

# Dealing with floods

As the owner or tenant of a property in West Montrose, there are steps you can take to protect yourself, your loved ones and your property.

## Prepare your family and property

- Know where your property is located in relation to the flood warning areas.
- Prepare a Family Plan that can be initiated should you need to evacuate during a flood emergency.
- Have an Emergency Kit (“Go Bag”) that includes essentials your family may need. Remember to include items like medications, items for pets, etc.
- Visit [www.wrem.ca/beprepared](http://www.wrem.ca/beprepared) for information on how to prepare a Family Plan and Emergency Kit.
- Consider installing a sump pump and zero reverse flow valves in basement floor drains, and consider having a portable generator and pump available.
- Move important items that may be subject to flooding to upper levels.
- 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.
- Consult your property insurer about steps you should take if your property is flooded.

## When a flood is imminent or occurring

- Listen to warnings and advisories on television and radio or through websites, including the GRCA’s at [www.grandriver.ca](http://www.grandriver.ca) and the Twitter feed for flood messages @grca\_flood\_msg, as well as the Township’s website at [www.woolwich.ca](http://www.woolwich.ca).

- 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 necessary 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, 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 offense to drive on a closed road and could void your insurance.

## After a flood

- Do not return home until authorities advise it is safe.
- Report broken utility lines.
- Consult your insurer about steps to take if your property is flooded.
- If you suspect your building has suffered structural damage, contact the Township of Woolwich Building Department at (519) 669-6036.
- 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.
- The water in your home could be contaminated with sewage and other pollutants. Contact Region of Waterloo Public Health.

## Getting information

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

- Visit the Township of Woolwich website & social media feeds: [www.woolwich.ca](http://www.woolwich.ca), Twitter @woolwichupdates, and Facebook (Township of Woolwich).
- Visit the Waterloo Region Emergency Management website at [www.wrem.ca/beprepared](http://www.wrem.ca/beprepared). The “Be Prepared” section contains useful information on how to prepare for emergencies.
- Monitor the media. GRCA flood messages are distributed to area TV stations, radio stations and newspapers for broadcast and publication. Many of these outlets also post the messages on

their websites.

- Check water levels on the GRCA website. Information from the GRCA river and rain gauges is updated every hour in the River Data section of the GRCA website at [www.grandriver.ca](http://www.grandriver.ca). Also, check the “Flooding” section of the website for more background information, including links to other sites about protecting your property and cleaning up after a flood.
- Follow the GRCA’s Twitter feed for flood messages: @grca\_flood\_msg or subscribe to receive GRCA flood messages via email on the GRCA’s website at [www.grandriver.ca/subscribe](http://www.grandriver.ca/subscribe).



# Preparing for Flooding

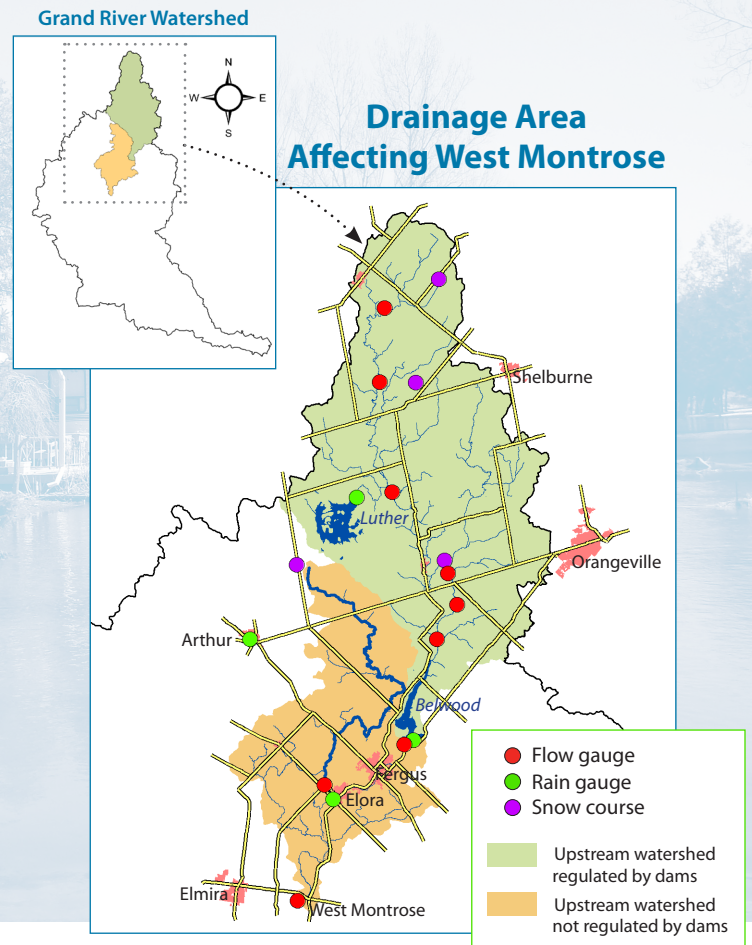
## A Guide for Residents of West Montrose

## Introduction

The historic Village of West Montrose and the West Montrose Family Campground lie on land that is prone to flooding – the floodplain – and high water has always been a part of life in this community.

