



Australian Government
Attorney-General's Department
Emergency Management Australia

WHAT TO DO BEFORE, DURING & AFTER A FLOOD



PROTECTING YOURSELF, YOUR FAMILY, PETS AND PROPERTY
FROM THE EFFECTS OF FLOOD

EMA
'safer sustainable communities'



Emergency Management Australia acknowledges and appreciates the assistance provided by the following organisations:

- Australian Building Codes Board
- Bureau of Meteorology
- Insurance Australia Group
- Melbourne Water
- State Emergency Service NSW and Victoria

This booklet has been prepared for the broader Australian community. Your local State Emergency Service can provide additional information specific to your region and your needs.

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Foreword

BE PREPARED FOR FLOODS

If there is one of life's essential elements that is on the mind of most of us more than any other, it would have to be water. For most Australians there is either too little, or too much.

For those living in areas subject to flooding, the effects of being unprepared can range from slight discomfort to devastation. Sadly, some people in our community perish in floods.

Because floods have been a part of Australian culture, it can be easy to become complacent. However, much has been done by experienced emergency preparedness workers towards mitigating the effects, and to develop sound advice on what to do before, during and after a flood.

It is the responsibility of all of us – young and old – to see that where there is a risk of flood affecting life and property, that we are well prepared before an event occurs. So I urge you to take up the challenge that this booklet promotes – to ask, learn, plan and prepare. Your efforts will be worthwhile should floods occur in your region.



David Templeman
Director General
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CHAPTER 1

BEFORE THE FLOOD

If you are in an area which is subject to flooding, learn how to protect yourself, your family, pets and property from its effects.

NOW – before the emergency is the time to **ASK, LEARN, PLAN** and **PREPARE**.

Ask

Find out what floods have occurred where you are living. A good place to start is with your local council or State/Territory emergency service office (SES). The following questions may be used as a guide:

QUESTIONS FOR THE SES:

- In which years were local floods recorded?
- How high did they rise, and how quickly?
- How long did they last?
- Is there a local flood plan?
- Does my house become isolated, or do I have to evacuate?

QUESTIONS FOR YOUR LOCAL COUNCIL:

- At what river height, at the closest official gauge will my home be flooded?
- Does my home become isolated?
- Do I have to evacuate and where do I evacuate to?
- What flood advices will be given by local officials in addition to those given by the Bureau of Meteorology?
- Where is the catchment area in which rainfall will cause floods near my home?

Some councils have produced “Flood Plain Maps” which will tell you the danger areas based on previous floods. These are excellent guides – but you also need to ask what recent developments have occurred which could affect run-off and river flow.

If you find there’s a lack of preparedness in your area and history shows you could be flooded – it is time to consult with representatives of your local council or State/Territory emergency service. They can inform you of local plans, warning systems and evacuation routes plus assist you in giving information on preparation for flooding.

Learn

Don’t wait for a flood to learn what to do. Now, before the flood, is the time to learn – firstly in knowing how the Flood Warning System works.

The Bureau of Meteorology issues forecasts and warnings. In particular, the Bureau issues a **Flood Watch** or similar advice of possible flooding, if flood producing rain is expected to happen in the near future. The general weather forecasts can also refer to flood producing rain. The Bureau issues a **Flood Warning** when flooding is occurring or is expected to occur in a particular location or area. When flash flooding is expected, a **Severe Weather Warning** is issued to alert to that possibility.



IMPORTANT FLOOD TERMS

Where the use of reliable flood forecasting models is possible, the Bureau issues Quantitative Flood Predictions at the location of official gauges within the body of the flood warnings. The State/Territory emergency service will be able to relate this to possible extent of flooding around the official river height gauge using Flood Intelligence, gathered either through past flood history or through flood mapping studies carried out by your local councils. Wherever possible they will issue local flood advices, informing you of the likely effects of the flood and what you should do.

The Bureau of Meteorology uses the following flood terms. It is important to know what they mean.

Minor flooding: Causes inconvenience. Low-lying areas next to watercourses are inundated which may require the removal of stock and equipment. Minor roads may be closed and low-level bridges submerged.

Moderate flooding: In addition to the above, the evacuation of some houses may be required. Main traffic routes may be covered. The area of inundation is substantial in rural areas requiring the removal of stock.

Major flooding: In addition to the above, extensive rural areas and/or urban areas are inundated. Properties and towns are likely to be isolated and major traffic routes likely to be closed. Evacuation of people from flood affected areas may be required.

Local Flooding: Used where intense rainfall could be expected to cause high runoff in limited areas local to the rainfall, but not necessarily leading to significant rises in main streams.

Flash Flooding: Flooding occurring in less than 6 hours of rain, usually the result of intense local rain and characterised by rapid rises in water levels. They are difficult to predict accurately and give little time for effective preventive action.

Plan and prepare

If your area has any history of flooding you should prepare a flood action plan based on the following information and check lists. This action plan would include where you will evacuate to should the need arise. Your local council will be able to provide information on the location of evacuation centres in your area. It is a good idea to practice your evacuation to ensure you are familiar with the route.



EMERGENCY FLOOD-PROOFING MEASURES

Apart from flash floods, most other floods allow some warning time. In many situations, unless a really major flood is expected, you may be able to keep flood water from entering your house, if you are prepared to take the necessary action. So plan and prepare ahead of the event.

CAUTION: Even if you take such measures to protect your home, you should still have a further action plan in case your flood-proofing fails.

