Let's Get Prepared – Collection Disaster Planning, Response and Recovery

Handout # 2

General Recovery Steps

1. Assemble team ready to plan recovery
2. Collect relevant information

a. extent and type of damage b. damaged priority artefacts	c. environment and building condition d. size of recovery

3. Document all damage
    a. Damage assessment forms
    b. Photographic evidence
4. Recovery requirements
    a. equipment
    b. expertise
    c. space
5. Stabilise environment
    a. Room
    b. Building
    c. Area / access
6. Specify salvage procedures and set up
    a. Understand the options available
    b. Know your priorities
7. Document artefact movement
    a. Use of forms and templates
    b. Photographic documentation
8. Ensure all formal notifications in place
9. Maintain well-being of team
10. SALVAGE THE COLLECTION

a. Use salvage procedure sheets b. Engage contractors c. Monitor the progress of the salvage	d. Seek expertise when required e. Maintain communication f. Ensure well-being of the team.

Salvage operation – key points

1. Triage
2. Set up area
3. Undertake salvage
4. Monitor
5. Determine completeness of recovery
6. Consider further treatments

Considerations –

- ☐ Type of damage
- ☐ Quantity of material
- ☐ Material type
- ☐ Significance or priority
- ☐ Resources

Triage

The three key choices to triage are **recover, replace, or discard.** The decision-making process that supports this option is based on the significance and priority of the collection object.

The **assessment & salvage team member** will make the decision based on knowledge of the collection, supporting documentation (collection priority list) and the condition and quantity of the objects.

The **ASSESSMENT & SALVAGE team member** should use the damage assessment template to inform decisions.
The following is integrated into the damage assessment template/form.
Recover

- Condition of material / type of damage
- What salvage technique will be used
- What is a priority based on material type
- What is a priority based on significance
- Recover inhouse or external conservator required
- Accept some level of damaged state

Replace

- Confirm replacement is available
- Document object - photographic, written
- Confirm with management

Discard

- Document object - photographic, written
- Confirm with management

Type of damage	Salvage options
Damp, humid, slightly wet	Air dry Interleave
Wet, sodden	Air dry Interleave Freeze
Rinse	Multiple baths Gentle stream of water
Soot, smoke	Soot sponge Air flow
Burnt	Vacuum
Dust	Brush vacuum
Mould	Isolate Air dry Brush vacuum Freeze

Area set up

Equipment - Large tables, wire racking, fans, dehumidifiers, blotting paper, absorbent materials, foam supports, Reemay, netting,

1. Line tables with absorbent material that can be replaced - blotting paper, butchers paper, towels.
2. Separate objects out on tables. Ensure ample space to create good air flow.
3. Keep like materials together.
4. Document

Important information

- Not all salvage options can be used on all material types.
- Contact a conservator to determine salvage pathways.

Air drying - Damp, partially wet and sodden objects

Good for – **everything** if you have time and space

- Works on paper, photographs, paintings, basketry, leather, glass, ceramics, plastic, wood, metal, textiles, stone, composite materials, archives, files, documents, negatives, books

Prepare recovery area and objects

1. Create air flow with cold fans, dehumidifiers and opening windows.
2. Spread out objects on tables, shelves and racks
3. Deframe works of art as required
4. Ensure documentation is maintained

Salvage options

Blotting - use paper towel, blotting paper, other absorbent material to blot away moisture and puddling water.

DO NOT WIPE.

Fan out - stand books on ends to fan out and allow air flow between pages.

- Adjust fanning to increase airflow

Pad out - Use absorbent material to reshape object to correct form.

- Replace padding regularly.

DO NOT FORCE OR STRETCH

Interleave - Use absorbent material to place between pages, layers, crevices.

- Replace interleaving regularly

Hang - if object is strong enough use washing lines and pegs to hang.

