

Lake Cities Municipal Utility Authority

📍 Lake Dallas, Texas



About Lake Cities Municipal Utility Authority

Lake Cities Municipal Utility Authority (<http://lcmua.org>) is located in Lake Dallas, Texas and provides superior drinking water, fire protection, and pressure to the Shady Shores, Lake Dallas, and Hickory Creek areas (together known as the Tri-Cities). It also operates according to the Texas Commission on Environmental Quality (TCEQ) standards in potable (drinking) water and sanitary sewer services. LCMUA operates 21 lift stations, 3 elevated storage tanks, 3 ground storage tanks, 10 pumps on the water side (with 3 altitude valves), and 46 sewer pumps on the wastewater side.

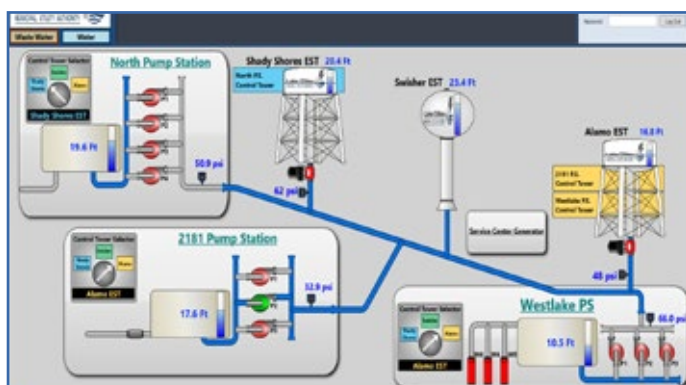
How LCMUA Navigated the Challenges of an Aging Facility & a Lean Workforce

Project Summary

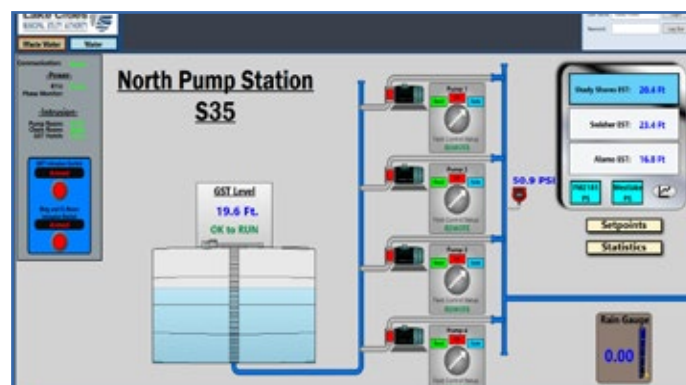
LCMUA had an aging infrastructure system that needed help from top to bottom. For example, a large portion of

LCMUA's budget at the time was spent on callouts, false alarms, and failing equipment. Additionally, the pre-existing SCADA system was a combination of three competitor products, which ended up providing LCMUA personnel with three different sets of operating data. To better manage and maintain their facility, the organization prioritized its upgrade. LCMUA needed a unified solution with a new HMI/SCADA that could handle Distributed Network Protocol (DNP3) communications and interface with existing Ovarro Connecting Technologies TBox combined PLC/RTU hardware installed at every lift station, pump station, and elevated storage tank in their system.

To accommodate a lean and often remote workforce, they needed a solution that could give them 24/7 operational visibility and send out alerts notifying personnel whenever the situation warranted, pulling their attention away from their daily duties to address larger, more serious issues.



An LCMUA Monitoring Screen Developed in GENESIS64™



LCMUA Pump Station Monitoring and Control Display

To fulfill those requirements, LCMUA sought out solutions to replace the older SCADA system, to reduce the related costs, and to ultimately manage the facility more efficiently with a lean workforce. To tackle their challenges and achieve their goals, LCMUA chose system integrator Impact Automation and Controls of Lewisville, Texas (www.impactaac.com) to resume the system upgrade work from the previous system integrator.

ICONICS Solutions Deployed

The integrator worked with LCMUA to select and deploy the following ICONICS solutions:

- **GENESIS64™** web-based real-time HMI/SCADA suite with **WebHMI™**
- **MobileHMI™** data mobility software suite
- **AlarmWorX™64** Multimedia OPC alarm management software
- **ReportWorX™64** enterprise reporting, charting, and analysis software
- **CFSWorX™** intelligent and reliable notifications software
- ICONICS **Hyper Historian™** high-speed, reliable, robust plant data historian

By using ICONICS solutions, LCMUA saw immediate value.

Realized Real-Time Benefits Through an Upgraded System

Lake Cities Municipal Utility Authority directly realized real-time benefits through their upgraded system with



Lake Cities Municipal Utility Authority
OnCall Monitoring

ICONICS solutions. The new HMI/SCADA system met quality and maintenance needs within the water and wastewater system without any of the previous issues or data discrepancies.

GENESIS64 improved secure visualization of water and sewer levels and improved monitoring and control of potable water and wastewater, elevation, PSI, intrusion pumps, pump monitors/controls, pump failure status, and temperature.

CFSWorX streamlined work empowering personnel to move past the break/fix model toward more proactive facilities and equipment management.

WebHMI and MobileHMI provided crucial monitoring and control of connected systems from the field using personnel iPads through "Any Glass" (a user interface that delivers 2D and 3D real-time operational visualization and intelligent dashboards).

Top Visualization & Solid Alarming with Impressively Fast Response Times

LCMUA now considers their visualization to be "top notch", their alarming to be "solid", and their data mobility to have an "impressively fast response time", vastly improving on the previous system. After new ICONICS graphic displays and trends were in place, system integrator Impact Automation and Controls completed the system upgrade. With ICONICS CFSWorX™ alarms and notifications capabilities, including voice and text messages, LCMUA increased their team's efficiency and collaboration, and reduced downtime and costs. Rather than everyone getting the same alarms all the time, managers can decide who gets what alarm when, which is extremely important as operators are not always on shift. As a message comes in on their personal smartphones, with their devices in their hands, personnel can quickly switch over to the mobile app to see what is going on, acknowledge alarms, and make quick decisions to solve the problem as fast as possible.

Managing Resources According to Real-Time Data

Managers can now spend their time more wisely, managing team resources according to real-time data, thereby optimizing efficiency, improving response times,

and reducing downtime. The new software also addresses challenges around efficient onboarding of new hires in combination with the aging workforce. With the improved ability to control and manage the facility, it is easier to transfer knowledge from the retiring personnel and attract new talent. Simply put, the team is better equipped to maintain the expertise needed to run the facility efficiently, even with a lean workforce.

Conclusion

Now that Lake Cities Municipal Utility Authority has experienced what ICONICS automation software can do, they anticipate expanding their remote worker support to further increase efficiency with more advanced capabilities such as worker location, push notifications, and priority calling. Rather than continuing to maintain a disparate, obsolete system, LCMUA made an investment in ICONICS to improve operational efficiency and pave a path to better serving the Tri-Cities areas.

“CFSWorX has been great. With the previous application, we would constantly worry if the system was working. Before we would leave on Friday, we would always send a test alarm to make sure we would get alarms over the weekend. That is no longer the case. We have yet missed a single alarm since moving to CFSWorX.”

Mark DiCiaccio,
Lake Cities Municipal Utility Authority
Operations Manager