

Quarterly Report for the Baxter Water Treatment Plant and Distribution system

**Operated by the Ontario Clean Water Agency (OCWA)
under contract to the Township of Essa
for the period ending September 30th, 2001**

Introduction:

This report is a summary of the last quarter's water quality, published in accordance with Ontario's Drinking Water Protection Regulation. It includes important information regarding the source of your water, analytical test results, and how it compares to standards set by the Province. If you have any questions regarding this report, please contact our Client Services Representative listed in section 3 below.

During this quarter the Ontario Clean Water Agency (OCWA) conducted more than 250 tests for water quality parameters. Of those tests conducted at an Accredited Laboratory there was no exceedences of the Ontario Drinking Water Standards as set out in Ontario Regulation 459/00.

On July 4th, 2001 the disinfection system malfunctioned causing the chlorine residual to drop off to 0. As a result we actively undertook the following remedial actions:

Resampled
Increased Chlorine Dosage
Flushed Mains

During this quarter, 18 turbidity exceedences were reported per Regulation 459/00. These samples are taken continuously in-house by online equipment and these spikes are believed to be caused from the starting and stopping of pumps and/or air in the sampler lines..

Compliance With Provincial Regulations:

OCWA operates your water facility in accordance with provincial regulations. Here is how we do it:

- Use of Accredited Labs: Analytical tests to monitor your water quality are conducted by a laboratory audited by the Canadian Association for Environmental Analytical Laboratories (CAEAL) and accredited by the Standards Council of Canada (SCC). Accreditation ensures that the laboratory has acceptable laboratory protocols and test methods in place. It also requires the

Quarterly Report for Baxter Water Treatment Plant for the period ending September 30th, 2001

laboratory to provide evidence and assurances of the proficiency of the analysts performing the test methods.

- **Operation by Licensed Operators:** Your water treatment plant and distribution system is operated and maintained by the OCWA's competent and licensed staff. The mandatory licensing program for operators of drinking water facilities in Ontario is regulated under the Ontario Water Resources Act (OWRA) Regulation 435/93. Licensing means that an individual meets the education and experience requirements and has successfully passed the certificate exam.
- **Sampling and Analytical Requirements:** OCWA follows a sampling and analysis schedule required by OWRA Regulation 459/00, the Ontario drinking Water Standards. More information on sampling and analysis including results are available in this report and from your municipal office.
- **Adherence to Ministry Guidelines and Procedures:** To ensure the protection of the public health and operational excellence, the OCWA adheres to the guidelines and procedures developed by the Ministry of Environment and the Ministry of Health.

System Information:

Facility Name:	Baxter Water Treatment Plant	Client Services:	Steve Rohacek
Total Design Capacity	1048m ³ /day	Phone Number	(519)770-5699
Raw Water Source	Two wells	E-mail Address	srohacek@OCWA.com
Disinfection Method	Sodium hypochlorite		
Municipal Location	Township of Essa	Operations Manager	Wayne White
Service Area	Village of Baxter	Phone Number	(705)429-2525
Service Population	114	E-mail Address	wwhite@OCWA.com
Operational Description: Two drilled wells provide 1048m ³ /day potable water to a community of 114. As two wells bring the water from the wells sodium hypochlorite is added by an automatic chemical feed pump. The water is then stored in four 425 litre pressure tanks. An online chlorine analyzer continuously monitors the residual in the water and sends an alarm if the residual of the water drops below a set point.			

Quarterly Report for Baxter Water Treatment Plant for the period ending September 30th, 2001

Analytical Test Results:

Micro biological Parameters	July	August	September	Quarter Summary	MAC / IMAC
Total Coliform counts/100mls					
Number of Samples	20	12	12	45	
Number of Detectable Results	0	0	0	0	
Min / Max	0	0	0	0	0
Exceedences	0	0	0	0	
E. Coliform counts/100mls					
Number of Samples	20	12	12	45	
Number of Detectable Results	0	0	0	0	
Min / Max	0	0	0	0	0
Exceedences	0	0	0	0	
Background					
Number of Samples	20	12	12	45	
Number of Detectable Results	0	0	0	0	
Min / Max	0	0	0	0	200
Exceedences	0	0	0	0	
Typical Source of Contamination	Microbial contaminants, such as viruses and bacteria, may come from septic systems, agricultural livestock operations, wildlife, and wastewater treatment plants.				
Comments: All Bacteriological samples taken in this quarter showed no sign of contamination.					

