

## **Chester County Flood Recovery Guide**

**Chester County Department of Emergency Services  
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West Chester, PA 19380**

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### **Flood Information (source CCHD)**

- Avoid **recreational contact with flood waters** due to the unknown amount of raw sewage and waste chemicals that may be present. This applies to both surface waterways and standing surface water remaining from the flood.
- To protect the health and safety of all residents, the Health Department Recommends:
  - No boating or rowing
  - No swimming, wading, or contact with the water
  - No fishing or consumption of fish caught in these waters

### **Flooding of Private Water Supplies (source CCHD)**

- Wells under flood waters **poses a serious public health threat**
- Wells should not be used if submerged by flood waters until they have been tested
- Health Department recommends:
  - Do not drink the water from your well. Use bottled water instead
  - If you **MUST** use water from your well boil for 2-5 minutes, allow to cool sufficiently before using to avoid scalding
  - Do not use well water for washing, bathing, oral hygiene or ice-making
  - After water has receded, inspect for damage. If there is damage contact a well drilling contractor and continue to drink bottled water
  - Contact a professional well driller or plumbing contractor and have your well disinfected by chlorination, or refer to the [instructions on disinfecting your water supply](#). The well must stand unused for 8 to 24 hours once disinfection is complete. After that time, run the water until the chlorine is out of the system, per the instructions.
  - Wait several days after chlorination and have the water tested. [Click here for a list of certified water testing laboratories in Chester County](#). Do not drink the water until it has been tested and shown to be suitable for consumption. A total coliform test is recommended
  - For more information, call the Health Department at 610-344-6526

### **Sewage Overflow Caused by Flood Waters (source CCHD)**

- Health Department recommends:
  - If sewage from your home is running into the road or onto properties other than your own, and you are connected to public sewer, inform your local municipality (or sewer authority if one exists) as soon as possible.

- If sewage is running into a stream notify your municipality and call the Department of Environmental Protection's 24 hour emergency number 484-250-5900.
- If sewage is backing up into your home or basement your first priority is to get the sewage out of the home. Use a sump pump or other means to get the sewage out. As soon as the sewage has been removed, call a plumber as soon as possible to have the system repaired.
- If connected to a public sewage and sewage is backing up call your municipality immediately.
- For more information call the Health Department at 610-344-6526

### **Food Safety (source CCHD and USDA)**

- Discard any food that is not in a waterproof container if there is any chance that it has come into contact with flooded waters.
  - Containers that are NOT WATERPROOF include:
    - Screw-caps
    - Snap-caps
    - Pull tops
    - Crimped caps
- All-metal cans and retort pouches can be saved if the following is done:
  - Remove the labels, if they are the removable kind, since they can harbor dirt and bacteria.
  - Thoroughly wash the cans or retort pouches with soap and water, using hot water if it is available.
  - Brush or wipe away any dirt or silt.
  - Rinse the cans or retort pouches with water that is safe for drinking, if available, since dirt or residual soap will reduce the effectiveness of chlorine sanitation.
  - Then, sanitize them by immersion in one of the two following ways:
    - Place in water and allow the water to come to a boil and continue boiling for 2 minutes, or
    - Place in a freshly made solution consisting of 1 tablespoon of unscented, liquid chlorine bleach per gallon of drinking water (or the cleanest, clearest water available) for 15 minutes.
  - Air-dry cans or retort pouches for a minimum of 1 hour before opening or storing.
  - If the labels were removable, then re-label your cans or retort pouches, including the expiration date (if available), with a marker.
  - Food in reconditioned cans or retort pouches should be used as soon as possible, thereafter.
  - Any concentrated baby formula in reconditioned, all-metal containers must be diluted with clean, drinking water.
- Discard any cardboard juice/milk/baby formula boxes and home canned foods if they have come in contact with flood water, because they cannot be effectively cleaned and sanitized

