

# Drain and Sewer Flow Monitors from UK to Help Model Drainage Network Performance in Canadian Cities

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Cities in the Canadian provinces of Ontario and Manitoba are pioneering the use of advanced flow monitoring technology supplied by Detectronic (<http://www.detectronic.org>), a UK based hydrological instrument specialist. Their Multi-Sensor Flow Monitor (<http://www.detectronic.org/product/atex-msfm-multi-sensor-flow-monitor>) (MSFM) is a sewer flow meter that logs levels and flows in sewers, drains and other pipes or channels. The robust instrument provides data to give a comprehensive overview of network performance permitting sewer and drainage master planning and more effective day-to-day management and maintenance.

Success was achieved in collaboration with local flow service providers SFE Global in Western Canada and Cole Engineering in the east. Against strong and technically respected competition from other international manufacturers, Detectronic's innovative approach proved convincing. Survey contractors SFE and Cole use 50 and 100 units respectively for comprehensive network studies as well as localised inflow and infiltration studies and combined sewer overflow reporting.

Detectronic commercial director Dave Walker commented, "Our partners are respected environmental engineers and flow service providers, noted for their thorough technical approach. The fact that their endorsement is based on their own practical experience with the instruments gives municipal users greater confidence. The companies also provide a high quality, locally based technical service and support."

The concept of in-sewer flow monitoring was pioneered by the Detectronic team more than 30 years ago. Their Surveylogger became an industry standard and proved to be so reliable that there are still many in use today. The MSFM is the most advanced sewer flow meter ever produced by the company.

"We were impressed by the build quality and attention to detail that gives the MSFM an edge over its rivals," explained a customer in Winnipeg. "The innovative sensor that can shed debris in low flows and the long life Lithium-ion rechargeable battery improve usability. The design of the unit is unique in that you can see and remove each item in seconds. Most of all, Detectronic, were happy to re-program software to meet our needs, giving us additional confidence."

The MSFM is typically used for weeks at a time, monitoring flows at regular intervals storing data and uploading it daily via the cellular phone network to a data hub. Units are usually positioned in a manhole chamber. Several instruments, strategically placed around the drainage network, survey the performance of the whole drainage system in normal and extreme weather situations. The system has compatibility with worldwide GSM data networks.

Data from the MSFM can be used for live network management or logged for retrospective drainage network performance analysis. In live mode, the controller may use the information from the system to direct maintenance teams to deal with blockages and overflows. While in logged mode, post event data is used more strategically to pinpoint areas for further investigation or remedial action. Data from the MSFM is compatible with industry standard modelling software Clarifica from Cole, GoData from SFE, FlowWorks, Infoworks and other leading packages.

"Metropolitan areas and utilities face the same issues in every part of the world," said Steve Woods managing director at Detectronic. "There is a pressing need to protect homes and businesses from flooding, to prevent effluent flows breaching the networks and so safeguard public health and the environment. This can only be achieved with detailed knowledge of the performance of the drainage infrastructure. To be of real value the survey must record both normal and storm flows. This data facilitates prioritised improvement so that finite budgets are used cost effectively."

Not resting on its laurels, Detectronic has achieved European ATEX and worldwide IECEx approvals for the MSFM system which will be shown at a major water industry trade show in New Orleans in September.

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High resolution images are on the web at [www.ainsmag.co.uk/de244/5064de1a-canada.htm](http://www.ainsmag.co.uk/de244/5064de1a-canada.htm)

Company Background

[www.detectronic.org](http://www.detectronic.org)

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