



IoT-Mfg

600 S Bell Blvd, Cedar Park, Texas 78613

+1 (833) 468-6342

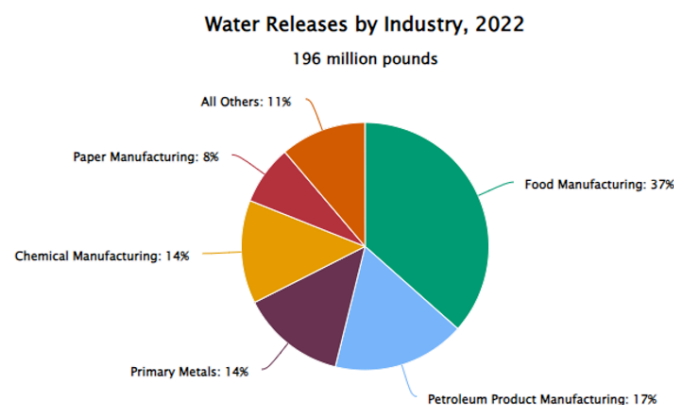
iot-mfg.com

White Paper

Turn The Art of Wastewater Into The Science of Wastewater

In every manufacturing facility, a common general layout can be found. There are different islands of production with materials entering, a product exiting and waste material leaving in a process sewer. There are typically multiple production areas with products passing from one area to another for further processing or passing out to be sold. Waste materials from the process flow into the process sewers and are typically carried by water. LOTS of water.

The chart below shows the Toxic Release Inventory (TRI) published by the Environmental Protection Agency (EPA). For some perspective, in the pulp and paper industry alone, approximately 17,000 gallons/ton of water is used making paper. After process losses, 85 – 90% of that water makes it to a wastewater treatment plant (WWTP).



Historically, wastewater treatment has been viewed as a necessary evil. It is expensive, time consuming, and regulated by the government. The wastewater plant is a necessary part of the cost of making useful products. Where dedicated wastewater operators are available, these operators rely on experience with the system and what is known in the industry as “the art of wastewater treatment” to solve problems either because of the lack of available data or available training. Adding to the problem, anecdotal information says forty to sixty percent of

operational data (pump is running, valve is open, pressure, temperature, etc.) is not connected to any system. There are many reasons for this condition.

This paper addresses the concept that, from the initial point of the first sewer in the process to the WWTP outfall, there is a complex and interactive biological eco-system that must be dealt with. Proper microbiological analysis is required to understand the impacts production has on the WWTP. This analysis requires microscans, nutrient analysis and adenosine triphosphate testing to discover vital information about the health of the overall eco-system. Utilizing technologies like the Industrial Internet of Things (IIoT) and AI, large quantities of previously remote or non-connected data is placed in the hands of the operator in real time. Wastewater Treatment is changed from an artform to a science, and in the process minimizes the impact of this cost center on the overall bottom line of the production process.

IoT-Mfg

600 S Bell Blvd, Cedar Park, Texas 78613

+1 (833) 468-6342

iot-mfg.com