CITY OF
Pitt Meadows
The Natural Place

COUNCIL POLICY C019

11 - Engineering & Public Works

Sandbag Distribution

Effective Date: April 24, 2007
Revised Date: June 19, 2012
Reaffirmed Date: July 21, 2015

1.0 Purpose:

To provide residents with sandbags to protect their property from potential widespread flooding as a result of high levels of spring snow melt in the Fraser River.

2.0 Policy:

The sole responsibility for protection of private property in the event of a flood lies with individual property owners and not with the City of Pitt Meadows. Pitt Meadows will only provide sandbags in anticipation of severe, widespread flooding. The City will not provide sandbags during most short duration or routine storm events typically experienced in Pitt Meadows. If your property has a history of flooding or recurring standing water each year (such as water building up at the garage or back patio for example), you are encouraged to get sandbags in advance of the rainy season and have them on hand throughout the winter. Sandbags and sand may be available at most hardware and home improvement stores.

2.1 Procedure

In the event of an emergency City crews and staff will establish locations to furnish sand and sandbags to the public. Residents should bring their own gloves and shovels to fill the bags they need.

It should be noted that in the event of large scale flooding the City can not guarantee the availability of sandbags and sand to private property owners. Therefore **reliance on the City to provide sandbags should not be considered as the primary means of protection**.

Distribution of sandbags will be based on the following priorities:

1. To prevent serious injury or the loss of life
2. Maintaining access to emergency services

3. Protecting vital infrastructure and community facilities
4. Protection of privately owned property

Owners of properties at risk of flooding are therefore encouraged to keep, where possible, their own stock of empty sandbags together with sufficient stocks of sand to fill bags at times of potential flooding.

Sandbags distributed by the City during an emergency must be used to protect primary residences (NOT seasonal dwellings), small businesses, small farms and charitable organizations and must be used to protect buildings not land.

Large Agriculture and commercial operations are responsible for obtaining and storing enough sand and sandbags for their own needs.

2.2 When

Sandbag distribution will be initiated when a "Flood Watch" is issued by the City at a river level of 6.0 metres as measured at the Mission Gauge.

2.3 Location

To be established based on need and to be announced by the City's Operations Department.

2.4 Stock and Supplies

The City will at all times keep 1500 sandbags in serviceable conditions and 30 tonnes of sand at all times for corporate use. This supply will be increased when high water in the Fraser River is expected as a result of the spring freshet based on a formula provided by the Ministry of Environment.

Bags Required for 30 metres of Dyke	
Height	**# of Bags**
1/3 metre	600
2/3 metre	2000
1 metre	3400

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Appendix 1

2.5 How to use Sandbags

Sandbags are one of the most well known means of keeping floodwater out of a property during flood events. However, sandbag construction does not guarantee a water-tight seal, but is satisfactory for use in most situations. Their performance is improved when used in conjunction with a de-watering pump.

Untied sandbags are recommended for most situations. Tied sandbags should be used only for special situations when pre-filling and stockpiling may be required, or for specific purposes such as filling holes, holding objects in position, or to form barriers backed by supportive planks. Tied sandbags are generally easier to handle and stockpile. **However, sandbag filling operations can generally be best accomplished at or near the placement site** and tying of the bags would be a waste of valuable time and effort. **If the bags are to be pre-filled at a distant location, due consideration must be given to transportation vehicles and placement site access.**

The most commonly used bags are untreated burlap sacks available at feed or hardware stores. Empty bags can be stockpiled for emergency use, and will be serviceable for several years, if properly stored. Filled bags of earth material will deteriorate quickly.

Commercial plastic sandbags, made from polypropylene, are also available from most bag suppliers. These will store for a long time with minimum care, but are not biodegradable. Thus, they have to be disposed of, or will remain around for a long time. Do not use garbage bags, as they are too slick to stack. Do not use feed sacks, as they are too large to handle. Use bags about 14-18" wide, and 30-36" deep.

A heavy bodied or sandy soil is most desirable for filling sandbags, but any usable material at or near the site has definite advantages. Coarse sand could leak out through the weave in the bag. To prevent this, double bag the material. Gravelly or rocky soils are generally poor choices because of their permeability.

Sandbag barriers can easily be constructed by two people, as most individuals have the physical capability to carry or drag a sandbag weighing approximately 30 pounds.

2.6 How to fill a sandbag

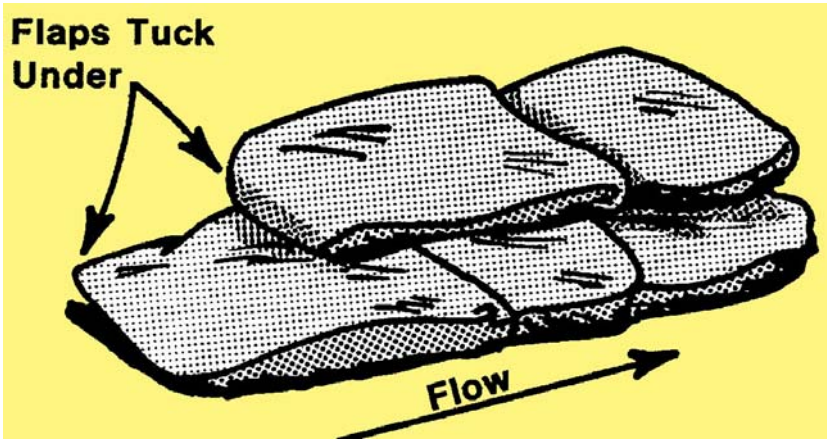
Filling sandbags is a two-person operation. Both people should be wearing gloves to protect their hands. One member of the team should place the empty bag between or slightly in front of widespread feet with arms extended. The throat of the bag is folded to form a collar, and held with the hands in a position that will enable the other team member to empty a rounded shovel full of material into the open end. The person holding the sack should be standing with knees slightly flexed and head and face as far away from the shovel as possible.

The shoveler should carefully release the rounded shovel full of soil into the throat of the bag. Haste in this operation can result in undue spillage and added work. The use of safety goggles and gloves is desirable, and sometimes necessary.

Bags should be filled between one-third (1/3) to one-half (1/2) of their capacity. This keeps the bag from getting too heavy, and permits the bags to be stacked with a good seal.

2.7 How to Place Sandbags

Fold the open end of the unfilled portion of the bag to form a triangle. If tied bags are used, flatten or flare the tied end.



When building a sandbag dyke a builder must first excavate a bonding trench by removing a strip of soil and placing sandbags one deep and two wide in the trench in order to key the dyke in.

A sandbag dyke should be three times wider than it is high. For example if the dyke needs to be 1 metre high it should be at least three metres in width.

Place the partially filled bags lengthwise and parallel to the direction of flow, with the open end facing against the water flow. Tuck the flaps under, keeping the unfilled portion under the weight of the sack.

Place succeeding bags on top, offsetting by one-half (1/2) filled length of the previous bag, and stamp into place to eliminate voids, and form a tight seal.

Stagger the joint connections when multiple layers are necessary. For unsupported layers over three (3) courses high, use the pyramid placement method.