SANDBAGGING

Sandbagging is a simple and effective way to prevent or reduce flood water damage. It provides a barrier from flood water, protecting your property and home. In this document, you will learn more about sandbagging and the safe and proper way to create a sandbag wall.

QUINTE CONSERVATION'S ROLE

The province of Ontario delegates the responsibility for flood warning to Ontario Conservation Authorities. To fulfill this responsibility Quinte Conservation (QC) administers Flood Forecasting and Flood Warning systems.

QC acts in an advisory capacity only, providing continuous monitoring of flood conditions. QC is not responsible for flood fighting other than in the operation of its own dams.

During a flooding situation, QC's office will be staffed appropriately to monitor water levels and weather conditions on a 24-hour basis if required. QC maintains a flood warning system for the watersheds of the Moira, Napanee and Salmon Rivers, and Prince Edward County, and will alert its member municipalities and appropriate agencies regarding potential flood threats.

QC's staff monitors watershed conditions carefully all year. They are on duty, ready to alert municipal flood coordinators, the media, police and other agencies of potential danger to lives or property.

QC's experienced staff know the watersheds, their flooding history and how they respond under various conditions. Staff members use all the data and tools available in preparing forecasts and warnings.

Quinte CONSERVATION

2061 Old Highway 2, RR#2, Belleville, ON K8N 4Z2
quinteconservation.ca | (613) 968-3434 | info@quinteconservation.ca

ABOUT SANDBAGS

- Sandbags are not a permanent flood-proofing solution.
- Standard plastic bags will NOT work because they cannot take the weight of sand that is required.
- Sandbags biodegrade in the sun therefore you cannot fill and leave them stock piled for a long period of time.
- You are required to leave your sandbags empty in the event you wish to stock pile. You can fill the bags only when you need them.
- Treat used sandbags as a contaminated product due to river water that has possibly picked up septic fluid. Contact your local municipality about sandbag removal.
- Sandbags can be filled at a rate of 20 bags per hour per person.

WHAT YOU WILL NEED

- ✓ Sandbags
- ✓ Plastic Poly (10ft-wide, 6mm Vapour Barrier)
- ✓ Sand
- ✓ Pump
- ✓ Shovel

Purchase sandbags through commercial supply or hardware stores. Contact your local municipality for information on acquiring sand.

WHERE TO BUILD SANDBAG WALLS

- Build your sandbag wall 1 metre away from your house, taking advantage of any elevation your property may have.
- Avoid placing sandbags directly against your house. Water will saturate the ground underneath, creating hydraulic pressure and applying force to your basement walls.
- Sandbags located too far away from your house takes away from the floodplain, this creates issues for others downstream and upstream.
- Municipal resources should be used to sandbag homes not detached sheds or garages.

SAFETY TIPS

- Avoid taking part in sandbagging if you have a medical condition.
- Wear personal protective equipment such as closed toe shoes, gloves, a hat and sunscreen.
- Take regular water breaks.
- Lift with your legs to avoid back injuries.
- Keep sandbags below shoulder height and close to your body. Limit the reach with arms when passing sandbags.
- Use wheel barrows, ATV trailers or handcarts to help move sandbags.
- At least two people should be part of the sandbagging process.

SANDBAGGING WORKSHEET

SUPPLY CHECKLIST:

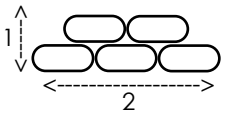
- ❑ Sandbags
- ❑ Plastic Poly
- ❑ Sand
- ❑ Pump
- ❑ Shovel
- ❑ Wheelbarrow
- ❑ Closed-toe Shoes
- ❑ Gloves
- ❑ Safety Glasses
- ❑ First Aid Kit
- ❑ Drinking Water

FIND THE NUMBER OF BAGS REQUIRED:

Measure **Length** of the berm: _____ Feet

Select Berm Height		# Bags	multiply	Length of Berm in Feet	equals	# of Bags Required
1 Foot	→	5	x		=	
2 Feet	→	10				
3 Feet	→	21				
4 Feet	→	36				
5 Feet	→	55				

Walls should be twice as wide as they are tall (e.g. 0.5ft tall = 1ft wide; 1ft tall = 2ft wide)



FIND THE AMOUNT OF SAND REQUIRED:

