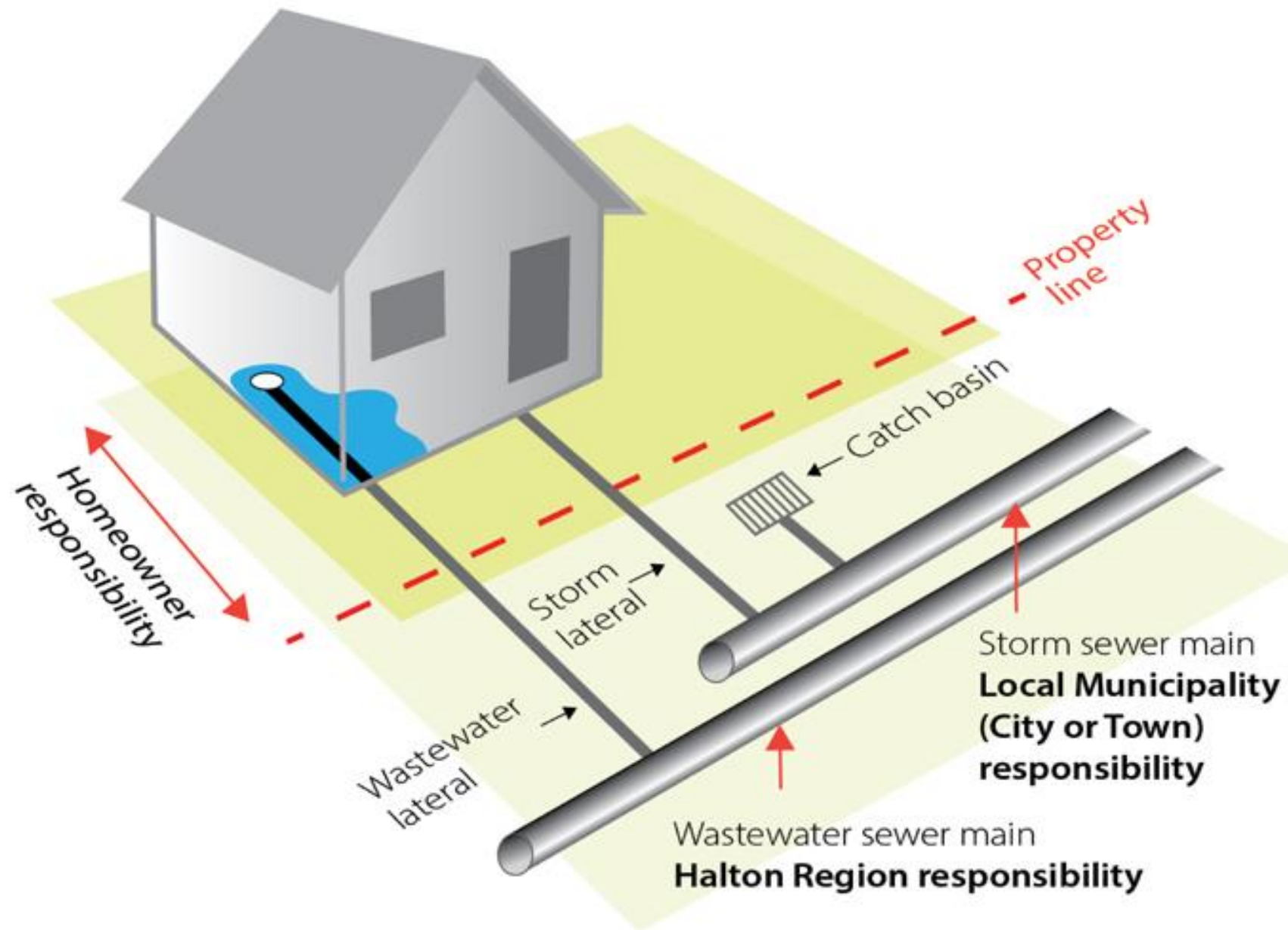


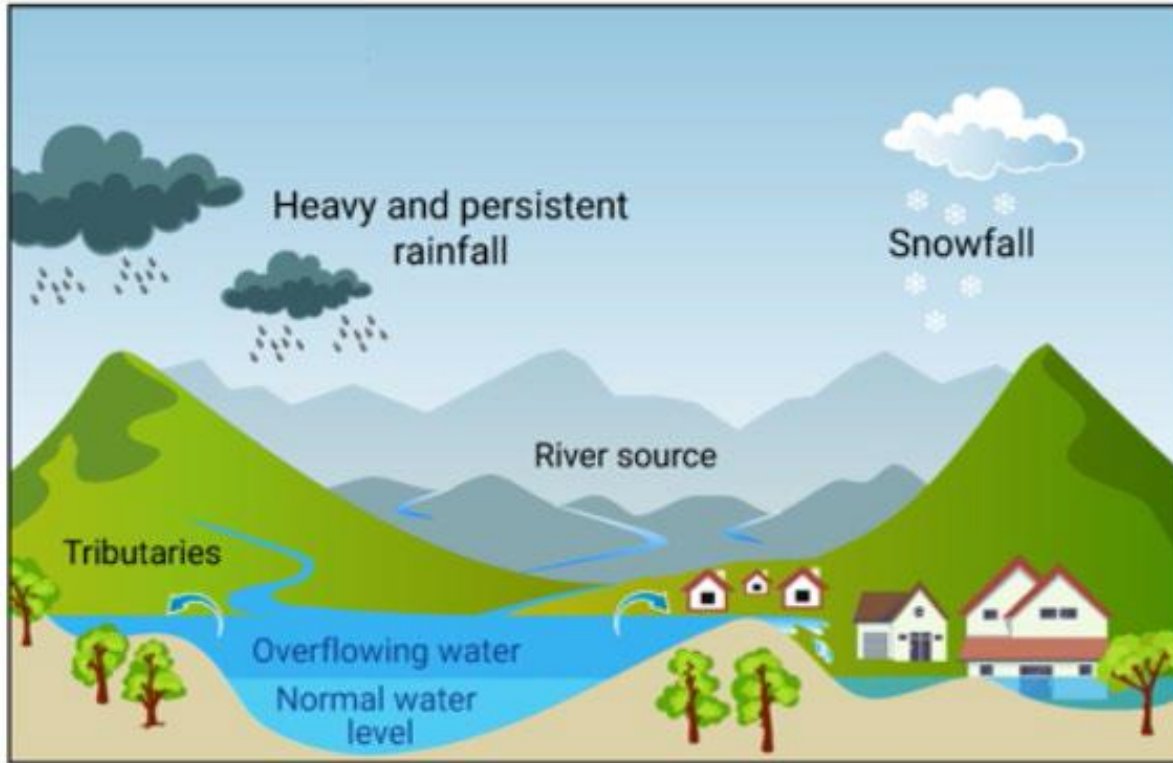
July Storm Event and Response Update

Committee of the Whole
November 2024

Drainage System Overview



Types of Flooding



Riverine Flooding

- Increased River Flow and Creek Levels
- Creekbanks overtopping



Urban Flooding

- Storm Sewer Backup
- Overland Flooding
- Sanitary Sewer Backup

Incident Overview

July 2024 Rainfall Events

- Over the 5 days prior to July 15, Burlington experienced approximately 95mm of rain
- July 15, the City received an additional 74mm of rain with the majority of the rainfall, approximately 50mm, falling between 11:30 a.m. - 12:30 p.m.
 - peak 1-hour rainfall intensity equated to a 1:100 storm event
- July 16, another smaller rain event of 14mm occurred further compounding ground saturation and overland flow.

Impact

- Flash flooding of creeks, ditches and swales
- Storm and sanitary sewer system surcharging
- Flooding on urban roads and private properties due to significant volume of water as well as debris blockage at storm sewer inlets.
- Estimated 1,620 homes in Burlington experienced basement flooding from both overland flow and sanitary sewer backup
- Initial cost of the storm response is estimated at \$2.27 million

Incident Overview

Initial Emergency Response (July 15)

- Emergency Management (CEMC) issued alerts, held coordination meetings, and updated key stakeholders.
- Roads, Parks & Forestry coordinated road closures, cleared debris, and reopened roads.
- Engineering Services responded to flooding inquiries and recorded water levels.
- Service Burlington handled 500+ customer inquiries.
- Fire Department responded to 23 flood-related emergency calls.
- Various departments and partners managed overall flood impacts.

