CASE STUDY

Environor
SOLENO GROUP MEMBER

From Silicat to Corrosion Inhibitors

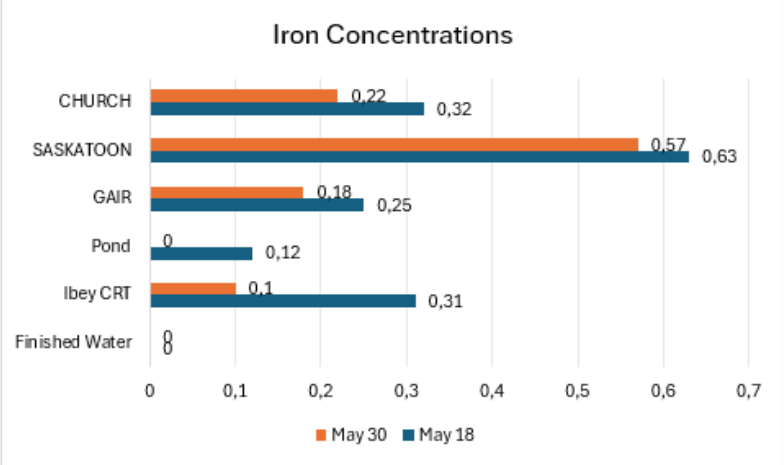
Context & Problem Statement

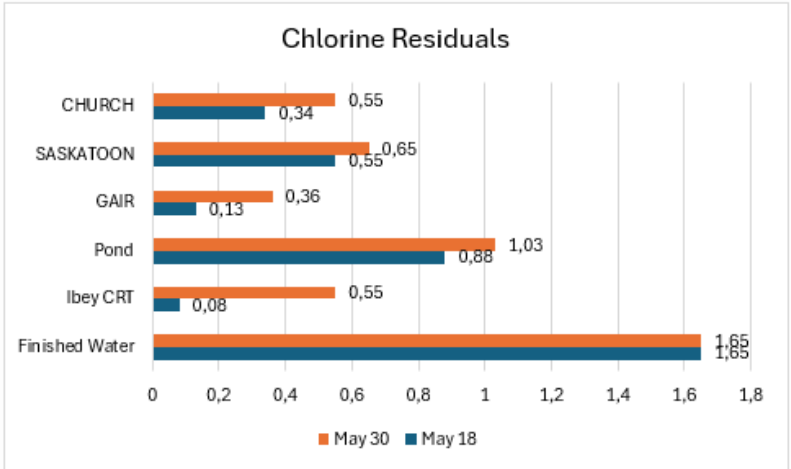
In May 2023, a municipality in central Ontario (15,000 residents) transitioned its water treatment process **from silicate to Environor corrosion inhibitors.** This decision followed several operational and water quality challenges:

- Yellowish water discoloration
- About ten system flushes
- Low chlorine residual levels
- Difficulty sourcing the product
- No technical support

Solutions & Results

After just 12 days of monitoring, results showed a noticeable improvement in the performance of the water distribution system. The municipality had around ten flushing points on its network, which were **reduced by 50%.**





Silicat VS Environor Corrosion Inhibitors

Unlike silicate, which is mainly effective near the treatment plant, **Environor inhibitors provide more uniform protection across the entire municipal network:**

- Improved protection of copper and lead
- Increased free chlorine residual
- Reduced disinfection by-products (THMs)
- Approximately a 50% reduction in flushing during the first month of treatment
- Overall improvement in water quality stability

Beyond chemical performance, this transition also enables cost optimization and access to personalized technical support.
A simple shift—with tangible impacts on water quality and system efficiency.

Corrosion Inhibitor - Zinc Phosphate

Zinc is an effective and easy-to-use corrosion inhibitor. Phosphate is a cathodic inhibitor that ensures long-term protection of infrastructure.

Color Control - Dispersive Polyphosphate

Dispersion promotes the separation of precipitated particles, thereby limiting crystal growth and the appearance of color. Sequestration ensures that iron and manganese remain in a dissolved state.

Benefits

- Visible and long-lasting reduction of color
- Improved chlorine residual throughout the entire network, including at the extremities
- Significant reduction in chlorine dosage at the plant (often more than 25%)
- Reduced network fouling
- Shorter flushing times
- Effective protection against internal pipe degradation
- Reduction in THM levels