

# AQUASIGHT

INTELLIGENT WATER SOLUTIONS

Case Study

## 800,000 Residents Benefit from an Intelligent Wet Weather Solution, Improving Utility Resilience

Aquasight's ACE™ Rain Heatmap and Storm Catalog



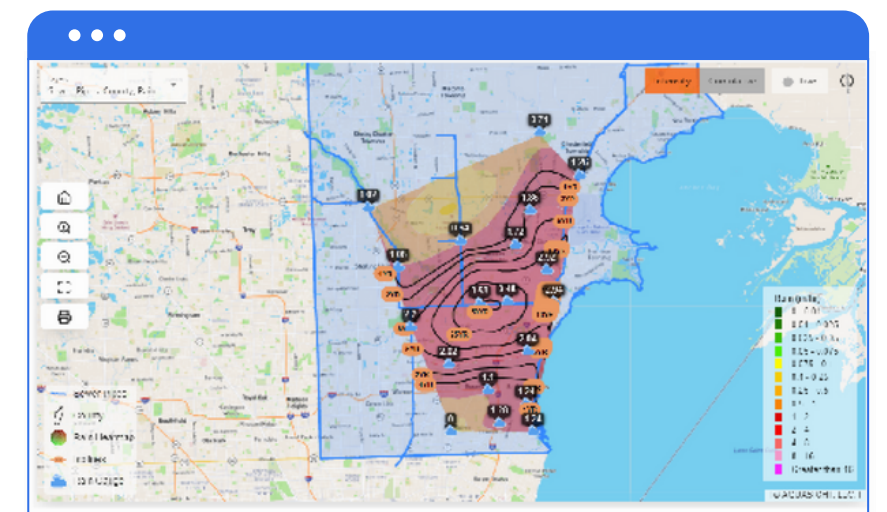
### The Problem

Macomb County, Michigan is a diverse and growing community of more than 865,000 residents. Located in southeast Michigan, the County provides a wide array of strong business opportunities, activities such as biking and hiking in and around the Clinton River watershed, and attractions such as orchards, cider mills, wineries, and farmer's markets. Quality of life and economic growth are of top concern. The County, however, has seen increasing impacts from more frequent and higher intensity rain events and the risks these pose to quality of life, economic growth, and sewer infrastructure. The County wanted to improve their sewer system resiliency by adopting new, innovative solutions designed to address the impacts of these climate and infrastructure challenges.



### The Solution

Partnering with Aquasight, the County implemented Aquasight's ACE™ Rain Heatmaps and Storm Catalog feature into their sewer management and planning protocols. ACE™ Rain Heatmaps and Storm Catalog provides critical insights to storm events in time for utilities to minimize flooding impacts or potential sewer overflows, sometimes preventing them! It provides actionable, data-driven insights into current, past, and forecasted storm events, enabling all aspects of wastewater utility operations, from operator to utility executive, to make better, more informed decisions.



Using a familiar GIS backdrop, the Rain Heatmap and Storm Catalog provides Macomb County with rapid, on-the-fly live and historical storm event records correlated to the County's unique design storm distributions. It provides powerful analytics to make crucial accurate visualization of storm event characteristics for rapid, proactive response to the effects of extreme rainfall events. It also merges sewer flows and levels across sewer shed.

# Top 10 Benefits

- **Fast and intuitive:** The solution is fast and intuitive, such that it is easy to derive rapid insights into current and past rain events.
- **Automated analytics workflow:** Once deployed, the Aquasight ACE™ Rain Heatmap solution eliminates the need to wait for staff to conduct post storm event analyses and “crunch” the rain data to determine rain event severity/impacts.
- **Combines rain gauge data with level/flow meter data:** Enable easy correlation of storm impacts on sewer flows and levels and the required response to each design storm analysis.
- **Enables data-driven decision-making:** ACE™ Rain Heatmaps provide data-driven insights for insurance risk minimization and quick, more effective responses to reduce damage and prevent loss of life.
- **GIS-based rain event visualization:** Cities can use the ACE™ Rain Heatmap solution to visualize rain events in specific locations by leveraging GIS and existing rain gauge data and long-term design storm trends
- **Facilitating effective communication:** ACE™ Rain Heatmaps allow Utility leadership to make faster, more informed, data-driven decisions on infrastructure upgrades and maintenance.
- **Engineering-level data solution:** The ACE™ Rain Heatmap solution is designed to provide engineering-level data visualizations to ensure as little time as possible is spent trying to determine the required engineering measures to respond to extreme rainfall.
- **Uses unique design storm data:** The ACE™ Rain Heatmap solution provides unique storm data tailored to the unique design storm analyses available for each utility.
- **An excellent training and adoption tool:** City departments can use the ACE™ Rain Heatmap solution to train staff to analyze and visualize storm events, leveraging data to coordinate response actions between multiple utilities.
- **A storehouse of institutional knowledge:** Effective knowledge retention is key to a successful utility, and the ACE™ Rain Heatmap solution uses past and current data to build knowledge consistently.

## About ACE™

Aquasight's ACE™ Intelligent Wastewater Solution is a comprehensive collection system intelligence platform with over 10 modules and built-in artificial intelligence capabilities. It merges flows, levels, rain gauges, lift stations, asset data, hydraulic models and much more to solve a variety of challenges in the sewer conveyance and collection systems. One of the modules in ACE™ is Real-Time Storm Event and Rain Heatmaps, which allows cities to proactively reduce the impacts of frequent and extreme rainfall events. Let Aquasight show you today how you can leverage this advanced intelligent water solution for your utility!



***"The rain gauge heat maps provide insight as to how the collection system reacts to rain events, both in real time and in post event analyses."***

**Steve Rozycki, P.E.**

Engineer II

Macomb County Public Works