

COUNTY OF BERGEN



# **FLOOD EMERGENCY CLEANUP HANDBOOK**

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BOARD OF CHOSEN FREEHOLDERS

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# **FLOOD EMERGENCY CLEANUP**

## **Flood Waters May be Contaminated!**

### **During cleanup wear:**

- Rubber gloves
- Washable clothing
- Rubber boots
- Disposable particulate filter masks may provide additional protection where mold has developed, especially by individuals with asthma or respiratory problems.

### **After cleanup:**

- Thoroughly wash hands with soap and water.
- Wash clothing in hot water and detergent.
- Dry clothes in dryer.
- Throw out cleaning rags. Put in plastic bags and place in regular trash.
- Sanitize boots with disinfecting solution.

Mix household bleach with water to make a 1 part to 10 parts disinfecting solution; for example, use 1 cup household bleach with 1 gallon water. Mix bleach only with water. Label this solution carefully to ensure people or animals do not drink the solution.

An EPA approved tuberculocidal solution, as noted on the label, is available for purchase at many drug stores and can also be used for clean up.

Sanitize food preparation surfaces by removing soil, then wash down the surfaces with the disinfecting solution. Keep surfaces wet for 2 minutes and rinse with purified water.

To disinfect floors and other hard surfaces, remove soil and then apply disinfecting solution.

Mops should be soaked in disinfecting solution after use and washed in hot water. Cleaning equipment, such as dustpans or buckets, should be thoroughly rinsed in disinfecting solution. Dispose of solution in sink or toilet.

**Keep bleach and disinfecting solution out of the reach of children and pets.**

**Do not mix ammonia and chlorine bleach! The combination can be deadly.**

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## **TIPS FOR CLEANING AND DISINFECTING AFTER FLOODING/WATER DAMAGE**

It is important to begin cleanup as soon as possible. The first priority is to get rid of visible dirt, then invisible germs. Use a disinfecting solution to ensure bacteria and viruses are eliminated.

Mildew flourishes in wet conditions. It grows when it has a source of oxygen, nutrients, moisture and warmth. Mildew can grow on clothes, furnishings and walls and is very difficult to control if it has a good start. Liquid bleach (5.25% sodium hypochlorite) will clean and prevent the spread of mildew.

- When disinfecting heavily soiled surfaces, it is important to change the disinfecting solution frequently to ensure effectiveness. It should be changed when the solution becomes cloudy.
- To protect against microbial contamination, wear protective clothing on hands, arms, feet and legs while cleaning up debris.
- Dry surfaces as soon as possible after water damage to prevent growth of mold and mildew. Place items in direct sunlight if possible.

Specific recommendations for cleaning and disinfecting various items that can often be salvaged:

### **Interior Surfaces**

Mildew generally abounds after water damage, so it's important to get surfaces dried and disinfected quickly.

- Clean and disinfect hard surfaces, such as floors, walls, counters, dishes, glass and plastic ware as soon as floodwaters recede. Remove loose debris, then wash down the area with the disinfecting solution. Keep surfaces wet for 2 minutes and rinse with purified water.

## **TIPS FOR CLEANING AND DISINFECTING AFTER FLOODING/WATER DAMAGE (continued)**

- If possible, large items should be cleaned and dried outside to avoid spreading contaminants in the house. Solid wood furniture can usually be repaired and cleaned, but wood veneer often separates and warps. Upholstered furniture, carpets and bedding soak up contaminants from floodwaters and should be cleaned only by a professional. Unless the piece is an antique or very valuable, upholstered furniture soaked by floodwaters should probably be thrown out. Get a cost estimate from a professional to see if furniture is worth saving.
- All submerged household appliances must be clean and dry before using them. What is salvageable is often tricky, so be sure to discuss what can/cannot be saved with your electrician.

Also, to reduce odors and to kill germs that may result from sewage backup in the toilet, pour one cup of household liquid bleach into the bowl. Brush the entire bowl and let the solution stand for 10 minutes. Flush again.

### **Kitchen Items and Food Safety Issues**

- To disinfect dishes by hand, remove visible dirt, then soak 2 minutes in disinfecting solution. Rinse well with purified water.
- Discard all soft plastic and porous items, such as wooden spoons and cutting boards, baby bottle nipples and pacifiers that may have absorbed contaminants.
- Do not eat any foods that may have come into contact with contaminated floodwater. Undamaged commercially canned foods can be saved if you remove the can labels, thoroughly wash the cans, and disinfect them with a solution consisting of 1 cup of bleach in one gallon of water. Mark your cans, including expiration date, with a permanent marker. Food containers with screw-caps, snap-lids, crimped caps (soda pop bottles), twist caps, flip tops, snap-open, and home-canned foods should be discarded if they have come into contact with flood water because they cannot be disinfected.