IMPORTANT PHONE NUMBERS

Keep a list of emergency phone numbers near the phone for example, your local State/ Territory emergency service office, police, ambulance, hospital and essential services, for example, gas and electricity.

CHECK LIST FOR EMERGENCY KIT

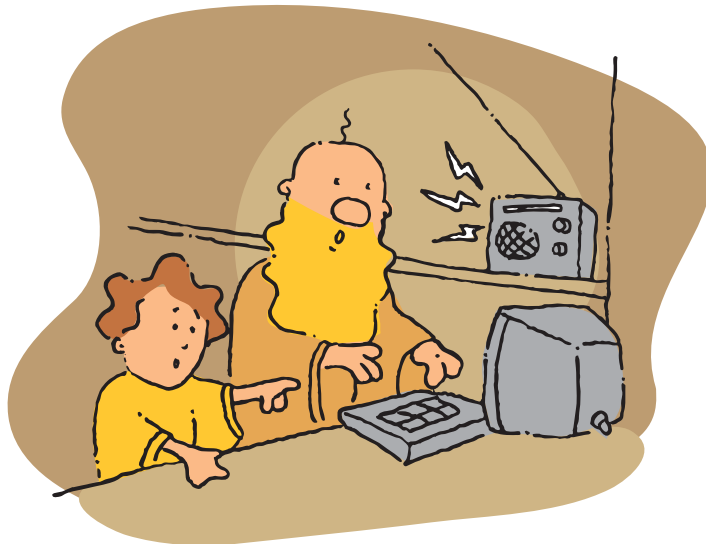
It's a good idea to have a basic kit ready at all times. This kit should comprise the items below. Chapter 2 has an extended list of items you may need to add to your basic kit at the time of evacuation.


- first-aid supplies
- torch
- battery operated portable radio
- spare batteries for radio and torch
- gloves

If you live in the country you may have to move livestock, machinery, pumps, irrigation equipment etc to high ground. Prepare by knowing the flood heights that affect your property and knowing where higher ground can be found. Remember that higher ground may become isolated with rising flood water. If you are likely to be isolated by flood waters, paint the name of your property on the roof in large letters.

ON RECEIPT OF A FLOOD WARNING

Flood Warnings are made available by various means including the internet. They are also provided by the radio, by the State/Territory emergency service media, television in some instances, or by direct contact in some areas.





When heavy rainfall is being experienced, it is in your interest to find out whether any Flood Warnings are current. Refer to the back page of this document for the Bureau of Meteorology contact details.

When you have either been informed or you find out that a Flood Warning has been issued for your area – NOW is the time to put your planning and knowledge to use. Know the whereabouts of other family members and near neighbours and whether they know what is happening. Listen to ABC and/or local radio for further flood bulletins. Ensure your portable radio has fresh batteries. Remove possessions to flood-free storage, and if possible, protect electrical appliances etc. All poisons, chemicals etc, should be stored above predicted flood height.

You may be isolated in your own home or you may be evacuated some distance away, so be prepared.

FAMILY RECORDS – CHECK LIST

It is always sensible to prepare a check list of important family records.

Include list of important records including wills, birth/marriage certificates, banking, financial records, etc. Have these stored in a secure location and ready to be packed in a waterproof bag for inclusion in your emergency kit if you need to evacuate.

SOME TIPS FOR THE ELDERLY OR THOSE WITH SPECIAL NEEDS

Disabled and elderly persons will usually require special assistance as they may be dependent on the help of others to prepare their properties and themselves to evacuate if required. Some tips on to how to manage your flood action plan follow:

- Assess your own special needs, limitations and capabilities realistically and honestly and make a list.
- Include details of any special dietary needs.
- Write down name, address and phone numbers of your doctor.
- Give a copy to a family member, friend or neighbour who could physically help if required and which could be readily available to emergency workers.
- Keep medications, duplicate prescriptions and other medical needs handy.
- Keep mobility items close at hand.

If you voluntarily evacuate ensure you tell a family member, friend, doctor or emergency worker your estimated time of departure and intended destination.

Remember in an ordered (planned) evacuation take only those items essential to your special needs. Food, clothing, shelter and first aid should be available at the evacuation centre. Travel light.

