

Dealing with floods

As the owner or tenant of a property in Haldimand County, there are steps you can take to protect yourself, your family and your property.

Before a flood: prepare your family and property

- Know where your property is located in relation to Lake Erie flood warning zones.
- Prepare an Emergency Plan that can be initiated quickly should you need to evacuate during a flood emergency.
- Have a 72-hour Emergency Kit (“Go Bag”) that includes essentials your family may need. Remember to include items like medications, items for pets, etc.
- Visit haldimandcounty.ca/emergency-preparedness for information on how to prepare an Emergency Plan and 72-hour Emergency Kit.
- Consider installing a sump pump and backflow preventer in basement floor drains, and consider having a portable generator and pump available in the event of a power outage.
- Move important items away from areas that may be subject to flooding.
- Consult your electricity and fuel suppliers (oil, natural gas, propane) for instructions on how to safely shut down and protect furnaces and other equipment, and the steps that need to be taken after a flood before restarting equipment.
- In the winter months, drain the pipes and shut off the water supply to help prevent the pipes from freezing.
- Consider installing storm shutters on windows.
- Speak with your property insurer about insurance options.

- and websites including Haldimand County’s (haldimandcounty.ca) and the Conservation Authorities’ websites.
- Follow @HaldimandCounty on Twitter and Facebook for important flood-related messages.
- Follow the instructions of emergency response officials, such as police, fire and municipal staff.
- Remove valuable items from the basement and lower levels.
- If you have a generator and/or portable pump, test them and have fuel on hand. (Only use fuel-burning generators outdoors in well ventilated areas away from building openings.)
- Make sure your sump pump is working.
- Follow the instructions from your utility supplier (gas, electrical, propane, etc.) to safely shut down and protect furnaces and other appliances.
- Prepare to evacuate if necessary. Collect essential items such as cash, medication, important papers, identification and change of clothes. Consider evacuating your residence if streets in your neighborhood are flooded. Emergency vehicles (ambulance, fire trucks, police cars, etc.) may not be able to get to your home.
- Resist the urge to tour flooded areas. You may be putting your own life at risk and could interfere with the work of emergency responders.
- Ensure your pets are not left alone during a flood by taking them to a kennel or leaving them with family and friends.
- If a road has been closed, obey the signs and take alternate routes. It is an offence to drive on a closed road and could void your insurance.

After a flood

- Do not return home until authorities advise it is safe. Check the Haldimand County website or Twitter/Facebook page for specific instructions and post-flood updates.
- Report broken or downed utility lines.
- Consult your insurer about steps to take if your property is flooded.
- Exercise caution when re-entering your home. If the main power switch was not turned off prior to flooding, do not re-enter your home until a qualified electrician has determined it is safe to do so.
- If your main electrical panel was under water, it must be cleaned, dried and tested by a qualified electrician to determine if it is safe. Do not use flooded appliances, electrical outlets, switch boxes or fuse breaker panels until they have been checked by the power company.
- If natural gas lines were under water, contact your gas supplier before resuming service. If natural gas appliances were under water, have them checked by an approved heating, ventilation and air conditioning contractor.
- If your well has been affected by flood waters, it is recommended that you boil your water for at least one minute at a rolling boil, or purchase water from a safe source. Before resuming normal use of the well, have the water tested for possible bacteria and pollutants. Water sample bottles can be picked up at any Haldimand-Norfolk Health Unit office and have their well water tested free of charge.

When a flood is imminent or occurring

- Watch for Lake Erie flood warnings and advisories on television, radio (92.9 The Grand FM), social media

Getting information

There are several things you can do to learn more when flooding is possible or occurring in Haldimand County:

- Visit Haldimand County’s website and social media feeds: haldimandcounty.ca, Twitter @HaldimandCounty, and Facebook (Haldimand County).
- Visit haldimandcounty.ca/emergency-preparedness. This webpage contains useful information on how to prepare for emergencies.
- Monitor the media. Both Haldimand County and Conservation Authority flood messages are distributed to area TV stations, radio stations and newspapers for broadcast and publication. 92.9 The Grand FM is Haldimand County’s official emergency information broadcast partner.



Preparing for Flooding

A Guide for Haldimand County Residents Affected by Lake Erie Related Flooding

About Lake Erie

The Great Lakes drainage basin covers an area of approximately 766,000 km². About 18 per cent of the world supply of fresh water and about 84 per cent of North America’s supply is stored within the lakes.