- Minor damage may occur at pegged site

DO NOT HANG SODDEN OBJECTS

Salvage options per material type for **damp/wet** materials

Object Type	**Salvage options**
Works on paper	De frame, blot, interleave, air dry flat. Can press between reemay and blotter. Continue to change absorbent material regularly
Photographs	Blot, hang, air dry flat. Can press between reemay and blotter. Continue to change absorbent material regularly
Paintings	De frame, blot, interleave between canvas and stretcher, air dry flat with canvas support. Continue to change absorbent material regularly
Wood	Blot, air dry with support as required
Ceramic, glass, metal, stone, plastic	Blot, air dry, turning to allow air flow
Textiles, leather, basketry	Blot, pad out, reshape with absorbent material. Provide support. Continue to change absorbent material regularly
Albums, books	Interleave, fan out, air dry. Continue to change absorbent material regularly
Negatives	Blot, hang, air dry
Composite material	As above - use most appropriate method

Important information

- Not all salvage options can be used on all material types.
- Contact a conservator to determine salvage pathways.

Rinsing – muddy or dirty

Rinsing is not suitable for all objects consult a conservator if you have concerns.

When to rinse	Consider
- Before or after freezing - When objects are still wet - When resources allow – rinsing takes time	- Do you have access to clean water? - PPE is essential - Objects are fragile and will require support

Prepare rinsing area

1. Create a series of tubs with clean water
2. Provide support for objects as they are moved in and out of tubs and water
3. Use tubs in sequence to slowly remove mud, dirt and debris
4. The final tub should be clean water
5. Ensure documentation is maintained
6. Then all objects must be dried – Follow air drying salvage options

CAUTION – DO NOT RUB or SCRUB.
See additional concerns below

Object Type	Consideration, cautions and concerns (Test an area if possible.)
Works on paper, books Textiles and Basketry	Bleeding inks and dyes Fragile Books keep closed
Photographs	If photograph has been wet for more than 12 hours DO NOT rinse
Paintings	Blot rinse only Varnishes may soften, abrade and blanch
Wood	Only surface rinse Susceptible to cracking, splitting, warping. Veneers may lift, split. Varnishes may soften, abrade, blanch
Ceramics	Paint layers may detach or peel or blanch pH changes and long exposure to water can cause corrosion
Glass	Old repairs may be weakened by water damage pH changes and long exposure to water can cause glass corrosion
Metals	Susceptible to corrosion, rust and flash rusting.

Freezing - wet or sodden

When to choose freezing

- When the scale of wet materials is too large to quickly air dry
- Threat of mould is imminent
- Mould has already begun

Materials that can be frozen	DO NOT FREEZE
Paper Books Photographs Leather, skin products Textiles	Metals Ivory, bone, shell Glass plate photographs Paintings Plaster Glass Stone Wooden composite Magnetic media

Freezing options

- Range from home chest freezer to industrial freezer trucks and containers.
    - Depends on the quantity that requires freezing.

Preparation for freezing

1. Each object should be wrapped in greaseproof paper, butcher paper or other paper product.
2. Clearly labelled and documented.
3. Then frozen as soon as possible - with 24 hours.

Options for recovery from frozen state

Steps	Suitable for
1. Thaw and air dry as above	All material types that are frozen
2. Freeze Dry	Commercial process. Suitable for - books, files, glossy pages, archives **NOT SUITABLE** for artworks
3. Thermal Freeze Dry or Vacuum Freeze Drying	**NOT SUITABLE** FOR COLLECTIONS

Soot, Smoke & Ash

CAUTION - Minimise handling. All contact imbeds soot further into the surface of the object.
CAUTION - All burnt objects are extremely fragile.

Important information

- Soot can be oily, sticky, and/or powdery.
- Soot is acidic and will stain and discolour objects.
- Treat as soon as possible - the longer soot is on the surface the harder it is to remove.
- Soot removal success will be affected by
  - Porosity of surface
  - Consistency of soot – powdery vs oily
- Ash is abrasive

Salvage Options

Vacuum in situ

- Vacuum with HEPA filter vacuum with bristle nozzle attached.
- Vacuum directly.
- DO NOT BRUSH surface. Allow suction to remove particles.
- DO NOT open or unfold objects.

