

Section III – Items for the Information of the Board

TO: Chair and Members of the Board of Directors
Meeting #5/20, Friday, June 26, 2020

FROM: Sameer Dhalla, Director, Development and Engineering Services

RE: **FLOOD RISK PUBLIC AWARENESS AND EDUCATION PROGRAM**
National Disaster Mitigation Program Funded Outreach Program Summary

KEY ISSUE

Summary of the digital, print, and in-person, outreach activities undertaken in flood vulnerable neighbourhoods as part of the National Disaster Mitigation Program (NDMP) funded Flood Risk Public Awareness and Education Program.

RECOMMENDATION

IT IS RECOMMENDED THAT this staff report, summarizing the Flood Risk Public Awareness and Education Program activities be received.

BACKGROUND

Many people inhabiting flood-prone communities are not fully aware of the risks to themselves and their property. A 2017 survey by the University of Waterloo found that only a small percentage of residents living in flood prone areas are aware of their flood risk (Thistlethwaite et. al., 2017). Pro-actively communicating risks to vulnerable communities can lessen the impact of flooding to these areas, as residents can take preparatory steps to protect themselves and their homes. The comprehensive and sensitive delivery of risk communication, in advance of a flood emergency, can support effective crisis communications during a flood emergency. In this context, risk communication is meant to enable audiences to analyze, evaluate, and synthesize information that will be valuable in the face of a potential emergency. Crisis communication, by contrast, is meant to trigger audiences to remember known information, understand simple directions, and apply key actions to lessen the impact of the crisis. The flood messages issued by conservation authorities are an example of crisis communications. Pro-actively providing information to increase awareness in flood prone neighbourhoods is an example of risk communications, which can prime these audiences to follow the protective actions outlined in the flood messages.

While the Toronto and Region Conservation Authority (TRCA) has historically made floodplain information available to the public via general website content and partnerships with municipal emergency management activities, the inclusion of flood outreach activities as a method of non-structural flood risk reduction under the National Disaster Mitigation Program (NDMP) presented a unique opportunity for more targeted communication with residents and businesses in flood vulnerable neighbourhoods.

At Authority Meeting #6/16, held on July 22, 2016, Resolution #A109/16 was approved as follows:

THAT TRCA staff, in partnership with TRCA's municipal partners, continue to pursue National Disaster Mitigation Program funding to accelerate flood risk mitigation projects;

Recognizing the opportunity to leverage federal funding to undertake a dedicated flood risk

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outreach program, TRCA successfully secured funding in 2018 through Intake 4 of the NDMP to actively reach out to flood vulnerable communities in TRCA's jurisdiction. Thus, the Flood Risk Public Awareness and Education Program was launched, which included two broad program objectives. First, to disseminate information on flood risk and current initiatives in risk reduction to municipal partners, and second, to jointly deliver (together with municipal partners) risk information to flood vulnerable neighbourhoods via a combination of digital, print, and in-person campaigns. These endeavours were supported through the following resolutions.

At Board of Directors Meeting #6/19, held on June 21, 2019, Resolution #A109/19 was approved as follows:

THAT TRCA staff be directed to continue to work with municipal staff and the insurance industry to share information from NDMP projects to advance and improve flood communications

Furthermore, at Board of Directors Meeting #9/19, held on October 25, 2019, Resolution #A181/19 was approved as follows:

THAT TRCA staff, together with municipal partners, pursue opportunities to pro-actively share important flood risk information with residents living in flood vulnerable areas, through measures including dedicated open houses hosted in conjunction with partner municipalities, as well as informational mail-outs that direct them to neighbourhood-specific web content.

RATIONALE

Areas in TRCA's jurisdiction where there is a high concentration of buildings within the regulatory floodplain are termed Flood Vulnerable Clusters (FVCs). Many of these areas correspond to communities that were developed prior to land-use planning practices for natural hazard management. TRCA recently ranked the 41 FVCs through the Flood Risk Assessment and Ranking (FRAR) study, and identified residents and businesses who live or work in the highest ranked Flood Vulnerable Clusters as being target audiences for enhanced risk communications.

Prior to undertaking public outreach in these areas, however, the Flood Risk Public Awareness and Education Program involved a municipal outreach component, in order to share the results of the FRAR study with municipal partner staff, and set the stage for collaboration on public outreach initiatives in the target neighbourhoods. Internal groups, such as the Government and Community Relations and Sustainable Neighbourhood Action Program teams, were also consulted to help identify target neighbourhood characteristics, and the Regional Watershed Alliance was consulted to identify possible FAQs and information topic areas. TRCA's Communications, Marketing and Events business unit was also a key partner in executing the program.

