



FLOODING AND SEWAGE SPILLS

PERSONAL PROTECTION AND CLEANUP HEALTH RISKS

Flood waters can often contain sewage, so personal protection and cleanup are a concern with both sewage spills and floods. The immediate human health risks of a sewage spill are from pathogens (bacteria and viruses) in the sewage which can transmit disease to people who come in contact with the sewage or flood water. The possible pathways of disease transmission are: swallowing and breathing, or cuts and abrasions on the skin. The best method to avoid exposure to disease-causing pathogens is to stay away from the sewage. If there is contact with the sewage, or contact is needed to proceed with cleanup, it is advisable to use rubber boots, rubber gloves, goggles and a mask for protection from splash.

CLEANUP INSIDE THE HOME

- Keep children and pets out of the affected area until cleanup has been completed.
- Wear rubber boots, rubber gloves, and goggles during cleanup of affected area.
- Remove and discard items that cannot be washed and disinfected (such as mattresses, carpeting, carpet padding, rugs, upholstered furniture, cosmetics, stuffed animals, baby toys, pillows, foam-rubber items, books, wall coverings, and most paper products).
- Remove and discard drywall and insulation that has been contaminated with sewage or flood waters.
- Thoroughly clean all hard surfaces (such as flooring, concrete, molding, wood and metal furniture, countertops, appliances, sinks, and other plumbing fixtures) with hot water and laundry or dish detergent. Rinse with clean water. Any food contact surfaces must also be sanitized with a solution of bleach and water one-third cup of regular household bleach per gallon of water. Keep area well ventilated. Milder disinfectants such as pine disinfectant or non-chlorine bleach can be used on non food-contact surfaces such as cabinets, furniture etc., to avoid damage to these materials.
- Help the drying process by using fans, air conditioning units, and dehumidifiers.
- After completing the cleanup, wash your hands thoroughly with soap and water. Use water that has been boiled for one minute (allow the water to cool before washing your hands).
 - Or you may use water that has been disinfected for personal hygiene. Use a solution of 1/8 teaspoon of household bleach per one gallon of water. Let it stand for 30 minutes. If the water is cloudy, use a solution of ¼ teaspoon of household bleach per one gallon of water.
- Wash all clothes worn during the cleanup in hot water and detergent. These clothes should be washed separately from uncontaminated clothes and linens.
- Wash clothes contaminated with flood or sewage water in hot water and detergent. (It is recommended that a laundromat be used for washing large quantities of clothes and linens if you have an onsite waste water system until your system has been professionally inspected and serviced.)
- Seek immediate medical attention if you become injured or ill.

OUTSIDE THE HOME

- Keep children and pets out of the affected area until cleanup has been completed.
- Wear rubber boots, rubber gloves, and goggles during cleanup of affected area.
- Clean up sewage solids (fecal material) and place in properly functioning toilet or double bag and place in garbage container.
- On hard surface areas such as asphalt or concrete it is safe to use a 2% bleach solution, or ½ cup of bleach to five gallons of water.
- Have your onsite waste-water system professionally inspected and serviced if you suspect damage.
- If you have a water supply well that was covered by flood water it should be disinfected and purged.
- Wash all clothes worn during the cleanup in hot water and detergent. These clothes should be washed separately from uncontaminated clothes and linens.
- After completing the cleanup, wash your hands thoroughly with soap and water. Use water that has been boiled for one minute (allow the water to cool before washing your hands).
 - Or you may use water that has been disinfected for personal hygiene. Use a solution of 1/8 teaspoon of household bleach per one gallon of water. Let it stand for 30 minutes. If the water is cloudy, use a solution of ¼ teaspoon of household bleach per one gallon of water.
- Seek immediate medical attention if you become injured or ill.

OUTSIDE PUBLIC AREAS

- Avoid contact with sewage if possible. If the area is a high public use area such as a park and or school, it should be posted with **“Keep Out Sewage Contamination”** signs until cleaned up.
- Once the floodwaters recede and the area dries out, the health risks are significantly lowered, as sunlight and drying eliminate most of the possible infectious bacteria and viruses contained in sewage.
- Grass and soft surfaces that have been flooded with sewage are safe to use once they have dried out and visible garbage has been picked up.
- If signs are posted relating to sewage spills, keep out of the posted area until signs are removed.
- For additional information call the Alameda County Department of Environmental Health (510) 567-6700.