CHAPTER 2

DURING THE FLOOD

Protect – valuables and goods

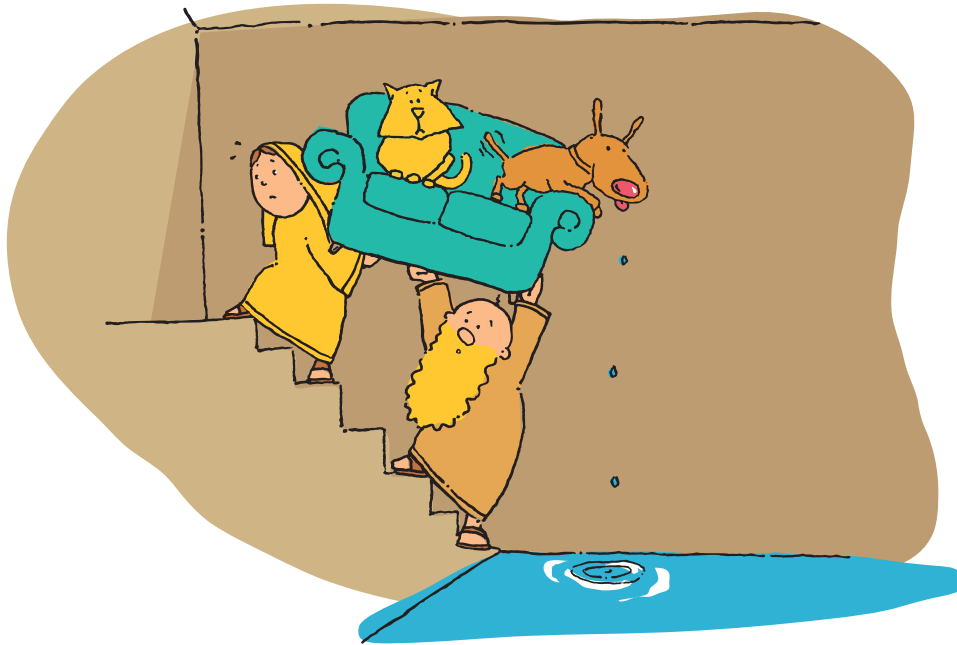
Move household items to a high place. Flood-free storage for lighter household items can often be built into ceiling space, however your ceiling or upper floor may not be able to safely support the additional weight of heavy equipment or furniture unless you have had it specially strengthened beforehand.

Place furniture on beds and then personal items on the furniture. Electrical equipment should be placed on top. Secure all items that may become hazardous and cause damage if moved by flood water, for example – refrigerators and other large household items.

- Remove wood drawers from built-ins, cabinets and furniture. Wood swells when wet and the pressure between the drawers and their containers can damage furniture.
- Remove light bulbs from light fixtures below flood level. Put the light bulbs and other glass items in plastic bags and move them above flood level.
- Protect valuable machinery, equipment and the like that cannot be relocated by enclosing in waterproof covers. Certain machinery may benefit from a coating of grease (please check with the manufacturer prior to applying any substance). Another alternative to consider is encircling such equipment with a wall of sandbags.

Secure – dangerous or damageable items

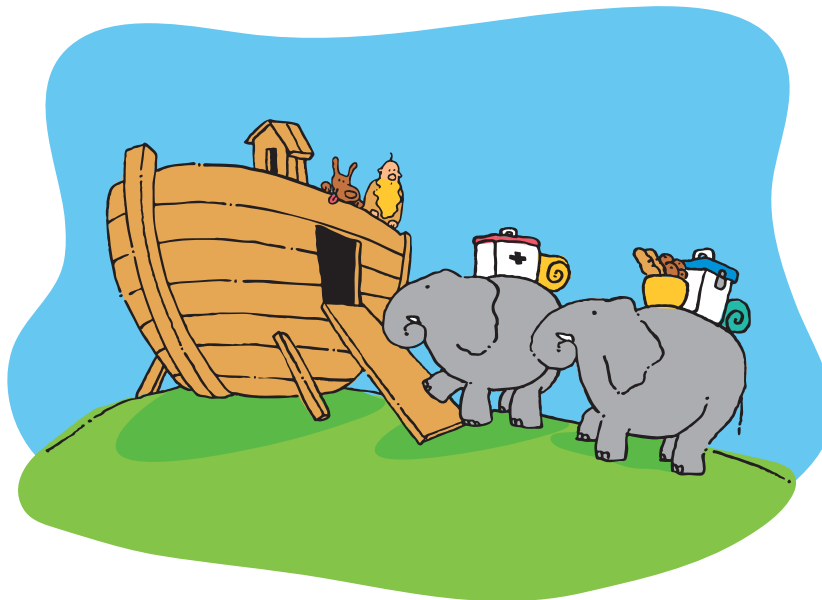
- Relocate chemicals that react with water to give off heat or form explosive or toxic gases and poisons to the highest level in your home in waterproof containers. Include any substances that could contaminate flood waters.



- Include cardboard boxes and newspapers etc, as items to be moved to higher ground. If this is not done, they will disintegrate and clog drains.
- Remove perishable food from refrigerators, place in plastic bags or containers and seal. Tie and anchor outdoor garbage bins to minimize spread of disease and unsanitary conditions. Leave refrigerator and freezer doors or lids open, (otherwise they may float, tip over and be damaged or cause damage).
- Tie down timber, drums and other loose, buoyant items in the yard to prevent them from being carried away by flood water or battered against other items or structures.

Evacuate – by authority or voluntarily

- If you have a boat, moor it so that you can gain access to it easily during the flood. (Only if safe to do so – See safety notes on page 13.)
- When evacuation becomes necessary, either by emergency workers or you decide to leave, be sure to shut down household utilities and empty refrigerators and freezers, leaving doors open.
- Locate your basic Emergency kit (see page 7) and include last minute items such as:
 - Special medicines
 - Non perishable food and water for your family and pets
 - Blankets and dry clothing
 - Rubber boots
 - Important papers, bank books, money and credit cards
 - Valuables and cherished articles (jewellery, photographs etc)
- If you evacuate voluntarily make sure you tell a member of the family, a friend or a neighbour and the State/Territory emergency service or police when you are going, (and where, if you know) so that authorities can account for you.
- Listen/watch for flood reports and instructions. Follow all instructions by emergency authorities and react to changing conditions.
- If you have to evacuate, fill your petrol tank and stock your car with emergency supplies to be evacuated with you.



