



Minnesota Historical Society
Historic Housekeeping Handbook

Revised 2019

Minnesota Historical Society

HISTORIC HOUSEKEEPING HANDBOOK

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I. INTRODUCTION (2000)

One of the primary objectives in operating an historic property is to promote the historical experience to current audiences while at the same time saving it for future generations. The comprehensive goal of preserving historic sites can be achieved in several ways. These include building maintenance, sound security practices, monitoring of building environments and mechanical systems, disaster preparedness, integrated pest management and management of collections. Contributing to the success of all of these is basic housekeeping. Cleaning is a fundamental, regular practice that can slow down, (or speed it up, if not done properly!) wear and tear of historic interiors and collections, assist in both security and pest prevention and contribute to building monitoring and maintenance.

Various inquiries from the Historic Sites staff and a subsequent survey of the Minnesota Historical Society (MNHS) Historic Sites in 1999, indicated a need for standards of practice in cleaning at sites. This document is meant to address that need. It provides guidelines and information that is useful to maintaining a level of care that advances the long-term preservation of collections at the MNHS Historic Sites.

This **Housekeeping Handbook** functions primarily as a guide and reference for housekeeping practices. It does not address building monitoring or maintenance, grounds maintenance, security, disaster preparedness or pest management but is an aspect of each of these. It gives some guidelines, practices and resources for the regular upkeep of historic interiors and their contents. This may be used by Historic Site staff (Site Managers and Site Maintenance Techs) or used in developing contracts for cleaning at a site. Specifications, articles and clarifications should be added to this **Handbook** where relevant and useful to specific site needs. We hope this serves as a foundation for guiding each site in its care and upkeep of historic areas.

2011 Revision

After ten years of use, and due to changes in the organization and staffing of the Historic Sites and Museums Division (HS&M), it was decided to review and revise this Handbook. The revisions were lead by Paul S. Storch, Sites Collections Liaison, and Diane Adams-Graf, Historic Properties Manager, both of the Historic Properties Office (HPO), HS&M. Staff at various Sites, and the Collections department and conservation unit (Collections Management) were also asked to review this revision and make comments and additions.

2012, 2014, and 2019 Revisions

Further branding, division and division/departmental reorganizations have prompted review and revisions to staff names and affiliations to improve the utility of this handbook.

II. HANDLING COLLECTIONS

Appropriate handling of collections is inherent in safe housekeeping and in providing a certain level of care for the collections. Most damage to historic collections, with the exception of disasters, occurs in improper handling. The MNHS Facilities-Historic Properties (F-HP) staff and conservation unit offers periodic training sessions in artifact handling to all MNHS staff. Make sure that all staff working with cleaning of historic areas or collections have had training in object handling either by identified site staff who have been trained or by the MNHS F-HP. Some Handling training print-outs are appendices to this **Handbook**. Additionally, materials are presently available on Fletcher and the MNHS website and through various other organizations online. These include the National Park Service's *Conserve-O-Gram*, a series published as a reference on collections management and curatorial issues, *CCI Notes*, a series of collections management and conservation issues published by the Canadian Conservation Institute and "Tech Talk", published by MNHS. Videos on housekeeping for historic sites are currently on YouTube and those links have been updated in this revision.

Although not addressed specifically in this **Handbook**, the maintenance of a stable environment, along with housekeeping, is an important part of long-term preservation. Light, heat, humidity and air pollution all have direct and immediate impacts on building interiors and their contents. Much of the damage caused by these can never be reversed, most notably, the consequences of light. It is strongly advised that light levels in historic buildings be reduced whenever possible. This may be as simple as the prudent use of shutters or blinds and the application of ultraviolet filters on glass windows. The F-HP unit took over the environmental monitoring of sites from conservation in 2012 and has placed monitors in all sites and the Kellogg Center. Any questions on temperature, relative humidity, and light levels at a site should be directed to the Sites Collections and Exhibits Liaison.

In housekeeping, it is critical to distinguish between the handling of modern materials (e.g. exhibit furniture) and collection artifacts. This distinction is important to make in all areas of building content, use and maintenance.

It is recommended that you have two cleaning manuals or clearly differentiated lists:

- **one for maintenance of modern equipment and facilities** (bathrooms, non-historic spaces, public galleries, &c.)
- **one for maintenance of historic spaces and contents.**

Housekeeping tools, equipment and supplies should be identified for one use or the other and have separate storage areas identified solely for that purpose. In both cases, cleaning tools and supplies should be carried and placed in areas away from collections while in use.

It is important to ensure that all necessary and appropriate equipment and supplies are on hand and available to cleaning staff. Safety Data Sheets (SDS) are to be available to all staff for all chemical products used on site. If housekeeping is contracted, certain types of supplies should be specified or prohibited in the contract. Additionally, all equipment/supplies used by the contractor should be itemized and reviewed during the contract period. A list of appropriate and unacceptable cleaning products is identified in this **Handbook**. Questions regarding specific types of equipment or cleaning supplies should be directed to the Sites Collections and Exhibits Liaison who will confer with a specific conservator. Sites staff is responsible for updating and maintaining the accuracy of the SDS Inventory List tab for their site. The tab must be updated when new products are brought to the site or regularly used products are disposed of and replaced. The list can be found here:

<https://docs.google.com/spreadsheets/d/1EGWNdl-JKwSRu1EPkazK01UIq8WXG46id8gwZcYiQRc/edit#gid=1078244839>

Additional Considerations:

Supplies for proper handling and transporting collections are also necessary to housekeeping:

- Gloves: for both personal protection and to protect object surfaces.
- Cleaning cloths and brushes: soft, reuseable/washable for general cleaning and dust removal tasks.
- Carts and/or carrying containers: Plastic or metal hand carts that are lined with DOW Ethafoam or equivalent can be used at sites that have large areas of storage or display. In other areas and in historic homes, a lined basket or lined, plastic-coated wire tray may be safe ways to transport object(s) in an historic environment where a cart is not possible.

