

Information sourced from Northern Territory Government

http://www.health.nt.gov.au/Environmental_Health/Disaster_Management/index.aspx

CLEANING UP FLOODWATER

- Do not swim in floodwater and ensure that you and your children stay away from creeks and storm water drains.
- Wear gloves and covered shoes when cleaning up after a flood, and treat any cuts immediately with an antiseptic.
- Wear a mask over nose and mouth when using a hose or high-pressure hose to clean up after floods to avoid breathing contaminated water droplets.
- Avoid unnecessary contact with mud and dirt.
- Disinfect all surfaces after cleaning up silt and debris.
- Thoroughly clean and disinfect refrigerators and food storage areas.
- Thoroughly clean with hot water and detergent, any cooking and eating utensils in contact with floodwater.
- Throw out flood-damaged food.
- Always wash hands with soap and water before handling food, and after handling any contaminated objects or pets that may have swum in contaminated water.
- Ensure that the electrical system is safe.

FLOODS AND INFECTIOUS DISEASES

- Floodwaters contaminated with sewage may carry a range of viruses and parasites. However, the experience from past floods is that the greatest risk of infection is bacterial infection of cuts and abrasions.
- The most effective way of preventing infection is:
 - Thorough hand washing after contact with flood contaminated materials,
 - Wearing gloves,
 - Avoiding contact between cuts or abrasions with floodwater or contaminated materials.
- No antibiotics or vaccinations are recommended for prevention of specific flood related viral, bacterial or parasitic diseases.
- People should contact their GP if they are concerned about their health.

FOOD, WATER AND KITCHEN CLEAN UP AFTER THE FLOOD

- Tap water may be used for drinking and food preparation if the Power and Water Corporation has indicated the supplies are safe for consumption.
- Dispose of all food (including frozen) that has come into contact with floodwaters. Some canned food may be kept but if the can is dented or damaged it should be thrown away. **IF IN DOUBT THROW IT OUT!**
- If power is cut for more than 4 hours, food in fridges will spoil. Freezers will generally not defrost and spoil for at least 24 hours if the door has been kept shut.
- Consuming unsafe food may cause serious illness. Throw away any perishable foods such as dairy products, meat, poultry and prepared food that has been un-refrigerated for more than 4 hours.
- NEVER refreeze frozen foods that have thawed. It should be consumed within 24 hours or disposed of. **IF IN DOUBT THROW IT OUT!**
- Dishes, pots and pans that have come into contact with floodwater should be carefully inspected, washed and sanitised before they are used again. Dishes with deep cracks should be thrown away, as they cannot be adequately sanitised.
- Discard any items made of porous material, such as wood, plastic or rubber.

- Wash any remaining items in hot soapy water, using a brush if necessary to remove dirt.
- Equipment that that can be taken apart should be cleaned in pieces and then rinsed in clean hot water.

SANITISING

- After washing and rinsing, sanitise items as follows:
- Immerse glass, porcelain, china and enamelware for 10 minutes in a disinfecting solution of 1 tablespoon of chlorine bleach per 2 litres of hot water. Air-dry dishes. Do not use a towel.
- Disinfect silverware, metal utensils, and pots and pans by boiling in water for 10 minutes. Chlorine bleach should not be used in this case because it reacts with many metals and causes them to darken.
- Domestic dishwashers are capable of sanitising all eating and cooking utensils as part of the normal cycle. Dishwashers: Do not use a dishwasher that has been exposed to flood water.
- Cupboards and counters need to be cleaned with hot soapy water and rinsed with a chlorine bleach solution before storing dishes.
- If you have any refrigerated medications especially insulin products, contact your pharmacist before use.

LOOKING AFTER YOUR YARD

- Treat all floodwater as potentially contaminated with sewage.
- Yards should be raked to remove debris. If necessary hose down the yard, apply builder's lime carefully and wet down the lime.
- Septic systems often do not work properly during flooding, or when the soil is very wet.
- Flooding of a septic system may lead to a back-up of sewage in the home and lack of sanitation until the system is fixed. Septic systems may need to be pumped out and the soil and surrounding areas need time to dry out.
- If you suspect your septic tank is damaged have it professionally inspected and/or serviced.
- To avoid mosquitoes breeding in your yard, remove rubbish that is water logged, empty out pot plant bases, and try to encourage drainage from your yard.
- If you use a water bore or well for domestic purposes and that bore has been inundated with floodwaters, you should purge the bore three times the volume of the bore before using the water. If you have continued concerns, please contact the local Department of Natural Resources Environment and the Arts (NT) on 08 8999 4892.
- Seek medical assistance if you have, or if any of your family, have severe vomiting or diarrhoea. If you have these symptoms, you will require extra fluids containing a mixture of electrolytes and sugars; such as Gastrolyte, which can be purchased from local chemists.

FOOD SAFETY AND VEGETABLE GARDENS AFTER THE FLOOD

- Floodwater may have contaminated your vegetable or herb garden. Some garden produce may be salvaged and sanitising, peeling and cooking is recommended to prevent food borne illness. Follow these simple guidelines:
- Your garden will take about a month to become clean after floodwater inundations. Don't eat or preserve food during this time.
- Discard leafy greens such as lettuce, spinach, and Asian vegetables such as Pak Choy, as well as soft berries and herbs. These are highly susceptible to bacterial contamination that is difficult to remove from them.

- Wash beans, peas, tomatoes, capsicums in water, and then soak in a weak chlorine solution of 2 tablespoons chlorine bleach to 4 litres of water. Peel and cook them thoroughly before eating.
- For underground vegetables such as carrots and potatoes, wash in water and sanitise as above. Peel and cook thoroughly before eating.
- Produce with a protective fruit or impervious outer skin, such as peas, melons, corns or oranges, should be washed and disinfected before the outer shell, skin or husk is removed. Then shell, peel or husk the produce and cook if possible.
- For more information contact Environmental Health (NT) on 1800 095 646.