Utilities – action on receipt of warning of imminent flooding/evacuation

ELECTRICITY

- Electricity is controlled by either plug fuses or circuit breakers located within a meter board fuse-box mounted on the wall of your home.
- If flooding is imminent, remove (don't just loosen) all fuses, including the one at the main switch and at the range switch, and put them in a place above the anticipated flood level. This will minimise the danger of short circuits when the power authority returns service to your home after the flood.
- If you have a circuit breaker panel board, switch each circuit breaker to the OFF position.

GAS

- Close main gas valve. This valve is generally located on the gas piping just prior to its entry into the gas meter.
- Gas cylinders/bottles should be tied down or disconnected and moved above anticipated flood height.

WATER

- Close main water valve. It usually is found on the main line where the water supply enters your property at the water meter.
- Drinking water can be stored in a clean and covered bathtub or in the hot water tank. If the hot water tank valves are turned off and no heat is supplied to the tank, flood water cannot enter the tank.

FUEL TANKS

- Anchor fuel tanks to prevent them from overturning or floating.
- Close fuel tank valves to prevent leaks, spills and flood water infiltration.

TOILET AND SHOWERS

- Place a strong plastic bag full of sand or earth in the toilet bowl to prevent a back-flow of sewage into your home.
- Place a strong plastic bag full of sand or earth over shower and bath outlets.

Travel in flood conditions

The majority of flood-related deaths in Australia are a result of inexperienced people entering flood waters either in boats, vehicles or on foot.

Boating, driving and walking in flood areas should be avoided unless absolutely necessary.

BOATING IN FLOOD WATERS

- If you are in a metal boat, keep away from power lines and power poles. If you are in a wooden or fibreglass boat, do not touch the water or metallic parts of the motor when near wires or poles. Consider all fallen wires as dangerous.
- Keep the boat away from guy wires. Metal of the boat or its engine touching a metal guy wire on a pole can cause a spark that may ignite any oil or petrol on the water's surface.
- Wear a life jacket at all times and carry items such as: oars, extra fuel, anchor etc.

DRIVING IN FLOOD AREAS

- Avoid driving in flooded areas at all costs.
- Enter only if absolutely essential and safe to do so, and proceed slowly and steadily. You may have to remove fanbelt and cover distributor in some cars.
- Don't enter flood waters before checking depth and current. Beware of wash-outs, fallen power lines and floating objects.
- Upon leaving flooded area, dry out brakes by applying light pressure until grip returns.
- If your vehicle becomes stranded in flood water, leave it and move to higher ground before the water rises further.
- Avoid driving at night – potholes and clean water cannot be seen.



WALKING OR SWIMMING IN FLOOD AREAS

- Don't swim in flood water – it is usually contaminated and often contains hidden snags, strong currents and other hazards.
- Avoid wading, even in shallow flood water, for the same reasons.
- If you must enter shallow water, wear shoes to protect feet. Don't proceed beyond waist-depth unless absolutely necessary (and only if there is no obvious current).
- Keep in contact with other people. Do things in pairs. Do not go anywhere alone.
- Whether you are leaving your area for a short time or you are evacuating, inform neighbours or emergency workers where you are going and if, and when, you are likely to return. This will avoid unnecessary effort for emergency workers and worry for relatives and friends.
- Take care on foot bridges and walkways as they may be extremely slippery.

CHAPTER 3

AFTER THE FLOOD

Caution – upon entering flood-affected area

- Wait until authorities have declared the area safe before entering a flood zone. Before entering your house, wait until water has fallen below floor level.
- Wear rubber boots (or at least rubber-soled shoes) and rubber or leather gloves.
- If you are going into an isolated area notify the proper authorities.
- Check with electricity, gas and water authorities to determine whether supplies to your area have been interrupted and are safe to be turned on by you. If the water supply system has been flooded, you must assume it is contaminated.

Hazards in the flood-affected area

- Indoors or out, under flooded or damaged conditions, treat every electrical item with the greatest respect. EVERY SOURCE OF ELECTRICITY CAN BE EXTREMELY DANGEROUS UNDER FLOOD CONDITIONS.
- If travelling on foot through a flood zone, observe overhead electrical lines for broken wires or evidence of arcing. Avoid power lines if possible. If you must cross them, cross under them only at midlength between supporting poles.
- An energised electrical wire or pole partially or totally submerged in water – whether metal or wet wood – can create an electrical field in the water that will cause a serious electrical shock hazard.

