

# Filtration innovations add millions to bottom line of Canadian pulp mill

**MOBILE, AUTOMATED SYSTEMS REQUIRE LESS EQUIPMENT; MANPOWER, EXCEEDS STANDARDS**

A pulp mill in Eastern Canada faced quality issues due to inadequate filtration capacity in its gravity/sand filters. In the spring, snowmelt run-off causes the inlet water quality to drastically decline at the plant's system intake.

Given the increased contaminant loading, the facility could not meet the water-flow demand through in-house filters. The lack of water flow forced the company to open a filter bypass, causing a severe degradation of the color brightness on the finished pulp product.

Since this occurs as outside temperatures are rising, the mill requires even more filtered water to run its cooling system. The consequence of these factors was an inferior-quality product that could not be sold to market and resulted in lost revenue.



## SOLUTION

Within 48 hours, MPW's Sales and Applications Teams developed and deployed an automated filtration solution that would produce up to 2,500 gpm (gallons per minute) and <1 NTU (Nephelometric Turbidity Units) product water quality.

By installing the system as a slip stream off the customer's clarifier, MPW effectively closed the bypass valve, ran the customer's filters at a slower rate and maintained up to 2,500 gpm filtered water to the system without chemical addition.

MPW's robust trailer design allowed for up to 900 gpm per filter trailer and automated backwashing, which reduced the amount of equipment and manpower needed, saving the customer on project cost. Additionally, MPW could inject chemicals or rely on mechanical filtration to produce spec water of the quality required. All of the chemical-dosing operations were automatically operated via PLC controllers, online turbidity meters and HMI interfaces.

Competitors' solutions were more expensive because they required more equipment, a higher degree of operational complexity and greater electrical demand. MPW also provided 24-hour field service coverage to operate the system, resulting in minimal customer-staff involvement.

## RESULTS

The system produced flow rates that surpassed the expectations of both client and MPW, all the while maintaining or exceeding required quality standards.

The adaptability of MPW trailers has led to additional projects with this customer to handle varying water qualities from year to year. Since MPW was able to use minimal equipment to complete this process, no other supplier could match MPW's quality, flow rates, response time

and cost effectiveness.

Each season, MPW has responded within hours of the customer's call, delivering the same turn-key package with Field Service staff to provide the greatest value for its customer. MPW's solution has kept the customer's product brightness above prime grade on every implementation, which has correlated to millions of dollars in added revenue each season.

## COMMITMENT TO SAFETY

**MPW recorded zero safety violations during this project**