Alternate options

- Gentle rolling of vinyl eraser
- Gentle wipe with lint free cloth / soot sponge/Groomstick
- Swab with water and or mild detergent (conservator only)
- Swab with water/alcohol solution (conservator only)

Important information

- Not all salvage options can be used on all material types.
- Contact a conservator to determine salvage pathways.

Dust

CAUTION - dust can be abrasive, acidic, greasy, contaminated, contain mould and be harmful to inhale.

WEAR appropriate protective clothing - dust masks N95, nitrile gloves, goggles and/or Tyvek suits.

Salvage options

Vacuum

- Brush vacuum with HEPA filter vacuum cleaner
- Fit nozzle with stockings or nylon mesh cover.
- Use variety of brushes to access all areas
- Test small area first for abrasion
- Brush directly into nozzle of vacuum
- Replace brushes regularly
- Clean brushes regularly in soapy water and allow to completely dry

Dry cleaning - Soot sponge or vinyl eraser

- Soot sponge - gently press to the surface
    - Test small area first for effectiveness and surface change
    - Allow sponge to absorb dust
    - Use clean surface of soot sponge and repeat
- Vinyl eraser - gentle circular motions
    - Support area between fingers
    - Test small area first for effectiveness and surface change

Mould

CAUTION: Mould can cause adverse reactions in sensitive people.

CAUTION: BEFORE HANDLING WEAR PPE - including gloves, goggles and protective clothing

Salvage

1. Isolate material from non- affected collection
2. Place mould affected material into plastic containers or wrap in plastic/Tyvek during transport

In specific mould **recovery** area

3. Assess level of mould - active or non active
4. Do NOT remove mould when wet/active
5. Dry out object and mould by reducing humidity, creating air flow
6. When the object is dry - brush vacuum using a HEPA filter vacuum
7. Test area first - if streaking - the object is not dry
8. Brush into vacuum nozzle
9. Brush entire object - not just mould affected area
10. Clean brushes in 70%ethanol: 30% water and dry
11. Clean work area with 70%ethanol: 30% water
12. Clean original site, furniture, racking with 70%ethanol: 30% water

Alternate salvage materials for use by a conservator

- Groom/stick - rolled over affected area
- 70% ethanol: 30% water only on certain material types

Important information

- ➢ Freezing and cold temperatures below 4°C will slow growth but not eradicate.
- ➢ When removed from cold/freezing objects must be dried out and cleaned as above
- ➢ Continue to monitor mould affected objects after treatment

Actions to create your disaster plan

1. Risks

❑ Undertake a Risk Assessment ❑ Assign risk value ❑ What are your biggest threats?	❑ Understand building risks ❑ Know community wide risks ❑ Create an action plan

2. Prevention

❑ Implement prevention measures ❑ Document preventive measures	❑ Keep up with maintenance ❑ What controls do you have in place?

3. Preparation

❑ Identify and document collection priorities ❑ Establish response and recovery teams – identify roles	❑ Identify external contractors ❑ Establish disaster supplies onsite ❑ Document disaster supplies offsite ❑ Floor plans

4. Response

❑ 1-page immediate response actions Pullout response plan – ❑ Response steps / guide / procedures ❑ Assessment checklist / templates ❑ Documentation guidelines ❑ Minor to major escalation process for response and recovery	Plus – (already prepared) ✓ Response Team ✓ Internal emergency contacts ✓ External emergency contacts ✓ Collection priority list ✓ Floor plans

5. Recovery

❑ Minor to major escalation process ❑ Recovery flowcharts ❑ Stabilise the environment ❑ Triage and transport options ❑ Salvage procedures for your collection. ❑ Documentation guidelines	Plus – (already prepared) ✓ Recovery team ✓ Resource options - equipment supplies ✓ Priority list