

MUNICIPAL WATER SUPPLY



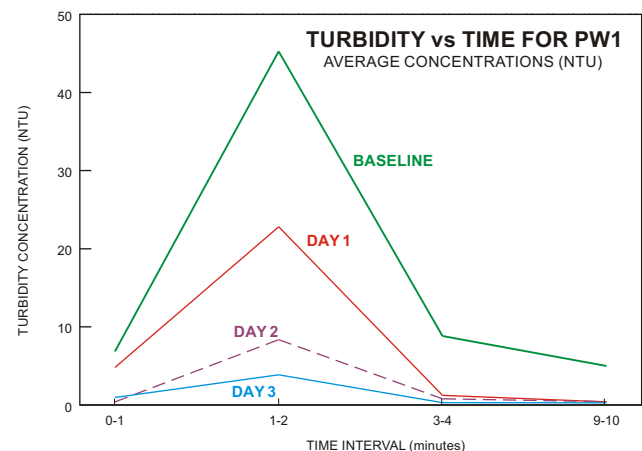
PROBLEM

The communities of Cheltenham and Terra Cotta in the Regional Municipality of Peel rely on ground water to supply municipal needs. Groundwater is obtained from two 200 mm diameter production wells screened in overburden sands and gravels. However, the water had unacceptable sand content and turbidity levels. The Region retained the services of Jagger Hims Limited to resolve this water quality problem at the source and eliminate the need for treatment.

APPROACH

Each well was pumped in excess of its' design production rate and turbidity and sand content in the discharge were monitored.

As shown on the turbidity versus time graph, turbidity levels decreased dramatically to acceptable levels during the first two minutes of pumping. Also, no sand was observed in the discharge water after the first two minutes. It is noted that elevated turbidity levels were the direct result of sand in the water.



SOLUTION

It was recommended that the well water be pumped to waste during the first two minutes each time the pumps were activated. This procedure prevented unacceptable levels of suspended solids from entering the water distribution system without the need for an expensive treatment system.