



November 2011

PORT HOPE DECLARED A WATER EMERGENCY

A 6-year old Port Hope Water Treatment Plant experienced a simultaneous failure to 2 out of 5 high lift pumps due to impeller wear which resulted in the plant operating at only 47 per cent capacity. The pumps failure created a serious concern in the surrounding residential and industrial areas and led the Municipality to declare a water emergency and urged residents and businesses in the ward to limit their water usage until the situation was resolved. Specifically, businesses needed to abide by the Municipality's request to keep their water consumption to below 100 cubic metres per day.

The Ontario Clean Water Agency was unable to source a pump for Port Hope's needs so they reached out to the Ontario Pollution Control Equipment Association (OPCEA) to broadcast the emergency to the members which Aquatech is a part of. Aquatech immediately took the direction from OPCEA and contacted the Director of Public Works and Engineering, Peter Angelo, to setup an emergency site visit with Aquatech technical representatives and applications engineer. The Municipality's main concern was supplying clean water to the industrial plant which is in close proximity to the Water Treatment Plant. Aquatech, however, was able to immediately supply and install a single diesel powered portable water pump that provided enough flow capacity to cover for the two failed pumps. This solution placed the Water Treatment Plant back in full operation at 100 per cent capacity and has restored the Municipality to full water usage which relieved the water emergency.

Customer Requirements:

Require flow rate to cover the 2 failed pumps was 1,500USGPM @ 110 PSI

Maximum flows of 2,500 USGPM @ 115 PSI

A portable Electric or Diesel powered pump with suction and discharge pipes were to be installed in a way that would not interrupt the replacement for the WTP current operating pumps.

Complete pumping system must be approved by the Municipality and the Ministry of the

Environment (MOE) to handle potable water.



Port Hope's three remaining operating pumps



New HDPE pipe to be Butt-Fused for Suction and Discharge

Aquatech Engineered Solution:

Aquatech performed a full system analysis and designed a complete backup system using HDPE pipe lines for suction and discharge along with all required ventilation and thrust block calculations to meet customer's requirements. Aquatech had in stock a new and unused 440 hp portable diesel powered pump that met and exceeded the requirements.



Aquatech team effort to mobilize on short notice



Aquatech HL250 Dri-Prime

Results:

After six consecutive days of hard work from Aquatech staff and the Treatment Plant staff, the system was successfully installed, pump was tied into the plant's SCADA system (for automatic start and shutdown), pressure tested, swabbed, sanitized and put into full operation. As reported by Northumberland Today, "With the emergency declaration now lifted, all municipal operations will return to normal and the Emergency Control Group will no longer meet on a daily basis".



Aquatech team bolting the 12" pipe to gate valve



Pump showing Suction and Discharge Piping

[Click here to read full story on The Peterborough Examiner website.](#)

[Click here to read full story on Northumberland Today website.](#)

For more information on water treatment plant, please contact one of our representatives.

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