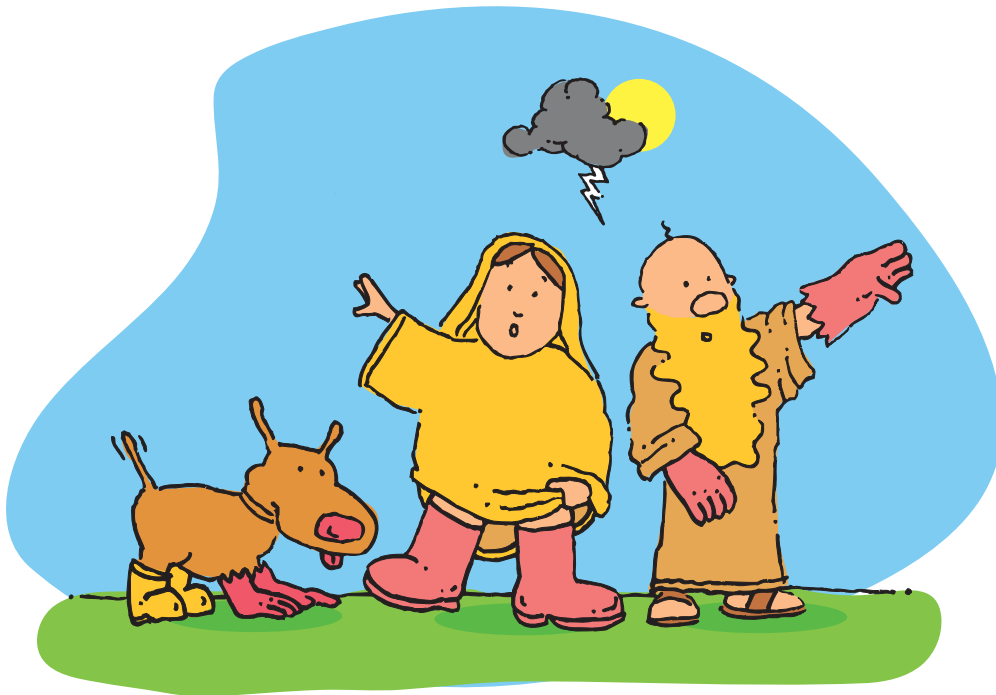
Hazards on entering your home

Move around slowly and carry a torch as you inspect for damage. Flooring and stairways need particular attention. Watch for loose floor boards, holes in the floor, protruding nails, and sagging ceiling areas that may be ready to fall. Wet plaster is heavy and dangerous; if loose, use a broom stick or any other long handled device to break it down before doing any work. Take care, as a sagging ceiling may contain a surprising quantity of water. Do not smoke or use open flames, as escaping gas may have collected in pockets of the building. Also keep a look out for other flood "victims" such as snakes and spiders.

There is a very real risk of death within a flooded home containing energised wiring. Do not turn on any lights or appliances until a qualified electrician has checked the entire electrical distribution system.

ELECTRICAL DISTRIBUTION SYSTEM

Every portion of your electrical system that has been covered with water or mud must be checked by an electrician before it is used.





DRINKING WATER

If there is any chance of flood contamination of your drinking water, drink only boiled or bottled water until the normal water supply has been declared safe by health authorities. Municipal water systems as well as private sources are subject to flood contamination, and health officers should certify water sources as fit for consumption.

FOOD

Discard all foods exposed to flood water except those in sealed (airtight) metal cans. Permanently mark the cans to keep their contents identifiable, remove paper labels, and wash the cans in soap and warm water. Then immerse in a solution of three quarters cup of household laundry bleach per five litres of water for two minutes to disinfect the outside of cans. Rinse immediately in clean water. Do not treat aluminium cans with bleach solution.

HYGIENE

Remove and burn or bury rubbish, decaying vegetation and driftwood.

Wash out mud, dirt, and debris from your home as soon as you can at medium pressure. Use a hose and start from the top or upper limit of the flooding and work downward to the floor or basement.

Wash surfaces that have been inundated with flood waters in order to reduce the danger of flood-carried infections. Pay particular attention to surfaces that children can reach.

Wash your hands thoroughly (with a disinfectant soap) after handling contaminated articles. To be on the safe side, consider all items exposed to flood waters as contaminated.

Clean/salvage – household items

Wait until your home and belongings have been thoroughly cleaned and dried before deciding whether to throw out. They may return to good condition or at least be repairable. Much can be salvaged if immediate restoration steps are taken as described in the following pages.

INSURANCE CLAIMS

Insurance claims need to be considered first.

The advice contained within this document is of a general nature. Always seek expert advice on repairs or discuss concerns with your insurance company. This needs to be done prior to cleaning or disposing of damaged items.

BEDDING

Mattresses soaked with flood water generally are damaged beyond use and should be discarded.

Feather and foam rubber pillows may be washed but those stuffed with kapok or cotton may not.

CLOTHING, HOUSEHOLD LINENS AND WOOLLENS

Allow clothing that is to be dry-cleaned to dry slowly at room temperature, away from direct heat. Shake, brush, or vacuum loose dirt from the articles before sending them to the cleaners.

To clean washable woollen clothes and blankets, first shake and brush to remove dirt, then rinse repeatedly in lukewarm water to remove particles of soil lodged in fibres.

Dry woollens in a warm place but not near a fire or in direct sunlight. Never allow them to freeze.

To clean mud-stained, washable clothing and household linens other than woollens, first brush off any loose dirt, then remove as much mud as possible by rinsing repeatedly in cool water.

Electric blankets should be dried on a clothesline and gently stretched into their original size and shape. They should NOT be used until safety tested by a qualified electrician.

Wash lightweight quilts in the same manner as woollens. Dry outdoors in the sun, if possible, to remove unpleasant odour. Thick comforters may need to be taken apart and the cover and filling each washed separately.

To further ensure sanitisation of washable articles, sanitise the washing machine occasionally to kill bacteria that live on the interior surface. Pour a disinfectant into the empty machine, then complete a 15-minute cycle at the hot water setting.

FLOOR COVERINGS

You will have to make a decision regarding cleaning your rugs and wall-to-wall carpeting. If you leave the carpeting on the floor, you risk fostering wood decay, mildew, and warpage of the flooring by hindering its drying. However, if you remove the carpeting, you risk shrinkage. Although professional cleaners do have methods for controlling shrinkage, the chance of preventing it entirely for wall-to-wall carpeting is unlikely.

If linoleum is broken, brittle, and cannot be salvaged, remove it with a chisel or hoe. Be sure to let the underfloor dry thoroughly before laying any type of floor covering.