There are limits to what can be done to prevent flooding. However, there are steps that can be taken to manage the risk that floods pose to people and property.

Woolwich Township, the Grand River Conservation Authority and the Waterloo Regional Police Service work together to warn residents about floods, to help them prepare for flooding and to keep people safe when flooding occurs.



## Contact:



**Woolwich Township**  
24 Church Street West, Elmira  
519-669-1647  
1-877-969-0094



**Waterloo Regional Police - Rural Division**  
13 Industrial Drive, Elmira  
519-570-9777  
(Non-emergency number)



**Grand River Conservation Authority**  
400 Clyde Rd., Cambridge  
519-621-2761  
1-866-900-4722

## Causes of floods

Floods can occur at any time of year and have a variety of causes. The most common reasons for floods are:

- extreme rainfall, which can occur at any time of year
- high temperatures in the winter and spring that cause snow and ice to melt quickly
- ice jams in the winter and spring, when large amounts of ice become lodged in the river channel, causing water to back up and spill over the banks

## Flood forecasting

The GRCA monitors weather information, river flows, snow pack and ice conditions in order to predict when floods will occur and how high the water may rise. River and rain gauges in the Grand River watershed provide information on current conditions.

## Upstream dams and reservoirs

Belwood and Luther reservoirs are upstream of West Montrose and help reduce the risk of flooding. These multipurpose reservoirs provide flood reduction and flow augmentation functions.

Snowmelt and rainfall are used to fill these reservoirs in the spring. During summer, water is released to augment river flows. In early summer, there is limited flood storage capacity at these reservoirs. About 40% of the drainage area affecting West Montrose is not regulated by dams, and runoff from this area can cause severe flooding.

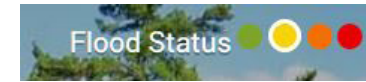
## Flood messages

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

There are three types of flood messages:

### 1. Watershed Conditions Statement – Flood Outlook:

This message provides early notice of the potential for flooding based on weather forecasts calling for heavy rain, snow melt or conditions that could cause an ice jam.



### 2. Flood Watch:

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

### 3. 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.

In addition to these flood messages, the GRCA may also issue a

“Watershed Conditions Statement – Water Safety” to warn about unsafe conditions around rivers, streams and ponds though flooding is not expected.

**How to learn more when flooding is possible or occurring >>**

## Flood response

When the GRCA issues a flood warning, it is sent to the Woolwich Township Flood Co-ordinator and the Waterloo Regional Police. They implement their flood response plans. In a serious emergency, the township may activate its Emergency Operations Centre to oversee the flood response.

- The Township Flood Co-ordinators will work with Township staff to close roads, shut down utilities and take other action to protect lives and property.
- The Township Flood Co-ordinator will warn households and businesses within the area to be affected, based on the warning levels shown on the map. This will be done through door-to-door visits by township fire staff or by the community alerting system or by email notification.
- Warnings may be issued at different times to different levels, depending on the conditions causing the flood. In most cases, properties will, at a minimum, receive one warning.

## Flood warning zones

Flood emergency officials have developed a warning system that is based on the rate of flow of water in the Grand River during floods. Water flows are measured in “cubic metres per second” (m<sup>3</sup>/s). That is the amount of water flowing past a fixed spot in one second.

Residents should locate their property on the map to see how it is affected at various warning levels.

Normal summer low flow:  
5.0 m<sup>3</sup>/s (cubic metres per second)

