

**BASE CAMP STUDIOS'**

**COLLECTIONS MANUAL**

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## *Preface*

This manual provides an overview of collections management at Base Camp Studios. Collections management includes everything that is done to document, care for, and make available for use, the objects in its possession. This means everything from how to handle certain materials to how to image and label an object to preventive measures to protect the collection.. This document is meant to be usable at a layperson's level and assist in helping Base Camp Studios follow good practices.

The five key principles of any good collections space are:

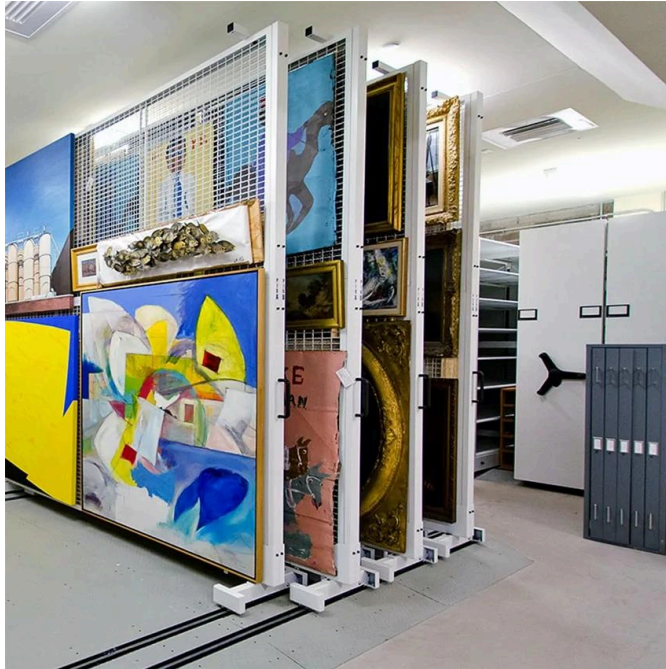
1. Each object entering the collection must be documented.
2. Objects should be housed in proper storage environments.
3. Collections must be inventoried and monitored regularly.
4. The storage environment must be monitored at all times.
5. All activities done in collections must be documented.

All of these are done in the pursuit of minimizing risk. There will always be factors beyond human control, but mitigating the damage by ensuring the adherence to these policies can make sure the gallery is achieving its mission and responsibility, both ethically and according to current professional standards.

Conserving and documenting contemporary art can be a major issue due to the volume of non-traditional media and sizes, as well digital formats and installation art. The key to dealing with contemporary art is documentation. Working with the artist to record all information from materiality to installation/deinstallation can be incredibly important for long-term preservation, loans, and reuse. In the case of installation art, video documentation can be useful.

# STORAGE

This section will focus on how to store an object, handle an object, and the best conditions for keeping an object in the collections. The most important part of any collections storage is that each object has a *unique* identification number since that is the only link between the object and its documentation.



## How to Handle A Material

The care of an object will depend on the type of material of an object. Different materials require different parameters when holding, moving, and storing an object. As an art gallery, the primary mediums may usually be canvas (either with stretchers or rolled-up), but Base Camp Studios prioritizes inclusivity across media and encourages artists of all disciplines. This means that proper guidance on handling non-canvas objects, like sculptural works, wood paneling, glass works, and more, is necessary.

The danger to an object via improper handling is the most common risk in a collections space. There are general rules to follow to minimize this:

- Prepare yourself before starting work with an object.
- Plan ahead—this means your route, procedures, and any potential issues you foresee.
- Minimize the exposure to light.
- Keep harmful materials away, e.g., flammable chemicals and other items not needed for the objects.
- No drinking, eating, or smoking in the collections space.
- Ban or isolate all living works, such as plants and organic material.
- In most cases gloves should be worn to minimize the exposure of oils from human contact. There are some exceptions.
- When in doubt, ask for help.

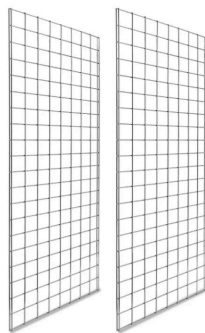
## Canvas



When dealing with framed and unframed canvas...

- *Gloves*
  - Use powder-free nitrile gloves
- *How to Handle*

- Framed canvas offers some protection when handling. If the frame is in poor shape, use a board to place the object on and then carry the board.
- Inspect framed works before touching or moving them.
- Always use both hands to lift an object. One at the bottom and one on the side.
- If possible, use a side cart for moving large works. Or get help from multiple people.
- Canvas that are not framed should be handled carefully so as to not bend the unsupported work.
  - Utilize a side cart or a rigid board underneath when moving the unframed canvas
- *How to Store*
  - The ideal method is to hang framed works on Gridwall panels.
    - Panels can be bought pre-made—the easiest way—or made from wire fence purchased from a hardware store. Example below:



- If you cannot hang work on screens, keep the framed works oriented correctly and place them on the shelf with acid-free archival board underneath, and on all sides to separate from other works.
- Use plastic covering on top to protect against potential water damage.
- When storing unframed canvas, make sure the work is fully supported underneath (i.e., no bends), and is both protected by acid-free archival board underneath.