Initial Emergency Response (July 16)

- Emergency Management (CEMC) continued coordination meetings and provided incident updates.
- Roads, Parks & Forestry kept clearing debris and monitored infrastructure issues on Cavendish Drive.
- Engineering Services inspected flood sites, documented water levels, and referred developers to Conservation Halton for pumping guidance.
- Fire responded to additional flooding at Cavendish Drive.
- Utilities addressed outages and flood-related impacts to infrastructure.

Ongoing Response and Shift to Recovery (July 17-31)

- Emergency Management (CEMC) coordinated with Halton Region on wellness checks and prepared for a Ministry of Municipal Affairs and Housing damage assessment visit.
- Roads, Parks & Forestry inspected creeks, repaired culverts, and addressed drainage.
- Engineering Services cleared blockages and investigated flooding causes.
- Finance & Legal coordinated on launching the Flood Relief Grant program.
- Service Burlington responded to inquiries and scheduled damage assessments.

Ongoing Recovery (Aug. 1 – Sept. 30)

- Emergency Management (CEMC) led recovery updates and an internal after-action review and continued coordinating with the Ministry of Municipal Affairs and Housing.
- Roads, Parks & Forestry managed debris removal and creek inspections.
- Engineering Services conducted drainage assessments and worked on flood mitigation.
- Building & Legal implemented the Flood Relief Program, with Customer Experience assisting in grant applications.

Incident Overview

Public Communications

Initial Emergency Response (July 15-16)

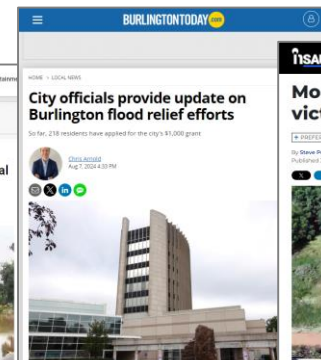
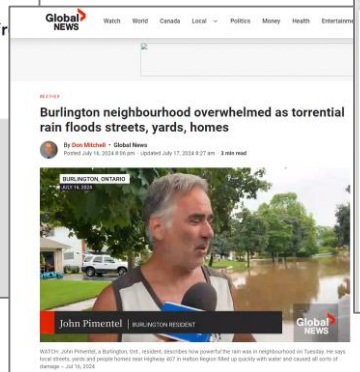
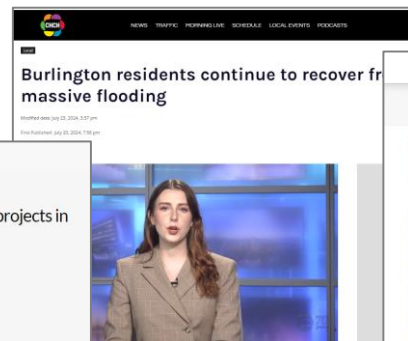
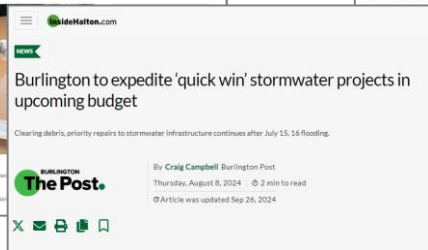
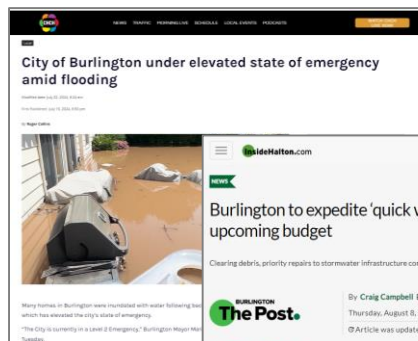
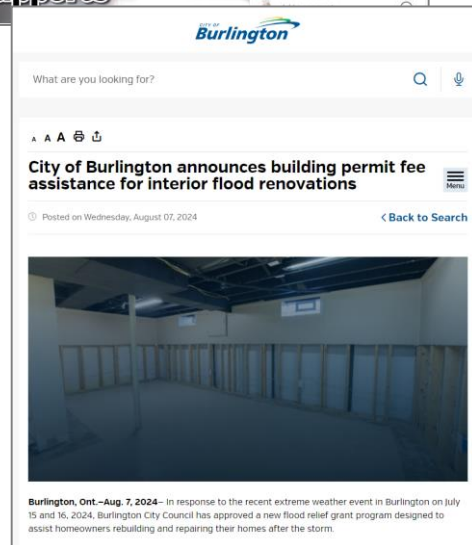
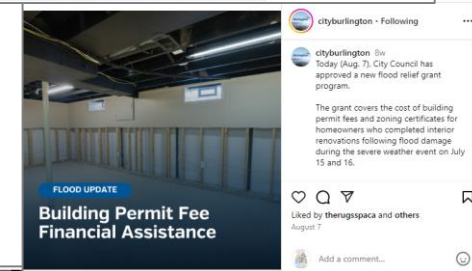
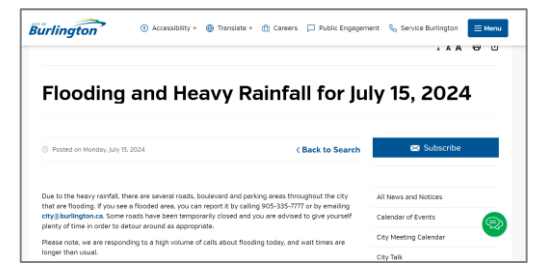
- **Public Communication Focus:** Emergency response and immediate safety alerts
- **Channels Used:** City social media, website, community Facebook groups