The MNHS Historic Sites Documentation Project (HSDP) conducted an inventory of all collections at sites from 1996-2000. If an accession number was not present on an artifact, it was assigned an FIC number and tagged. Make sure that tags are not removed during cleaning. As further curatorial reviews are completed and numbers are physically applied, these artifacts will no longer have tags but until then, it's important that they not be separated from their temporary number assignments.

Common sense, careful observation and consistency are the keys to successful cleaning and resulting care of collections. These and the appropriate training and tools will make valuable contributions to the preservation and security of the MNHS permanent collections at Historic Sites. We hope that this **Handbook** is a useful guide and we encourage you to contact staff resources with any of your collections care questions or needs.

III. HOUSEKEEPING

A. Scheduling and Reporting

Historic housekeeping needs to follow a specific schedule. Otherwise, some work is forgotten, overlooked or inconsistently done. Site-specific schedules should be written by site management and completed by assigned personnel (staff or contract).

All schedules should provide for reporting or include a housekeeping log that allows for reporting of any discrepancies in collection condition, insect infestation, or other changes in general conditions.

All reporting should include the reporter's name (initials) and date of entry. Site managers should review all reporting on a regular basis to confirm its completion and send a copy to the Sites Collections and Exhibits Liaison with any specific questions or concerns. At all sites, infestation reporting is already part of the established Integrated Pest Management (IPM) program. Monitoring the objects on display and in storage, for pests, can also be part of the regular housekeeping tasks.

Damage to artifacts should be reported to the Sites Collections and Exhibits Liaison in the *Incident Report* form:

<https://drive.google.com/drive/folders/0B3sOo6P5aQGNMm12NXFqVHdzaVE>

Requests for conservation survey or treatment of a specific collection item should be submitted to the Sites Collections and Exhibits Liaison in the *Conservation Work Request for Collections at Historic Sites* form:

<https://docs.google.com/document/d/1HpqtPHWgnNdd8wPSliKYgMH7huZT7HzuadXEQbSx1E/edit>

Sample Schedule for Historic Housekeeping

Depending on the number of buildings, their size, number of furnishings or other artifacts and length of the visitor season, the cleaning schedule will vary. In large historic house sites, some tasks might be rotated. For instance, dusting of furniture may take place on alternating floors on alternating weeks. What is important is to establish a cleaning schedule that provides for full cleaning on a regular basis.

Each site should review its historic buildings and interiors to first identify all necessary cleaning tasks.

Observe conditions.

- How many visitors are there on a daily basis?
- What areas are they in?
- Are windows or doors often open?
- What is the dust accumulation like in different areas?

Walk through each building, each historic room and public space and list what needs to be cleaned. Detail these tasks in a specific schedule that can be outlined in a task list, work log and contract, if applicable. Identify necessary supplies and appropriate places to store them. Review any training needs. Determine what specific questions about particular building interiors, collections or methods remain and direct them to the Sites Collections and Exhibits Liaison.

The following is a *sample list* of the types of tasks that should be done on a regular schedule. It is only a sample. Every historic site should develop its own cleaning schedule based on the specific needs identified in its review.

Daily

- Empty all trash containers.
- Dust identified historic rooms:
 - wood surfaces
 - hardware (brass, &c.),
 - marble
 - window frames
 - floor boards
 - all other interior horizontal surfaces within reach *so that a full rotation of the house/building is completed on a biweekly basis*
 - Clean all window sill horizontal surfaces when cleaning window frames. Do not leave insect carcasses on the sills, as they provide food for mice and other predators. Identification of both active and dead insects can be made by the Pest Control Operator (PCO) contracted by Facilities-Historic Properties (F-HP). Put the insect in

an air-tight container and show it to the (PCO) at the next available service visit.
Notify the Sites Collections and Exhibits Liaison.

- Vacuum public traffic runners and non-historic carpets.
- Sweep floors and shake non-historic throw rugs.
- Enter work in the housekeeping log. Log completed rooms and changes, damages and insects (pest monitoring log (IPM log), if applicable).

Weekly or Biweekly

- Dust tops of all doors.
- Wash floors and non-historic rugs.
- Clean, dust and wash building entrances/foyer. This may have to be done more frequently in the winter to remove salt and sand accumulations.
- Clean doors and screens.
- Brush all window shutters, if applicable.
- Enter work in housekeeping log.

Monthly

- Clean mirrors, glass panels in furniture and picture glass.
- Vacuum or dust walls.
- Clean tops of wooden tables and wipe down chair frames and seats.
- Clean tops of other horizontal surfaces such as sideboards, cabinets, and stoves (non-functioning).
- Blow dust from carved or molded picture frames.
- Vacuum historic carpets with screen on rotating basis so that all historic carpet are cleaned on a six month basis.
- Dust ceramics, glassware and light fixtures.
- Clean all window sills and frames in non-historic areas.
- Enter work in housekeeping log. Note accumulation of insects in IPM log.

Quarterly

- Dust/vacuum books, if needed.
- Clean windows.
- Dust metal.
- Wash non-historic table coverings, curtains and other non-historic textiles.
- Rotate vacuuming of upholstery, drapes, bed spreads, tablecloths and other exposed historic textiles so that all are cleaned on a semiannual basis.
- Enter in log.

Semi-annually

- Vacuum or dust ceilings
- Verify that all historic carpets and other textiles have been vacuumed.
- Remove and rotate all table covers, bed covers, if possible, after cleaning. Repack and store those removed.
- Dust/clean wood details with cotton swabs (rotate into room cleaning every six months).
- Wet clean all window shutters, if applicable.

