



Monitoring stream levels for resident safety in Denville, New Jersey

Overview

The Township of Denville, New Jersey, is in Morris County and is home to almost 17,000 residents. In recent years, the area has been experiencing large amounts of flooding from heavy storms that hit the area. To ensure that all residents remain out of harm's way, they needed to find a level measurement solution for monitoring the water levels of local streams and dams.

Finding a level measurement solution for resident safety

With Denville experiencing more flooding in the area, the Office of Emergency Management (OEM) and the Department of Public Works decided to be proactive when monitoring local water levels. The safety of the residents is the top priority of the two offices, and finding a solution before the rainy season was important.

As the town is widespread, they needed to find a level measurement solution that not only provided them with accurate and reliable results, but also allowed them to remotely monitor the water levels at various locations. The ability to monitor various streams and dams at one time would allow teams to respond quickly to the residents and let them know if they need to evacuate before the water levels got too dangerous. At the time, the only way the teams were able to review the water level was from a large measuring board with level marks. This was not the safest nor easily viewable solution to have in place when you want to provide residents with flood information sooner rather than later.

Understanding that they needed to find a better solution for their residents, the two local departments reached out to their local municipal Pulsar Measurement representative, Miller Energy, to find the right solution.

Remotely measuring local water levels with a dBi and SignalFire RANGER

Miller Energy knew that the township needed to remotely monitor their level and that having these measurements easily accessible was ideal. Whatever solution they recommended also needed to have the ability to alarm once the water level



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DPW, Denville, New Jersey

reached 6 feet. If the solution could alert the team on their phones that this level was reached, it would provide enough time to communicate with residents on how they should stay safe. With these specifications in mind, Miller Energy recommended Pulsar Measurement's dBi HART and a telemetry system from SignalFire, the RANGER.

Why use these solutions for the level application?

The dBi HART sensor and SignalFire RANGER are a great pair for remote water level monitoring. The SignalFire RANGER will provide power for the dBi allowing it to measure the water level and the RANGER will also report a high-level alarm if the water level reaches the 6-foot critical mark.

It was suggested that the city use the dBi HART sensor for the application, and the best location for installation was 6 inches away from a major bridge structure in the town. The Digital Adaptive Tracking of Echo Movement technology (DATEM) embedded in the dBi allows the system to focus on the water level and ignore any obstructions that could be coming from the bridge. The Pulsar Measurement PC Suite software was used to adjust parameters on setup, and can also be used for echo profile viewing or saving and uploading configuration parameters.

The SignalFire RANGER cellular wireless telemetry system is a cost-effective, reliable, and easy way to deliver sensor data where you need it. SignalFire's system requires no trenching or cabling, greatly reducing installation cost and time. Once the RANGER transmitter is connected to your sensor, your system is powered and ready to deliver data directly to the cloud, where you can easily access it from your laptop, PC, or mobile device and start realizing the potential of insight.

Success with two level measurement solutions.

The pairing of the dBi and SignalFire RANGER is the first multiple remote level package that Denville is installing on their waterways, and it has been nothing but a positive experience since having them installed. They were able to set it up at the point they needed and have the alarms set to 6 feet for the safety of their residents. The OEM and Department of Public Works were pleasantly surprised with the simplicity of the solution. After they had the product installed, they said, "Wow! That was quick! Is that all we needed for setup?" Miller Energy is happy to have not only provided a simple solution but keep people safe with a great solution.

More Information

dBi HART: <https://pulsarmeasurement.com/dbi-hart>

SignalFire RANGER: <https://www.signal-fire.com/lte-m1-cellular-products/ranger-node/>

Miller Energy: <https://millerenergy.com/>



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