- The object's information, i.e. title and identification number, should be written on two acid-free tags and tied by string to the d-rings or other hanging mechanism on the back of the work.

## Ceramic

When dealing with ceramic...

- *Gloves*
  - The majority of ceramic or glass objects can be handled without gloves **as long as your hands are dry and clean**. The exception is porous or unglazed works. In that case use nitrile gloves.
- *How to Handle*
  - Grip ceramics by their base when handling and move objects in a cart or box with padding surrounding the object.
- *How to Store*
  - Objects should be placed in well fitting boxes with plenty of internal padding. Do **not** stack boxes on each other. Make sure to place extra padding and support around the most delicate areas, e.g., handles, stems, ornamental features. Use archival materials to avoid deterioration of paint.

## Textile

When dealing with textile...

- *Gloves*
  - Use clean and dry hands or nitrile gloves.
- *How to Handle*

- Textiles should be handled as infrequently as possible. No costume or wearable textile should ever be worn. Move textiles on a type of support, e.g., a hangar. Do not pierce the textile.
- *How to Store*
  - Storage should be done with the utmost care as textiles are prone to easy deterioration. Light exposure should be reduced to an absolute minimum. Even on display, a 50 lux maximum should be adhered to so as to prevent fading. Textile may be rolled or folded for storage. Use acid-free and unbuffered archival boxes. Do **not** store on or near the floor, under ventilation or HVAC.

## Wood

When dealing with wood...

- *Gloves*
  - Use clean and dry hands.
- *How to Handle*
  - Do not drag, push, or pull wood objects as it can cause stress fractures. Use two or more people if the piece is too heavy. Use a flatbed or cart if possible. If using a flatbed to move the object, make sure it has rubber or pneumatic wheels so it rolls smoothly. Do **not** use straps and over tighten them to the object.
- *How to Store*
  - Do not store on the ground and avoid storing under pipes if possible.

## Other

When dealing with a material not listed above...

- *Gloves*
  - In most cases, nitrile gloves will be sufficient. The major exceptions are things like polished brass, musical instruments, varnished wood. If there is no other option but to use bare hands, make sure they are clean and dry.

- *How to Handle*
  - In most cases, you want to securely handle an object by its base or most sturdy component. Use a cart or flatbed when possible. Some objects should be handled as little as possible due to brittleness and fragility. Objects made of bone, ivory and the like, as well as delicate specimens like shells, insects, or powdery dyes, should be handled infrequently.
- *How to Store*
  - In most cases, you want to expose the object to as little light as possible by securely storing it in an archival box filled with padding to support the object. You do **not** want any object stored on the ground.

## Temperature and Humidity

Maintaining stable temperature and relative humidity (RH) is foundational to preventive conservation. Collections are highly susceptible to environmental fluctuations, which can accelerate chemical deterioration, encourage biological activity, or induce mechanical stress—especially in hygroscopic materials like paper, wood, and leather.

For the majority of cultural materials, the AAM endorses the AIC’s standard of “... a setpoint in the range of 45-55% RH with an allowable drift of +/-5%, yielding a total annual range of 40% minimum – 60% maximum, and a temperature range of 59-77°F is acceptable.

- Fluctuations must be minimized.
- Some cultural materials require different environmental conditions for their preservation.
- Loan requirements for all objects must be determined in consultation with conservation professionals.” ([Environmental Guidelines - MediaWiki](#))

Optimal conditions depend on material types. Composite objects—those containing both organic and inorganic elements—are particularly vulnerable, as each component may react differently to environmental changes. Fluctuations are often more damaging

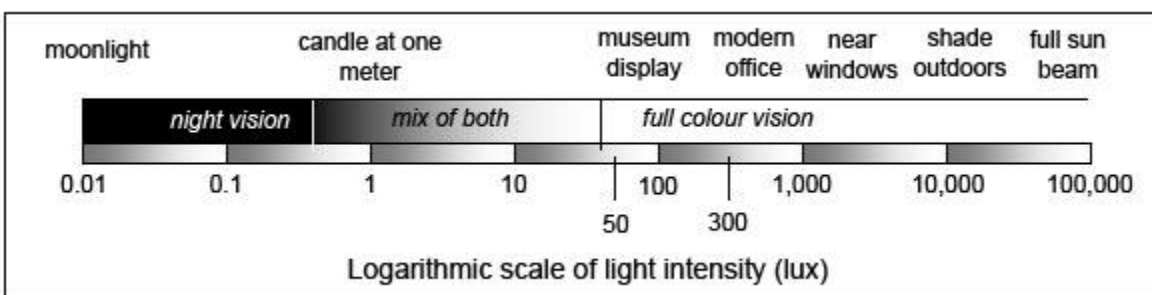
than steady-state conditions outside the ideal range, leading to warping, delamination, corrosion, or mold growth.

