

Sewerage and Water Board of New Orleans

Water utility management to avoid flooding in a city below sea level



PROJECT AT A GLANCE

Project Type

Water utility management

Location

New Orleans, Louisiana

Service Area

Entire city of New Orleans

Applications

Monitoring rainfall intensity, movement and rates to determine drainage needs and power generation for drainage operations

Equipment Installed

MxVision WeatherSentry® *Water Utility Edition*

CUSTOMER BENEFITS

- Real-time weather conditions
- Forecasts up to 15 days in advance
- Consultation with a team of experienced meteorologists 24/7



The Sewerage and Water Board of New Orleans is the water utility serving every household in the New Orleans city limits. The water utility is responsible not only for water treatment as well as sewer and wastewater disposal, but also drainage operations throughout the city.

Challenges

With the majority of the city below sea level, the city's topography in the Mississippi River Delta creates a unique set of challenges for the operations of the water utility. Due to the city's low elevations, rainwater must be pumped out through a network of drainage systems strategically placed throughout the city to avoid flooding. According to Eric Labat, supervising power dispatcher for the Sewerage and Water Board, more than 90 percent of the rainfall that occurs in New Orleans requires some amount of additional pumping. The pumping system

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Eric Labat, supervising power dispatcher for the Sewerage and Water Board

has the capacity to evacuate an inch of rain within the first hour and a half-inch of rain per hour thereafter throughout the city. Even minor rainfall can require the need to activate the pumping system.

The drainage pumping system is run by power generated by the water utility, which requires an additional expense for the operation of the equipment and additional personnel to monitor the activity. Staff monitors 24/7 in anticipation of scheduling generated power to meet the demand of drainage pumping operation.

New Orleans receives on average about 64 inches of rain annually. Tropical weather events are of particular concern to the water operations in New Orleans. These events are often accompanied by heavy, rapid rainfall.

Solution

Accurate rainfall forecasts are vital to manage both costs and manpower to operate the drainage systems. The Sewerage and Water Board has relied on Schneider Electric's MxVision WeatherSentry *Water Utility Edition* for more than 25 years.

MxVision WeatherSentry provides real-time weather conditions as well as accurate, detailed local forecasts based on proprietary forecasting systems and experienced meteorologists. Conditions can be forecast up to 15 days in advance, with hourly outlooks for the first three days. Schneider Electric's precipitation forecasts were ranked number one in the industry for the sixth consecutive year by ForecastWatch.com. The City of New Orleans also subscribes to consultation services, which gives the utility the ability to consult with Schneider Electric's team of experienced meteorologists 24/7.

The Bottom Line

Labat's team watches Schneider Electric's radar 24/7 to monitor rainfall intensity, movement and rates to help determine drainage needs, power generation for drainage operations and staffing. All of the city's rainfall must be managed through the pumping system operated by the utility. Having accurate rainfall forecasts is key to determining when to initiate the pumping systems and bring in the extra staff required. Operating the pumping system requires additional resources, from dollars to manpower, and accurate forecasts ensure that those resources are used wisely and appropriately.

Post-Hurricane Katrina, local and state governments as well as local media pay particular attention to the operations and responses of city utilities, and information, data and graphics become very important to the utility both during and after any storm events. Labat's team frequently uses the 24/7 consulting services during tropical weather season for additional feedback on expectations, outlooks and storm paths. MxVision WeatherSentry makes every member of the Sewerage and Water Board staff an on-site weather expert, with data and knowledge to help plan for rainfall in any amount.

Freeze warnings also occasionally happen in the city, which requires special consideration for some of the utility's facilities. Although relatively rare, Labat also relies on Schneider Electric for the forecasts and information he needs to prepare for those events.

Labat says, "Without the drainage system operating, the city would hold water; the topography is such that there is no natural runoff. Schneider Electric's MxVision WeatherSentry technology allows us to be much more accurate, and serves an essential function for us to meet our mission to the city of New Orleans."