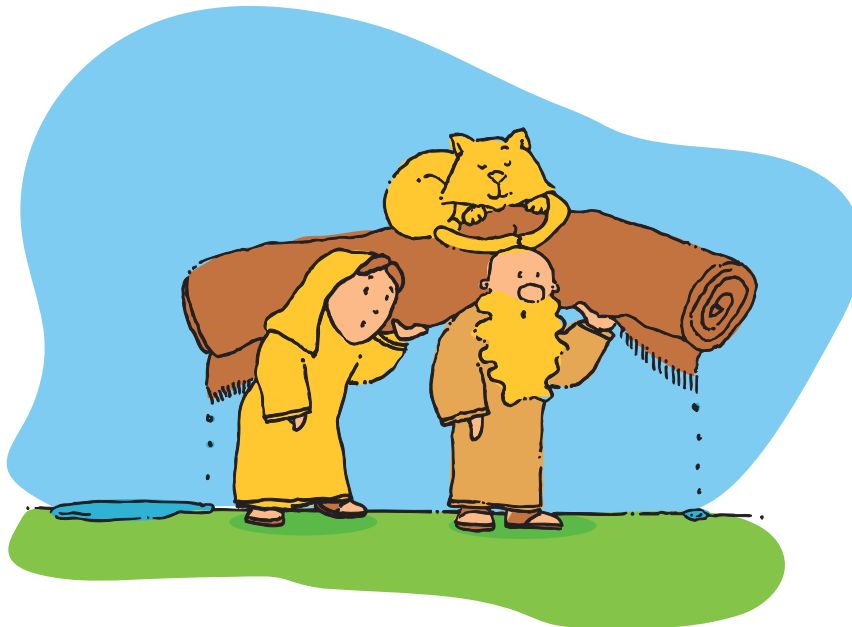
FURNITURE

Promptly place pieces of wood or aluminium foil under furniture that has castors or metal caps on the legs to avoid staining carpeting.

When weather permits, take all furniture outdoors, but keep it out of direct sunlight to prevent warping or fading. A garage or carport is a good place to work. Remove as many drawers, slides, or other moving parts as possible. If the furniture is made of wood, these will probably be jammed in position. Do not force drawers with a screwdriver or chisel. Remove the back of the furniture – cutting it out if necessary and push out the drawers.

If kitchen cabinet doors or drawers are stuck, do not force them open. Once they have dried they should be easier to open.

Clean off all mud and silt from furniture items, using a hose if necessary.



To remove mildew from wood furniture, scrub with a mild alkali, such as four to six tablespoons of baking soda to five litres of water. Rinse well with clean water and allow to dry thoroughly. After cleaning, store the wood furniture inside the house or garage where it will dry slowly; do not leave it out in the sun as it might warp and twist.

To remove mildew from upholstered furniture, first remove loose mould from outer coverings by brushing with a broom. Dry the article as quickly as possible with an electric heater, fan, or any convenient method to carry away moist air. Sun and air the article to stop the mould growth.

CAUTION: Sunlight may fade the colour of your upholstery.

If mildew remains on upholstered articles, sponge lightly with thick suds of soap or detergent and wipe with a clean, damp cloth. Use as little water on the fabric as possible to avoid soaking the padding.

Wood furniture that has not been submerged may have developed white spots or a whitish film or cloudiness from dampness. Try rubbing with a cloth wrung out of a mixture of half cup household ammonia and half cup water, turpentine, camphorated oil or oil of peppermint. Wipe dry at once and polish with wax or furniture polish. If colour is not restored, dip fine steel wool in oil (boiled linseed, mineral, or lemon) and rub lightly with the grain of the wood. Wipe with a soft cloth. Use a drop or two of ammonia on a damp cloth for deep spots; immediately rub dry with a soft cloth and then polish. If all efforts to remove white blemishes are ineffective, it may be necessary to refinish the furniture.

LEATHER

Remove surface dirt from leather by rinsing with cold water, then wipe with a dry cloth. Stuff purses and shoes with crushed paper to retain shape. Leave suitcases open. Dry leather away from heat and sun. When dry, rub with saddle soap. Neatsfoot oil may be used on shoes that have become stiff, however, it causes leather to darken. Paste-type neutral floor wax may be used on leathers as a final polish if they are not to be refinished by a commercial cleaner.

Use fine steel wool (lightly) or a suede brush on suede.

Rinse leather and suede jackets in cold water. Dry away from heat.

To remove mildew from leather goods, wipe with a cloth wrung out of diluted household bleach. Dry in an airy place. If mildew remains, wash with thick suds of a mild soap or detergent, saddle soap, or a soap containing a germicide or fungicide. Then wipe with a damp cloth and dry in an airy place. Polish leather shoes and luggage with a good wax dressing.

REFRIGERATORS AND FREEZERS

Clean them thoroughly and disinfect inside. Don't turn them on until they have been given the opportunity to dry out. Have them checked by an electrician first.

TV/RADIO SETS

TV and radio sets, even if completely immersed may be salvaged and repaired provided the cabinet is sound and appearance acceptable to the owner. Those wishing to try salvage are advised to take the following steps:

1. If still wet and muddy, thoroughly and gently hose the set internally and externally with clean fresh water, or if it has dried out, gently brush out dirt etc.
2. In either case, then apply a non oil-based water repellent/cleaner (for example, isopropyl or methylated spirits) to all metal and electrical parts, avoiding rubber components.
3. Allow to dry (seven days). In the meantime, call an expert for a repairs quotation.