Current research has shown that these ranges can be expanded slightly to help smaller institutions more easily control their costs. However, proper adherence to AAM standards allows for the use of institutional loans, AAM recognition, better chances of receiving museum grant funding, and will preserve works the best.

Environmental control is typically achieved via HVAC systems, supplemented by humidifiers/dehumidifiers, buffered storage enclosures, and microclimates (e.g., sealed display cases with silica gel or RH stabilizers). Seasonal shifts and building design pose ongoing challenges, especially in historic structures or institutions with limited infrastructure. Continuous monitoring using data loggers and climate mapping enables evidence-based decision-making and long-term risk management.

The most important part is to maintain stability over high fluctuations in temperature and humidity.

## Light



Light is both essential and inherently damaging to museum collections. It can cause irreversible fading, discoloration, and structural degradation, especially in light-sensitive materials like textiles, paper, photographs, and organic dyes. The damage is cumulative and non-linear, intensifying over time even at low exposure levels.

Illuminance is measured in lux, and conservation guidelines vary by material. For example:

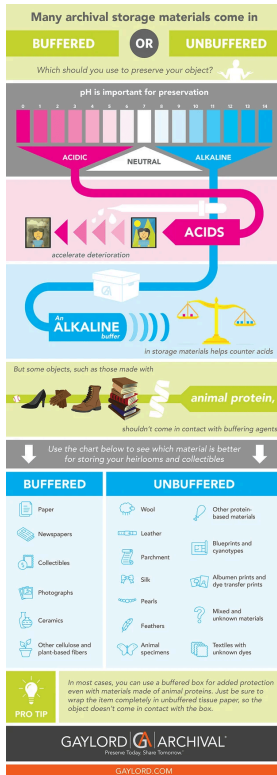
- Textiles, photographs, and watercolors: **50 lux**
- Paper and parchment: **50–150 lux**
- Oil paintings and wood: **150–200 lux**
- Stone, ceramics, and metals: **up to 300 lux**

Equally critical is controlling ultraviolet (UV) and infrared (IR) radiation, which contribute to photochemical and thermal damage. UV levels should be kept **below 75  $\mu\text{W/lumen}$** , typically using UV filters on windows and light sources.

Lighting strategies include LED fixtures (with low UV/IR emissions), automated light controls, and fiber optic systems for case lighting. Where possible, collections should be rotated and light exposure logged to limit cumulative dose. All exhibit lighting plans should be informed by light exposure budgets, calculated based on material sensitivity and expected display duration.

## **Type of Archival Material to Use**

Refer to the pictographic below on choice between using buffered or unbuffered paper.



## Labeling

It is critical to make sure that each work is labeled correctly so that it is attached to a specific database entry. Some museums will mark the ID directly on the object. To avoid this, it is recommended to use acid-free paper to write the pertinent information and attach that label to the work via non-adhesive ways.

## CATALOGING

### Condition Reporting

When accepting a new object, it is critical to do a condition report upon acceptance. Documentation for the condition of an object allows the collections to have a record of the object from start to finish. It helps mitigate any claims of damage against the

institution, helps for insurance reasons, and is integral to the sales process so that collectors have documentation attached with their purchase.

A condition report is an accurate and informative assessment of the object at a particular moment in time. It can:

- Establish the exact condition at a specific point in time.
- Make future handlers aware of the previous condition, treatments, and vulnerabilities.
- Provides documentation for incoming/outgoing objects.

Below is an example of a condition report, followed by an example of a filled out report.

# Example Report

## General Condition Report Form

Object \_\_\_\_\_ Examiner \_\_\_\_\_  
Catalog/Loan Number \_\_\_\_\_ Date \_\_\_\_\_

Significance (e.g., name of artist/maker, title of object, date & place of manufacture/site collection)

Brief Description (e.g., physical description, material composition, construction, number of parts)

Dimensions (e.g., HxWxD, diameter, circumference)

Previous Repairs/Treatments/Alterations

Overall Condition Assessment \_\_\_ Excellent \_\_\_ Good \_\_\_ Fair \_\_\_ Poor

Specific Damage                      Location/Degree (negligible, slight, moderate, marked, extreme)

**Accretions**

- \_\_\_ Soiled
- \_\_\_ Residues/Deposits
- \_\_\_ Tarnish
- \_\_\_ Corrosion
- \_\_\_ Efflorescence
- \_\_\_ Other \_\_\_\_\_

**Discoloration**

- \_\_\_ Stains
- \_\_\_ Bleeding
- \_\_\_ Water Damage
- \_\_\_ Foxing
- \_\_\_ Fading/Bleaching/
- Darkening
- \_\_\_ Other \_\_\_\_\_

