

Weather Warnings and Actions by the City for July 16, 2024 Storm

July 10 – 14th, 2024

In the days leading up to the July 16th severe weather event, the City of Mississauga received alerts from Environment Canada (EC), and localized rainfall during events on July 10th (Hurricane Beryl remnants), July 12th, and July 14th. These events resulted in saturated soils throughout the City's watersheds leading into July 15th and July 16th.

July 15th, 2024

On July 15th, 2024, the Office of Emergency Management (OEM) in Mississauga received a notification from Credit Valley Conservation Authority (CVC) advising of the risk of strong thunderstorms occurring over the next two days, with rainfall expected to range between 20 to 50 mm. This initial alert was soon followed by a Water Safety Statement from Toronto and Region Conservation Authority (TRCA) and a more urgent Rainfall Warning from EC, predicting rainfall amounts of 40 to 60 mm. In response, CVC issued a Flood Outlook Statement, prompting the OEM Duty Officer to connect with the Works Operations and Maintenance (WOM) Incident Management Team (IMT) to prepare for potential flooding.

As the day progressed, the situation appeared to temporarily stabilize when EC rescinded the Rainfall Warning in the early afternoon. However, subsequent updates from CVC and TRCA indicated rising water levels in local creeks, particularly Serson Creek and Little Etobicoke Creek near Dixie and Dundas. These updates suggested the possibility of minor flooding, leading OEM to reconnect with the WOM team, which then dispatched a Road Patrol Supervisor to monitor the affected areas. By early evening, TRCA advised the OEM Duty Officer that water levels were receding, and the earlier flooding concerns were attributed to a malfunctioning water gauge, resulting in no confirmed incidents of flooding.

July 16th, 2024

The following day, July 16th, began with EC issuing a Severe Thunderstorm Watch early in the morning, with the possibility of up to 50 mm of rain. This was later downgraded to an expected range of 25 to 30 mm, with the storm expected to be brief, lasting 30 minutes to an hour. As the morning continued, the situation escalated with a Severe Thunderstorm Warning and a subsequent Rainfall Warning forecasting up to 75 mm of rain at a rate of 40 mm per hour. TRCA responded by issuing a Flood Watch, with reports of rising water levels in Little Etobicoke Creek and Cooksville Creek. By mid-morning, the OEM was notified that Cooksville Creek reached bank full status, indicating imminent flooding. Soon after, TRCA advised OEM that Little Etobicoke Creek had begun flooding.

These events prompted the WOM IMT Commander and Manager of OEM to fully activate the IMT and convene a meeting to assess the situation and develop a response plan. The rainfall intensity increased into the later morning, with Environment Canada extending the warning to 125mm of rain. Both CVC and TRCA escalated their advisories, issuing a Flood Watch and Flood Warning. Although the rain subsided by midday, the IMT and City Divisions continued to respond to various incidents throughout the afternoon and evening. An IMT briefing meeting was held in the early afternoon to reassess the situation and adjust the response strategy as needed.

Weather Warnings and Actions by the City for August 17 & 18, 2024 Storm

Friday August 16, 2024

In the afternoon of Friday August 16, 2024, Environment Canada issued a Special Weather Statement for Mississauga advising of local rainfall amounts of 30 to 60 mm, with rainfall rates up to 40 mm in an hour. Both the TRCA and CVC would each issue a Water Safety Statement shortly after. The duration of the event was anticipated to be from Friday evening through Sunday.

Saturday August 17, 2024

In the late morning of Saturday August 17th, EC issued a Severe Thunderstorm Watch, advising of winds up to 90km/h and rainfall rates of 40mm. Upon receiving the notification from Environment Canada, the OEM Duty Officer contacted the EC Canada Ontario Storm Prediction Centre (OSPC) to confirm event details and notified the WOM IMT. In the early afternoon, EC upgraded the alert to a Severe Thunderstorm Warning, advising of wind gusts of up to 90 km/h, and rainfall rates of up to 50 mm per hour. An email update was provided to the Mayor and Members of Council from the IMT Commander advising of the Severe Thunderstorm warning issued by EC.

Throughout the early afternoon, EC would continue to issue alerts with updated forecasted weather impacts. As updated alerts were issued, the OEM Duty Officer remained in consistent communication with the OSPC, providing additional weather details to the WOM IMT. The OEM Duty Officer was also in consistent communication with both the TRCA and CVC who advised of potential flood impacts. As it became apparent that rainfall amounts would exceed initial estimates and flooding was possible, the WOM IMT was activated to coordinate the Corporate response to the event. The WOM IMT and various additional City Divisions would continue to respond to various storm impacts throughout the afternoon and into the evening.

Sunday August 18, 2024

On the morning of August 18, 2024, EC advised that potential rainfall rates of up to 30-40 mm were likely to begin in the afternoon. EC would continue to issue updated weather forecasts throughout the day, with the OEM Duty Officer remaining in consistent communication with EC, the TRCA, and CVC. The WOM IMT convened early in the morning of Sunday August 18th to discuss the coordinated response to potential flooding that could occur later in the day.

Later in the afternoon, the WOM IMT met again to identify and discuss coordinated response actions. Shortly after this meeting, TRCA notified the OEM Duty Officer that Little Etobicoke Creek was likely to flood. The OEM Duty Officer informed the WOM IMT, with staff from various City Divisions responding to flood impacts in the area. Water levels began to recede shortly afterwards. The IMT would reconvene in the evening to discuss the response to the event, with EC ending the Rainfall Warning that had been in effect for Mississauga as the group was meeting.

City Response - Rainfall Events of July 16, 2024 and August 17 and 18, 2024

Mississauga Fire and Emergency Services (MFES) responded to numerous non-emergency and emergency calls; the majority of which were related to localized flooding. This included water rescue of cars submerged in flooded roadways and the evacuation of 114 residents from Tyndall Seniors Village Long-Term Care.

Parks assets and trail systems experienced significant damages during the July and August severe weather events. Numerous Park areas and trails flooded and were closed during and following the July and August rainfall events along with cancellation of sports field permits. For example, the sports field at Fred Halliday Memorial Park had extensive damage resulting from the July 16, 2024 storm while Streetsville Memorial Park flooded, with the parking lot also experiencing flood impacts from the August 17, 2024 storm. Parks staff were redeployed to support the various parks, trail, and sports fields.

Facilities & Property Management responded to a number of service requests related to water damage, mitigation, and restoration calls at City facilities due to the intense storms. MiWay Transit also rerouted bus routes as a result, with buses being utilized to support evacuations, including that at Tyndall Seniors Village Long-Term Care on July 16, 2024.

During the July and August storms, WOM's priority was ensuring public safety by monitoring flood-prone areas, clearing blocked storm drains, barricading sinkholes and supporting Emergency Responders with traffic control and road closures. Immediately following the storms, WOM undertook emergency repair of damaged public infrastructure and ensured all roads were safe and passable condition. The severity of the storm minimized the effectiveness of most operations and maintenance activities as the entire system exceeded capacity at the same time throughout the City. In the Lisgar area, the high-water protocol was activated with pumping taking place on July 16, 2024 and August 17 and 18, 2024. After the storm events, WOM arranged City contractors to carry out street cleaning while WOM crews continued to engage in debris clean-up, including the clearing of catch-basins, outlets and walkways.

The City received a large number of requests on a variety of maintenance and related concerns with the City's stormwater infrastructure including blocked catchbasins, dislodged maintenance hole lids, erosion and damage to creek infrastructure and high water levels in storm ponds. Early assessment revealed that the greatest damage has been to the City's creeks.