Monitoring Rainfall

Does the City monitor local rainfall?

Yes. The City monitors rainfall with the use of a 14 tipping bucket rain gauge network across the City. The gathered information is used to measure the depth of the rain that has fallen and the period of time over which it fell.

This information is used to calculate the size of the storm and also help to determine the frequency of storms of that intensity happening in the future. Using this data in computer models, the impacts to property and infrastructure can be estimated.

How do the City's tipping-bucket rain gauges work?

At the top of a tipping bucket rain gauge is a funnel that collects rainwater, snow or ice as it falls from the sky. After the water falls into the funnel, it travels down a small tube called a siphon toward the tipping bucket.

The tipping bucket is a small, dual-sided bucket that is centre-mounted on a pivot. The tipping bucket has two halves to it, each of which can be filled with a pre-determined depth of water before tipping. Water only flows into one side of the bucket at a time and once one side it full it tips, spilling the water through a drain hole.

Every time the tipping bucket tips down and connects with the calibration screw beneath it, it sends an electrical signal to a data logger that records a time stamp for the known depth of rain in the bucket. That information is sent by wireless signal through the local cellular network to the City's contractor who records the data, checks the quality of the data and loads it into special software.

The City accesses the rainfall data through the internet and is able to view both rainfall data and create graphs of the intensity of the storm event.