**Miscellaneous**

- \_\_\_ Pest Damage
- \_\_\_ Mold
- \_\_\_ Shrinking
- \_\_\_ Other \_\_\_\_\_

**Structural**

- Abrasions/Scratches
- Wear/Fraying/Dog-Eared
- Dents/Gouges/Chips
- Tears/Splits/Cracks
- Losses
- Creases/Wrinkling/Buckling
- crazing
- Pitting
- Loose Joints
- Delaminated
- Distorted/Warping
- Friable/Flaking/Rot/Powdering
- Stiff/Embrittled
- Detached/Missing Elements
- Other \_\_\_\_\_



**Images/Sketches of Damage** *(note position)*

**Additional Comments**

**Recommendations for Exhibition/Storage**

**Structural**

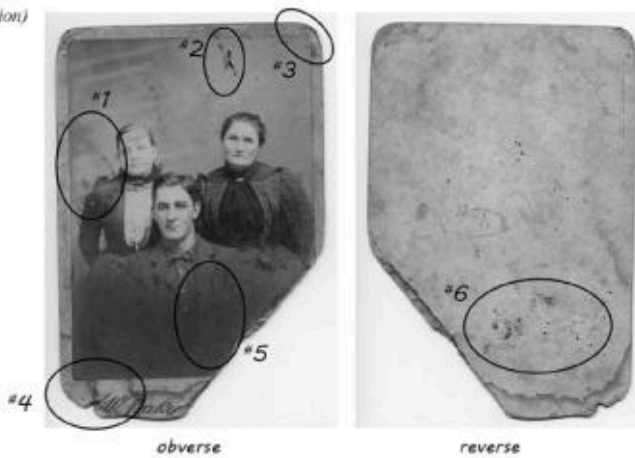
- Abrasions/Scratches
- Wear/Fraying/Dog-eared
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- Delaminated
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- Friable/Flaking/Rot/Powdering
- Stiff/Embrittled
- Detached/Missing Elements
- Other

obv: moderate, diagonal V-shaped scratch (2.4 mm long) BC; negligible scratches in photo layer overall; entire BR portion of object missing, with slight to moderate creases in photo layer and cracks/tears in mount along missing edge; TR corner moderately dog-eared

obv/rev: marked wear/fraying at corners and along missing edge, with some loss of surface paper on secondary mount; mount markedly embrittled

**Images/Sketches of Damage** (note position)

- #1 red ink(?) stain—diffuse/blurry
- #2 red ink(?) stain—sharp/defined
- #3 dog-ear
- #4 pest damage
- #5 v-shaped diagonal scratch
- #6 flyspecks



**Additional Comments**

keep eye on cracks along missing edge

**Recommendations for Exhibition/Storage**

make reference copy for use and store original

## **Examination**

Things needed for examining any object:

- Measurement, such as:
  - Cloth tape measure *without* metal caps on the end
  - Clear, flexible ruler
- Handling and Support, such as:
  - Gloves, almost always powder free nitrile gloves but use appropriate glove for the material you are examining
  - Protective gear
  - Acid-free paper and board to use as a base for the object
- Illumination, such as:
  - Flashlight
  - Headlamp
  - UV Light
- Magnification, such as:
  - Jeweler's loupe
  - Hand lens
  - Head-mounted magnifier

## **Documentation**

Things needed for proper documentation include:

- Identification #
- Type of object
- Name of artist(s)
- Title of work
- Date of collection
- Dimensions
- Overall condition
- Damage assessment
- Location of any damage, if any

- Recommendations for storage
- Name of person doing the report
- Date of the examination

### **Types of Damage**

Damage can be biological, physical, or chemical. Document any damage in terms of shape, texture, odor, color, or other properties as appropriate.

Refer to the glossary of terms in the next section for precise terminology when describing damage. Document the damage by using a grid system as shown below.

TL	TC	TR
CL	C	CR
BL	BC	BR

### **General Terms**

Below is a list of general terms to use when describing damage to an object. More specific terms exist if needed. All information comes directly from the Museum Registration Methods (MRM6).

*Abrasion* – A generally superficial mechanical wearing away of the surface, often from scraping, rubbing, grinding, or friction.

*Accretion* – External material deposited on a surface, often as a result of burial conditions or accidental deposits such as splashes, drips, flyspecks, etc.

*Adhesive residue* – The sticky or crusty remains of glue, paste, or pressure-sensitive tape.

*Bleeding* – The suffusion of a color into adjacent materials, often caused by water or other solvents.

*Break* – A fracture or split resulting in the separation of parts.

*Chip* – A defect in a surface characterized by the breaking away of material.

*Crack* – A surface fracture or fissure across or through a material, either straight-line or branching in form; no loss is implied. A crack may be described as blind when it stops part way, as hairline when it is a tiny fissure, or as open when it is a large fissure.

*Crazing* – An unintentional fine network of surface cracks in a ceramic glaze, a painting's varnish layer, or a metal's coating.

*Crease* – A line of crushed or broken fibers, generally made by folding.

*Delamination* – A separation of layers; splitting.

*Dent* – A shallow concavity in the surface, caused by a blow.