- Inspect canned foods and discard any food in damaged cans.
- Discard wooden cutting boards, plastic utensils, baby bottles nipples and pacifiers.
- Thoroughly wash all metal pans, ceramic dishes, and utensils that came in contact with flooded water with hot soapy water and sanitize by boiling them in clean water or by immersing them for 15 minutes in a solution of 1 tablespoon of unscented, liquid chlorine bleach per gallon of drinking water
- Use bottled water that has not been exposed to flooded waters. If bottled water is not available tap water can be boiled

### Drinking Water

- If you are worried about the safety of your drinking water the USDA recommends:
  - Use bottled water that has not be exposed to flood waters if it is available
  - If you don't have bottled water:
    - **Boil water** to make sure it is safe. Boil for 2-5 minutes, let it cool before storing it in clean containers
    - If you can't boil water, you can **disinfect it using household bleach**. Bleach will kill some, but not all, types of disease-causing organisms that may be in the water. If the water is cloudy, filter it through clean cloths or allow it to settle, and draw off the clear water for disinfection. Add **1/8 teaspoon (or 8 drops)** of regular, unscented, liquid household bleach **for each gallon of water**, stir it well and let it stand for 30 minutes before you use it. Store disinfected water in clean containers with covers.

### Well Water Disinfection Procedure (source CCHD)

The following chlorination process is usually effective in treating bacterial contamination in well water. You will not be able to use your water supply for 12-24 hours. Do not drink the water or bathe with the water until the entire disinfection procedure has been completed. This process could be done overnight or on a day when no one is home.

#### Chlorination

1. You will need the following items to complete this process:
  - chlorine test kit from a local pool supply store
  - 2-gallon plastic bucket
  - measuring cup
  - garden hose that will reach to the top of the well
  - ½ gallon or more of household bleach (½ gallon will effectively treat up to 200 feet of water in a 6" well casing)
  - clear glass
2. Bring all of the above materials to the well. Remove the well cap.
3. Mix one cup of bleach with 2 gallons of water and pour this mixture into the well. Flush it gently around the sides of the well casing pipe in order to clean the inside of the casing. Repeat this process until you have mixed and poured all of the bleach solution into the well.

4. Turn on the garden hose and run water into the well for about 5 minutes. This will mix the bleach and run it into your water system.
5. Run some water from the hose into the clear glass. Put a drop or two of the chlorine test chemical into the glass. If you see a yellow color (orange if the chlorine concentration is very strong) the chlorine is in the water system. Turn off the hose and replace the well cap. Drain the garden hose because the chlorine can damage the rubber hose. If you have more than one outside faucet, run water through all of them. As soon as chlorine is detected, turn faucets off. Be careful not to overtax a low-yielding well.
6. Go into the house to the kitchen sink. Go to the sink or fixture that is furthest away from the water supply line as it enters the house. This is often a second floor tub or sink. Run the hot (The hot water is not hot enough to kill bacteria) water until you detect chlorine (using the test kit). This may take awhile because you are draining all the water that has been laying in the pipe. Now run the cold water until you detect chlorine. This should only take a few minutes. Turn off the sink faucet.
7. This process will disinfect the plumbing system in addition to the well water. Turn on all the faucets (including laundry tub, bathtub and shower) in the home one at a time, until you detect chlorine in both the hot and cold water. Once you detect chlorine in all the water, turn off all the faucets.
  - o If you have an automatic icemaker, discard the ice in the bin and make a new batch of ice, which later you will also discard.
  - o Run a complete cycle in the dishwasher with no dishes. Remove the supply hoses from the washing machine and flush out those lines as well.
  - o Run a small amount of water out of your hot water heater.
  - o Flush each toilet in the house once.
8. Now the water must not be used until the chlorine has done its job. This takes at least 12 to 24 hours. Then follow the dechlorination process.
9. After the chlorine has been in the system and the system has not been used for 12 to 24 hours (except to flush toilets) you are ready to flush it out of the well and your water system.

