



## Sewer collapses in the Town of Stellarton, NS. Town equipment can't beat back flood waters. ITT Water & Wastewater dewatering service called on for help.

For most of us when municipal water & wastewater infrastructure works it's hardly noticed, it's out of sight and out of mind. However, this isn't the case for our city and town engineers and operators who get their feet wet, literally and figuratively speaking, almost every day during their regular scheduled maintenance and repairs of our aging water handling infrastructure.

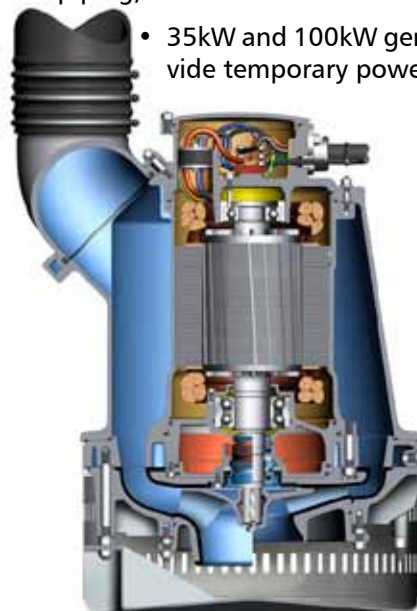
Quite often town operators must deal with problems arising from aging infrastructure and occasionally sudden catastrophic events occur that test even the most experienced municipal personnel. The town of Stellarton in Nova Scotia, situated on the East River, just went through such a trial.

The morning of Monday, November 2nd, 2009 started off just as any other working day, but things changed dramatically when a sink hole was reported on the north end of Foord Street near Highway 104. Investigations revealed a large cavity beneath a smaller hole in the road pavement surface; and it was immediately decided to close the road for repairs. An estimated 100 tons of gravel was poured into the cavity but, it just disappeared into the sinkhole and the hole continued to grow. In the process, sewer lines and water mains were broken and communications cables were damaged, and the eastbound off-ramp of Highway 104 had to be closed.

Meanwhile, water was accumulating in a large depression bordered by Highway 104 and Foord Street due to a suspected blocked culvert that would normally allow the water to reach the East River. Stellarton and neighbouring community fire trucks removed water for the better part of a week but it soon became evident that they would need more pumping capacity than the fire trucks could provide.

At this point, Tony Addis, Town Engineer, contacted Micheal Molloy, dewatering specialist at ITT Water & Wastewater to see what equipment they could provide to help with the situation. Tony explained the situation he was up against and ITT personnel acted quickly to ship:

- One Flygt submersible pump model BS-2151 6" 30HP capable of pumping up to 1,500 USgpm;
- One Flygt submersible pump model BS-2250 10" 88HP capable of pumping up to 4,500 USgpm;
- 50 feet of 6" heavy duty discharge hose;
- 50 feet of 10" heavy duty discharge hose;
- One each of 6" x 8", 8" x 12" and 10" x 12" increasers to connect hoses to piping;
- 500 feet of 12" Kwik-Lok steel galvanized piping;
- 35kW and 100kW generators to provide temporary power.



*Cutaway view of a BS-2250 used in this case story.*

*Engineered for life*

The town crew, led by Tony Addis and Eddie Stewart, quickly installed the BS-2250 pump, powered by the 100 kW generator, in the flooded depression on the south side of Highway 104 and connected it to the 12" Kwik-Lok piping which was passed through a temporary culvert under Foord Street south to complete the dewatering system which quickly lowered the water filling the depression.

Next, they installed the BS-2151 pump, powered by the 35 kW generator, in the storm sewer on the north side of Highway 104 and connected to the remaining 12" pipe through another temporary culvert under Foord Street north. This second pumping system removed water from the blocked storm sewer which was suspected to have collapsed downstream under Highway 104. Once the water was pumped down to a safer level, the town had electrical services installed at both pumping locations because they expected to keep the pumps in place for several months.

The pumps and piping have now been in place since November 9th 2009 and are expected to remain in place until sometime in March 2010.

Once the flooding was under control, Tony Addis expressed his thanks to Micheal Molloy for ITT's quick response and follow-up support.



12" Kwik-Lok steel galvanized piping and a Flygt 100kW generator.

**Micheal Molloy**, ITT Water & Wastewater, Dewatering Specialist, Dartmouth at (902) 450-1177 Ext. 27

#### **ITT Water & Wastewater - Dewatering service**

Created to meet the increasing demands for a full fledged solution driven company, the Dewatering service mandate is to engineer, manage and supply major temporary site dewatering and sewage bypass projects in the municipal, construction, industrial and mining sectors. On-site project supervision, technical expertise and equipment maintenance services are also offered.

Built on ITT's 50 years of Canadian water handling experience, the Dewatering service specializes in effective and environmentally secure water and wastewater transfer applications such as Sewage Bypass, Excavation Dewatering, Flood Drainage, Surface Irrigation and Mining Dewatering.

ITT W&WW also offers a full service rentals program. A complete line of submersible pumps, engine driven suction pumps, generators, piping and complementary accessories are available for either long or short-term rental. With 14 coast to coast service locations, ITT W&WW is the only nationwide company to offer complete turn-key water handling solutions, expertise and products.