*Discoloration* – A partial or overall change in color caused by aging, light, or chemical agents. Yellowing and darkening can occur, along with bleaching (the lightening of color), and fading (a loss of color or a change in hue).

*Disjoin* – A partial or complete separation of a joint between two members of an object, as distinguished from a crack, tear, check, or split.

*Distortion* – A misshaping of the original shape; shrinkage may occur.

*Draw* – A local distortion at the corner of a painting or a piece of paper, marked by diagonal cockling from the corner toward the center of the mount.

*Embrittlement* – A loss of flexibility causing the material (e.g., paper, parchment, leather) to break or disintegrate when bent or curled.

*Friable* – Able to be easily crumbled or pulverized into a powder.

*Gouge* – A concavity in the surface where material has been scooped out.

*Inclusion* – A particle accidentally bonded to the surface of an object during manufacture.

*Loss* – Missing area or hole

*Mildew* – See *Mold*.

*Missing Element* – The loss of an integral component of, or an addition or appendage to, an object (e.g., handle, tassel).

*Mold* – Biological in nature, mold or mildew can be evidenced by a musty odor or colored, furry, or web-like surface excrescences.

*Patina* – A colored surface layer, either applied or naturally occurring.

*Pest Damage* – Surface loss, tunneling, holes, fly specks, and so on caused by insects, rodents, or other pests.

*Repair* – The evidence of past repair such as a filled loss, a staple or rivet, or inpainting.

*Scratch* – A linear surface loss due to abrasion with a sharp point.

*Sheen* – A polish produced by handling. Often occurs on frequently touched locations.

*Soil* – A general term denoting any material that dirties an object. Dust is loose soil while a smear and a fingerprint are types of localized grime.

*Stain* – A color change as a result of soiling, adhesives, pest residue, food, oils, etc. A diffuse stain is without a distinct boundary; a discrete stain has a distinct boundary or tide line, which is darker than the general area of the stain; and a centered stain has a darker or more intensely colored center within its general area. In metallic staining, adjacent materials are discolored as a result of metal corrosion.

*Stiffness* – The loss of flexibility and suppleness.

*Tear* – A break in fabric, paper, or other sheet material as a result of tension or torsion.

*Wear* – Surface erosion, usually at the edges, due to repeated handling.

## **Database Entry**

When entering a new work into the collections, it is important to make sure that the entry is filled out correctly and the work itself is labeled.

Below is an example of a completed database entry

ID#	DATE OF ENTRY	ARTIST	TITLE	DIMENSIONS	MEDIUM	DIGITIZED IMG	LOCATION
A1	1/26/2025	Paul Nunn	Kermit	24x24 inches	Wood panel	Yes	A.101

The first thing to do is give the object an ID# – follow the numbering sequentially based on the last entry, e.g., if the last entry was A4, then the newest entry would be A5. Afterward, you want to label the work itself with this same ID number to create a link. Use one of the acid-free paper slips to write the ID # and attach it to the work.

Next, you'll want to fill out all the basic information, including size and medium.

Then you'll want to digitize the work by taking it to the imaging station and capturing a picture. *\*If the artist has their own digital photos that they are willing to provide, we can use those instead.*

Once the work is digitized and included in our catalog, you can store the work on the shelf. Be sure to note the location and record it in the database, e.g., if located on the first level of shelf A, as the first work on the shelf, the location would be A.101. The letter represents the shelf, the first number represents the vertical level it is placed on (1, 2, or 3), and then the final two numbers represent the place horizontally on each row (01 being the first)

To make sure that any content is not lost, it is recommended that a backup copy of the database be created periodically in case of any file loss or system failure.

## **Content Management Systems (CMS)**

The current database in use is a simple excel spreadsheet. In the future, if migrating to a professional CMS, export the current database's CSV file to import into the new CMS. Then update the database entry section to match the new protocols.

# Imaging



Imaging is a foundational component of museum documentation and an essential step in the accession process. It refers to the systematic capture of visual data—primarily still photographs—of an object upon entry into a collection. This process supports collections management, facilitates research and access, and contributes to long-term preservation through digital surrogacy.

The primary purpose of imaging at acquisition is to establish a **visual baseline** for the object's condition and appearance. These images form part of the object's permanent record and are typically integrated into the museum's **collections management system (CMS)**. High-quality images allow curators, conservators, and registrars to reference the object without unnecessary handling and provide crucial evidence in the event of damage, theft, or insurance claims.

Imaging also supports:

- **Cataloging and inventory**

- **Loan documentation**
- **Online access and digital engagement**
- **Condition reporting and conservation tracking**

## **Imaging Protocols**

Professional standards recommend that imaging be conducted in a controlled environment with proper lighting, background, and color calibration. Key considerations include:

- **Lighting:** Even, diffuse lighting to minimize shadows and glare. Light sources should have a consistent color temperature.
- **Background:** Neutral, non-reflective (often gray or white), to enhance contrast and aid in object isolation.
- **Scales and color targets:** Inclusion of size reference (metric scale) and color checker ensures image consistency and usability over time.
- **Angles and views:** At minimum, front, back, sides, top/bottom, and any inscriptions or damage. Complex objects may require additional angles or detail shots.

