

REPORT

Council

Meeting Date: March 24, 2025

FROM: Roads and Works Operations

DATE: March 11, 2025

SUBJECT: Flooding Preparedness

LOCATION: Town-wide

WARD: Town-wide

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RECOMMENDATION:

That the report from Roads and Works Operations entitled Flooding Preparedness, dated March 11, 2025, be received for information.

KEY FACTS:

The following are key points for consideration with respect to this report:

- On July 15 and 16, Oakville and Halton Region experienced a severe rain event in localized areas.
- Staff provided an update of the flood event to Council on August 13, 2024, and staff were to create an education/promotional program related to flooding.
- The public awareness campaign includes hosting a Public Open House on April 24, 2025, at Town Hall, and use existing communication channels and paid advertising to promote ongoing education and seasonal reminders year-round.
- Education focus areas will help our residents better understand the various responsibility of stakeholders, role of the resident, and who to contact.

BACKGROUND:

Oakville and Halton Region experienced a severe rain event in localized areas.

On Monday July 15, and Tuesday July 16, 2024, severe thunderstorms occurred in Halton Region, with Oakville receiving varied levels of rainfall. The heaviest storm activity occurred in South Oakville. On July 16, the Queens Elizabeth Park

Community Centre area received the equivalent of a 10 to 25-year event and the Halton Region Southwest Waste Water Treatment Plant, near Coronation Park, received the equivalent of a 100-year event.

Due to consecutive rainfall on the five (5) days preceding Monday July 15, the ground was already saturated which resulted in heavier than normal stormwater runoff on July 15/16. The severity of the storm on July 16, 2024, and the cumulative impact of the previous heavy rainfalls, caused damage to some town assets and resulted in temporary interruptions to some services. To date, most issues have been resolved.

Service Oakville and the Region of Halton (311) received a total of 339 calls related to the storm ranging from public right-of-way/property damage to private residential flooding.

The town's response during a severe storm focuses on the safe operations of the town's right-of-way and maintaining the function of our stormwater network. Staff promptly assessed the Town's infrastructure stability and addressed immediate safety concerns. Through these assessments, staff completed rehabilitation and replacement of assets in 2024 and continue with planning additional capital projects in 2025.

On August 13, 2025, an information report was provided to council on impact of the storm event, town's recovery efforts, plans to mitigate future flood risk, flood response and communication.

The purpose of this report is to describe communication improvements related to flooding preparedness and the initiation of a public awareness campaign.

COMMENT/OPTIONS:

Flood response protocol with communication triggers and a "Flooding" website was created in 2024 to enhance information available to the public.

In 2024, there were a few notable accomplishments to share. Staff from Roads and Works Operations, Parks and Open Space, Facility Services, Corporate Communications, ServiceOakville, and Oakville Fire met to review the lessons learned from a communication perspective regarding this storm.

Staff developed a Flood response protocol using different levels of warnings and prepared associated communication with consideration of emergency management. The protocol stipulates the applicable web banner notifications that would apply to relevant levels of warning.

Further, staff reviewed the town's website and determined that there were numerous pages related to stormwater; however, they are mostly related to studies and technical information about stormwater assets. Town website team quickly created a Flood information webpage that now includes flood prevention tips and basement flooding information. Additional work resulted in creation of a more resident-friendly website to address "what should I do when my house is flooded".

The "Public Awareness Campaign" includes a launch in the Spring and continuous communication through the year.

The educational approach of a flood protection public awareness begins with a proactive campaign to help residents prepare before seasonal rainy weather begins.

The Public Awareness Campaign has four (4) main objectives:

1. Deliver an educational campaign about flood protection to help the community prepare for potential flood incidents.
2. Inform the community about flood protection resources, and where to find them, and how to prepare in case of flooding.
3. Clarify roles so residents know their responsibilities and that of the town, region, and conservation authorities.
4. Encourage the community to make simple, impactful enhancements to flood-proof their property.

There are several key messages to be communicated with the public, including:

- Flood resilience is a priority for everyone
 - Flooding can damage homes, displace residents and put pressure on stormwater infrastructure. Collective action is important.
- Flood preparedness and response are shared responsibilities
 - The town, region, conservation authorities and the public, each have a specific role to play to be flood prepared.
- Who to contact
 - Knowing who to contact for what type of flood concern can help with timely response.

The above-noted objectives and goals will be achieved through a "Phased" approach:

- Phase 1 – Staff will host a Public Open House on April 24, 2025 at Town Hall.
- Phase 2 – Staff will provide ongoing education during the year before and during seasonal rain events.

During the Public Open House on April 24, 2025, several Town departments will be present with educational information and available to answer questions from the public. There will be staff on hand from Fire and Emergency Services & Climate Change to discuss climate risks, preparation for floods and what to include in emergency kits. ServiceOakville staff will be available to discuss call/inquiry triage process, roles and responsibilities, and resources available on the website. Also, staff from Roads & Works Operations, and Parks & Open Space will discuss their role when dispatched to a home/park, provide information about culverts and ditch maintenance.

