



STRATUMSM
CONSULTING PARTNERS

Stratum Case Study

Littleton/Englewood Wastewater Treatment Plant

The third largest facility of its kind in the state of Colorado, the Littleton/Englewood Wastewater Treatment Plant (LEWWTP) processes over 27 million gallons of water daily.

The plant's commitment to environmental and efficiency standards have been recognized with numerous awards from the environmental protection agency (EPA). Areas of recognition include exemplary operations, maintenance and pretreatment processes. Responsible extensive wastewater treatment studies, LEWWTP scientists and technicians are nationally regarded as subject matter experts and have testified before congress to improve national regulations and standards.

Planning for Expansion

Since LEWWTP began operations in the 1950s, it has undergone several phases of expansion. A 2001 internal audit concluded that the plant would need to undertake a massive expansion in order to satisfy projected demand — effectively doubling in size.

The plant was already experiencing challenges in managing equipment and materials; it was determined that implementing an Enterprise Asset Management (EAM) system would be a requirement of the expansion. Specifically, the EAM system would need to incorporate and enforce the LEWWTP's recently acquired best practices model.

While the plant did not have previous EAM experience, its maintenance department was already benefiting from their maintenance management software solution, MP2, developed by Datastream (acquired by Infor). After an evaluation process, LEWWTP decided to upgrade their MP2 implementation to a facility-wide deployment of Infor's Enterprise EAM solution.

Vetting Stratum

Once Infor Enterprise EAM was chosen as the EAM system of choice, the plant began evaluating several potential consulting firms to configure and deploy the system. According to Cindy Goodburn, Business Services Administrator for LEWWTP, Stratum was selected “based on their broad EAM experience, and their ability to work with our team effectively.” LEWWTP also considered the average years of experience for Stratum team members, which were much higher than competing firms.

LEWWTP was influenced by Stratum's reputation for going above and beyond to solve customer challenges, and their ability to advocate for the customer through effective, direct dialog with EAM providers. Stratum's local presence and ability to conduct ongoing, onsite engagements was also an important factor.

The Implementation Process

Stratum and the Littleton/Englewood Wastewater Treatment Plant structured a long-term series of implementation phases. One of the first, and most critical phases, was aligning the new EAM system to the updated best practices. The plant faced early challenges to integrating the new standard operating procedures (SOP) with the EAM platform. Leaving the SOP outside of the EAM platform was not an option. Stratum effectively integrated the new best practices model into the Infor EAM solution, resolving this critical challenge to the project.

Along with configuring and deploying the EAM solution across multiple departments, Stratum introduced an innovative system integration. Stratum and LEWWTP jointly developed a custom web services interface that bridged the EAM solution to the plant's Supervisory Control and Data Acquisition (SCADA) system.

Responsible for collecting vast amounts of real time data from equipment sensors, the SCADA system is a critical part of the plant's ability to monitor processes and maintain operations. Stratum's custom interface combined SCADA information output with the ability to act on that information in real time, using the Infor technology.

Throughout the implementation Stratum worked closely with plant staff to ensure they became stake holders and subject matter experts in the new technology.

Benefitting from EAM

The transformative effects of the Infor product are well summarized by Administrator Goodburn: "Even though our facilities and materials have more than doubled — managing operations is easier than before the expansion, thanks to Stratum's EAM implementation." The plant has already experienced several specific operational improvements.

Improved Responsiveness

Using SCADA, equipment measurements and runtimes are communicated in real time; through Stratum's integration of SCADA alerts and diagnostics with Infor's work management functionality, technicians have dramatically accelerated response time. Malfunctioning equipment can be observed and analyzed, and through Stratum's integrated interface, work-order can be submitted in real-time to have the equipment repaired — tracking time, equipment and cost in the process.

Tracking Asset Performance

By measuring breakdown frequencies and repair processes, the EAM system can reveal if certain materials and models are prone to malfunction, or otherwise do not justify their cost. The plant leverages its EAM implementation to make more cost effective purchasing decisions. The result has been improved uptime and reduced operating expenses.

Integrating Technology and Best Practices

Just as the development of best practices influenced the plant's EAM implementation, the implementation is now influencing subsequent best practices and operations. Standard operating procedures are now created or revised to incorporate the use of EAM technology. Initially envisioned as a way to monitor assets and materials, the EAM implementation is being leveraged more broadly to audit personnel, and is a component to performance evaluations. As more areas of the plant benefit from the EAM system, its adoption continues to expand throughout the facility.

Managing Growth and Improving Operations

The Littleton/Englewood Wastewater Treatment Plant stands out in its industry. To ensure continued success, the plant has incorporated innovation and high internal standards as part of its corporate charter.

To guarantee its expansion would result in operational success, LEWWTP planned to integrate their best practices with EAM technology. Due to careful preparation and proper execution by Stratum Consulting Partners, the plant has automated many areas of facilities management. As LEWWTP expands its EAM implementation, it is working with Stratum to identify new opportunities to monitor, automate and streamline operations.



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