- Clean the floors in fire-places and remove dust from gas log inserts, fire-screens, and andirons.
- Vacuum or dust tops of cabinets in pantries and non-public side rooms.
- Enter in log.

Annually

- Wash ceramics, as necessary. They might be washed annually, as needed, following approval and instruction by the Sites Collections and Exhibits Liaison and Objects Conservator.
- Clean floors thoroughly, as appropriate. At some sites, re-waxing might be necessary.
- Remove and clean light fixtures after checking with the Sites Collections and Exhibits Liaison. Instructions will be provided.
- Wash exposed glassware and china per instructions.
- Vacuum, wash or dry-clean (as designated) all curtains and drapes.
- Wet-clean all painted woodwork.
- Other work identified in site review.
- Enter in log.

B. Books

Use extreme care in handling. Never pull a book out by putting your fingers over the top of the spine or by gripping the back with your fingernails. Expose enough of the spine so that you can get a firm grip on it.

Unless books can be removed from and replaced on the shelves easily and without obstruction, there is always the likelihood of the books being damaged. Books must never be crammed tightly into shelves. There should be enough room between any volume to allow finger space on each side of it.

Historic books can generally be vacuumed with a narrow, slender attachment (micro-attachments) to the vacuum. If the binding appears fragile, they might be gently dusted with a “Dust Bunny” or brushed with a camel hair brush (see illustration). If there is enough space above the shelved books to safely handle the vacuum attachment or brush, it may not be necessary to remove the books. If books are removed, an entire row of books should be removed from each shelf so that each book can be dusted as well as the shelf. When dusting volumes, dust away from the binding, from the bound edge to the paper edge. Observe how dust accumulates. Damage can occur easily when books are handled so clean no more often than necessary, certainly, *no more than quarterly*.

If at all possible, allow for ventilation behind the books on the shelf and behind the bookcases.

Look for any signs of mold, insect infestation or other pests. Report them in the housekeeping log and/or pest monitoring log and inform the Sites Collections and Exhibits Liaison in a timely manner.

Make note of loose or detached book boards (covers) and report them to the Sites Collections and Exhibits Liaison who will forward the report to the Conservation unit’s Paper and Book Conservator. Do not use string or elastic bands to hold books together. If they must be tied together, secure them with wide (one to two inch) cotton twill tape.

When displaying a book (off of its shelf), consult with the Sites Collections and Exhibits Liaison to identify the best manner in which to display the book. Books are not displayed open flat in MNHS displays. Plexiglas “cradles”, sized for the volume, are recommended for exhibiting open books. Books with light-sensitive elements, hand-painted features or fragile bindings may not be suitable for display at all.

C. Carpet

- Vacuum historic carpets with nozzle through a screen (see supplies) every three to four months.
- Do not vacuum historic carpets with the power head/beater brush of a vacuum.
- Modern/reproduction throw rugs should be used in public traffic areas. Historic throw rugs should be cleaned as above.
- Modern carpets may be vacuumed daily, if needed.
- After each carpet is vacuumed, wash the brush attachment in warm soapy water; be sure the brush is dry before vacuuming the next carpet. This washing will prevent the transfer of insect eggs and larva from carpet to carpet. Purchase of multiple brush attachments will increase the efficiency of vacuuming.

Historic Carpets

First remove your shoes before walking on a historic carpet even when you're cleaning it. This will help to prevent abrasion and the introduction of dirt and particulates into the surface.

Second, it is often impossible to clear the visible dirt from the surface of a carpet while using a screen. Especially if some dry media like dirt, or bread crumbs, has been spilled on it. This makes vacuuming appear to be a useless or fruitless endeavor. Subsequently no one wants to vacuum the carpeted areas.

It is not uncommon for both conservators and technicians to surface clean a carpet without the screen if the textile is in good and sound condition. In this manner the soft head of the vacuum is placed on the rug in a step by step, row by row manner. The head of the vacuum should never be dragged or rubbed back and forth on the rug. Unfortunately it is necessary to do this on one's hands and knees. However being close to the surface allows you to see the dirt better and since it is only done four times a year neither the person doing the cleaning or the carpet should be the worse for wear.

D. Ceramics

- “Ceramics” is a broad term covering porcelain and all types of pottery.
- Ceramics should be handled as little as possible.
- Always look carefully at the object before attempting to lift it to see if there are any repairs that could come apart or sections that could be knocked off.
 - Always use both hands when picking up an object and make sure you have plenty of room.
 - Never reach over one object to pick up another and always know exactly where you are moving the object.
 - Confirm that your movement with the object to its new location is unobstructed.
 - Never pick an object up by the handle or rim. A basket or plastic-coated wire tray lined with cotton batting or acid free tissue and/or muslin for padding is a safe way to carry ceramics.
- Remove all rings and other jewelry prior to handling or moving artifacts. Clean, dry hands, without lotion, are acceptable when handling glazed ceramic (and glass) objects.
- Never stack ceramics one inside of the other, unless they are the same size (e.g. plates), are interleaved with padding, and are not stacked more than ten inches high.
- If an historic site is closed for the winter season, consideration should be given to moving artifacts to a central location (e.g. table) in each room and covered with paper “hats” (marked with accession number). This allows for cleaning of other spaces and diminishes the need for special cleaning of artifacts. Consider the risks of handling whenever considering movement, packing and/or storage of artifacts during the off season.
- Ceramics with rough bases should have felt mats with a Mylar/Melinex barrier to protect the surfaces upon which they are displayed.
- Do not wash ceramics without first consulting the Sites Collections and Exhibits Liaison. They might be washed annually, as needed
- Dust ceramics with a natural bristle, brush monthly, during open season.
- Avoid exposing historic ceramics to food, water and excessive pressure.
- Carefully inspect ceramics when dusting (whenever handling) for structural weaknesses.
- Report any changes, damage, &c. in housekeeping log.

