**Case Study**
CASKMIEX-52061.000

# MIEX® Mini Magnetic Ion Exchange System Helps Indigenous Community Deliver Clean Drinking Water

## Excellent dissolved organic content and color removal results in better water quality.

**Topics:** raw water, dissolved organic content (DOC), water color, ion exchange, resin


Ixom Watercare Engineers getting the MIEX® Mini Magnetic Ion Exchange System ready to go for initial start-up.

**System Overview:** A very small, remote indigenous community system in far northern Saskatchewan with a lake as its raw water source.

**Project Objectives:** To remove dissolved organic content (DOC), which are pre-cursors to undesirable disinfection by-products that form as a result of the disinfection process and to remove color.

**Solution:** This MIEX® Mini System contains two (2) Contactor Vessels operating in a duty/standby configuration. Each Contactor Vessel is designed to treat a maximum capacity of 3.1 liters per second (50 US gallons per minute). This MIEX® Mini System also allows resin regeneration to be set at the desired rate (which governs level of treatment).

**Project Timeline:**

- June 2021: Initial water samples sent to Ixom Watercare, efficacy testing performed
- September 2021: Confirming water testing performed, proposal requested and submitted
- March 2022: P.O. issued
- April 2023: Initial system start-up & orientation

**Results:** During commissioning, the MIEX Mini System achieved an average 80% DOC reduction with a final effluent range of 1.81 mg/L to 2.31 mg/L.

Water Color was dramatically improved with an end result of <1 on the true Color Pt-Co scale.

The coagulation dosage in their system feed was also substantially reduced from 710 mL/hr (104.6 mg/L) to just 220 mL/hr (30.0 mg/L).

*See data charts on following page.*

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# Case Study *(cont'd)*

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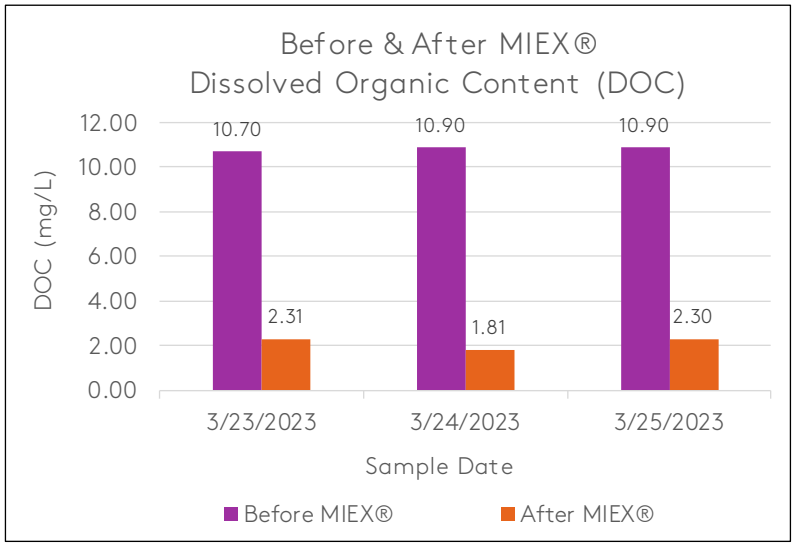


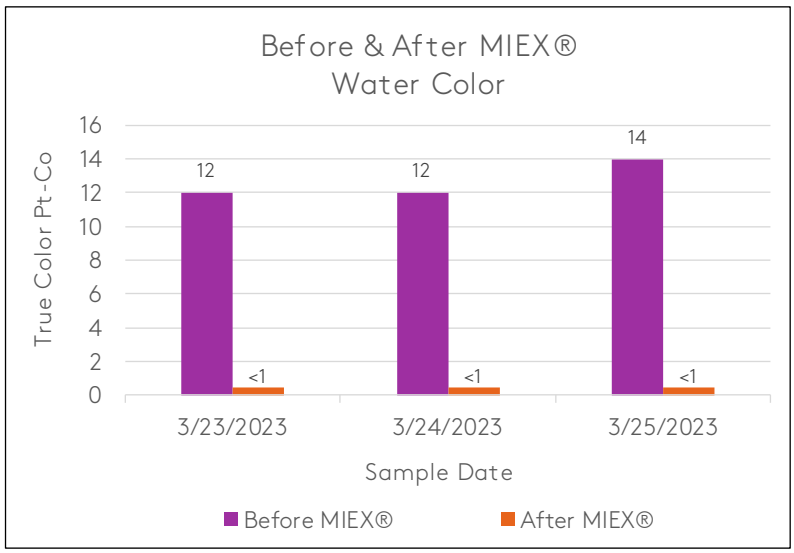


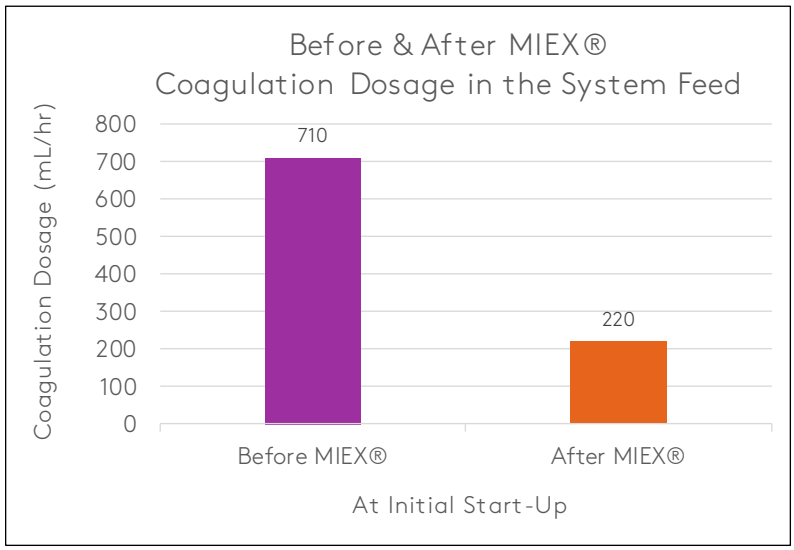


**80% DOC Removed**

**>95% Color Removed**

**69% Reduced Coag**


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