	÷ 67.5	=	
Total # of Bags	**divide by 67.5 (bags filled with a cubic yard of sand)**	**equals**	**Total cubic yards of sand required**

FIND THE TIME REQUIRED TO FILL SANDBAGS:

	÷ 80	=	
Total # of Bags	**divide by 80**	**equals**	**Total hours required to fill sand bags for 4 people**

BUILDING SANDBAG WALLS

Step One: Pack Sandbags

- ❑ Fill your sandbags using a shovel with an overhand, underhand grip.
- ❑ Fill sandbags 2/3 full (max 40 pounds).
- ❑ If transporting sandbags, tie them, otherwise it is not necessary.
- ❑ If you are not tying sandbags, fold the access of the bag over to one side to keep the sand from falling out.

Step Two: Dig a trench

- ❑ Dig a narrow trench as deep and wide as the sandbags.
- ❑ The trench will act as a locking system when the sandbags are placed in it, preventing the sandbags from falling over and preventing water from coming under the sandbag wall.

Step Three: Lay the poly

- ❑ Flip the poly all the way out
- ❑ Place the poly on top of the trench, making sure there is half a meter of poly on the backside of the trench (the side facing the house).
- ❑ If you have to use more than one sheet of poly, make sure the plastic is overlapping the section downstream of the flow of water.

Step Four: Build the wall

- ❑ Place the sandbags on top of the poly.
- ❑ Ensure there are no gaps or openings between each sandbag.
- ❑ Walls should be twice as wide as they are tall (e.g. 0.5m tall = 1m wide; 1m tall = 2m wide)
- ❑ When stacking sandbags higher, change the direction of the sandbags for each layer, stacking them in a brick pattern.

Step Five: Finish the wall

- ❑ Once your wall is to the desired height flip the poly on the outside of the wall overtop to the backside of the wall
- ❑ Put a series of sandbags on the backside and top of the wall overtop of the poly in order to prevent the poly from falling off.
- ❑ You can make your sandbag wall higher if necessary by unwrapping the poly from the wall and adding more sandbags.
- ❑ Note: Placing the poly overtop of your sandbags prevents water from coming through the wall.

Step Six: Pump out water

- ❑ Sandbag walls may still leak no matter how well they are built, so be prepared to pump the dry side of the wall out.
- ❑ Find a low spot in the ground behind the sandbag wall where water may pond.
- ❑ Dig a small hole and place the strainer and pump in the hole.
- ❑ As an alternative you can use a plastic bucket and sump pump. Put holes in a plastic bucket causing it to act as a strainer, placing the bucket with sump pump in the small hole.

FLOOD COMMUNICATIONS

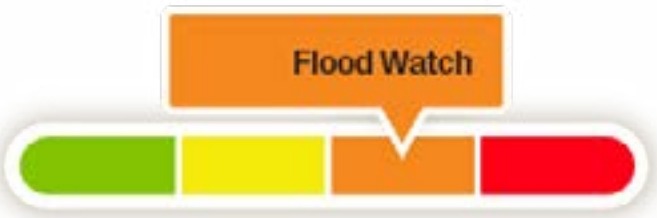
At any time of the year, when there is flooding, Quinte Conservation will issue up to four levels of messages:

WATERSHED CONDITIONS STATEMENT:
This is a general notice of potential flooding or other conditions that pose a safety risk. There are two kinds of statements:

- A **WATER SAFEY STATEMENT** indicates that high flows, unsafe banks, melting ice or other factors could be dangerous for users such as anglers, boaters, swimmers, children or pets. Flooding is not expected.

- A **FLOOD OUTLOOK STATEMENT** gives early notice of the potential for flooding based on weather forecasts calling for heavy rain, snow melt, high wind or other conditions that could lead to high runoff, cause ice jams, lakeshore flooding or erosion.

SHORLINE CONDITIONS STATEMENT:
Flood outlook (an early notice of the potential for flooding on the Great Lakes based on weather and lake conditions) and water safety information.



FLOOD WATCH:
This level notifies that the potential for flooding exists within specific watercourses and municipalities. Municipalities, emergency services and individual landowners in flood-prone areas should prepare.

FLOOD WARNING:
Flooding is imminent or already occurring in specific watercourses or municipalities. Municipalities and individuals should take action to deal with flood conditions. This may include road closures and evacuations.