E. Wood

Always use basic care in handling furniture. Refer to “Handling of Objects” attachment in this **Handbook**.

Furniture might need to be dusted at least weekly if the findings of the initial cleaning needs review justify that schedule. Staff at the site should study furniture collections to identify and clearly list which pieces of furniture should not be dusted at all, which are better dusted with a hand-held brush to a vacuum nozzle (away from the surface) and which have a strong enough surface to resist dust abrasion and can be wiped with a clean, soft, cotton cloth. Consult with the Sites Collections and Exhibits Liaison for further advice on this after conducting the preliminary assessment.

Avoid placing furniture near radiant heat or high light sources. Gilt and composite picture frames must not be hung in the direct line of forced-air ventilators.

- If furniture must be moved, observe the following:
 - Before lifting an object, make sure that all parts to be handled are in sound condition.
 - Identify whether any loose or removable parts need to be removed prior to any movement.
 - Secure (tie closed with cotton twill tape) or remove any drawers prior to move. - -
 - Moving even quite a small piece usually needs two people.
 - Refrain from handling upholstery in the course of moving a piece of furniture. Stools and chairs should be carried at the base of the seat.
 - Never carry marble and glass tops flat but raise them into a vertical position and carry them in that position. Get specific recommendations from appropriate staff if there are any concerns regarding how to remove marble or glass tops.
- Dust with a plain, clean, soft rag (cotton diaper), “Dust Bunny” cloth or, dust with a hand-held, soft bristle brush. When brushing, move brush gently across surface of furniture toward vacuum nozzle near edge of artifact.
- Never use cloths or dusters with raw edges and dangling threads.
- Wax, if needed, with Renaissance Wax after consulting with the Sites Collections and Exhibits Liaison.
- Never polish with a liquid, aerosol polish, or any polish with silicone in it.

- Inspect furniture in storage areas at least once a month. Dust as needed or vacuum with a soft bristle brush.
- Cotton swabs may be used in dusting furniture details (semiannually).
- Do not place vases with water on or near historic furniture. **Do not use live plants in historic rooms.**
- In normal circumstances, surfaces need a light dusting with a clean, dry cloth to keep them clean and free of dust at least once every two weeks, depending on environmental conditions and visitor traffic. Use caution in dusting furniture which has missing pieces of molding or veneer.
- **Pre-Season (“Spring”) Cleaning:** Thorough dusting should be done underneath a piece of furniture, around the back, inside and outside the drawers, so that every surface which can be reached is free of dust. Use the opportunity of “Spring” cleaning to carefully review objects for any changes in their appearance. Thoroughly dust areas that are not reached in day-to-day cleaning. Wherever possible, all furniture should be moved once a year to prevent dust from becoming trapped underneath and behind it.
- Avoid contact with textiles and leather upholstery when cleaning wood sections of furniture. Leather upholstery can be carefully dusted separately. Textile upholstery can be vacuumed through a fiberglass screen.
- For heavy grime (wood banister, &c), clean with a mixture of Murphy’s Oil soap (per manufacturer’s directions), water and a few drops of ammonia (2-4 drops per gallon of water). Dry thoroughly.
- While cleaning, always look out for damage such as lifting veneers or brass inlay and flaking lacquer, or structural defects such as rickety legs. Do not attempt to stick bits of furniture back onto the furniture. Place any parts or pieces in a sealed plastic bag marked with furniture name, accession number and date. Complete the *Incident Report* form (see above) and submit it to the Sites Collections and Exhibits Liaison.

Woodwork (Painted)

- Tortoiseshell, lacquered, japanned and papier mache’ surfaces should not be dusted or cleaned. Observe the surface closely to determine if there is flaking or crumbling. Report changes in the housekeeping log.
- Clean with a dilute solution of Murphy’s Oil soap cleaner (per manufacturer’s directions) and tepid, distilled or deionized water. Make the solution fairly weak and change the water often. Wash twice a year. Stubborn grime: remove with warmer water with 2-4

drops of household ammonia per gallon. Wash with clean, cotton cloth that is wrung out well.

Woodwork (Finished)

- Clean with diluted Murphy's Oil soap solution (per manufacturer's directions) and 2-4 drops household ammonia per gallon of water (no more than once per year). Stubborn grime: consult with the Sites Collections and Exhibits Liaison on major cleaning procedures.
- Touch up finish with Butcher's Wax (White Diamond Paste Wax) or Johnson's Floor Wax (paste wax in the yellow container) as needed. Use a paste wax for banisters and heavily used areas. Use Renaissance Wax for little used areas. Do not wax more than once per year. Apply as directed with clean, cotton cloth.

Wood Floors

- Dust with a dry mop.
- Wash with diluted Murphy's Oil soap (per manufacturer's directions). Wash with a string mop that is frequently rinsed and well wrung out. Change water often. If the mop snags on the floor, gently remove string by hand. Floor splinters should be bagged and reported in the cleaning log. Consult with the Sites Collections Liaison for further direction.
- Wax with Butcher's Wax or equivalent when needed (every six-twelve months depending on use).
- Wooden floor heating grates should be avoided with the mop and cleaned by hand with clean, cotton cloth using same cleaning solution.
- Sites that have issues with salt and grit accumulation on floors during the winter will receive specialized cleaning instructions from the Sites Collections and Exhibits Liaison.