Shifting to Recovery (July 17-31)

- **Public Communication Focus:** Transition to recovery and support
- **Channels Used:** Media outlets, social media, website
 - Media requests: CBC, CHCH (2), Global News (2), Insauga, YourTV

Long-Term Recovery (Aug. 1 - Sept. 30)

- **Public Communication Focus:** Long-term recovery efforts and flood prevention
- **Channels Used:** Social media, website updates, direct communication with residents through Mayor's Office and Customer Experience Team



Incident Overview

Emergency Response and Communications

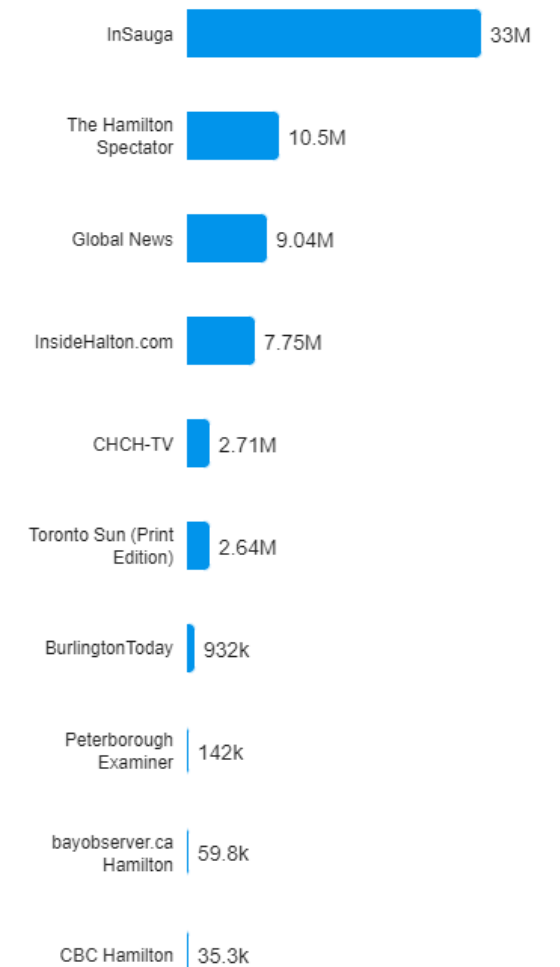
Media Engagement July 15 – Oct. 7, 2024

Public communications during and after the weather event provided emergency response updates and transitioned to recovery information after July 16.