## **File Formats and Metadata**

Images should be captured in **RAW format** and then processed into **archival-quality TIFFs** for storage, alongside **JPEG or JPEG2000 derivatives** for access and web use. Each file should be accompanied by standardized **metadata**, following schemas such as:

- **Dublin Core**
- **VRA Core**
- **CDWA Lite**

Metadata should include:

- Accession number
- Photographer and date
- Description of views
- Equipment and settings used
- Any post-processing steps

## **Storage and Digital Preservation**

Digital image files must be stored in accordance with digital preservation best practices, including:

- **Redundant storage** (on-site and off-site or cloud)
- **Regular integrity checks**
- **Use of stable file formats**

- **Migration planning** for long-term access

Images should be linked to object records within the CMS and periodically reviewed for accuracy, especially if the object undergoes conservation or reclassification.

## **INTEGRATED PEST MANAGEMENT (IPM)**

Integrated Pest Management (IPM) is a preventive, evidence-based framework for mitigating pest risks in museums. It combines monitoring, habitat modification, exclusion, and targeted intervention to protect collections without relying on routine chemical treatments.

Museum pests—including carpet beetles, clothes moths, silverfish, booklice, and rodents—can cause extensive damage, particularly to organic materials like wool, paper, feathers, and wood. Infestations often begin in areas with high dust, poor housekeeping, or moisture problems.

### **A successful IPM program includes:**

- Routine inspections and cleaning protocols
- Monitoring with sticky traps and pheromone lures, strategically placed and regularly documented
- Identification and analysis of pest data to inform action thresholds
- Environmental management (e.g., lowering RH, improving airflow)
- Quarantine and inspection procedures for incoming loans or acquisitions

- Staff training and institutional communication to support vigilance

Chemical treatment is used only as a last resort, typically involving anoxic treatments, freezing, or controlled heating, applied with strict oversight. IPM also intersects with building maintenance and storage design—tight seals, clean zones, and sealed cabinetry can all mitigate pest ingress. The effectiveness of IPM relies not on elimination but on proactive control and institutional coordination.

## Common Pests



Museum pests are species that pose a threat to organic or hygroscopic materials commonly found in collections. These pests are typically small, cryptic, and well-adapted to indoor environments. Understanding their behavior and life cycles is essential to effective management.

- **Clothes moths (*Tineola bisselliella*, *Tinea pellionella*):** Target keratin-rich materials such as wool, fur, feathers, and taxidermy. Larvae cause damage, not

adults.

- **Carpet beetles (*Anthrenus spp.*, *Attagenus spp.*):** Especially destructive in natural history and textile collections. Larvae are covered in bristles and feed on proteinaceous materials.
- **Silverfish (*Lepisma saccharinum*):** Feed on starches, adhesives, and paper—common in books, archival materials, and textiles.
- **Booklice (*Liposcelis spp.*):** Thrive in damp conditions and consume mold, binding glue, and paper.
- **Powderpost beetles (*Lyctidae*):** Infest seasoned hardwoods, often present in historic furniture or wooden artifacts.
- **Rodents and bats:** Though less frequent in tightly sealed museum environments, they can cause widespread damage through gnawing, nesting, and waste.

Early detection is critical. Damage patterns—such as grazing on bindings, frass deposits, cast larval skins, or exit holes—can help identify the culprit species.

# Things to Use Against Pests



IPM emphasizes non-chemical and preventive tools over routine pesticide use. When interventions are required, they must be both effective and safe for sensitive materials.

## Monitoring and detection:

- **Sticky traps and pheromone lures:** Deployed in a grid pattern or in high-risk zones (e.g., near exterior doors, under cabinets, in storage corners).
- **Light traps and UV attractants:** Occasionally used for flying insects, though less common in collection spaces due to potential UV exposure.
- **Trap mapping and logbooks:** Essential for tracking pest activity over time and identifying infestation sources.

## Environmental and mechanical controls:

- **Humidity control:** Low RH discourages mold and deters pests like silverfish and booklice.
- **Housekeeping:** Regular vacuuming and dust removal, especially in hidden or low-traffic areas.

- **Barriers and exclusion:** Weather stripping, door sweeps, window screens, and sealed access points prevent ingress.
- **Freezing:**  $-20^{\circ}\text{C}$  to  $-30^{\circ}\text{C}$  treatments for 72+ hours, commonly used for organic materials infested with insects.
- **Anoxic treatments:** Nitrogen or argon atmospheres to suffocate pests—non-toxic and safe for most objects.
- **Thermal treatments:** Heating objects to  $50\text{--}60^{\circ}\text{C}$  for brief periods can also eliminate pests, though material tolerance must be confirmed first.