HOT WATER SYSTEMS

A flooded hot water system should be repaired by an experienced repair person only. Controls can suffer hidden corrosion damage. They may operate adequately for a while, but cease to operate safely in the future. Testing seldom reveals future problems. Burners or electrical components should not be assembled or adjusted by the home owner/occupant.

VALUABLE BOOKS AND PAPERS

Wet paper attracts mould and will continue to deteriorate until it dries. Separate sheets of paper as soon as you can and allow them to dry. Separate sheets not touching one another can be placed in a photographic print dryer, but care must be taken to prevent them from scorching.

Larger quantities of paper, such as in file cabinets, can be placed in a freezer to stop mould and deterioration. Separate into small bundles. When time allows, bundles can be removed, allowed to thaw, and individual sheets separated and dried. Do not try to unfold wet paper because it tears easily.

Many stains can be removed from water damaged paper with non sudsy household ammonia. Use it in a well ventilated place to avoid fumes.

Place books on end to dry and keep the leaves apart. If books are very damp, sprinkle cornflour or talcum powder between the leaves to take up the moisture, leave for several hours and then brush off.

After exposing books to the air for a time, pile and press them to keep the leaves from crumpling. Continue this alternate drying and pressing until they are dry to prevent mildew. Just before they are completely dry, apply a little heat between the pages to prevent musty odours.

Repair – flood-damaged buildings

The main considerations are to dry the building materials and furnishings out as soon possible, and to delay renovation and redecoration for as long as possible, at least until building components are substantially dry.

Drying involves draining, flushing or pumping out mud and water from wall cavities, ducts, service pits and basements; ventilating as much as possible by keeping doors and windows open, taking up floor coverings, and moving furniture away from walls; and ensuring good sub-floor ventilation by removing floor boards to assist in drying the floor and floor joists. Drying can also be assisted by the use of fans and heaters. Waterlogged insulation material should be removed. In the case of masonry houses, mud should be cleared from the wall cavities and ventilators.

Electricity and gas service pose special problems and the appropriate authorities should be contacted to check and, if necessary, to arrange for repair of flood affected fittings.

The natural tendency to restore the appearance of a flood damaged building as soon as possible should be resisted. Drying out is likely to take a long time – possibly months – depending on the type of construction, and premature painting of walls and restoration of floor coverings will delay drying of the structure and probably lead to early manifestations of dampness (such as mould growth) and failure of paint films.

Similarly, repainting and other repairs to cracked brickwork or concrete masonry are best left until the foundation soil has dried out and foundation movements have ceased. Doors and windows should not be replaned to make them fit their frames until the timber is back to its normal moisture content, which may take several weeks. One thing that should be done promptly is to oil locks and hinges to prevent them binding with rust.

Cleaning/restoring walls, floors, etc

BRICKWORK AND CONCRETE BLOCKWORK

Mud on the walls will make them look unsightly and will probably be stuck fairly firmly, but mud will not seriously affect the performance of masonry. The mud should be cleaned off using water, detergent and a good stiff nylon or bristle brush. It is not a good idea to use acid as this could cause staining.

As the walls dry out, there is a fair risk of efflorescence or white salt growth on the bricks or blockwork. This is not serious and it should stop when the wall is fully dried. In most cases it can be removed by brushing with a bristle broom. Acid treatments may be effective as a last resort but should be used cautiously.



WALL CAVITIES

One of the places where cleaning is often overlooked is within the cavities of timber, brick veneer or cavity brick walls. Make sure there is no mud present that will hold water. Take off the top and bottom boards, part of the wall lining or a few bricks to inspect the cavities. If necessary, flush them out and leave them open until everything is dry.

Remember that with timber frames there may be noggings in the frame half-way up which could hold the mud.

SUB-FLOOR SPACE

If necessary, clear all the mud out from the sub-floor. This may involve taking up some floor boards which should be left up to help drying. Everything should be done to increase under-floor ventilation, for example by taking out bricks from the walls below floor level. Careful attention should be given to clearing away any mud from around the floor joists and other sub-floor members.

FLOORS

Do not attempt to straighten warped or buckled wood floors until they have dried out. Wood and plywood expand when wet, then return to near original dimensions when dry. Flooring may require replacing, refastening, or refinishing, but if there is any question, wait until after drying is complete to make the decision. Remove floor coverings, to allow the flooring to dry. Mop off excess water as soon as possible.

HEATING DUCTS

Clean out all mud and water from heating and other duct work.

STAINS

Rust stains can be treated with proprietary phosphate compounds. Stains from timber can be treated with bleach. Some bleaches (such as oxalic acid) can be dangerous to humans and should be handled with care. Oil stains, grease etc, can be treated with detergents.

MOULD

It is highly likely that wet lining boards and some timbers will grow mould during the drying process. Remove it with hypochlorite bleach used in accordance with the manufacturer's recommendations. Repeated applications may be necessary as the drying continues. Note that the bleach may affect the colour of some materials.

Wetting for a short period does not cause permanent damage to many building materials but they should be dried out as quickly as possible. Check for hidden pockets of water and think of ways to facilitate the drying. In most cases, especially with masonry materials, drying can take a very long time, possibly months.

Don't repaint walls too soon. Drying will be quicker if furniture and pictures are kept away from them.