### **Dechlorination**

1. Run water from your garden hose, out onto the ground. Make sure that it will not run over your sewage absorption area (drainfield) or a neighboring absorption area, or form a puddle on a neighboring property. Avoid discharging the water into storm drains, waterways, creeks, etc. Fish and aquatic animals are very sensitive to chlorinated water and may be killed. Run the hose, and sample for chlorine until the test shows that there is no chlorine in the water. If you get an indication of chlorine, continue to run the hose until you no longer see any indication of chlorine left in the water. Be careful not to overtax low-yielding wells.
2. Run a complete cycle in the dishwasher with no dishes. Flush water through the supply hoses to the washing machine as described above.
3. Flush all of the toilets once.
4. Run all the faucets in the house for about a minute, starting with the faucet farthest from the pressure tank.

This should remove almost all of the remaining chlorine from the water system. You can now begin to use the water again. You should have the water tested (Total Coliform test) before drinking the water again to assure it is safe for consumption. If there are still coliform bacteria

present (but much less than the previous sample) you may want to repeat the chlorination process. If chlorination has not significantly reduced the amount of coliform bacteria in your well water, you should consider installing a continuous disinfection device (ultraviolet light or chlorine injection system) or, if available, connect to public water.

For questions about this process or other well water quality concerns, contact us at 610-344-6526.

### **Floods and Mold**

- Mold grows in damp or wet areas indoors. Mold can be seen in the form of discoloration, frequently green, gray, brown, or black but also white and other colors.
- Overtime mold destroys things they grow on. To prevent damage and to save money you can eliminate mold growth after floods.
- To limit potential mold growth
  - Stop the source of leak or flooding.
  - Move wet items to a dry, well-ventilated area or place them outdoors to speed dry.
  - When water leaks or spills occur indoors - ACT QUICKLY. If wet or damp materials or areas are dried 24-48 hours after a leak or spill happens, mold will most likely not grow.
  - Remove excess water with mops or wet vacuum.
  - Run a dehumidifier to remove moisture from the air.
- Renters should report all plumbing leaks and moisture problems immediately to their building managers

### **Cleaning Up After A Flood**

Indoor mold growth can be prevented or controlled by controlling moisture indoors. If there is mold growth in your home you will need to clean up the mold and fix the water problem. Consider the area where the mold is present. If the molded area is roughly 10 square feet (3ft x 3ft), this may be a job you can handle yourself with proper personal protection equipment. Some ways to properly protect yourself and remove mold from surfaces and/or fixtures are:

- Wear gloves and eye protection when using disinfectants in a poorly ventilated area.
- Limit your exposure to airborne mold. You may want to wear an N-95 respirator, available at many hardware stores.
- Use a stiff brush or cleaning pad on cement-block walls and other uneven surfaces.
- Scrub mold off hard surfaces with detergent and water and dry thoroughly.
- Using bleach or other disinfectants on surfaces **after** mold removal may be needed if people living in the home are susceptible to fungal infections (such as a person with immune system problems). Should you decide to use bleach or another chemical, read and carefully follow the label directions.

Large contamination problems - areas greater than 100 square feet - may require an experienced, professional contractor, especially if:

- there has been a lot of water damage, and/or mold growth covers more than 10 square feet

- the water and/or mold damage was caused by sewage or other contaminated water. In this situation, you need to call a professional who has experience cleaning and fixing buildings damaged by contaminated water.

## **Avoid Electrocutation**

- Once inside a flood-ravaged building, turn off the gas and electricity. Wear rubber-soled shoes or boots and rubber gloves and turn off the main switch using a piece of rubber, plastic or dry wood while standing on a dry board to avoid electrocution.

## **Insurance Tips**

### **• Homeowners/Flood Insurance**

- Call your company or agent as soon as you are back into your home. Keep a diary of all of your conversations with your insurance company.
- Insurance company disaster teams are in Pennsylvania now, but be patient and ask for a timeframe on when they can view the damage and help you.
- In the meantime, take pictures of the damage and secure the problems so further damage does not occur. Do not make any permanent repairs until your carrier says you can.
- Keep all receipts. Be aware that multiple claims in a short time frame could result in a premium increase, so consider taking care of minor repairs on your own.
- Avoid contractor scams and anyone who may knock on your door to help you with your clean-up or claims.
  - Get more than one bid from contractors and ask for references.
  - Ask for proof of necessary licenses, building permits, insurance and bonding.
  - Record the contractor's license plate and driver's license number.
  - Never pay upfront for the entire job. You can always go with the contractor and pay for supplies directly.
- Flood damage to your vehicle is covered under your auto insurance policy if you have "comprehensive" coverage.
- If the first offer made by the insurance company does not meet your expectations, be prepared to negotiate. If you believe you are being treated unfairly, call the Pennsylvania Insurance Department at 1-877-881-6388.