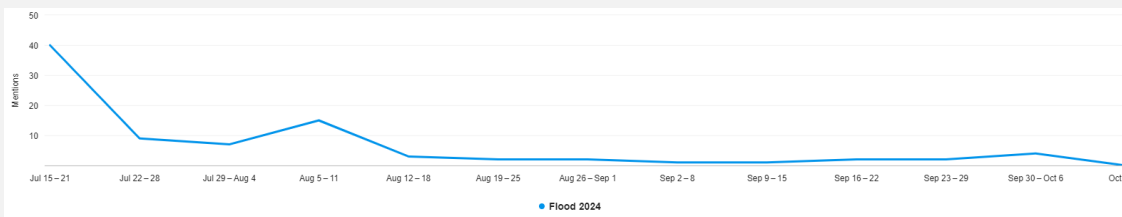
Highlights:

- **26,804** unique users accessed flood-related info on Burlington.ca (July 15-30)
- **88 media stories** and **66.9M total reach** (July 15-Oct. 7)
- **132 social media posts** from the City (Facebook, Instagram, Threads, X)
- **11 newsfeed posts** on Burlington.ca and **3 media releases**
- **17 Halton Region posts reshared, 8 City posts** in Burlington Together group
- Peak media reach: **32.5M** (week of July 15-21)

Top Sources

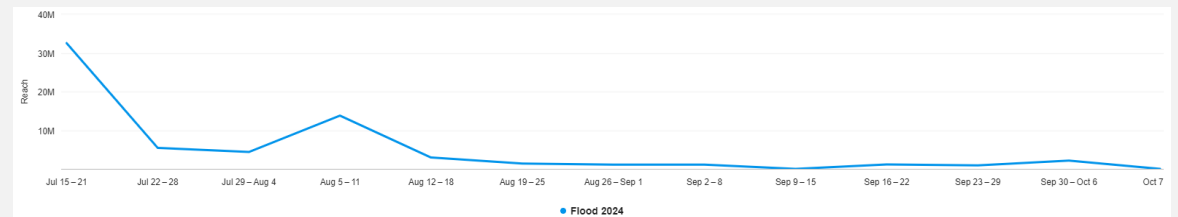


Media Mentions



Total news stories: 88 between July 15-Oct. 7
Peak: 40 mentions between July 15-21

Potential Reach

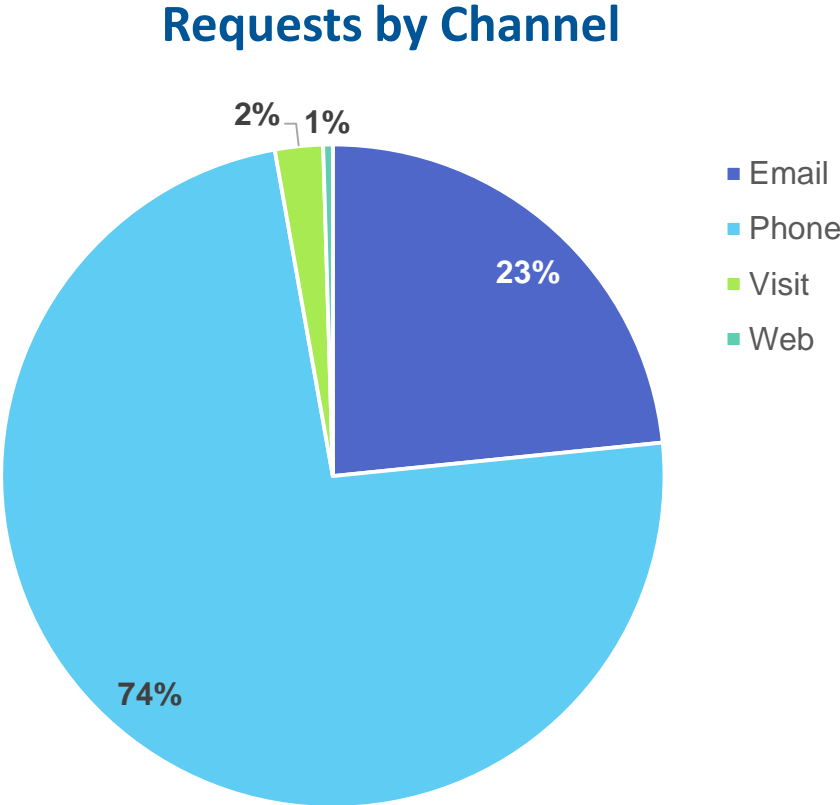


Total reach: 66.9M peak during between July 15-Oct. 7.
Peak: 32.5M during the week of July 15-21