F. Glass

- Glass objects are generally light and can be easily knocked over. Heavier glass objects are subject to chipping or cracking if struck.
- Never try to carry more than one piece of glass at a time unless pieces are padded on a cart or transported in a basket/carrier unit as described earlier in object handling.
- Glass with painted or gilded decoration should not be cleaned in any way. Handle as little as possible. Submit a *Conservation Treatment Request Form* if you perceive that such an objects requires intervention.
- Dust with a dry cloth every two weeks (e.g. “Dust Bunny”).
- Washing Exposed Glassware:
 - Once yearly in warm water and diluted Orvus (1/4 teaspoon per gallon of water). Orvus may be obtained from the Sites Collections and Exhibits Liaison.
 - Pad a dish pan with towels to avoid breakage, and change the water frequently.
 - Never put more than one piece of glass at a time in the pan.
 - Check to make sure that there are not any previous repairs that might separate and verify that applied accession numbers are not “floating” off.
 - Drain on paper towels laid out on flat surface.
 - Use a soft cloth for drying, taking care not to put excess pressure on any one area, particularly the rim or bowl.
 - Never hold a glass by the stem when drying.
- Windows can be cleaned with a mixture of distilled water (50%), Isopropyl alcohol (50%) and a few drops of ammonia. Spray onto clean, soft cloth and wipe window with cloth. Avoid getting cleaning solution onto the putty that holds the glass in its pane. Windows covered with UV film should be dusted with a brush and wiped with a damp, clean, soft cloth.
- Avoid exposing historic glassware to food and water. Avoid exposing historic glassware to any pressure of any kind.
- Inspect when dusting or washing (whenever handling) for structural weaknesses.
- Cleaning Mirrors: Know how the mirror is secured to the wall prior to cleaning. It may be safer for two people to be present; one steadying as necessary. Clean with an Isopropyl alcohol based glass cleaner only. Avoid dripping the cleaner into the rabbet of the frame or getting the cleaner on the frame or any other wooden surfaces. The alcohol will disturb neighboring shellac surfaces.

- Remove and clean light fixtures after checking with the Sites Collections and Exhibits Liaison. Instructions will be given or specifications provided in the case of chandeliers
Note: Staff at the Hill and Ramsey Houses are experienced in cleaning chandelier crystals and perform the cleaning routine annually with a standard protocol. Other sites with chandeliers, e.g. the State Capitol, either use MNHS Conservation services or work with the building owner (Facilities-Plant Management) to bring in a contractor.

G. Interior Marble

- Vacuum gently every two weeks or so. Brush decoration with a natural bristle brush to loosen deep dust while vacuuming.
- Dust with clean, dry, cotton cloth daily (or “Dust Bunny”) at least twice a week.
- Wash once a year in a weak solution of ammonia and distilled water if recommended by the Sites Collections and Exhibits Liaison. No more than once yearly.
- **Never** use chlorinated cleaners on marble or limestone objects or architectural features.
- Wax, if needed, with Renaissance Wax.
- Consult the Sites Collections and Exhibits Liaison if any stone objects become stained in any way.
- Inspect weekly for structural weaknesses, loose pieces or loose decoration. Report in log.
- Exterior marble and stonework is managed and maintained by the F-HP unit separately from interior stonework.

H. Metal

Metal surfaces are easily scratched and worn away. Do not think of metals as infinitely durable. Never attempt to remove a patina (surface coloration of the metal object). Refer those types of problems to the Sites Collections and Exhibits Liaison by filling out a *Conservation Treatment Request*.

Dusting metal objects should be kept to a minimum because the dust itself is abrasive. This applies to cleaning of historic metal tools, silver hollowware, sculptural busts, small sculptures, and any metal parts of composite artifacts. Never rub when dusting, just flick the dust lightly off of the surface with a natural bristle brush.

- Whenever possible, the dusting of metal should be limited to three times per year.
- Do not touch metalwork with bare hands.
- When dusting metal, always wear clean gloves (see illustration). Nitrile gloves are often appropriate as they create a stronger barrier between hand perspiration and the metal. See supply list for source of gloves.
- Do not polish any metal surfaces. Check with the Sites Collections and Exhibits Liaison on specific cases.
- Wipe brass every week with soft cloth (cotton diaper).
- Check with the Sites Collections and Exhibits Liaison prior to polishing any silver on site. Cleaning and polishing of silver and other decorative metal objects are conservation treatments and must be done under proper safety conditions and supervision. Please submit a *Conservation Treatment Request* form to the Sites Collections and Exhibits Liaison for any and all objects that you consider to require treatment. Methods for minor surface cleaning on site will be provided by the Objects Conservator via the Sites Collections and Exhibits Liaison when deemed appropriate. This is sometimes possible to do on site if cleaning/polishing is warranted for the object.
- Use Corrosion Intercept bags (see supply list in this **Handbook**) for storage and to cover items (e.g. large hollow-ware objects) overnight when on display. Corrosion Intercept bags slow down tarnishing in uncoated objects and negate the need for polishing those items already treated by the Objects Conservator.
- Metal building features such as railings, plumbing fixtures, light fixtures, hinges, doorknobs and other items that are subject to public handling or frequent use should be cleaned weekly with “Dust Bunnies” to remove grime. Consult with the Sites

Collections and Exhibits Liaison for cleaning beyond that. Damage to building features should be reported to the Project Manager for the site.

- Carefully observe metal surfaces and report any changes in the housekeeping log and to the Sites Collections and Exhibits Liaison.

I. Paintings and Framed Works of Art

Some of the most basic methods of care for paintings and other framed works of art are in their method of display. When picture chains or wires do not need to be visible, confirm that two wall screws are used to hold the wire. Wherever possible, within the scope of the interpretive plan and furnishings research, hang framed work above furnishings or in other places where they are most likely not to be touched or bumped by visitors. Do not hang work above radiators or a fireplace that is being used or in direct line of a forced-air ventilator. Paintings on outside walls should have corks secured to the bottom corners of the frame to isolate the picture from the exterior wall and allow circulation of air.