# **TIPS FOR CLEANING AND DISINFECTING AFTER FLOODING/WATER DAMAGE (continued)**

## **Outdoor Items**

- For exterior surfaces contaminated with floodwaters, first clean the area with a power hose, then apply disinfecting solution. Keep the surface wet with the disinfecting solution for 2 to 10 minutes. Rinse thoroughly.
- Children's toys, play equipment, and outdoor furniture that have come in contact with contaminated waters need disinfecting too.

## **Garbage Disposal**

Garbage containing spoiled food must be packaged in heavy plastic bags or sealed in sanitary containers to prevent disease and rodent problems.

## **Recreational Fields**

An extra measure of safety for a field subjected to flooding by dirty water is to place lime on the field and then wait one day before using it.

## **Coffee Machines**

Chlorine will kill bacteria but not parasites such as cryptosporidia and giardia. These two organisms will be killed if the water temperature is raised to 180° F.

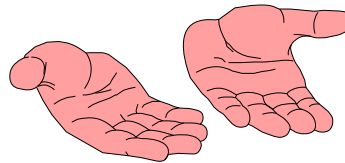
If coffee machines bring water to 180° F., they can be used during the "boil water" advisory time period.

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# IMPORTANCE OF PROPER HANDWASHING

- Do you know that the Centers for Disease Control and Prevention (CDC) indicates that handwashing is the single most important means of preventing the spread of infection?
- Do you know the Food and Drug Administration (FDA) estimates that poor handwashing is responsible for 80 million cases of foodborne illness and 10,000 deaths each year?

Proper handwashing is the most critical part of personal cleanliness and should follow any act of potential contamination, as outlined on the following checklist.



## Handwashing Checklist

Wash your hands before starting any food preparation activities. In addition, always wash your hands after:

- Touching anything that contaminates your hands
- Using the bathroom/restroom
- Using a handkerchief or tissue
- Handling raw food
- Touching any area of the body
- Working with unclean equipment such as work surfaces, wipe cloths, clothing
- Smoking, eating or drinking
- Cleaning away or scraping soiled dishes or utensils
- Handling garbage.

# **IMPORTANCE OF PROPER HANDWASHING (continued)**

## **Handwashing Tips**

It is important to have respect for the damage your hands can cause to other people's health.

Proper handwashing means:

- Use plenty of soap and warm running water.
- Rub hands together vigorously for at least 20 seconds.
- Wash palms, backs, under fingernails, between fingers and wrists and use a nail brush if possible.
- Rinse thoroughly
- Allow hands to air dry or use paper towels.

# **CONTAMINATED PRIVATELY OWNED WELLS**

Water to be used for drinking or cooking from private wells that have been flooded during hurricanes, floods, heavy rainfall, or other natural disasters should be disinfected by bringing water to a rolling boil for 1 minute or by treating the water with chlorine tablets, iodine tablets or unscented household chlorine bleach (3.25% sodium hypochlorite).

- If you use household chlorine bleach to treat water, add very small amounts. Use 1/8 teaspoon of bleach per gallon of water if the water is clear. For cloudy water, add 1/4 teaspoon of bleach per gallon. Mix the solution thoroughly and wait 30 minutes before using.
- If you use chlorine or iodine tablets, follow package directions.

Privately owned wells that have been subjected to flooding should be tested as soon as possible, by a certified laboratory for drinking water safety. If the well water proves to be unsafe for consumption, it should be decontaminated by a commercial well service listed in the yellow pages under “Water Well Drilling and Service.” Confirmation that such drillers and installers are in possession of a current valid license can be obtained through the Department of Environmental Protection (DEP) at (609) 777-1026 or the Bureau of Water Allocation at (609) 984-6831.



# **TETANUS PREVENTION**

Wear heavy-duty waterproof gloves and boots when cleaning up after a flood. Keep hands away from face and eyes. Wash your hands thoroughly with soap and water when gloves are removed. Shower when cleanup is completed and launder and dry clothing to remove germs and prevent possible illness.

Tetanus vaccine usually provides protection for 10 years, but boosters may be given sooner in the case of accidental injury.

Individuals who sustain an open wound, are subjected to contaminated water, and have not had a tetanus shot in 10 years should receive tetanus booster (Td) as soon as possible. Individuals who do not have a wound and have not had a tetanus shot in the last 10 years should receive a tetanus booster at some point in the near future, but it does not have to be given urgently. Each person should be evaluated individually for the need for tetanus booster.