Warning Zone 1: 110 - 180 m<sup>3</sup>/s

Warning Zone 2: 180 - 280 m<sup>3</sup>/s

Warning Zone 3: 280 - 400 m<sup>3</sup>/s

Warning Zone 4: 400 - 700 m<sup>3</sup>/s

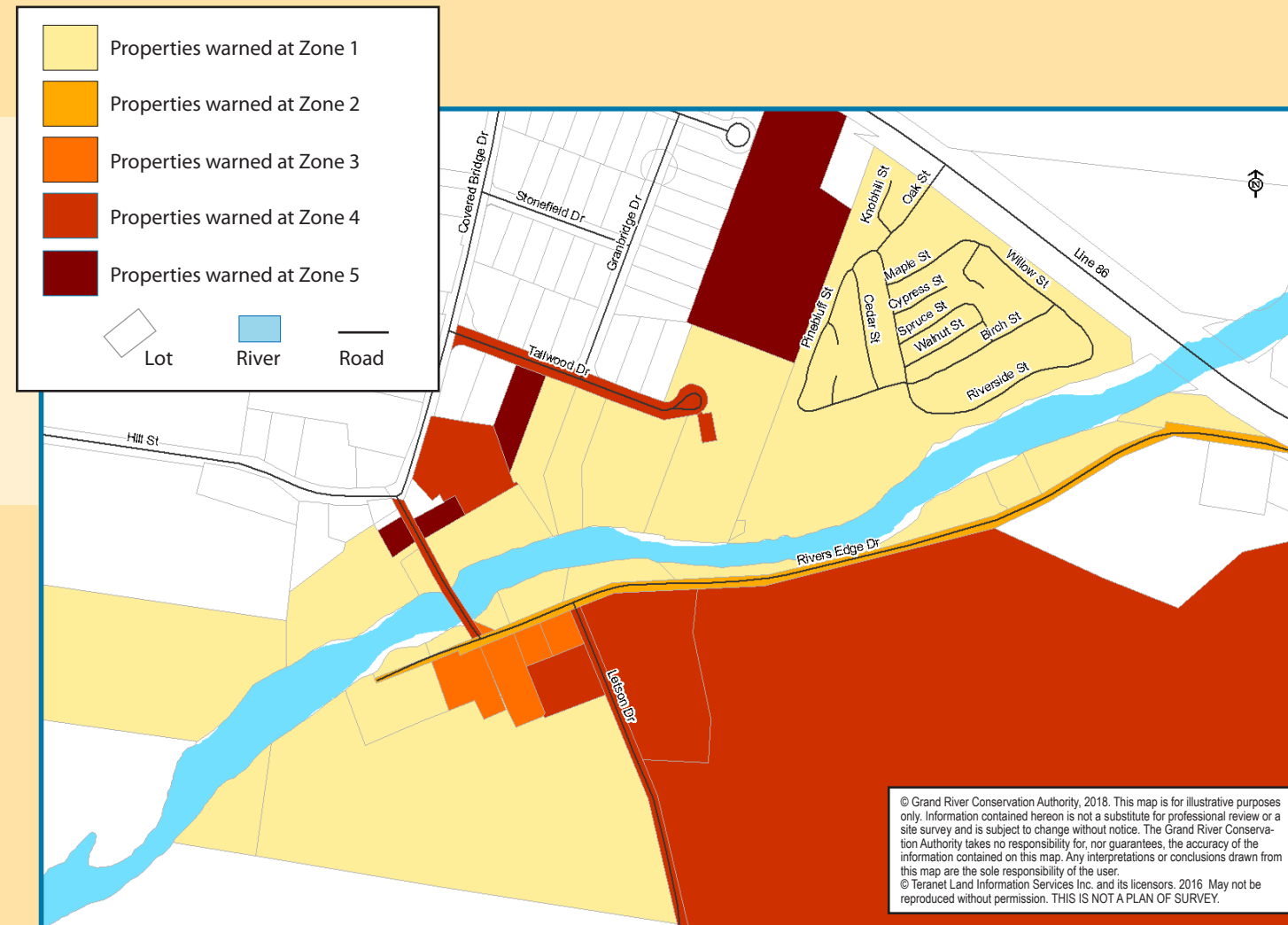
Warning Zone 5: 700 - 1,400 m<sup>3</sup>/s

Zone 5 would be flooded if a huge storm — the size of Hurricane Hazel in 1954 — were centred directly upstream of the Village of West Montrose. The flows would be about 1,400 m<sup>3</sup>/s. This is known as the *regulatory flood* and is used to determine the parts of West Montrose where construction and new development are restricted. Anyone considering building, grading and/or undertaking other construction in this area must consult the Resource Planning department of the GRCA. More information is available in the “Planning and Regulations” section at [www.grandriver.ca](http://www.grandriver.ca).

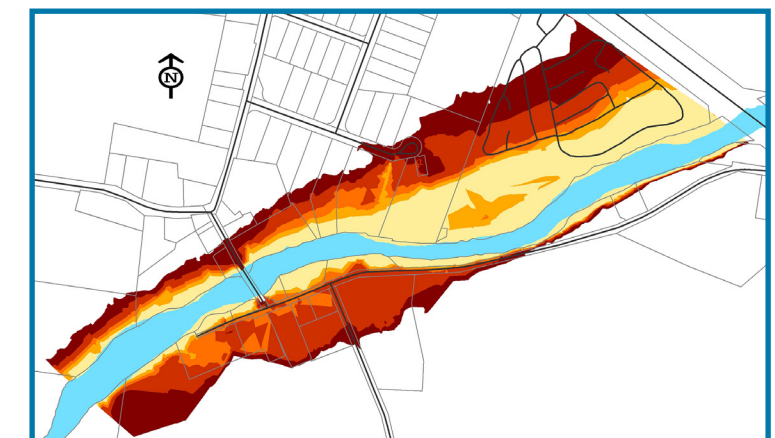
**Ice jams:** Ice jams can develop quickly and can cause flooding at any flow level or make flooding worse than under ice-free conditions. The GRCA’s water level monitoring gauge at West Montrose is used to help detect sudden changes in water level caused by ice jams.

## West Montrose properties warned in the event of flooding

If flooding is about to occur, Woolwich Township staff warn households and businesses within the area to be affected using the community alerting system, or by the Township Fire Department going door-to-door.



June 23, 2017 - West Montrose Covered Bridge.



West Montrose flood inundation map: This map identifies the impact of specific flooding zones.