95 per cent of Lake Erie’s water comes from the upper Great Lakes – Superior, Huron, Michigan – as well as Lake St. Clair. The rest comes from precipitation on the lake itself or drainage directly to it via tributaries like the Grand River.

The International Joint Commission implements plans that allow for some regulation of water flowing out of Lake Superior and Lake Ontario. Regulation of Lake Ontario does not affect water levels in Lake Erie due to the elevation drop at Niagara Falls. These regulations also do not affect long-term trends and their effects are too slow to be useful for short-term lake level adjustment.

The water elevation in Lake Erie fluctuates with changes in the weather (hours, days), the season (one year),

and the long-term water supply to the Great Lakes basin (multiple years).

A prolonged wind from the south-west causes Lake Erie to rise along the shoreline of Haldimand County. Seasonally, the lake level is usually the highest in June and the lowest in February. Although day-to-day water levels are highest during the summer months, the fall and winter storm season brings more surge and wave action. A solid sheet of ice on the lake can help protect the shoreline from surge and wave action, but represent a significant hazard in its own right if a storm coincident with ice breakup pushes ice blocks on to the shore. Long-term fluctuations in lake levels have not occurred in a predictable pattern. The time between high and low lake level conditions and the duration of the levels varies widely.

More information about the Great Lakes, characteristics and conditions is available on the Fisheries and Oceans Canada website at <https://waterlevels.gc.ca/>.

Contact:



Haldimand County
53 Thorburn St. S, Cayuga
905-318-5932



Long Point Region Conservation Authority
4 Elm St., Tillsonburg
519-842-4242



NIAGARA PENINSULA CONSERVATION AUTHORITY

Niagara Peninsula Conservation Authority
250 Thorold Rd., Welland
905-788-3135



Grand River Conservation Authority
400 Clyde Rd., Cambridge
1-866-900-4722

Causes of floods

Lake Erie is the shallowest of the Great Lakes and is especially vulnerable to fluctuating water levels due to weather. South-west winds of sufficient speed and duration, and low pressure systems travelling from west to east along the length of the lake, are able to “push” water from the west end of the lake to the east end (wind setup/surge). This lake surge can temporarily raise water levels by up to two and a half metres along the lakeshore and connected tributaries for hours at a time. In addition to these storm surges, isolated waves of up to two metres above the surge height can also occur.

Flood forecasting

The Conservation Authorities monitor weather information,

ice conditions, and lake level forecasts from the Ontario Ministry of Natural Resources and Forestry (MNRF) and the National Oceanic and Atmospheric Administration (NOAA). Water level gauges at Port Colborne, Port Maitland and Port Dover provide information on current conditions.

Flood messages

When flooding is possible or about to occur, the Conservation Authorities issues flood messages to municipal emergency management officials and the media.

There are three types of flood messages:

1. Lake Erie Conditions Statement - Flood Outlook:

This message provides early notice of the potential for flooding based on weather forecasts calling for high winds

from the south-west, and lake level forecasts from MNRF and NOAA.

2. Lake Erie Flood Watch:

Flooding is possible in specific areas. Municipalities, municipal services and landowners in flood-prone areas should prepare.

3. Lake Erie Flood Warning:

Flooding is occurring or is about to occur. Municipalities should take action to deal with flood conditions. This may include road closures and evacuations.

Flood response

When the Conservation Authorities issue a Lake Erie flood message, it is sent to the Haldimand County Flood

Getting information when
**flooding is possible or
occurring >>**

Coordinator and the Haldimand County OPP. The County implements their flood response plans. In a serious emergency, the County may activate its Emergency Operations Centre to oversee the flood response.

- The County Flood Coordinator will work with County staff to close roads, shut down utilities and take other action to protect lives and property.
- The County Flood Coordinator will warn households and businesses in affected flood zones. Warnings will be distributed to media outlets, posted on the County's and Conservation Authorities' websites and shared through social media channels. In some instances, volunteer firefighters will conduct door-to-door notifications.
- Warnings may be issued at different times to different levels, depending on the conditions causing the flood. In most cases, properties that may be affected will, at a minimum, receive one warning.

