

Salvaging water damaged collections

Outlined below are steps to salvage water damaged paper, book, photographic and audiovisual collections. It is important to attend to the damage as quickly as possible to prevent permanent damage and mould growth. The chart is designed for quick reference. If you require more detail or information on material not covered please contact the State Library Conservation Unit on ph: 3840 7779.

Safety Precautions

- It is a good idea to wear nitrile gloves during the clean up. A P1 respirator mask is also advisable, particularly if you are unsure whether there is active mould or contamination present.
- If you do find mould, be aware that many moulds can be toxic and the necessary protective gear is needed. For more information on dealing with mould, please refer to our information leaflet on the subject, *Caring for your collections: dealing with mould*.

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 level 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 your precious collections, you will need to work quickly and in a methodical manner. Do not panic.

- Use the chart below to prioritise which material needs treating 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, butchers 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 and lower humidity.

- Use fans to maximise air circulation and speed up drying. Keep them at a low speed and do not direct the air flow 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 refer to our information leaflet, *Suppliers of preservation materials*, for more information.
- 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.

Salvage Chart

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 sodden, carefully drain excess water, then air dry immediately, image side face up, on tables lined with absorbent paper. 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 on one corner of the print away from the image. ▪ Wet negatives should be removed from plastic sleeves and air dried by hanging as described above. Place the peg on one corner along the sprocket edge away from the image.
Motion picture film	1	<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 film resists 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. ▪ Any concerns and information regarding film duplication, contact the State Library's Film Conservator on ph: 3842 9067.
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. ▪ Calendered/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. <p style="color: red; margin-left: 20px;">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 information leaflet, <i>Caring for your collections: pest</i>

Material	Salvage Priority	Handling Concerns	Salvage method
Books	2	<ul style="list-style-type: none"> Support sodden books along the spine when removing from the shelves or floor. 	<p><i>management - freezing.</i></p> <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 contact us. 
Digital Media	1	<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	<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

For further information or to obtain information leaflets on caring for your collections, please contact:

Conservation Unit, Collection Preservation
 State Library of Queensland
 PO Box 3488
 South Brisbane QLD 4101
 Ph: 07 3840 7779
 Fax: 07 3842 9060
 conservation@slq.qld.gov.au
 © 2008