Incident Overview

Customer Experience

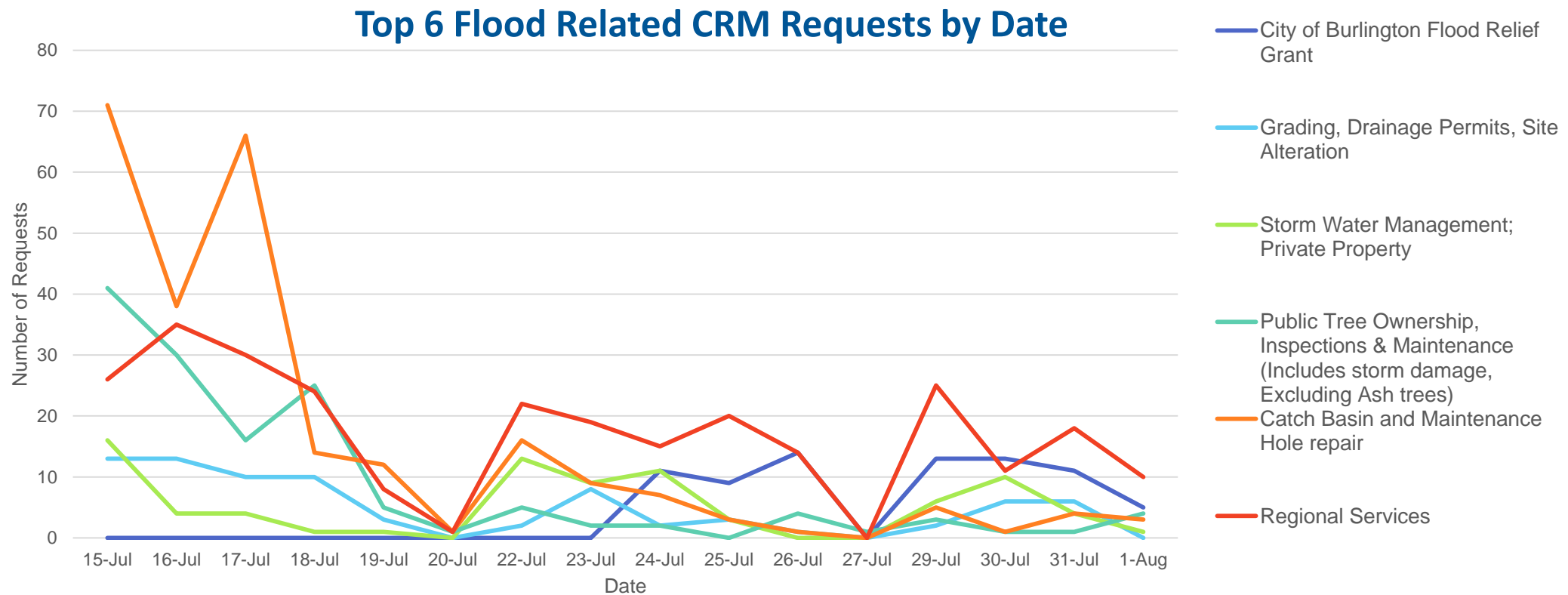
- There were 1069 CRM requests from July 15 – Aug.1 related to flooding
- 74% of these requests were submitted via the phone, therefore increasing phone volumes and wait times and also increasing wait times for email responses as representatives were handling live phone calls.
- Between July 15 and August 1, CoBy (burlington.ca digital assistant) handled 716 interactions, with 63 (9%) related to flooding. These interactions involved 9 different departments or program areas.
- After the first day of flooding, CoBy was updated to quickly direct customers to flood-related resources. A message was added to the chat box as soon as it opened, giving customers immediate access to the information they needed without having to ask.