DOMESTIC SWIMMING POOLS INUNDATED WITH FLOODWATER

When a swimming pool has been inundated with floodwater there are many issues that need to be considered. It is not essential that a swimming pool be restored to use immediately but it is essential to assess the condition of the swimming pool and make it safe before starting any work. An unused swimming pool is not likely to transmit, or become a source of, diseases in the short term unless sewage has contaminated the pool.

1. **Initial Assessment:** Once the floodwaters have receded the swimming pool needs to be assessed to determine that the fencing is intact to prevent children from accidental drowning. Check any pump house and other structures to ensure that snakes, spiders or other pests are not a threat. Be cautious around reptiles and insects that appear to be dead as they may, in fact, be still alive. Secure or restrict access to the area if possible, particularly if fences have been damaged or debris has made the area dangerous. The Department of Local Government Housing and Sports - Water Safety Branch (NT) can assist - 8999 8520.
2. **Electrical Safety:** If the swimming pool and the pump, timer and any electrical equipment have been fully inundated ensure that once the floodwater has receded that a licensed electrician checks the circuits and each electrical fitting to ensure its electrical integrity. This may need to be done in consultation with the local pool shop in case electrical components need to be replaced.
3. **Construction Integrity:** Severe damage may mean that the pool area should be secured, made safe and/or abandoned until a consultant (or insurance assessor) is able to give professional advice. Do not pump out a swimming pool immediately as this may cause more structural damage than leaving the pool full. An empty pool, particularly a fibreglass pool, may pop out of the ground. Check the pool surrounds for wash outs, missing paving materials or deposited debris. Eventually the pool may need to be pumped/cleaned out to allow a full assessment of the damage.
4. **Nuisance Conditions:** While the pool is full but not able to be restored it may provide harbourage to mosquito breeding and it should be checked daily. If mosquito breeding is detected then 1 cup of household kerosene should be added to the pool water weekly. If the pool starts to turn green then an algal bloom is forming. The local swimming pool shop should be consulted to determine the best practice to minimise the algal bloom.
5. **Water Quality – Soil, silt or debris present:** The contents of the pool need to be assessed. If the pool has received silt or other soil material during the flood it may need to be pumped or bucketed out. There may be unusual material washed into the pool that could be hazardous as well as affecting the pool water quality. Power and Water needs to be consulted as to where the pool contents may be discharged. It is not appropriate to pump out the pool to the sewer.
6. **Water Quality – No soil or large debris present:** The water is likely to be very dirty and any attempt to filter the water will rapidly clog the filter. Consult a swimming pool shop on how to flocculate the pool water to precipitate and remove the suspended colloidal soil material. The flocculated material should be vacuumed to waste and not filtered. Once the pool has been flocculated the pool filter should be turned back on

to circulate and filter the water. Sufficient (check the label) liquid chlorine (sodium hypochlorite) should be gradually added to the pool to raise the free chlorine concentration to 5mg/L and the pH to 7.2 at least overnight with the filter running. Once this has been achieved normal pool operation can be re-instated. If salt-water chlorination is used then the salt concentration should be then readjusted.

CLEANING RAINWATER TANKS INUNDATED WITH FLOODWATER

Cleaning of rainwater tanks presents a number of occupational health and safety risks, such as working in confined spaces and it is only recommended that a tank be emptied if it has been inundated by floodwater. When cleaning a rainwater tank the following recommendations should be considered:

TYPES OF TANKS

CONE SCOUR BASE:

- Are easy to clean by simply opening the cleaning outlet to allow the water to gush out with the sludge then rinse with a hose.

SMALL, FLAT-BOTTOMED:

- Can be cleaned by getting inside the tank with a bucket, shovel and broom and digging out the sludge.
- A second person should always be present to ensure the safety of the person inside the tank.
- Clean the tank early in the morning or when the area is shaded to avoid heat exhaustion.
- For light inside the tank, use a battery lantern not a flame or electric extension.
- If chemicals are being used for repairs inside, a respirator may be necessary.
- Professional tank cleaners are available in some areas.

CONCRETE TANKS:

- Could crack if it dries out. Check with the tank supplier to find out if the type you have can safely remain empty for a few weeks. It might be necessary to put water in the tank to stop it from cracking.

PLASTIC TANKS:

Will need some water or should be tied down to stop them blowing over in strong winds when they are emptied.

Disinfection If you suspect water in the tank has been contaminated

- Chlorinate by adding powdered swimming pool chlorine (calcium hypochlorite, 65% available chlorine) or liquid chlorine - sodium hypochlorite, 12.5% available chlorine).
- You should not use stabilised chlorine (chlorine cyanurates).
- Approximately 5 milligrams of chlorine per litre is needed to disinfect a 5000-litre tank, though more accurate calculations are listed in Environmental Health Information Bulletin No.8 – Disinfection of Water Tanks (NT). (This is equivalent to 7 grams of calcium hypochlorite or 40 millilitres of sodium hypochlorite per 1000 litres of water).
- A level dessertspoon may be used as an approx. measure for 7 grams of powdered calcium hypochlorite.

A lot of the chlorine may be used up during disinfection. There should be at least 0.5 milligrams per litre free chlorine, 30 minutes after the chlorine is added. Note: You can use a pool chlorine test kit to measure how much chlorine is the water. Note that milligrams per litre is the same as parts per million.

CONTACT YOUR LOCAL COUNCIL OR STATE GOVERNMENT FOR MORE INFORMATION AND ASSISTANCE