

Caramat Water Treatment Plant

Client: Municipality of Greenstone

Year: 2006-2007



SERVICES PROVIDED

Caramat, a northern community of less than 100 residents is located 4 hours north-east of Thunder Bay, ON. Drinking water is drawn from a small lake, which presents complex water quality issues such as very high colour, organics, and turbidity. The existing water treatment system could not effectively treat this complex raw water, and when chlorinated, resulted in Trihalomethanes forming at unacceptably high concentrations. This resulted in long-standing drinking water advisories issued by the local Health Unit, and the requirement to supply the residents of Caramat with bottled water. One of the primary design objectives was to have a fully automated, low maintenance facility. A pilot study completed in 2004 resulted in the selection of the MS Filter Inc. slow sand filtration system complete with ozone pre-treatment. This system operates by gravity and comprises 3 filtration steps: roughing filter, slow sand filter, and granular activated carbon filter. The slow sand filter comprises a biological filter medium (schmutzdecke). The pre-ozonation oxidizes the organics in the raw water, improving filtration efficiency. The water treatment plant includes the latest SCADA control and communication equipment to minimize operator time on site. It was officially opened in December 2007.

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