Along with online and printed resources that will be made available, the Town is collaborating with key partners whose role in flood prevention and response is important. Invites have been extended to our key partners who will be represented at the upcoming Public Open House. Halton Region, will discuss their role in response, flood subsidy program, flood prevention advice. Similarly, Conservation Halton staff will provide additional information on the online alerts, difference between flood alert, watch and warning, and how best to check if a property is on a floodplain. The Insurance Bureau of Canada, will discuss the different types of flood insurance, “do’s” and “don’ts”, and claims process. Finally, Oakville Ready Community group will be available to offer support and resources to members of the public.

Following the launch, Phase 2 includes providing on-going communication and promoting flooding preparedness and awareness to the public utilizing cross promotion opportunities:

- Issue flood / rain related communication in March and August each year using the town’s existing communication channels ahead of the rain season (typically occurring during in the months of April and September).
- Include the prepared promotional / education material at other town events and initiatives such as May 5 to 11 - Emergency Preparedness Week; Mid-June to end of September – Home Fire Safety Awareness program; August/September – Seniors Open House etc.
- Posters at town facilities; tax bill flyers and others.

Significant content will be developed to meet the objectives of the public awareness campaign.

Out of the four objectives of the campaign, the following are highlights of the information that will be shared with the public.

Roles and Responsibilities – Agencies

The key responsibility areas for the Town, Halton Region, Conservation Halton, the resident, and developers will provide the context for the education focus areas and will be included in the public awareness campaign information provided.

Residents will be directed to contact the Town of Oakville (905-845-6601 or service@oakville.ca) for the following responsibility areas:

- Catch basin, ditch or culvert flooding
- Stormwater management ponds
- Creek blockage
- Road or sidewalk water pooling
- Property flooding due to neighbouring construction
- Park, trail, or town facility drainage concerns
- Harbours

Also, the town's response to flooding (as documented on the town website), and how staff triage calls and track "Hotspot" areas will be effectively communicated and explained in greater detail.

Residents will be directed to contact Halton Region (311 or 905-825-6000 or accesshalton@halton.ca) for the following responsibility areas:

- Basement flooding
- Enhanced basement flooding program
- Waste-water flooding
- Watermain courses
- Fire hydrants

The Conservation Authorities, which include Conservation Halton (CH) and Credit Valley Conservation (CVC), have several areas of responsibility for flooding and flooding emergencies, but act in an advisory capacity to:

- Support municipal flood emergency planning by providing technical advice pertaining to flood risk (e.g. hydrology, hydraulics, flood vulnerable areas, etc.) and where applicable, engage in flood mitigation projects to reduce flood risk prior to flood events.
- Maintain a local monitoring network, collect data, and monitor watershed and weather conditions daily in order to provide timely warning of anticipated or actual flood conditions (i.e., operate a flood forecasting and warning system). Provide local watershed condition details and updated forecast information as well as other supporting technical and/or advisory data pertaining to flood conditions to municipalities within their jurisdiction during an event.

- Issue flood messages to municipalities, including the media and the public, to advise of potential flooding when appropriate.
- Monitor and operate Conservation Authority dams and flood control structures, in accordance with operating plans, to reduce the effects of flooding when appropriate.
- Maintain communications with municipalities and the MNR Surface Water Monitoring Centre (SWMC) during a flood event.

Roles & Responsibilities – Residents

Knowing about flood risks and how to prepare for them (before, during and after a flood) will help keep our residents safe and minimize damage to property. Our Town of Oakville residents can help by doing the following:

- **Before the Event**
 - Watch for alerts issued by CH and CVC.
 - Ensure street catch basins are not blocked and keep their eavestroughs clear.
 - Move electrical appliances and other belongings above ground level.
 - Make sure all basement windows are closed.
- **During the Event**
 - Keep the radio on to find out what areas are affected.
 - Stay away from streams, drainage channels, creeks, lake shoreline, stormwater management ponds and other areas known to flood suddenly.
 - If water rises above electrical outlets, baseboard or furnace, call Oakville Hydro at 905-825-9400 to report it.
 - Take the emergency kits with you if evacuated.
- **After the Event**
 - Return home only when authorities indicate it is safe.
 - Roads may still be closed if they have been damaged or are covered by water. If you come upon a barricade take another route.
 - Stay out of buildings surrounded by floodwaters.
 - Use extreme caution when entering buildings due to hidden damage.

Driveway Culvert and Roadside Ditches

Another education focus area includes understanding how driveway culverts and roadside ditches are important parts of the town's drainage system, and how homeowners are responsible for maintaining the roadside ditches and driveway culvert (including headwalls) on their property if their home is located in an area with a ditched roadway drainage system.

Staff provided a Council Information memo on Town Practices – Ditches and Driveway Culverts (on December 16, 2024 Council Agenda) that outlines town's work related to ditches, property owner responsibilities, standards for ditches and driveway culverts, and related communications that will be part of the public awareness campaign.

