

SANDBAG WALL CONSTRUCTION

This helpful guide gives practical advice on how to make your home more likely to withstand the effects of flooding. These measures are intended as advice only and not meant to conflict with or replace more detailed technical knowledge and planning.

DESIGN

A single stack of sandbags isn't very strong. The recommended approach is to plan a sand bag wall 3 times wider than the height (or 2 times wider at bare minimum if you are lacking time or supplies). In other words, a one-foot high wall should have a three-foot-wide base, giving the wall a pyramid shape. You should always plan on building a wall at least one foot higher than the projected crest of the water.

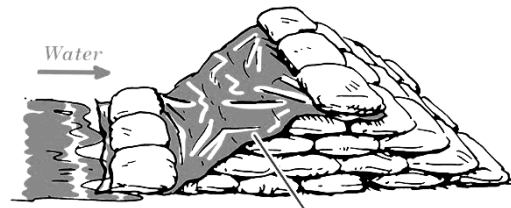
STEP 1: Fill the bag with sand about halfway. Do not add more sand as it will not help. Filling the bag halfway with sand allows the bag to be moved more easily. A properly filled sand bag should weigh around 35-40 lbs. To protect your eyes from the sand be sure to wear goggles or eye protection.

STEP 2: Close the top of the bag. Scrunch the walls of the bag together like a candy bag. Sandbags filled half to two thirds full should then be tied or secured using a zip tie/cable tie.

STEP 3: Use proper lifting techniques to avoid injury and fatigue. Lift with your legs and bend at the knees to save your back. Lay the sandbag flat and roughly parallel to the expected flow of water and debris.

STEP 4: Your completed wall can be sealed with plastic sheeting in order to improve its watertight capacity. To do this, lay down a bed of sand 1 inch deep and 1 foot wide at the bottom of the wall on the water side. Lay plastic sheeting over the sandbag wall so that its edge meets the edge of your soil/sand layer. Next, place

sandbags on the bottom of the plastic to form a good seal (again, this is along the water side). The top of the sheeting should go over the wall; use sandbags to hold down this top edge as well.



Seal the wall with plastic sheeting for extra protection

- It takes on average about 500 - 600 sandbags to cover a 100 foot wall section, 1-foot high.
- Sandbags are laid length-wise end to end
- The average sandbag wall is 2-3 sandbags wide and has a pyramid shape.

Use this information to provide a rough estimate of the sandbags required, but, please use your own judgment regarding how to protect your property.

How big is a standard sandbag?

The most popular sizes of sandbag are 14 inches x 26 inches (36 cm x 66 cm) and 18 inches x 30 inches (46 cm x 76 cm).

How much sand per bag?

A sandbag should be filled 1/2 to 2/3 full with 35-40 pounds of sand. A standard sandbag can hold up to 50+ pounds of sand, but an overfilled sandbag will be packed too tight and will create gaps in the wall that will allow water through.

How many sand bags can a truck carry?

30 sandbags is more than 1,000+ pounds and would be the maximum limit for a standard 1/2 ton pickup truck. Stay safe don't overload your truck. Overloading a truck can damage the suspension components, and decrease the steering ability and seriously affect braking.

PLANNING GUIDE

Before you begin take a few minutes to plan how you will build a wall by using this worksheet.

1. Preparation

Inspect the site.

First, remove any debris where the sandbags will be placed. Avoid sharp turns and uneven ground. If purchasing sand, consider a level place near the center of the wall for your sand pile. Filling your sandbags close to the wall will help reduce fatigue, use proper lifting technique.

Height of Wall	# Bags / 10 feet
1 foot	50 bags
2 feet	100 bags
3 feet	210 bags
4 feet	360 bags
5 feet	550 bags

Measure the total length of the wall	Total distance: _____feet
Measure wall height required	Total Height: _____feet
Use the table below to calculate the number of bags required:	TOTAL BAGS
Total # of Bags x 40 lbs of sand per bag	Total Pounds of Sand Required

Sandbags can be filled at a rate of 20 bags per hour per person. Divide the total number of bags needed by 20 and that will give you the number of person hours needed to fill.

SUPPLIES

You will need the following:

Sandbags	
Sand	
Plastic Sheeting / Water Barrier (6 mil polyethylene rolls)	
Wheelbarrow	
Gloves	
Safety Glasses	
Shovel(s)	
Drinking Water	
First Aid Kit	

Emergency Numbers (Toll-Free)

Emergency Assistance

911

River Watch Recorded Message

1-888-561-4048

NB-EMO

1-800-561-4034

Provincial Road Report

1-800-561-4063

Environmental Emergencies

1-800-565-1633

No matter how well you build a sandbag barrier, given time and conditions water will seep through. A plan to keep yourself safe by leaving the property should always be your first priority.