that used to require manual maintenance can now be addressed remotely. This saves time and increases your facility's ROI.

Better response times and expedited corrections to machines increased customer satisfaction and confidence in this municipality's water supply.

The Team | Device Provisioning, Activation and Installation Services

USAT serves the nation's critical infrastructure by creating secure communication networks that pass data wirelessly between key systems — linking remote facilities, personnel, and machine assets for fixed and mobile applications within both rural and urban environments.

USAT is a premier channel partner of MultiTech, the manufacturer of the best-in-class rCell Series routers. We have over 25 years of experience providing connectivity solutions to government entities and private enterprises that operate wastewater treatment facilities.

Committed to remaining at the forefront of technology-driven data communications solutions, we are your wastewater utilities' best choice to custom engineer the public and private *(4G, 5G, CBRS, and PLTE)* wireless connectivity solutions your organization needs.

CONTACT US TODAY TO ENGINEER RELIABLE COMMUNICATIONS SOLUTIONS

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