In order for the homeowner to maintain a clear and unobstructed flow path through the culvert, this may require occasional clearing of leaves, branches, dirt, debris which may build up in the culvert from time to time. This also requires that any landscaping materials such as retaining walls or stones do not block inlets or outlets. Inspecting culverts regularly will ensure they are in good working order. Property owners, as per the current Property Maintenance By-law, are also responsible for routine maintenance of the ditches which includes grass cutting.

Private Site Drainage, Site Alteration, and Infill Developments

The last education focus area will focus on maintaining private site drainage per original design and changes to the property (e.g. site alteration and infill developments).

It is the responsibility of the property owner to maintain the property's grading and surface drainage. Any work carried out that changes the original approved grades or the historically existing grades, must not impair the land's ability to drain properly or create adverse impact to the adjacent properties, including the municipal right-of-way and town infrastructures.

Changes that do impact properties could result in numerous issues, such as flooding, negative impact to adjacent properties, natural environmental features and municipal infrastructures, costly repairs, negative feelings with your neighbours, and possible charges under the town's by-laws. The Public Awareness Campaign will provide information on town's requirements and available tools (Grading and Servicing Plan Guide, Town of Oakville Development Engineering Procedures and Guidelines, the Stormwater Master Plan, and the Site Alteration By-law) to help make a resident infill development or project a success, and to minimize the risk of flooding on neighbouring properties.

The potential grading and drainage impacts of the proposed redevelopment of single-lot residential lots are currently reviewed through the site alteration (pools and tear down/rebuild) process or scoped site plan process if the property is within the Ontario Regulation Bill 97 buffers. While the site plan process is considered "applicable law" under the Building Code, the site alteration permit process is not, meaning building permits can be issued without an approved site alteration permit. Regardless of the process, the availability of tools, including zoning provisions for a minimum landscape requirement, side yard and rear yard drainage setbacks, and/or

stormwater management requirement, is paramount to protecting neighbouring properties and town-owned infrastructure.

Town staff continue to enhance town's communication, maintain town's stormwater infrastructure, plan for the future, and continuously improve on processes / practices to mitigate the impact of flooding.

Through the Public Awareness Campaign, the town will continue to improve our website, promotional material and collaborate with our partners on increasing awareness.

The town completed a number of stormwater studies/assessments and through the Rainwater Management Financial Plan, long-term improvement plans, and sustainable funding source will be developed. The implementation of the stormwater improvements to improve resiliency to climate change and protect our stormwater infrastructure and assets will include green infrastructure assessment with green infrastructure being the preferred option.

Staff continues to monitor lake levels and through advocacy efforts have requested the International Joint Commission (IJC) to thoroughly review Plan 2014, and other alternatives, to regulate discharges from Lake Ontario in order to minimize flooding of public and privately owned lands and infrastructure along Lake Ontario. Poor management of Lake Ontario levels could increase the risk associated with both public and private property such as cost increases in emergency response and infrastructure improvement. Ideally, Lake Ontario management strategies will help to minimize costs for waterfront communities through better forecasting and/or management tools. The Town of Oakville recognizes that it is challenging for the IJC when it comes to responding to extreme weather conditions and Lake Ontario water levels as communities and other interests both upstream and downstream of the Moses-Saunders Dam can be negatively impacted by extreme conditions.

The town is currently exploring regulations that address the hardening of front and rear yards to prevent flooding impacts on neighbouring properties and town lands through the review of Zoning By-law. Excessive hardscaping increases surface runoff, preventing rainwater absorption which can overwhelm stormwater systems and/or direct excess water onto adjacent lots. By balancing development with sustainable water management, the town aims to reduce flooding risks while supporting responsible urban development.

Lastly, staff are reviewing our pool permit process to introduce an expedited approval for applications with minimal hardscaping and no significant grade changes. For applications proposing extensive hardscaping or alterations to grading, a more detailed review will be required to minimize the risk of flooding on neighbouring properties.

CONSIDERATIONS:

(A) PUBLIC

Information and educational material related to flooding protection and preparedness will be updated to assist members of the public with their questions on how to improve their property's resiliency and adapt to the impacts of climate change.

(B) FINANCIAL

Any financial implications would be related to advertising and promotion of the material and workshop and there is sufficient funding in the roads and works budget to cover the costs.

(C) IMPACT ON OTHER DEPARTMENTS & USERS

Asset Management, Transportation and Engineering, Parks and Open Space, Roads and Works, Planning and Development, and Communications and Customer Experience were consulted in the preparation of this report.

(D) COUNCIL STRATEGIC PRIORITIES

This report addresses the corporate strategic goal(s) to:

- Environment – Effective management of the overall rainwater related infrastructure network helps to protect Oakville residents while preserving our natural environment and increase our resiliency against climate change.

(E) CLIMATE CHANGE/ACTION

Severe storms can cause property damage and have harmful effects on the environment. Appropriate management of the town's stormwater assets and providing resources to the public regarding flooding will support the town's efforts to adapt to the impacts from more frequent and severe rainstorms resulting from climate change.

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