Municipal Partner Engagement

In June of 2019, Flood Risk Management staff undertook four full-day workshops with municipal partner staff, with over 100 staff from diverse departments amongst TRCA's municipal partners, including Durham Region, the City of Pickering, Town of Ajax, York Region, City of Markham, City of Richmond Hill, Town of Whitchurch-Stouffville, City of Vaughan, City of Toronto, Peel Region, City of Brampton, Town of Caledon, and City of Mississauga. These workshops provided an opportunity for TRCA to share location specific information on Flood Vulnerable Clusters, review roles and responsibilities, and establish the working groups, and workplans, for

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the delivery of the public outreach component. Municipal partners were also given the opportunity to review and provide input into the digital and print materials that were subsequently produced. Initial target clusters for public engagement were selected based on their risk ranking, but the final list of target clusters, and the corresponding strategies, were developed through these meetings and the subsequent communication with municipal partners, who identified their own priority areas and strategies. Where the outreach events were organized and hosted by the Flood Risk Management team, TRCA staff liaised with the local and regional councillors in the target areas either through direct meetings or through presentations to council or committee meetings. Local elected officials were often in attendance and highly supportive of the events held.

Internal and Industry Partner Engagement

In addition to municipal partners, other agencies with active program areas in flood risk outreach were invited to participate in applicable open houses. Agencies that attended included the Electrical Safety Authority to provide information on post-flood recovery practices, the Intact Centre on Climate Adaptation to provide information on lot-level flood protection measures, and the Insurance Bureau of Canada to field questions on insurance coverage options. Each municipal partner's respective Emergency Management staff also attended, thus providing a 'one-stop-shop' for residents to inform themselves about various elements of flood risk.

Public Outreach Events and Materials

Where existing public engagement events were already planned in the area by municipal partners or other TRCA departments, Flood Risk Management staff leveraged the existing event opportunity and attend the related event, providing panels, takeaway materials, and the opportunity to answer questions. Where no public engagement opportunity already existed in the highest priority clusters, TRCA pursued active outreach, with methods that were jointly developed with municipal partners over the course of six months. These tactics comprised direct mail campaigns, social media advertising, targeted websites for each cluster with more detailed flood risk information, and finally hosting dedicated open houses for the public to provide information and answer questions. Key messages were established to outline risk information, clarify roles and responsibilities, and provide targeted tips for enhancing flood preparedness. Cluster-specific flood risk webpages were developed with this content, with a goal to drive residents and business towards this information through further engagement. Given the diversity of municipal partner approaches, as well as the unique demographics of each cluster, the engagement methods were tailored for each cluster, and are summarized in the table below.

Table 1 – Target cluster and strategy summary

Cluster Name (rank)	Municipality	Outreach strategy- in-person	Date of in-person event	Digital Content developed	Advertising strategy
Rockcliffe (1)	Toronto	Attendance at existing event organized by local councillor	June 11, 2019	Directed to existing project page	N/A
Oak Ridges/ Lake Wilcox (8)	Richmond Hill	Attendance at existing event organized by Fire and Emergency Services	October 5, 2019	Dedicated flood risk webpage	

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Cluster Name (rank)	Municipality	Outreach strategy-in-person	Date of in-person event	Digital Content developed	Advertising strategy
Woodbridge (21)	Vaughan	Attendance at existing community event – Woodbridge Fall Fair	October 12, 2019	Dedicated flood risk webpage	Community centre posters; geo-targeted social media campaign
Pickering Village (4)	Pickering/Ajax	Attendance at existing Public Information Centre (PIC) related to flood infrastructure improvements	October 30, 2019	Directed to existing project page	N/A – note that the PIC itself was advertised per Environmental Assessment (EA) requirements
Jane-Wilson (2)	Toronto	Attendance at existing PIC for Basement Flooding Area 45 Master Plan and Black Creek Trunk Sewer Improvement Study	December 11, 2019	Dedicated flood risk webpage	Geotargeted social-media campaign (PIC itself was advertised by the City of Toronto)
Bolton Core (5)	Caledon	Dedicated flood risk public open house	January 7, 2020	Dedicated flood risk webpage	Hand-delivered invitation letters
Stouffville Centre (27)	Whitchurch-Stouffville	Dedicated flood risk public open house	January 20, 2020	Dedicated flood risk webpage	Town recreation guide; geo-targeted social media campaign
Avondale /Spring Creek (6)	Brampton	Dedicated flood risk public open house	January 30, 2020	Dedicated flood risk webpage	Hand-delivered lenticular postcards; geotargeted social media campaign
Vellore Woods (29)	Vaughan	Attendance at existing community event – Vaughan Winterfest	February 9, 2020		Community centre posters
Dixie-Dundas (3)	Mississauga	Dedicated flood risk public open house	March 2, 2020	Dedicated flood risk webpage	Mailed letter invites; geotargeted social media campaign
Markham Industrial / Don Mills Channel (10)	Markham	Dedicated door-to-door information campaign	March 5 & 6, 2020	Dedicated flood risk webpage	Door-to-door delivery of employee safety poster

Where Flood Risk Management staff hosted dedicated public open houses, the format included informational panel displays with staff on-hand to answer questions, followed by a short presentation, and question and answer session. A professional facilitator was engaged as a

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neutral point of contact, to guide the question and answer sessions, and to collect qualitative feedback. Event summaries, panels, and presentation slides were posted to landing pages to ensure continued access to the information for members who were not able to attend in-person. A variety of methods were used to advertise the open houses, including geo-targeted social media campaigns, community centre posters, and print invitations whose format varied from formal letters to visually arresting postcards (examples are included in Appendix 1). Each of the print materials were equipped with links and QR codes to direct readers towards the online information; this also allowed for the collection on the effectiveness of the campaigns, as it was possible to determine how many website visits originated from these print campaigns. Overall traffic to the Flood Risk Management sections of TRCA's website was also tracked.