Quarterly Report for Baxter Water Treatment Plant for the period ending September 30th, 2001

Operational Parameters	July	August	September	Quarter Summary	MAC / IMAC
Chlorine Residual					
Number of Samples	31	31	30	92	
Number of Detectable Results	31	31	30	92	
Min / Max	0.02/1.34	0.02/0.53	0.02/1.31		0.05-4.0
Exceedences	1	0	0	0	
Turbidity					
Number of Samples	31	31	30	92	
Number of Detectable Results	31	31	30	92	
Min / Max	.22/1.48	.14/>2.0	.23/>2		1
Exceedences	5	8	5		
COMMENTS: Turbidity and chlorine are monitored continuously with online equipment. Operations staff collect grab samples during their plant checks and measure the chlorine and turbidity with pocket instruments as a comparison to the continuous equipment. All turbidity spikes were reported as per O.Reg. 459/00.					

Volatile Organic Parameters	July	August	September	Quarter Summary	MAC / IMAC
Typical Source of Contamination	Organic Chemical Contaminants, including synthetic and volatile organic chemicals, that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.				
Comments: Volatile Organic Parameters were tested in July of this quarter and there were no exceedences.					

Inorganic Parameters	July	August	September	Quarter Summary	MAC / IMAC
Typical Source of Contamination	Inorganic contaminants, such as salts and metals, can be naturally-occurring or result from urban storm water runoff, industrial, or domestic wastewater discharges, oil & gas production, mining.				
Comments: Inorganic parameters were not tested in this quarter.					

Quarterly Report for Baxter Water Treatment Plant for the period ending September 30th, 2001

Pesticides and PCB Parameters	July	August	September	Quarter Summary	MAC / IMAC
Typical Source of Contamination	Pesticides and herbicides, may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.				
Comments: Pesticides and PCB's were tested in July of this quarter and no exceedences occurred.					

Radiological Parameters	July	August	September	Quarter Summary	MAC / IMAC
Typical Source of Contamination	Man made or natural elements emitting radiation in the form of alpha, beta or gamma particles				
Comments: Radiological Parameters were not tested in this quarter.					

Discussion of Analytical Results:

During this quarter there no microbiological testing that exceeded the MAC/IMAC limits. There were many turbidity spikes during this quarter. These spikes were reported as per O.Reg. 459/00. It should be noted that at the times of all the turbidity spikes that the system was receiving adequate disinfection. Turbidity spikes are an ongoing problem and is believed to be equipment related. Spikes can occur from pump cycles as well as air and/or dirt in the sample lines.

Availability of Analytical Test Results:

The certificate of approval from the Ministry of the Environment, and Regulation 459/00 set out monitoring requirements for your water. The tables above summarize all the results required for inclusion in quarterly reports. Your water is extensively tested for the presence of dozens of compounds. Some compounds, not listed above, may be present in low concentrations and their presence does not necessarily mean that the water poses a health risk. Results of all analytical tests are available through your municipal office.

Quarterly Report for Baxter Water Treatment Plant for the period ending September 30th, 2001

Definitions and Abbreviations:

- **MAC** - Maximum Acceptable Concentration.
- **IMAC** - Interim Maximum Acceptable Concentration.
- **Coliform Bacteria** - a group of commonly occurring rod shaped bacteria. Their presence in a water sample is indicative of inadequate filtration and/or disinfection.
- **Fecal Coliform Bacteria** - refers to a subgroup of coliform bacteria present in the digestive system of warm blooded animals and humans.
- **Heterotrophic Plate Count** - a method of measuring bacterial content in water samples. Also known as Standard Plate Count.
- **Organic Parameter** - a group of chemical compounds containing carbon.
- **Inorganic Parameter** - a group of chemical compounds not containing carbon.
- **Raw Water** - Surface or ground water available as a source of drinking water that has not received any treatment.