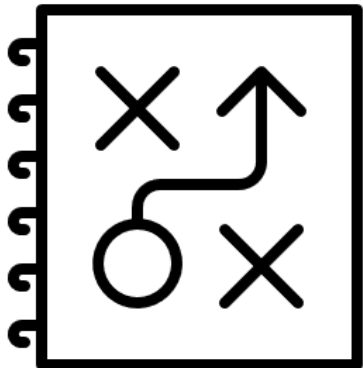
Incident Overview

Customer Experience

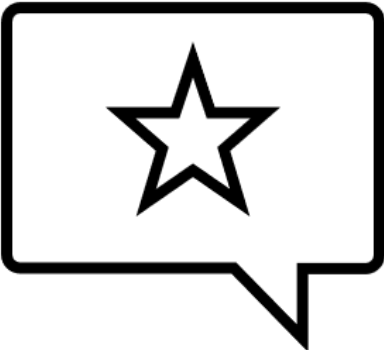
- The below chart shows the top 6 CRM flood related requests from July 15 – Aug. 1
- Requests for catch basin and maintenance hole repairs, as well as public tree ownership issues, were high early in the week but dropped as operations shifted from active response to recovery. In contrast, Regional Services requests, like grants, garbage collection, and inspections, remained steady throughout the week.



Strengths



**Collaboration
during response**

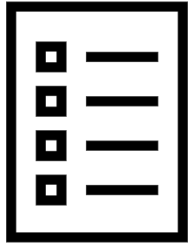


**Customer
response**



**Support for
residents**

Improvement Plan



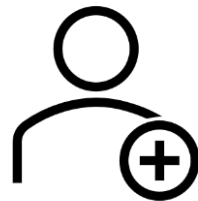
Expand infrastructure assessments



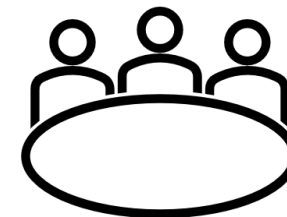
Increase maintenance frequency



Address encroachments and unpermitted site alterations



Expand on-call staffing for non-winter storms



Improve coordination with private infrastructure owners

Area Specific Flooding of Cavendish Drive



- Impact of 3rd Party Infrastructure on Storm Drainage Network

2025 Financial Impact

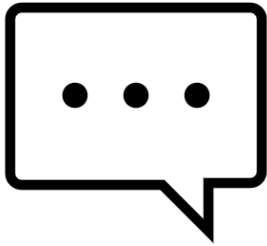
Reallocation of Proposed 2025 Capital Funding from Annual Road Resurfacing Program - \$2.18M

- Stormwater Drainage Assessments for vulnerable areas of flooding - \$100K
- Storm Sewer Inlet Grate Review - \$30K
- Enhanced CCTV Storm Sewer Inspections - \$250K
- Funding for Stormwater Infrastructure – Renewal and Resiliency \$1.8M

Additional 2025 Budget Request (Business Case 2025-026)

- Stormwater Master Plan - \$750K (One-Time Funding)
- Improving Storm Response (Expanded On-Call Coverage) - \$50K
- Increased Proactive Ditching and Creek Maintenance - \$200K
- Emergency Management Program Staff - \$150K

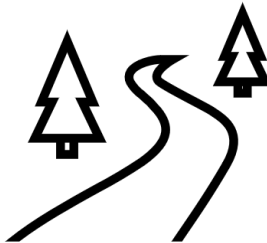
Continuous Improvements



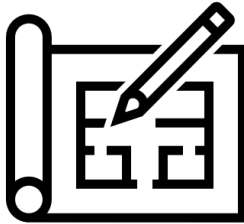
Communications



Multi-Agency
Coordination



Roads, Parks and
Forestry/Operations



Public Works and
Capital Projects

Conclusion

The City of Burlington is committed to ongoing improvements, studies, and projects that work to help mitigate flooding risks from extreme weather events.

