



Join Us at WEFTEC 2026, Booth #8654

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Spiral Water: Addressing the Wastewater Cost Challenge

For food and beverage processors, pharmaceutical manufacturers, and other industrial facilities, wastewater is becoming an increasingly significant operating expense. Rising municipal surcharges for total suspended solids (TSS) and biochemical oxygen demand (BOD), water hauling and disposal costs, and solids-related equipment fouling can all drive up costs while creating bottlenecks that affect plant productivity.

The challenge is finding a solution that delivers meaningful improvements without requiring facilities to redesign their existing wastewater treatment systems. Companies need practical ways to **lower operating costs, increase uptime, and improve wastewater treatment performance—with a measurable return on investment.**

Spiral Water Technologies' advanced automatic self-cleaning filtration technology is engineered specifically for these demanding requirements.

Taking on High-Solids Wastewater

High and fluctuating solids loads can create significant challenges for conventional filtration and downstream treatment processes. Excess solids can contribute to fouling of membranes, dissolved air flotation (DAF) systems, membrane bioreactors (MBRs), and other equipment, increasing maintenance requirements and potentially limiting treatment capacity.

Spiral Water's patented technology provides continuous high-solids separation and concentration, handling wastewater streams with highly

variable TSS concentrations. The systems can process fluids containing substantially higher solids concentrations than traditional backwash filtration technologies while delivering **up to 99% water recovery in a single pass**.

At the heart of our system is a rugged stainless-steel filter that continuously removes accumulated solids. Unlike conventional approaches, our technology operates without backwashing, cross-flow, high differential pressure, or routine filtration downtime. Solids are automatically sensed, concentrated, and purged as part of the process.

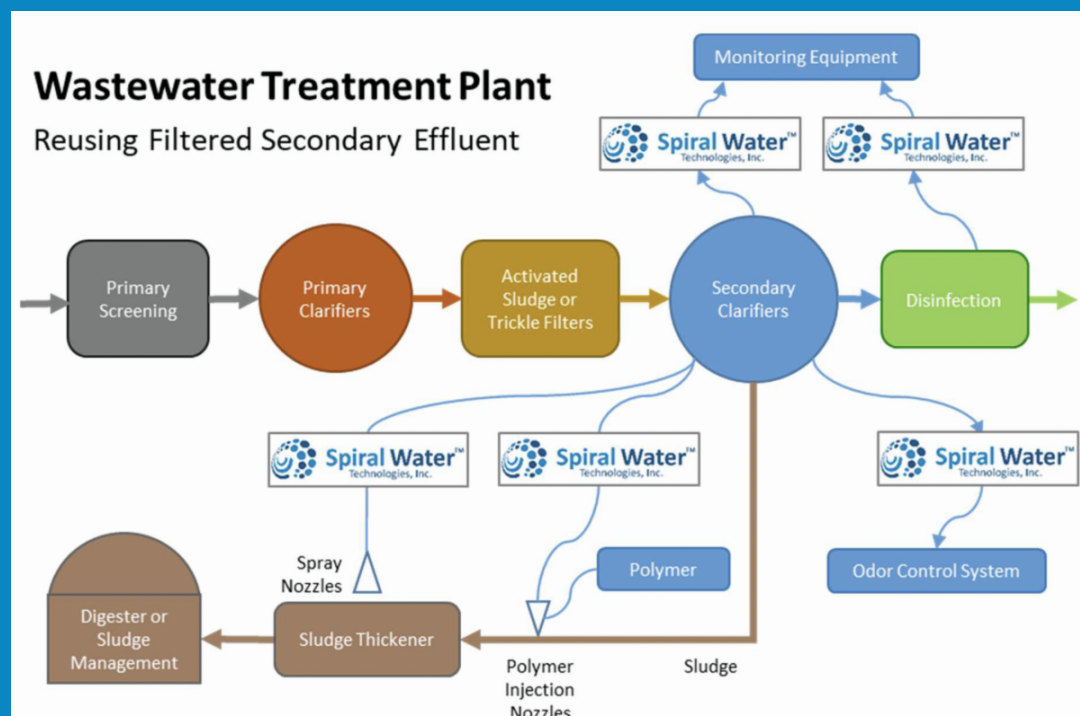
A Practical Path to Lower Wastewater Costs ...

For facilities facing rising wastewater expenses, the benefits extend beyond filtration performance. Removing and concentrating solids before they reach downstream processes can help reduce the burden on existing treatment equipment, minimize solids-related maintenance, and improve overall system reliability.

... with Highly Effective Results

Spiral Water's technology serves applications across food and beverage processing, pharmaceutical and biopharmaceutical manufacturing, industrial wastewater treatment, biogas and renewable natural gas production, water reuse and recovery, and other high-solids applications—helping facilities turn wastewater treatment from an operational bottleneck into an opportunity for greater efficiency.

Insight: Reusing Filtered Secondary Effluent at Wastewater Treatment Plant



Problem: Wastewater treatment plants monitor and reuse secondary treated effluent for cleaning screens, diluting chemicals, and foam control. While secondary effluent can prove more economical than potable water for

these applications, a common challenge of reusing wastewater is the cost-effectiveness of filtering.

Solution: Spiral Water Technologies Model 810 Automatic Filter can handle secondary effluent and is not affected by biofilm growth. It consists of a patented, spiral-shaped wiper and metal filter screen that continuously cleans the screen without crossflow, backflush, or downtime. The innovative filter cleans itself over 500 times per minute, and solids get collected away from the filter at the bottom of the housing, allowing filtered water to flow continuously through the outlet.

This filter reduces TSS with no chemicals or pollutants added to the wastewater stream. The metal filter screen and wiper only need to be replaced every two years, and maintenance routines involve only (as little as?) quarterly cleaning and inspection.

A Quick Look at Our Advanced Wastewater Solutions

Most conventional filters cannot process high solid loads above 500 ppm, making them insufficient for many industrial operations. However, our high-quality filters are not only beneficial in wastewater treatment applications but significantly contribute to the reduction of the total lifecycle cost while providing the following benefits:



REDUCED
EQUIPMENT
REDUNDANCY



LOWER LABOR
COSTS



LESS WATER WASTE



SMALLER
FOOTPRINT



LIGHTER WEIGHT



ECO-FRIENDLY

Spiral Water Model T1000 – A Unique

High Solids Water Treatment Solution



Watch the Video Now

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