

## PROCESS WATER RECYCLING SYSTEM IMPLEMENTATION PROVIDES SUSTAINABLE BENEFITS

**ABOUT WATER STREET BRASS.** Water Street Brass (WSB), based in Jamestown, NY, was established in 2012 and specializes in creating decorative hardware exclusively for luxury boutique partners. WSB's primary goal is to deliver exceptional customer satisfaction through unmatched quality, performance, and reliability.

**THE CHALLENGE.** WSB was generating over 30,000 pounds of hazardous waste each year, costing tens of thousands of dollars annually. This amount classified the company as a Large Quantity Generator (LQG). Most of the hazardous waste was rinse water from various metal oxidation and coloring processes. WSB was seeking solutions to cut hazardous waste and reduce costs.

**MEP CENTER'S ROLE.** Insyte Consulting collaborated with the New York State Pollution Prevention Institute (NYSP2I) to assess reverse osmosis (RO) technology as a cost-effective way for WSB to reuse process water and minimize hazardous waste. From this assessment, a process was developed to produce water suitable for reuse, with an estimated 95% decrease in hazardous waste.

WSB chose to buy the system and enlisted NYSP2I's help in implementing the process water recycling system.

A collaborative team consisting of WSB, NYSP2I, and the equipment supplier reviewed the Bill of Materials and system layout. The team supervised the system's start-up and worked to optimize its performance after the custom-designed and fabricated system was installed.

A mixing tote was added to collect all rinses, serving as an equalization tank. The combined solution was then transferred to the RO process tank through a 5-micron filter to improve system performance. Additional modifications included installing a pressurized bladder tank and ion exchange columns to efficiently route RO permeate back to various operations.

**"It was a pleasure to work with the NYSP2I team. They were very thorough in their research, and communications were top-notch. Water Street is very pleased with the savings and the reduction of hazardous waste as a result of this project."**

-Andrea Desnerck, General Manager

## RESULTS



Process water recycling system projected to reduce hazardous waste by 66%.



A Standard Operating Procedure created to reflect the system's latest optimizations.



Projected savings of \$23,000/year due to reduced hazardous waste.



New RO system adaptable to support additional demand as operations expand.

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