Pesticide use should be minimal and limited to targeted applications under professional supervision. Residues can be harmful to collections and complicate future conservation efforts.

## Isolation and Quarantine



A rigorous isolation and quarantine protocol is essential to prevent pests from spreading to established collection areas. New acquisitions, incoming loans, and

returned items from exhibit should all be subject to inspection and controlled acclimatization.

**Key components:**

- **Intake inspection:** Each object is examined for signs of infestation—e.g., frass, live insects, webbing, holes, or odor.
- **Holding area:** Objects are temporarily stored in a designated quarantine space, separate from core storage. This area should be environmentally stable, easy to clean, and monitored for pests.
- **Bagging or containment:** Sealing objects in polyethylene or Tyvek® bags can help isolate potential infestations while preserving evidence for identification.
- **Observation period:** Objects may be held for several weeks with periodic checks, especially if pest life cycles are involved.
- **Treatment decision tree:** Based on risk, value, material, and infestation level, staff determine whether to proceed with anoxic treatment, freezing, cleaning, or safe reintegration.

Clear documentation of each stage is vital. Forms should capture date of intake, inspection notes, treatment applied, and date of clearance. A robust quarantine process protects not only the collection but also the integrity of the institution's long-term preservation program.

# DANGERS AND HAZARDS

## Water



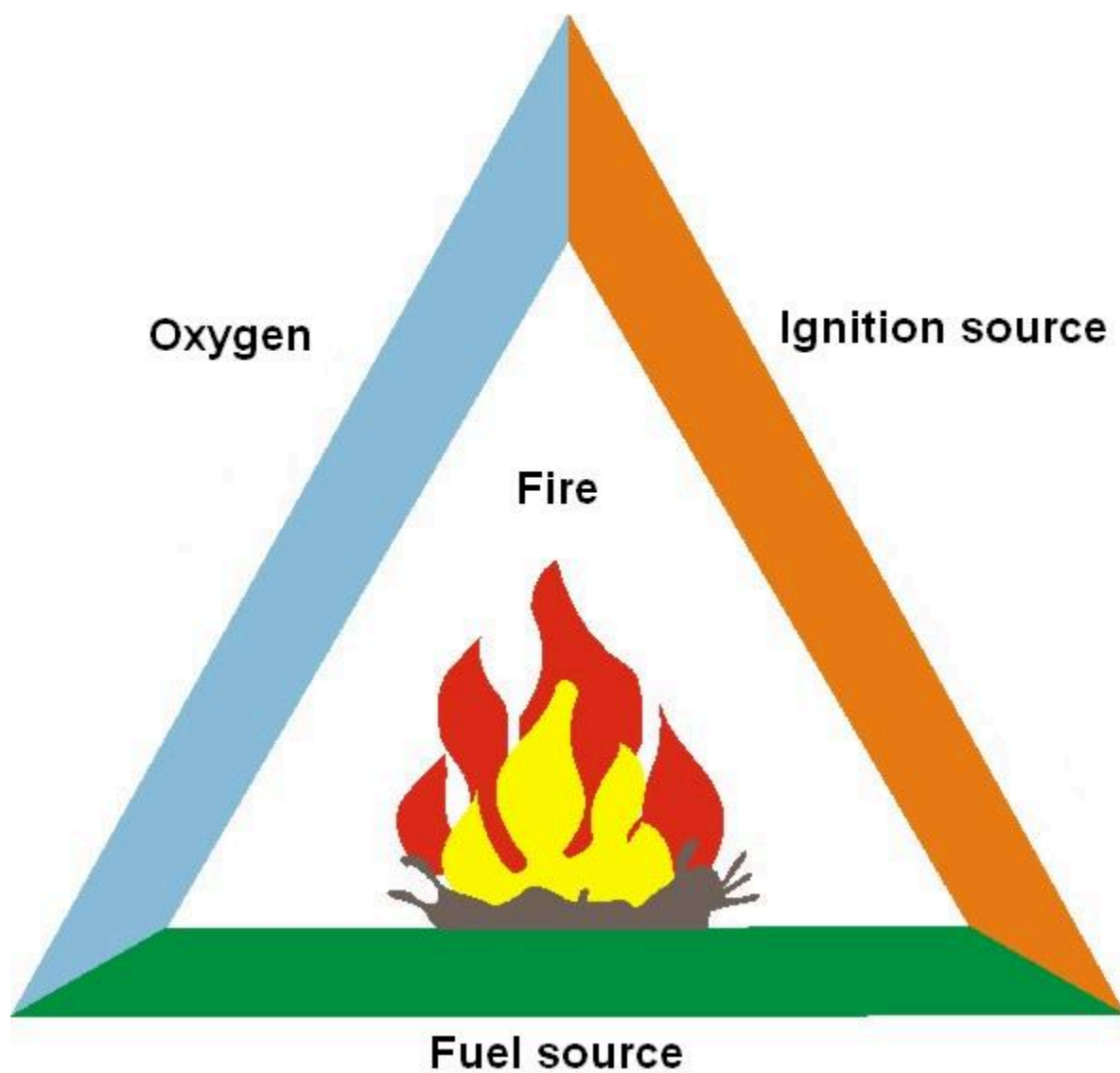
Water hazards in a collection space refers to the liquid form, as well as dampness, humidity, and condensation. Water damage is one of the most common ways a collection is ruined. It can occur via natural water damage, e.g., a rainstorm, hurricane, flood. It can occur via technological or mechanical failure, e.g., broken water line, leaking roof, HVAC system failure, etc. It can occur via accidents like using excess water when cleaning or having the sprinklers go off during an alarm.