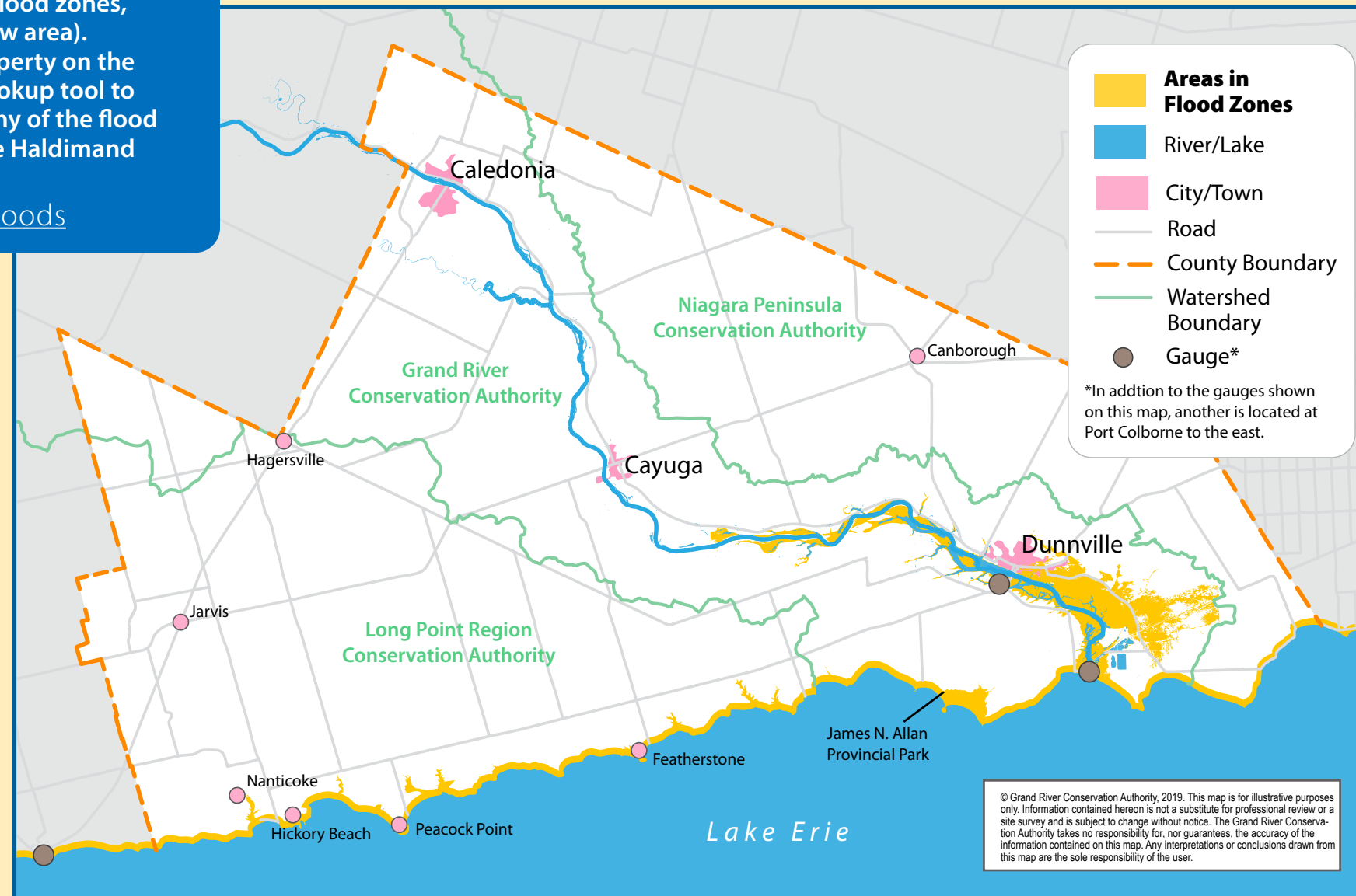
This map shows all the Lake Erie flood zones, consolidated into one layer (yellow area). Residents should locate their property on the Lake Erie Flood Zone Property Lookup tool to determine if it is located within any of the flood zones. This tool is accessed on the Haldimand County website:

www.haldimandcounty.ca/floods

Lake Erie Flood Zones

In Haldimand County, rises in the lake level can cause flooding along the lakeshore, as well as flooding along the rivers that are connected to Lake Erie for kilometres inland.

Flood level warnings are based on forecasts that consider the lake elevation just prior to the event plus storm surge only, as these aspects are able to be more accurately forecast. Properties may also be affected by waves, spray (possibly freezing), ice, high winds, shoreline erosion, etc. Further, properties on the Grand River near the lake could also be subject to riverine flood waters (i.e., high river flows). In all cases, residents should also be aware that road access to properties — both in and out of the flood zones — may be impacted.



Port Maitland, Ontario (January 29, 2007).