

Dealing with floods

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

Prepare your property

- Know where your property is located in relation to the flood warning areas.
- Consider installing a sump pump and zero reverse flow valves in basement floor drains.
- 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 site at www.grandriver.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.
- 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 building department for the Township of North Dumfries.
- 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 Ayr:

- **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. 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.
- **Subscribe to the GRCA e-mail news service.** Subscribe to this free service to receive flood messages and other GRCA news releases at the same time as they are issued to the media. For more information see the **Newsroom** section of the GRCA website at www.grandriver.ca
- **Visit the Waterloo Region Emergency Management website at www.wrem.ca** The "Public Awareness and Education" section contains useful information on how to prepare for emergencies.



Preparing for Flooding

A Guide for Residents of Ayr

Introduction

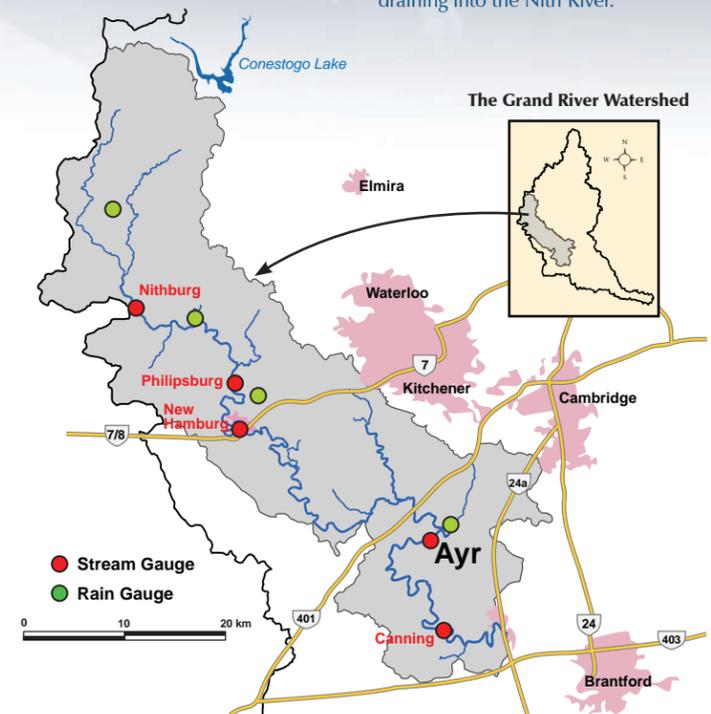
The central part of Ayr lies on land that is prone to flooding – the floodplain – and high water has always been a part of life in our community.

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.

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

The Nith River Watershed

The Nith River watershed is all of the land draining into the Nith River.



Contact:



Grand River Conservation Authority
400 Clyde Rd., Cambridge
(519) 621-2761



Waterloo Regional Police - Rural Division
34 Peel St., New Hamburg
(519) 570-3000 ext. 4423 or
(519) 650-8500 ext. 2298 (outside regular office hours)



Township of North Dumfries
1171 Greenfield Rd., Cambridge
(519) 621-0340

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. Five river gauges and four rain gauges in the Nith River watershed provide information on current conditions.

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.

Flood warning



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.

Turn over for important information on **dealing with floods** ▶

Flood response

When the GRCA issues a flood warning, it is sent to the Waterloo Regional Police and the North Dumfries Township Flood Co-ordinator. 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-ordinator will work with township staff to close roads, shut down utilities and take other action to protect lives and property.
- The police 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 police officers.
- Warnings may be issued at different times to different levels, depending on the conditions causing the flood. In most cases, properties will receive only one warning.

Flood warning levels

Flood emergency officials have developed a warning system that is based on the rate of flow of water in the Nith River during floods. Water flows are measured in “cubic metres per second” (m³/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: 2.6 m³/s (cubic metres per second)