BRICKWORK

Don't rush into brickwork repairs. Wait until there is a fair chance that all movement has ceased before patching any cracks. Some cracks may actually close up as the foundation dries out. Minor cracks are not serious in brick veneer structures as there is usually a large margin of structural safety.

JOINERY

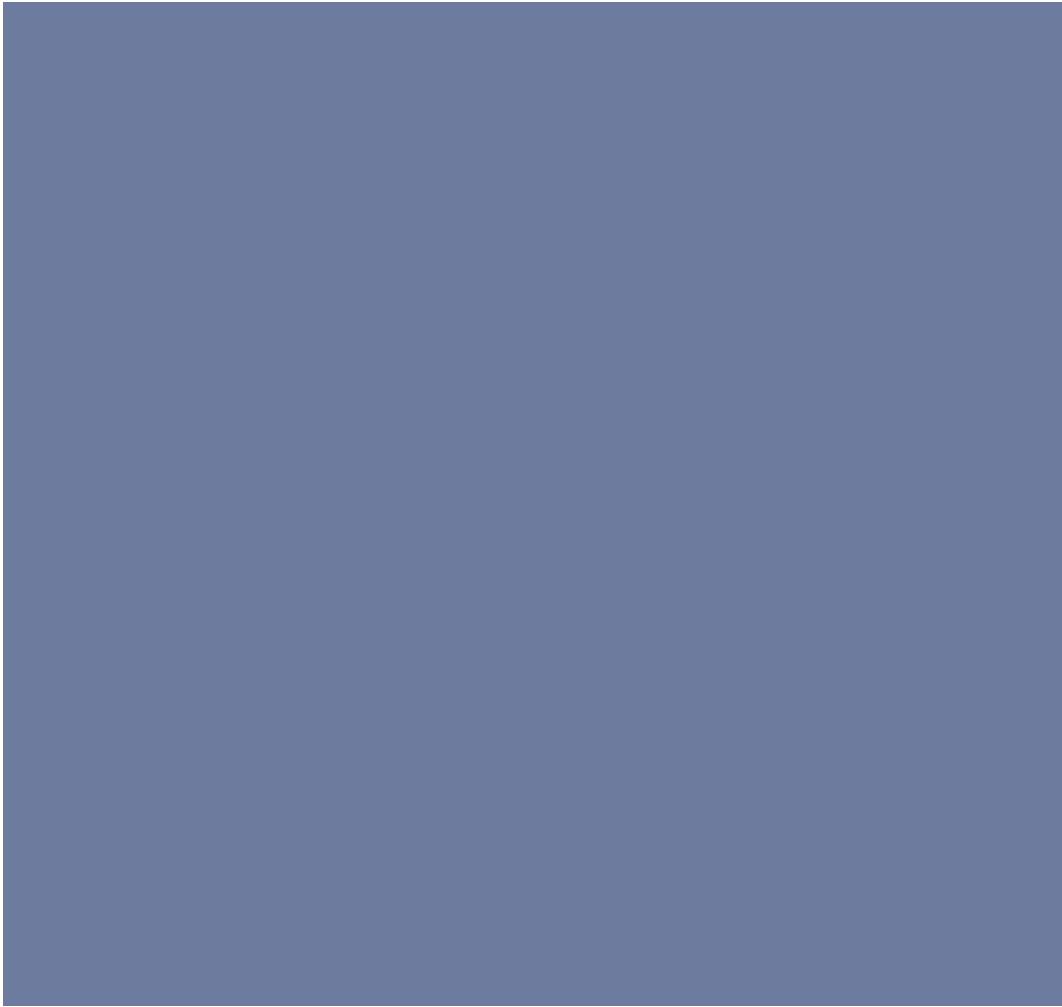
Again, don't rush into repairing things until the timber has had a chance to dry. A door may have swollen and jammed while it is still wet. Don't trim it off while wet. Wait until it is dry – it will probably fit again then. It may help to take off the architraves to help drying.

PARTICLE BOARD

Particle board is likely to lose strength when saturated and re-dried. Any parts carrying load should be very carefully checked, particularly if they show any sign of swelling, before they are re-used.

PLASTER SHEET

Plaster sheet is very weak when wet but may recover its strength when dry. If it is obviously damaged, get any load off it and let it dry – it will probably be alright, particularly if reinforced with glass fibre.



Don'ts

Don't ignore flood warnings

Don't drink flood water

Don't play in flood water

Don't enter flood water until the depth and current strength has been assessed

Don't exceed knee depth in flowing water

Don't use gas or electrical appliances until they have been checked for safety

Don't eat food that has been in flood waters

Don't boat, drive or walk in flood waters unless absolutely necessary

Where can I get warning information?

Radio: Listen to ABC and/or local radio for emergency warnings, evacuation advice and weather updates. To find your local ABC Station visit: <http://www.abc.net.au>

Flood warning information provided by the Bureau of Meteorology can be obtained as follows:

World wide web: <http://www.bom.gov.au/hydro/flood/>
Click on your region of interest.

Recorded voice telephone services:

NSW/ACT	1300 659 218
NT	1300 659 214
QLD	1300 659 219
SA	1300 659 215
TAS	1300 659 216
VIC	1300 659 217
WA	1300 659 213
National Directory	1900 926 113

Weather-by-fax service:

Quick reference directory 1800 630 100 or 1902 935 200

Detailed directory 1800 061 440

Call charges: Call charges apply (more from international, satellite, mobile or public phones).