## **Road Conditions**

- Do not drive around highway barriers and road closed signs even if flood waters have receded. The roadway and bridges may have been damaged during flooding. Until PennDOT inspectors take a look, you cannot assume the roadway is safe to use.
- Be aware that there will be many detours and delays in the weeks ahead as crews repair damaged roadways, bridges and other transportation infrastructure. Please be patient and allow extra travel time in flood-damaged areas and slow down to keep road crews and fellow motorists safe.
- Do not put yourself in harm's way by visiting damaged sections of roadway for sightseeing or picture taking. Not only do you endanger yourself, you can delay workers from making much-needed repairs.
- Call 5-1-1 to check on road conditions before you head out.
- Visit <http://bit.ly/1nK6xMG> for information on road closures in Chester County
- Keep an eye out for debris on roadways.

## **Chester County Health Department General Message**

With the potential for flooding and power outages due to heavy rains, the Chester County Health Department is offering important information to help Chester County residents stay safe and healthy during the potential flooding. Please [visit our website](#) for health and safety information that will help you and your family stay safe over the next few days.

Information includes:

- [Flooded Private Water Supplies](#)
- [Sewage Overflow Recommendations - en Español](#)
- [Flooding in Chester County Food Facilities - en Espanol](#)
- [Food Safety during a Flood or Power Outage](#)
- [Well Disinfectant Procedure - en Español](#)
- [How to Properly Dispose of Medications](#)
- [Information on Molds](#)
- [Carbon Monoxide and Generators \(Video\)](#)
- [Hurricane and Flood Recovery](#)

These pages will be updated frequently, so check back often. You can also receive Health Department updates on [Facebook](#) and [Twitter](#)  
[Chester County Health Department Website](#)

## **Restoration Companies**

<b>Company Name</b>	<b>Phone Number</b>
SI RESTORATION	855-823-3350
Paul Davis	866-765-0773
Flood Support Disaster Recovery	877-713-5663
Mellon Certified Restoration	610-363-6397
Above & Beyond Unlimited Cleaning	888-361-3883
Belfor	888-629-4768
Philadelphia Fire Restoration	215-375-7849
Rainbow International Restoration	610-910-4077
SERVPRO	610-524-0211
Bioclean Carpet Care	267-784-0627
Fire Mark Restoration Inc	484-530-5400
Delaware Cty Fire Restoration	610-583-5266
Servpro	215-772-1203

## **Turn Around Don't Drown®**

When large amounts of rain falls over a short period of time, as expect with this storm, roads in low-lying or poorly drained areas will become flooded.

Turn Around Don't Drown®. *If you cannot see the road or its line markings, do not drive through the water. Depth of water and how fast it is moving is unknown.*

As water depth increases or a greater area is exposed to moving water the force of water is greater.

As little as one foot of water can move most cars off the road and just six inches of fast-moving water can sweep a person off his/her feet. This is why officials tell us not to drive through flooded roads.

The Center for Disease Control (CDC) reports that more than half of all flood-related drowning occur when a vehicle is driven into hazardous floodwaters. The next highest percentage of flood-related deaths is due to walking into or near floodwaters.

Once swept downstream, a vehicle will often roll to one side or perhaps flip over entirely. The driver then has only a few seconds to escape. Many drivers panic as soon as the vehicle submerges and are found later with their seat belt intact.

The best practice is to stay out of flooded roadways. Turn Around Don't Drown® Let caution, good sense, your personal safety and your family's well being be your guides.

Sources: [www.fema.gov](http://www.fema.gov); <http://tadd.weather.gov/tadd-intro.shtml>