



**ENTERPRISE
AUTOMATION**
A TETRA TECH COMPANY

PROJECT PROFILE

LB-MUST implementation

CITY OF LONG BEACH

Customer Background

When the City of Long Beach found themselves in a precarious situation and needed a new integrator, they sought a recommendation from the Los Angeles County Sanitation District (LACSD) and hired Enterprise Automation to determine the status of their critical project and complete the work. Since EA succeeded in this effort several years ago, the City of Long Beach has entrusted us with a variety of projects since.

When the City's \$45 million marquee project, the Municipal Urban Stormwater Treatment (LB-MUST), was set to move forward, EA was their first-choice automation consultant.

Project Background

The City of Long Beach's old drainage systems caused polluted water to flow into the Los Angeles River and nearby Pacific Ocean.

To address this issue, the LB-MUST project centered on the creation of a new facility, located in the Lower Los Angeles River Watershed Area. The facility's purpose is to divert and treat polluted urban runoff and portions of first flush stormwater (the initial runoff from a storm containing the highest concentration of pollutants) from existing stormwater pump stations along the Los Angeles River to the LB-MUST facility.

This project also scoped the creation of a community greenspace with wetlands sustained by water from the treatment facility. Initially, the facility would be able to treat 2 million gallons per day (MGD), with the potential for future expansion to 4 MGD.

Project Manager



**Matt
Avila**

Project Technical Lead



**Adam
Ekstrand**

Key Insights:

- Architected networking, PLC, and SCADA design for greenfield project
- Developed a novel method of utilizing industrial graphics and standardized tag names in AVEVA InTouch to create replicable graphic objects to reduce risk and programming effort

Key Technologies:

- AVEVA InTouch
- Allen-Bradley ControlLogix PLC
- Siemens PLC hardware

EA Solutions

We installed a new control system that would cooperate with both the City's existing physical assets and advanced treatment technology to achieve superior water cleanliness and quality.

Central to the treatment process were the new Purifics ceramic ultrafiltration (CUF) and the Photo CAT system. The CUF system removes heavy metals by forcing water through a porous membrane. The membrane pores trap pollutants, which are periodically backwashed to the sanitary sewer for treatment. The Purifics Photo CAT technology provides further purification through photocatalytic processes, which uses light energy and a catalyst to destroy organic substances and breaks down pollutants into harmless molecules. Our work at the LB-MUST facility integrated and connected these new assets with the City's infrastructure.

For operators, we installed high-performance screens to monitor the efficient removal of debris and contaminants from stormwater. To achieve this, we incorporated a redundant InTouch SCADA system for real-time monitoring and control, ensuring reliable and continuous operation of the LBMUST facility. Within InTouch, our engineers developed a novel method to reduce and risk programming effort by creating replicable graphic objects through utilizing industrial graphics and standardized tag names. Furthermore, we integrated Siemens and Allen-Bradley PLC hardware to control and manage the treatment processes, which allowed for precise and accurate operations.

Additionally, we implemented an automated reporting system to generate comprehensive reports which track key plant operation metrics and data. These automated features enhanced operational efficiency and provided stakeholders with valuable insights into the facility's performance in real-time.

We have maintained an ongoing partnership with the City of Long Beach and are proud of our involvement in a project dedicated to the environmental stewardship and beautification of the city.



Enterprise Automation, A Tetra Tech Company (NYSE:TTEK), a nationwide process automation consultant - plans, designs, documents, builds, tests, deploys, and supports critical automation and OT infrastructure for process industries.

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