You want to control the threat of water damage by avoiding a location that is prone to flooding or is in a building that has leaky facilities. You want to avoid placing anything on the ground or directly underneath infrastructure that could leak. Be prepared and

alert if a natural weather event will threaten the collection to take precautionary measures.

Emergency supplies that should be used in case of a water damage emergency:  
Polyethylene sheets, mops, buckets, squeegees, rubber gloves and boots, toweling, sponges, wet/dry vacuum, industrial fans, dehumidifiers.

## Fire



Fire is a hazard that affects all buildings. Fire can be put out using a portable fire extinguisher at first. Sprinklers should activate when the heat of the fire is sufficient. Once the fire hits this stage of heat, the fire is in a flashover stage and ready to ignite all combustible materials located in the collection space. This can happen in only a few minutes.

The **most important** aspect during a fire hazard is to get yourself to safety.

Common causes of fire can come from electrical sources like faulty wiring, blown panels, HVAC systems, open flames such as candles, food warmers and fireplaces, construction or maintenance that uses heat, smoke, gas leaks and arson.

## **Other**

In addition to catastrophic events such as fire and water damage, museum collections are subject to a range of other hazards—some sudden, others cumulative—that can compromise object integrity, documentation, and institutional stewardship. Recognizing and mitigating these risks is central to any comprehensive preservation plan.

### **Physical Forces**

Improper handling, vibration, and impact pose persistent threats to collections. Common sources include untrained personnel, transit accidents, or even structural vibration from nearby construction. Fragile, composite, and aged materials are particularly susceptible. Protective packing, proper handling protocols, and secure display and storage systems are key preventive strategies.

### **Pollutants and Contaminants**

Airborne pollutants—including dust, soot, sulfur dioxide, nitrogen oxides, and ozone—can cause discoloration, corrosion, and material degradation over time. Indoor

sources like wooden cabinets, off-gassing plastics, and cleaning agents may also release volatile organic compounds (VOCs). Pollutant control measures include HVAC filtration, sealed enclosures, use of inert materials, and regular housekeeping.

### **Light and Radiation**

While often addressed separately (see “Light” section), it’s important to reiterate that ultraviolet and visible light exposure are forms of radiation hazard. These contribute to fading, embrittlement, and photo-induced chemical change, especially in organic or dyed materials. Light-sensitive materials should be identified, monitored, and rotated as part of standard preservation policy.

### **Pests and Infestation**

Biological threats such as insects, mold, rodents, and birds can destroy organic materials and spread rapidly if undetected. Integrated Pest Management (IPM) systems are essential, combining environmental control, monitoring, housekeeping, and treatment protocols. See the IPM section for detailed guidance.

### **Theft, Vandalism, and Malicious Damage**

Security breaches, vandalism, and insider threats present significant risks, particularly to high-value or politically sensitive objects. Damage may result from theft attempts, defacement, or protest actions. Mitigation requires robust physical security, access controls, incident protocols, and staff vigilance. Display and storage design should consider risk exposure and deterrence.

### **Neglect and Human Error**

Failure to document, monitor, or maintain collection conditions can be as harmful as overt threats. Long-term neglect—such as poor storage, inadequate labeling, or failure to respond to early warning signs—can result in irreversible loss. Similarly, accidental

errors in handling, display setup, or treatment can cause harm. Investing in staff training, clear protocols, and ongoing assessment is essential.

## **ACCESS AND LOANS**

A policy around access and use of the collections should be developed with both the care of the works and the security of the space in mind. When possible, restrictions should be placed on access to the collections so that unrestricted use is unavailable. Someone with knowledge of the collections and works should be present with anyone wanting access.

Loans—from the point-of-view of collections—should require a documented condition report before the object leaves the collection. Another report should be done upon receiving the object again after its completed loan. This is done to create a robust record of the object at all stages so any changes or damages can be easily pinpointed.

Additionally, a loan form should be standardized and used across all loans. An example below:



[Care of objects and collections - Canada.ca](#)

[Preservation and conservation - Canada.ca](#)

[Museum Registration Methods \[Paywall\]](#)

[American Institute for Conservation](#)

[Find a Conservator](#)

[Conservation and Art Materials Encyclopedia Online \(CAMEO\)](#)

[Media Collection](#)