The Millcreek Township Sewer Authority, working in close association with the city of Erie, Bureau of Sewers, is using the TELOG flow metering system and finding significant benefits in the story it tells. The TELOG flow metering system records the actual flows in the sanitary sewer system and is used for the charges Millcreek Township pays to the city of Erie for sewage transportation and treatment. The TELOG information also assists the Authority in understanding the volume, duration and flow fluctuation to the sewage flowing through the specific metering points over time. In a previous In Community article (Spring 2013), we informed you about the Memorandum of Understanding which addressed the flow metering agreement between the Authority and the city of Erie.

The flow metering information or “story” tells us if our sewage system has any inflow or infiltration problems, commonly referred to as I/I. The I/I topic was introduced in the Summer 2012 In Community article. To simplify the way it works: starting with a typical dry weather day, we establish a baseline flow (FIGURE 1).

As usage increases, the flow metering records the changes over time. If a wet weather event occurs such as the recent December 20-23, 2013 snow melt (FIGURE 2) and the flows quickly increase, we know we have inflow into the sanitary sewers within the contributing area to the flow meter. This information helps us narrow down the area to investigate for the source of inflow. Typical inflow sources include storm drains, downspouts and sump pumps connected to the sanitary sewer system.

If we have leaking pipe joints or cracks in a pipe, during those periods of the year with a high ground water table through which the sanitary sewer line is located and the flows increase, we have infiltration. Similar to inflow, the story it tells helps us identify the areas we need to undertake internal pipe investigation and then utilize the chemical grouting to seal the joints or cracks.

Chemical grouting was the topic of our Fall 2013 In Community article. Through flow metering, evaluating the data the story tells, investigating and reducing or eliminating the sources of I/I, we pay for our fair share of the sewage Millcreek Township transports and is treated by the city of Erie.

A special thank you to Mr. Rob Rodemoyer, P.E. of the Millcreek Township Sewer Authority and Mr. Basil Ronzitti of the City of Erie, Bureau of Sewers for their dedicated efforts associated with the TELOG flow metering program.