

Caring for your collections:

Salvaging water damaged collections

Outlined in this guide are steps to salvage water damaged paper, book, photographic, and audio-visual collections. It is important to attend to the damage as quickly as possible to prevent permanent damage and mould growth. The salvage chart included with this guide is designed for quick reference. If you require more detail or information on material not covered, please contact the State Library Conservation team (contact details are located on the last page of this document).

Safety Precautions

- Safety must always come first. Protect yourself by wearing Personal Protective Equipment (PPE), this includes heavy duty gloves, sturdy, closed-in footwear, protective eyewear and face masks (e.g. N95 respirator mask) as mould and other harmful contaminants may be present. Make sure you replace your mask regularly to ensure optimal protection.
- If you do find mould, be aware that many moulds can be toxic, and suitable PPE equipment is required. For more information, please refer to our guide on *Dealing with mould*. This guide can be found on our website at this link - [How to guides](#).

Equipment and materials

The salvage methods outlined in the chart require the following:

- Plenty of absorbent paper such as paper towels, toilet paper, or blotting paper. (N.B. Do not use printed paper as the dyes can run when wet causing staining on objects).
- Fans to increase air circulation and speed up drying process.
- Portable dehumidifiers to bring humidity levels down.
- Clothesline or cotton tape or string.
- Plastic clothes pegs.
- HEPA filter vacuum cleaner for overall cleaning of furniture and flooring after salvage.

Setting up

- Once you are able to safely access your home and possessions, work quickly and in a methodical manner. Do not panic.
- Use the chart below to prioritise which material needs attention first.
- Firstly, move all items that are on the floor to clear your access path to other damaged materials.
- Begin your collection salvage with material labelled Salvage Priority 1 (see Salvage Chart below).
- Find a location away from risk that is dust free, cool, well ventilated, and as dry as possible and set this up as your treatment area.
- Line tables and other flat surfaces with absorbent material such as paper towels, scrap paper, or blotting paper. These need to be changed regularly.

Creating the right salvage environment

- To speed up the drying process and to minimise mould growth, it is important to dry objects as quickly as possible. Create good air movement with lower humidity.
- Use fans to maximise air circulation and speed up drying. Operate at low speed and direct the air flow adjust too rather than directly at drying materials.
- As high humidity will encourage mould growth, it is a good idea to use portable dehumidifiers. These can be hired from hire shops and a number of specialist suppliers. Please see our guide on *Suppliers and guide to selecting preservation materials*. This guide can be found on our website at this link - [How to guides](#).
- Do not use heaters or hair dryers as they will encourage the growth of mould and can cause distortion of certain objects.
- Remember to keep replacing absorbent paper when it becomes damp. If this is not done, there is a greater chance of mould activity and physical distortion.
- Keep all identifying information with the objects.

Need further assistance?


Contact Conservation at State Library by calling (07) 3840 7666 and your call will be directed or complete an [ASKUS](#) Conservation enquiry.

Useful websites

- AICCM Australian Institute for Conservation of Cultural Material www.aiccm.org.au
- AIC American Institute for Conservation <https://www.culturalheritage.org/>
- The National Film and Sound Archives <http://www.nfsa.gov.au/preservation/>
- Find a conservator in private practice through the Australian Institute for Conservation of Cultural Material (AICCM) <https://www.aiccm.org.au/find-a-conservator>

Material	Salvage priority	Handling concerns	Salvage method
Photographic materials (including digital prints)	1 Requires immediate attention	<ul style="list-style-type: none"> • Avoid touching front of photograph. When wet, image surface becomes soft. • To move, place photograph image side up onto a rigid support such as board or card. 	<ul style="list-style-type: none"> • If prints are still wet, gently separate if possible. • Rinse gently with clean water (preferably distilled or deionised water). This is particularly important if there is mud or other surface dirt present. • Carefully drain excess water, then air dry immediately, image side face up, on tables lined with absorbent paper. Clean fly screens placed between chairs also work well. • Nothing should be touching the image surface. • Keep changing absorbent paper. This should be done until photographs are completely dry. • If prints are damp but not sodden, they can be air dried by hanging from string or plastic washing line hung up inside. Place a plastic peg or paper clip on one corner of the print away from the image. If there is a risk of damage, air dry flat as described above. • Wet negatives should be removed from plastic sleeves and air dried by hanging as described above. Place the peg/clip on one corner along the sprocket edge away from the image. • Historic photographic processes such daguerreotypes, lantern slides, and glass plate negatives should be air dried as quickly as possible. If water is inside the case, contact us for specific instructions. <p>Buy some time:</p> <ul style="list-style-type: none"> • If immediate air drying of photographs is not possible or if photographs are stuck together, paper and plastic based photographs can be frozen. Please refer to our guide on <i>Freezing water damaged collections</i> for detailed instructions on safe freezing techniques. This guide can be found on our website at this link - How to guides • Interleave or wrap individual photographs or groups of photographs before freezing with a non-woven polyester material or greaseproof paper. This will make them easier to separate when they are eventually treated. • Do not freeze photographs on glass or in wooden cases, such as daguerreotypes. • If in doubt, please contact us.