- Never touch the surface of a painting with anything.
- Never hold a tool or attempt to position something above a painting.
- Prohibit the use of aerosols or any sprays near paintings.
- Always remove paintings when decorating, construction or repairs are taking place in the room.
- Never hang a painting on a freshly plastered or painted wall.
- When taking down a painting, remove all ornaments and furniture below the painting first.
- Smaller paintings should be carried with one hand supporting underneath and the other hand at the side. Use two people when removing large, framed pieces. Carry it vertically, know where it is being moved to and have an unobstructed path identified before removing it from the wall. Refer to “Handling of Objects” attachment.
- Dusting frames will generally not improve the appearance of the frame.
 - Do not attempt to dust a frame if the gilding is flaking.
 - Do not dust with a cloth or feather duster, either of which abrades the surface.
 - Dust top and bottom edges lightly, with natural hair brush. Make sure that dust does not fall on to the painting surface.
- Do not clean framing glass with any window cleaner or any liquid, including water. Buff glass with a soft, clean, dry chamois leather.
- Framing, un-framing and transport should be referred to the Sites Collections and Exhibits Liaison.
- Temporary storage on-site should follow storage specifications. Consult with the Sites Collections and Exhibits Liaison for guidelines and options regarding storage of paintings.

J. Textiles, Historic

- Table covers should be changed once or twice a year and those on display allowed to rest in stable, storage environments (see “Historic Sites - Storage Guidelines” in this **Handbook**).
- The Sites Collections and Exhibits Liaison will consult with the MNHS Textile Conservator prior to any wet-cleaning and/or steaming of historic textiles. It is possible that some sturdy, color-fast, cotton, fabrics may be approved for hand washing in warm water with minimal amount of Orvus, rinsed thoroughly with distilled water and dried flat on sheet of Plexiglas. If approved, this may be done only once a year as it is stressful to fibers.
- Never press or steam historic textiles without approval of the Sites Collections Liaison and MNHS Textile Conservator. *Do not* press textiles while on an historic wood table or another artifact. This can cause permanent damage to the surface beneath the textile by melting or burning the finish or wood.
- Curtains may be vacuumed (with screen) if not washable. Reproduction drapes may be dry-cleaned. Instruct the cleaners to use extreme care in handling and to use fresh solvent only. If possible (generally in the metro area), use a dry-cleaner that is approved by the MNHS Textile Conservator.
- Historic non washables may be vacuumed through a screen. Upholstery should be vacuumed every three months, using a nozzle and screen. Place the head of the vacuum on the screened surface of the upholstery in a step by step/row by row manner. Never drag the head of the vacuum across the surface. Upholstery is often extremely fragile due to wear and light degradation.
- Historic non-washables, such as heavy drapery, often collect thick layers of dust. This is especially prevalent along window valances, and bed curtains. For this level of build-up it would not be uncommon for a conservator to vacuum these without a screen. The head of the vacuum would be placed in the same careful way as described before.
- Carefully vacuum fragile or damaged material only after consulting with the Sites Collections and Exhibits Liaison and MNHS Textile Conservator.

The Sites Collections and Exhibits Liaison should be consulted if any dust, plant material or frass is found to collect in, around, or under upholstered furniture or draperies as this is an indication of infestation. Upholstered objects are excellent homes for entire colonies of insects before any damage is noted on the surfaces. Therefore, careful and regularly scheduled monitoring is important.

For further details of pest management and monitoring infestations, consult the Integrated Pest Management (IPM) plan for the Historic Sites Network and the section covering that

in this manual. It is very beneficial to have the physical evidence of the infestation preserved for inspection and identification of the species involved. It is all too easy to vacuum up carcasses before one gets a good look.

Finally the benefits of dust coverings during off-seasons on all soft furnishings cannot be stressed enough. Dust covers are excellent projects for volunteers. The closing down of a house can be a timely and costly procedure, however, maintenance is less costly than conservation and dust covers can be washed and reused for many seasons.

IV. INTERPRETIVE CENTER EXHIBITS CLEANING GUIDELINES

Eleven MNHS Historic Sites have interpretive centers and exhibit galleries that contain items from the Society's permanent collections. It is important for these spaces to have regular cleaning schedules and practices instituted. The following guidelines are based on the cleaning recommendations and chart developed for the Minnesota History Center exhibit galleries. Regular and consistent cleaning of gallery spaces and exhibits props extends the useful life of both objects and exhibits furniture (cases, vitrines, reading rails, etc.).

<h4>GALLERY CLEANING CHECKLIST</h4>
--

- Set up a regular schedule for inspection of the gallery, objects and props using the chart below. These inspections are important for security, identification of damage and preventive maintenance. Copy this chart as needed, and set up an accessible file. A hanging clipboard for ease in regular, routine inspection may be useful. Inspections and observations must be on a regular basis and consistent, with one staff person (with a backup assigned) responsible for the task. This should be conducted at least once a week.
- Identify frequency and type of cleaning needs by making observations in the exhibit area:
 - Are displayed artifacts in cases?
 - Are the cases sealed?
 - Are artifacts in open areas?
 - Are props and other exhibit components in open areas?
 - How much visitor traffic is in the gallery?
 - What is the level of dust accumulation?
- Set up a regular schedule for cleaning of the gallery, props and program-use material (PUM).
 - Identify specific spaces, floors, rails, cases and other exhibit sections to be cleaned and define frequency (monthly, annually, &c.).
 - Perform routine cleaning on a consistent basis.
 - Do not clean artifacts in exhibits unless specifically trained and instructed to do so. Arrangements and specifications for cleaning artifacts in exhibits are made with the Sites Collections and Exhibits Liaison.
 - Use only conservation unit approved cleaning supplies and equipment (see supply list in this **Handbook**). Requests regarding the use of particular products by staff or contractors are to be directed to the Sites Collections and Exhibits Liaison.
- Have copies of the SDS (Safety Data Sheets) for each cleaning product that your crew is using in the galleries to clean non-artifact surfaces (e.g. floors, rugs, Plexiglas, carpet) on hand at all times. Have these posted in one common book and updated in

the Site SDS inventory.

