

DRAFT Collections Care Best Practices

Prepared by Julia Gray for the History Trust, July 12, 2021

Monitor temperature and relative humidity

- This can be done with data loggers, or manually recording from non-logging temp/RH meters
- A good starter data logger:
 - <https://www.onsetcomp.com/products/data-loggers/ux100-003>
- A more robust climate monitoring program
 - <https://www.eclimatenotebook.com/>

Climate Control Goals

- RH between 30% and 70% with some gradual seasonal shifts
- Avoid prolonged periods of lower or higher RH. Short-term changes are generally less of a concern as collections take time to respond, and if you can mitigate in a timely manner, unlikely to cause harm to most things.
- Mold is a significant risk in our generally humid environment, so keeping RH below 70% and promoting good air flow are both important.
- Temperature as low as possible, but above freezing, with consideration for human comfort. Better to have it not quite so cold rather than turning heat on and off. Make any changes gradually, such as turning the heat up in the Spring or down in the fall.
- Keep heat sources away from close or direct contact with collections.
- Create buffers or appropriate microclimates for especially sensitive collections.
 - Examples of buffers include putting a fragile document in an archival folder inside an archival box or wrapping a fragile textile in acid-free tissue inside an archival box.
 - Example of a microclimate is putting vulnerable metals in a tightly sealed plastic bag or box with a silica gel packet or cartridge.

Light

- Light damage is cumulative and irreversible.
- Only expose collections to light when necessary.
- Reduce BOTH UV and visible light. UV is more harmful, but visible light is still damaging.
 - UV filters on windows (shades or film, or for new windows, built in)
 - Light filtering or light blocking shades. Consider using light blocking shades that are kept closed whenever you are closed/not using the space.
 - Turn lights off when nobody is there, and consider putting lights on timers to help with this.

- Be especially careful about sunlight and fluorescent lights (including CFLs). High-quality LEDs are generally safe, as long as they are not too bright.
- Give extra protection to materials that are especially light-sensitive, such as paper-based materials (documents, maps, watercolors, etc) and textiles (especially silk, modern dyes).
- Consider framing significant paper documents with UV-protective glass and archival framing materials.
- A good strategy is to rotate light sensitive objects off exhibit, limiting the time of exposure.

Pests

- Mostly we are talking about insects and rodents.
- They can cause damage by eating, nesting, and excreting
- Take an integrated pest management (IPM) approach
 - Everything you ever wanted to know about museum pests: <https://museumpests.net/>
 - Focus is preventative rather than using pesticides.
 - Block access
 - Remove non-collections food sources, as these are an added temptation (food, drink, live plants, etc)
 - Keep collections areas neat and clean
 - Monitor (sticky traps) and identify (so you know what is at risk)
 - The UMaine Cooperative Extension is a good resource for pest identification
 - Recommended sticky trap: <https://www.insectslimited.com/store/p/trapper-insect-monitor?rq=trap>
 - Monitor incoming items for pest infestations before putting in with the rest of your collections, to avoid introducing pests.
 - Treat infested items. Sometimes you can do this using the freezing process, sometimes it requires a professional conservator.
 - Details on freezing process: <https://museumpests.net/solutions-low-temperature-treatment/>
 - Maintain buildings and grounds to reduce access and attraction.

Pollutants

Three sources:

1. Outside pollution
2. Inside pollution (off-gassing and acidic storage and exhibit materials)
3. Dust (can cause long-term damage if not prevented/carefully removed)

What to do:

- High-quality, HEPA filters in air-handling system, maintained and changed regularly
- Keep doors and windows closed when outdoor pollution is high
- Use appropriate storage and exhibit materials (shelving, cases, surface treatments, boxes, etc)
- Use appropriate storage enclosures to protect from dust and other pollutants
- Consider curtains or dust covers on shelves and large items; tyvek, clean cotton sheets, plastic
- Good housekeeping to prevent buildup of dust
 - When cleaning/dusting collections items:
 - Use a soft brush to remove dust, and an adjustable suction vacuum to collect the dust.
 - Only directly vacuum surfaces that are stable and relatively smooth.
 - Use nylon window screening as a protective layer between vacuum and object, so if anything comes loose it does not get sucked into the vacuum.
 - A good, reasonably-priced vacuum is the [Miele Compact C1 Pure Suction Powerline Canister Vacuum](#)
 - Do not use any cleaning chemicals (Windex, Endust, etc) on collections items. If necessary, a cloth or cotton swab dampened with distilled water can be used for (very gentle) surface cleaning.
 - When cleaning metals such as silver, remember that every time you polish that piece, you remove some of the surface, slowly wearing away at the piece.
 - A detailed guide on cleaning museum spaces and collections: <https://ccaaha.org/resources/collection-housekeeping-guide>

Handling

- Most damage to museum objects is a result of improper handling. This can include both touching and picking up/carrying, lack of proper support while in storage or on exhibit, theft and vandalism, and unprofessional treatments and cleaning.
- Use the right kind of gloves.
 - Nitrile gloves are the best for most uses, with cotton as an option if someone can't wear nitrile.
 - For many paper-based materials, especially those that are fragile, clean, dry hands may be the best option. Cotton gloves reduce dexterity and can catch on or snag tears and loose surfaces.

- Change nitrile gloves if they become dirty; wash cotton gloves in a mild, gentle detergent such as Ivory Snow, and use an extra rinse to remove any detergent residue.
- Limit handling and handle with care
 - Use trays or carts to move objects
 - Always lift with both hands
 - Don't lift by handles (these are often fragile)
 - Have a clear travel path planned before you pick something up
- Have appropriate access control and security in place
- Create appropriate storage and display mounts that fully support an object
- Make an institutional decision about acceptable level of risk and loss in regards to visitor interactions with collections, and institute corresponding policies.
 - If you want visitors to have access to something, to be able to touch something, are you OK with the possibility of damage or loss of that piece?
 - Do Not Touch signs are only sort of effective. If it can be touched, someone will touch it.

Disasters

- This includes water, fire, wind, earthquakes, social unrest, etc.
- Prevent
 - Understand the types of disasters that could occur in your location and with your type of building.
 - Building and property maintenance (especially to prevent water problems)
 - Policies and procedures to reduce human-caused disasters, i.e. no open flame in the building, limited access to collections storage areas, etc.
 - Appropriate building systems, such as fire detection and suppression, security systems, water alarms
 - Institutional decisions about acceptable level of risk vs. cost of systems
- Plan
 - Have a disaster plan. Simple is better than none.
 - Work with local emergency responders to familiarize them with your facilities and collections.
 - Work with local emergency responders so that you understand what will happen when they respond to an emergency.
 - Have disaster response supplies on hand.
 - A good list for putting together a disaster kit:
<https://ccaha.org/sites/default/files/attachments/2018-05/Emergency%20Supply%20Kits.pdf>

- Respond
 - Practice and implement your plan.
 - Make sure you have copies of your plan off-site, in case you don't have immediate access to your building.
 - Coordinate with emergency responders
 - Work with local and regional partners for things like off-site storage if your building is made uninhabitable.