Material	Salvage priority	Handling concerns	Salvage method
Motion picture film	1 Requires immediate attention	<ul style="list-style-type: none"> Do not touch image area of film. When wet, it is extremely easy to damage. 	<ul style="list-style-type: none"> Gently try to unwind the film, holding by film edge only. If films resist unwinding or if image surface is lifting, immerse film in a bucket of clean, de-ionised or distilled water with a small drop of good quality dishwashing liquid. Do not agitate the film while in the water and remove promptly. Do not leave sitting in water. The film should immediately be unwound carefully. Once unwound, air dry by draping over plastic clothesline in a dust free environment. Ensure film is not overlapping as this will cause the film to stick together. <p>Buy some time:</p> <ul style="list-style-type: none"> If immediate air drying of film is not possible, films can be frozen. Please refer to our guide on <i>Freezing water damaged collections</i>. This guide can be found on our website at this link - How to guides. Any concerns and information regarding film duplication and preservation, contact the State Library's Film Conservator on ph: 3842 9067 or the National Film and Sound Archives website http://www.nfsa.gov.au/preservation/
Paper documents	2 Can be frozen and treated later	<ul style="list-style-type: none"> If paper is very wet it will be weak and should be carefully supported with a rigid support such as board or card. 	<ul style="list-style-type: none"> Blot excess water off documents using paper towels or thin blotter. Lay wet documents out on the lined tables to air dry. It is important to keep changing the paper towels until the documents have dried. Calendared/glossy paper should be separated immediately as they will stick together irreversibly upon drying. If sheets can be safely separated, lay out flat on absorbent paper on a table. Keep changing paper until documents are dry. Avoid separating sodden paper records. Allow to air dry as they are until sufficiently dried to handle safely then apply the previous step.

Material	Salvage priority	Handling concerns	Salvage method
			<p>Buy some time:</p> <ul style="list-style-type: none"> Paper documents can be safely frozen and dried later. This allows for immediate treatment of more vulnerable material. For instructions on safe freezing please refer to our guide Freezing water damaged collections.
Books	<p>2</p> <p>Can be frozen and treated later</p>	<ul style="list-style-type: none"> Support sodden books along the spine when removing from the shelves or floor. 	<ul style="list-style-type: none"> If the book can safely stand without placing stress on the spine, fan the pages out (see right). Allow to air dry. Location of a fan nearby will greatly speed up this process. Drain sodden books by carefully bracing the spine and allowing excess water to drain. Approximately 10% of the pages of sodden books should be carefully interleaved with absorbent paper (eg. 200 pages = 20 sheets of absorbent paper). It should then be placed flat on an absorbent surface. Repeat this step by replacing wet absorbent paper with dry sheets until the book is able to stand on the bottom of the book edge. Then fan book pages as described above. <p>Buy some time:</p> <ul style="list-style-type: none"> Books as well as paper documents can be frozen and treated later. For instructions on safe freezing please refer to our guide on <i>Freezing water damaged collections</i>. This guide can be found on our website at this link - How to guides. 

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Digital Media	1 Requires immediate attention	<ul style="list-style-type: none"> Avoid handling or abrading disc surface. Hold disk by the edges when moving. 	<ul style="list-style-type: none"> Air dry, vertically, if possible (kitchen sink draining rack), or place flat on greaseproof paper, printed side face down. Accompanying paper inserts should be dried as described above for paper documents.
Video and Audio tapes	1 Requires immediate attention	<ul style="list-style-type: none"> Do not play wet tapes as this causes stretching of tape. 	<ul style="list-style-type: none"> If the tape has been submerged in dirty or contaminated water, place tape gently into a bucket filled with clean, de-ionised or distilled water to remove any surface debris. Do not agitate the tape while in the water and remove promptly. Do not leave sitting in water. To air dry videotapes, open flap and place vertically to allow water to drain through opened flap. For audiocassettes, place vertically with opening at base. It is recommended that once dry, video and audio tapes are duplicated as the magnetic signal may have been damaged. Any concerns and information regarding tape duplication, contact the State Library's Film Conservator on ph: 3842 9067 or the National Film and Sound Archives website http://www.nfsa.gov.au/preservation/

The procedures described here have been used by State Library of Queensland in the care of its collections and are considered suitable by State Library as described; however, State Library will not be responsible for damage to your collections should damage result from the use of these procedures.

Need further information?

(07) 3840 7810 | <http://www.slq.qld.gov.au/preservation>

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