- Remove shoes when entering dioramas for cleaning procedures.
- Pay careful attention to where vacuum power cords are laid out in a diorama and gallery.
- Plan out where ladders are placed within a diorama in order not to damage the ground treatment and PUM's.
 - Begin cleaning from the upper areas down.
 - Wipe down the track lighting and ceiling struts/support. Walls should be dusted at least once per year from the ceiling downward.
- Do not attempt to move any permanent collection artifacts on exhibit during cleaning. Most artifacts are attached to their mount or vitrine support in some manner, and an attempted move or removal has the potential to damage the object. Contact the Sites Collections and Exhibits Liaison if it is deemed necessary to move the object off display.
- Clean and maintain cleaning equipment after every use. Wash brushes, clean out vacuum hoses and tubes, and change vacuum bags frequently.
- Look for chronic exhibit design problems which pose a potential hazard to people or collections or contribute to vandalism in the galleries, e.g lack of Plexi around a platform, or poor design of easy access to collections in cases. Report any damage to collections immediately, using the *Incident Report* form. Record chronic problems and exhibit needs and submit requests for repair or replacement to the Sites Collections and Exhibits Liaison.
- Look for signs of pest damage and infestation in the exhibits spaces. Record the observations in the IPM log, and report sightings of pests and pest remains to the Sites Collections and Exhibits Liaison.
- The forms included here (Exhibit Cleaning Record and Gallery Cleaning Needs) are available on Fletcher under Forms/Facilities-Historic Sites.

<https://sites.google.com/a/mnhs.org/historic-properties-resources/forms>

MNHS HISTORIC SITES- EXHIBITS GALLERY- CLEANING NEEDS

SITE NAME: _____
Date filled out: _____

Determine the cleaning needs of the gallery, exhibits sections and individual objects with the assistance of the Sites Collections Liaison and Conservators.

Key: Cleaner: Exh.= Exhibits fabricator staff ; Cons.= Conservation staff; CS= Contract staff; SS=site staff

Freq.: minimum frequency of cleaning in years, e.g. .5= twice yearly

Gallery	Object/Section	Cleaner	Freq.	Problem	Cleaning Method

MHNS SITES EXHIBIT CLEANING LOG

This form is to be updated each time the gallery and objects are inspected and cleaned, and kept as a permanent record. Copies are to be sent to the Sites Collections and Exhibits Liaison after each cleaning cycle.

Site: _____

Gallery	Object/Section/Case	Date	Action	Cleaner	Comments

V. STORAGE GUIDELINES

- Artifacts not on display at an historic site should be stored apart from non-collection items.
 - Non-collection items are things such as cleaning supplies, props, paint, tools or office equipment and supplies.
 - A specific area for storage of non-displayed permanent collections should be identified and used *solely for that purpose*.
 - Do not use the basement or attic. These are inappropriate because of their temperature and humidity extremes and susceptibility to pest infestation.
 - If there are no options other than basement or attic storage, increase the regular inspection and monitor both temperature and humidity.
- Storage area(s) must be locked and otherwise accessible only to authorized staff.
- Lights should be turned off when the storage space is not in use. External sources of light should be eliminated.
- Allow no food or drink in the storage area.
- Do not store items near furnace, radiators, pipes or other sources of water or heat.
- Do not store flammable materials near the storage area
- Keep a fire extinguisher ready for use near or in the storage area.
 - ***Keep the storage area clean.***
- Identify all storage areas and the appropriate storage method:
 - Artifacts may be wrapped in acid-free tissue and boxed, covered with muslin or hung on hangers or rolled storage units.
 - Shelves should be padded.
 - Items that are stored in other historic artifacts (dresser drawers, china cabinets, &c.) should have barriers of acid-free tissue, board or Mylar/Melinex, as appropriate, separating artifacts.
 - Consult with the Sites Collections and Exhibits Liaison for storage recommendations or to arrange for a survey of stored collections.
- Identify items that are not covered or boxed. These will need to be cleaned regularly on the site cleaning schedule.

- Inspect all stored objects regularly; at least every three months. Inspect hanging, rolled or boxed artifacts at least biennially (schedule a rotation that will accommodate all artifacts).
- Refer questions regarding storage equipment (shelving, cabinets, &c.) and supplies (acid-free boxes, tissue, ethafoam, &c.) to the Sites Collections and Exhibits Liaison
- Requests to remove collections from the site, to any location, must be directed to the Sites Collections and Exhibits Liaison.

VI. DISPLAY GUIDELINES

While it is important that our collections be presented to the public, there are guidelines for proper display practices that will help to prolong the integrity of those objects for the future. This set of guidelines deals with the objects or furnishings in **small, temporary displays** that Historic Sites and Museums staff may set up during specific seasons or special events. Temporary displays such as these, typically do not go through a formal exhibits, collections, or conservation oversight process. Applying the following guidelines to temporary displays will help to prevent inadvertent deterioration and damage to the collections used in them. Contact the Sites Collections and Exhibits Liaison for further advice or help with specific questions.