Warning Level 1: Up to 200 m³/s

Warning Level 2: 200-300 m³/s

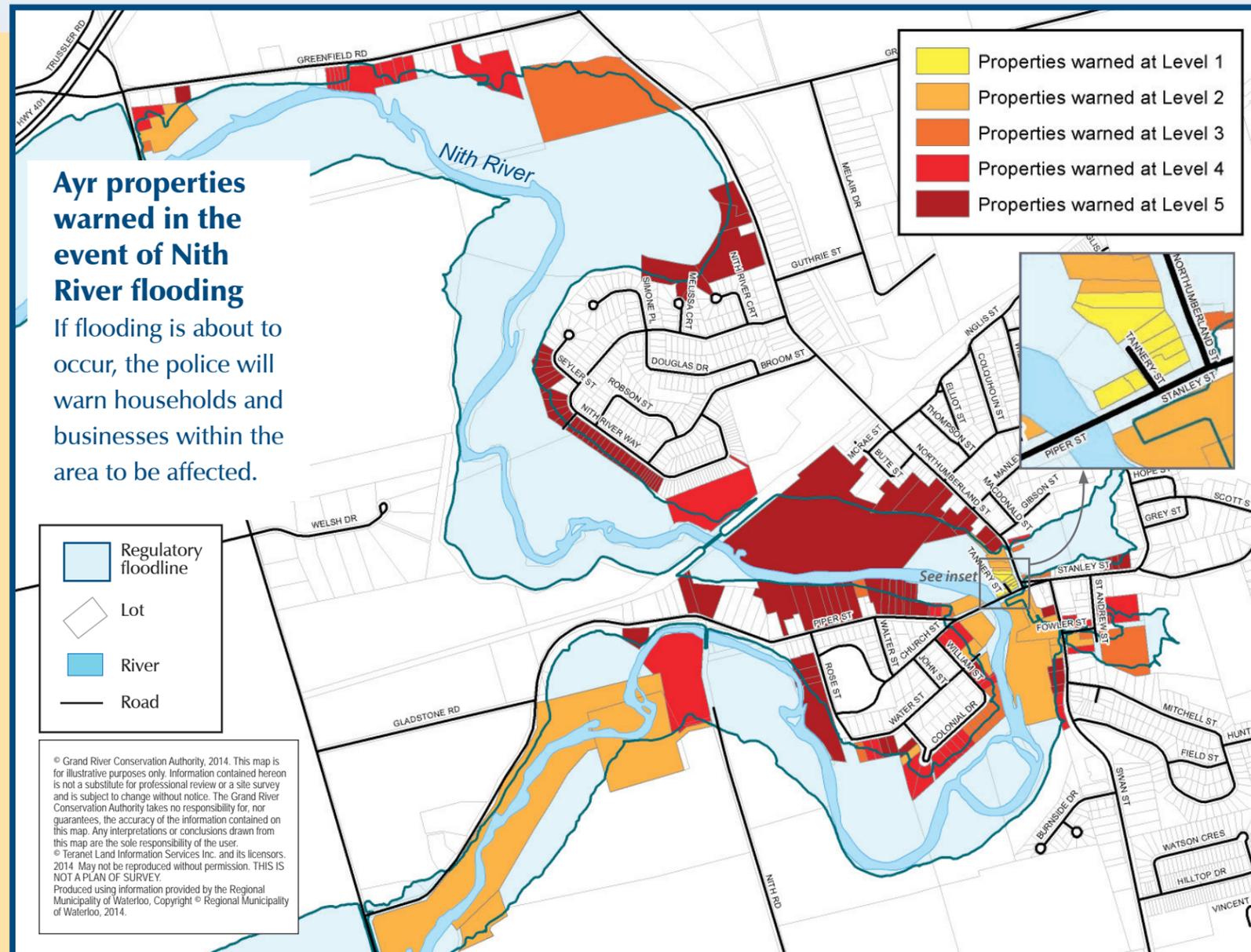
Warning Level 3: 300-400 m³/s

Warning Level 4: 400-600 m³/s

Warning Level 5: 600-800 m³/s

Warning Level 5 includes the land that would be flooded if a huge storm, the size of Hurricane Hazel in 1954, were centred directly over Ayr. This is known as the “regulatory flood” and is used to determine the parts of Ayr where construction and new development is restricted. Anyone considering building, grading or other construction activity in this area must consult the Resource Planning department of the GRCA. More information is available in the “Planning and Regulations” section of the GRCA website.

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 gauges can sometimes detect sudden changes in water level caused by ice jams.



March 7, 2004: Warning Level 3

Flows around 9 a.m., the approximate time of this picture, are about 315 m³/s.



December 29, 2008 Warning Level 4

Flows around 1 p.m., the approximate time of this picture, are about 415 m³/s.