



# Guidelines for managing mud and used sandbags after a flood

c-er3-19 • March 2009

**S**ediment, or mud, left by a receding flood can contain contaminants that present human health and environmental concerns. As part of a flood-recovery plan, sediments should be managed as an “unregulated special waste” as outlined below. The main health risks are from the potential presence of human and animal waste, pathogens (bacteria and viruses) and molds. Flood-mud can also contain contaminants, such as oils and pesticides, and low levels of other sediment-associated pollutants from the watershed, such as heavy metals and industrial chemicals (for example, polychlorinated biphenyls or PCBs).

## Disposal of flood sediment

The general guidelines for the management of flood-sediment include:

- Stockpile sediment away from wellhead and sensitive areas to dewater. Then, use the dewatered sediment as controlled fill (placed outside of flood plain and covered to minimize human exposure). Runoff sediment and erosion control measures should be placed around and downhill of flood sediment stockpiles.
- Mud mixed with known sewage/wastewater should be treated with lime after dewatering and land applied in accordance with septage land-treatment criteria or it should be lime-treated and placed as controlled fill.



*Sediment from a receding flood may contain contaminants and should be handled with caution.*

- Mud mixed with suspected contaminants from nearby business sources should be treated as municipal waste and disposed of at a sanitary landfill or stockpiled and tested for suspected contaminants.
- Mud from a pollution-listed or impaired watershed may likely contain trace levels of a contaminant (for example, mercury). However, this material can be managed as controlled fill and testing for these trace contaminants is not required or necessary.

## FEMA considerations

Please note that for a federally declared disaster, in order to reduce the potential for disease transmission, the Federal Emergency Management Agency (FEMA) has reimbursed cleanup expenses for the disposal of flood sediments and debris as a municipal solid waste when disposed of at a sanitary landfill.

## Disposal of used sandbags

Floodwater can contaminate sandbags with bacteria and other pathogens. And used sandbags that are not properly managed can develop mold over time. Generally, one of the following methods should be used to manage used sandbags:

**A. Disposal of emptied sandbags and the sand from them:** Remove the sand from the used sandbags and properly dispose of, reuse, or recycle the bags. The sand may then be:

- used as clean fill (preferably covered) and only in appropriate locations (i.e., do not use the sand to fill wetlands, etc.) or
- stockpiled for use as winter road sand.

*Note: Place the sand where it will have no contact with humans. For example, do **not** use the sand for playgrounds or sandboxes.*

**B. Disposal of full sandbags:**

Not all landfills will accept sand and sandbags, so call first.

- Dispose of very muddy sandbags and debris in a sanitary landfill. Full sandbags could also be disposed of in a demolition landfill.

*Note: Landfill disposal is the safest but not necessarily the most cost-effective alternative for disposal of full sandbags.*

- Full used sandbags can be used as fill on a case-by-case basis. Contact your local Minnesota Pollution Control Agency (MPCA) solid waste staff for approval if you wish to dispose of full used sandbags in this manner. It is recommended that used sandbags deposited as fill be covered with soil.
- Full sandbags contaminated with oils and other significant pollutants should be disposed of in a sanitary landfill.

**C. Sandbag reuse:** Full sandbags may be stored and reused for same-season flood fighting. It is not recommended that used sandbags be stored for long periods. Sandbags may be reused to construct permanent earthen flood structures.

## Health and safety

As both flood-mud and used sandbags may contain bacteria and contaminants, care should be taken to wear appropriate protective gloves, eye protection,

and clothing. Persons who work with flood mud or used sandbags should exercise good hygiene and wash their hands with soap and water when they are done working with these materials.

## For more information

For more information about disposal of flood sediments or used sandbags, phone the MPCA main office at 651-296-6300 or toll-free at 800-657-3864 or one of the regional MPCA offices:

Brainerd	.....	218-828-2492
Detroit Lakes	.....	218-847-1519
Duluth	.....	218-723-4660
Mankato	.....	507-389-5977
Marshall	.....	507-537-7146
Rochester	.....	507-206-2631
Willmar	.....	320-214-3786