Summary of Program Reach

Over the course of a 10-month period; Flood Risk Management staff hosted or attended events with an attendance of over 2,400 people combined, and created campaigns that reached 50,000 people digitally, and 1,949 people by mail. From these, 3,100 people accessed the flood risk specific webpages to learn more about their risk, and there were over 200 meaningful in-person conversations with residents and business owners living in TRCA's flood vulnerable clusters. Furthermore, the number of new public signups to receive flood forecasting and warning messages between January and March 2020 (the most active period of the campaign) was more than four times the average of new self-subscriptions in a given quarter. Attendance at open houses can be influenced by a variety of factors, ranging from the weather on the day to the demographics of the audience, to whether or not the community was already 'over-engaged'. Of the public open houses that were organized specifically for this campaign, the two that were the most well-attended were where:

- There had recently been a major flood event (Bolton Core)
- The direct mail campaign was the most visually arresting (Avondale/Spring Creek)

While the attendance at open houses on average corresponded to only 10% of the target audiences, the continued presence of the key information on the cluster specific webpages will allow for growth, over time, in the proportion of residents and businesses that are aware of their flood risk.

Key Themes

Attendees at the dedicated open houses hosted by Flood Risk Management staff were given a simple survey to determine their prior risk knowledge as well as the degree to which the information presented was useful. Although approximately only 25% of attendees completed surveys, the facilitator hired by TRCA for these events also captured qualitative information on key themes.

From the survey, it was possible to glean that:

- Most respondents heard about the open house through TRCA's direct mail efforts
- Most respondents (75%) now know what to do during a flood
- Almost all attendees found the information presented to be useful

From the qualitative observations provided by the facilitator, several themes emerged with respect to public perception around flood risk, as well as roles and responsibilities. Key themes included that:

- Residents wanted to share their anecdotal experience of flood risks and have a desire to supplement the data gathered during real flood events with their 'eyes on the ground' information.

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- Residents sought clarity on whom to call (TRCA, the municipality, or first responders) for flooding situations; residents did not see a distinction between urban or riverine flooding
- Many residents expressed concerns around debris removal and channel cleanups
- Residents and business owners sought information on specific measures they could take on their own properties
- Attendees were appreciative of the information being shared

As this program represented the first opportunity of its kind, the lessons learned from each outreach event were applied to subsequent events where possible and will continue to be applied towards future flood risk communications initiatives. Content to directly address the key themes above is already being generated.

Conclusion

The Flood Risk Public Awareness and Education Program was in its final stages when the new Ontario Flooding Strategy was released, which underscored the importance of increasing awareness as a method to reduce flood risk. Ensuring Ontarians are aware of flood risks is one of five overarching objectives within the strategy, and TRCA has exhibited leadership in this realm through the delivery of the Flood Risk Awareness and Education Program. While the ability to undertake dedicated public open houses and door-to-door in-person campaigns will be limited in the absence of follow-up funding to the National Disaster Mitigation Program, education and outreach remains a key program area within the Flood Risk Management group. Broad-range activities in this realm that are expected to continue in collaboration with municipal partners. Key activities for this year include the continued development of site-specific content for high-risk flood vulnerable clusters, with expanded information on remediation and infrastructure projects, as well as an overhaul of the main Flood Risk Management website to incorporate the key areas in which residents and business owners seek information. Objectives also include the development of informational videos explaining concepts like the '100-year storm', flashy watersheds, and the process of creating floodplain maps, as well as factsheets on seasonal flood risks, such as ice-jams and thunderstorms. Social media campaigns will continue to be developed to address the key theme areas identified from the public open houses, such as clarity on roles and responsibilities during flood events. Additional engagement with flood vulnerable cluster residents will continue to occur as opportunities arise. A key target audience for the coming years includes the real estate and insurance industry, to leverage their touchpoints with homeowners in order to increase awareness of flood risks, a tactic that is explicitly identified within Ontario's Flooding Strategy. Although this year's Emergency Preparedness Week events were cancelled due to COVID-19, Flood Risk Management staff will continue to work with municipal partners to identify unique opportunities to connect with and inform residents and business owners living in flood vulnerable neighbourhoods

Relationship to Building the Living City, the TRCA 2013-2022 Strategic Plan

This report supports the following strategies set forth in the TRCA 2013-2022 Strategic Plan:

Strategy 2 – Manage our regional water resources for current and future generations

Strategy 8 – Gather and share the best sustainability knowledge

FINANCIAL DETAILS

General flood risk awareness and communications activities are funded through the Flood Risk and Communications operating account 115-62. The specific Flood Risk Public Awareness and Education Program was completed using funds provided by the National Disaster Mitigation Program, City of Toronto, and the regional municipalities of Peel, York and Durham. Funding was allocated in account 107-54.

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Attachments: 1

Attachment 1: Direct Mail Examples