- Choose objects for display that are structurally and chemically stable. There should be no loose parts or pieces, shredding of fabric, active flaking, powdering or any other indication that the artifact is not stable, whole and sound, or composed of fugitive materials. Consult a conservator if there are questions on how to make that determination for a specific object or material. Requests to have objects for display treated by a conservator should be made on the *Conservation Work Request for Collections at Historic Sites* (see attachment) and submitted to the Sites Collections and Exhibits Liaison.
- The light level exposure guidelines for collections objects are as follows:
 - Works of art on paper and textiles are 50 Lux maximum exposure for a display period not to exceed 90 days.
 - Finished wood, paintings on canvas, leather, and composites of similar materials can withstand exposure levels of up to 200 Lux for a display period not to exceed one year. Inorganic materials such as stone, metals and ceramics, do not have exposure limits.
 - Ultraviolet and infrared radiation must be limited to the greatest extent possible.
 - Do not expose light sensitive, organic objects in display cases to sunlight from windows for any amount of time, even if the window has UV film on it.
 - Consult the Sites Collections and Exhibits Liaison to make arrangements for light level readings. Blue wool fading indicator cards, relative humidity (RH) indicator cards and electronic light loggers are also available from the Sites Collections and Exhibits Liaison to place inside the display cases.
- Place the case or artifact where it is out of direct air flow from heating/cooling duct outlets, drafts and air leaks from windows. Avoid placing cases directly against exterior walls.

- Place the temporary display case, mannequin or artifact, well out of the way of traffic areas and areas of high vibration. Place collections on a sturdy table or vitrine base. Use stanchion barriers if necessary to keep visitors from getting too close and bumping into the case or artifact. Consult with the Sites Collections and Exhibits Liaison if object mounts are necessary to support and stabilize a vulnerable object. Plexiglas and conservation board book cradles for book displays are available from F-HP.
- Avoid using wool felt inside display cases as the felt gives off sulfur which will tarnish metals. Nylon should also be avoided. Polyester, cotton, or blends are acceptable fabrics to use for mound coverings inside vitrines. Do not use Tygon tubing (a PVC product) or any other polyvinyl chloride (PVC) plastic with objects inside a vitrine.
- When historic artifacts are displayed directly on top of other historic artifacts (e.g. placing a dress on a bedspread; undergarments on a chair, greeting cards on a table, &c.), it's best to place a protective material (e.g. Mylar/Melinex, acid-free tissue) between the two objects.

VII. RESOURCES

A. MNHS Staff Resources

MHS staff phone numbers and email addresses are available on the Society's "Fletcher" intranet site. For those without access, contact the Sites Collections and Exhibits Liaison for specific numbers or addresses. The following current staff are direct resources for Historic Sites and Museums in the care and management of collections.

MNHS Facilities and Risk Management Division, Facilities-Historic Properties Department History Center, St. Paul

Project Specialist III/Collections and Exhibits Liaison (WITS):

Paul Storch: (651/259-3257)

Facilities-Historic Properties Manager: Aaron Novodvorsky: (651/259-3475)

MNHS Conservation Unit, (Collections Management Department), History Center, St. Paul

Textile Conservator: Ann Frisina (651/259-3385)

Paper and Book Conservator: Saira Haqqi (651/259-3383/3384)

Objects Conservator: Tom Braun (651/259-3382)

B. Supplies - Product List

Brushes - Many useful dusting brushes of natural hair (horse, sheep, hogshair) can be found at art supply stores, hardware stores and through conservation supply companies (see suppliers list). Camel hair lens or negative brushes (with bulb), used for “blowing” dust, can be found at camera supply stores and photograph studios.

Gloves - White, cotton gloves are available through safety supply companies and museum conservation supply companies. Source of plastic gloves (blue, nitrile) are shown on the suppliers list.

Muslin - Can be purchased at any fabric store. Pre-wash before using it for any purpose.

Mylar/Melinex - Available in art supply, conservation and museum supply stores and catalogs.

Orvus - non-ionic cleaning solution available through the Sites Collections and Exhibits Liaison.

Vacuum - see attachment, “Choosing a Vacuum for Use in Museum Collections” *Conserve O Gram*, June 2003, No. 1/6,
<https://www.nps.gov/museum/publications/conservoogram/01-06.pdf>

Murphy’s Oil soap - Most grocery and hardware stores.

Renaissance Wax - Conservation supply companies (see suppliers list).

Dust Cloths - Dust Bunny is a product name for a cloth (Tyvek and nylon) that is approved for dusting and available from University Products. “Dust-alls” or “dust swipes” may also be used. These are available in the grocery store or “Target” store. They work by electrostatic charge and are disposable. Be very careful not to purchase those cloths that have been impregnated with cleaners. Cotton diapers can also be used for dusting Consider diapers available from a diaper service that sells used diapers by the pound.

Butcher’s Wax or Johnson’s Paste Wax – Carnauba/beeswax blend in turpentine. Available in most hardware stores.

Screening - Fiberglass window screening sold by the roll. Available in most hardware stores. Cut into 1-2 foot squares and edge with cotton twill tape or with artist’s masking tape (available in most sewing and art supply stores).

Corrosion Intercept Bag - Made of polyethylene film impregnated with molecular copper particles. Available in roll, pouch, or zip-lock bag form (University Products, product number 034-2024, pouch).

DO NOT USE -The following is a partial list of problem cleaning materials. Note: Turpentine and Bees Wax are in the waxes listed above as safe. The reason they are listed here is to prohibit their use in direct, bulk form.

Lemon oil	glass cleaner on Plexiglas
Turpentine	bleach
Bees Wax	abrasive cleaners
Endust or other dusting products	feather dusters
Any aerosol products	acid-based cleaners
Saddle soap	chlorine bleach or chlorine-based powder
cleansers	
Plexiglas cleaner on any other surface	Vinegar

C. Suppliers of Conservation-Related Products

Archivart (Heller & Usdan)

PO Box 428
7 Caesar Place
Moonachie, NJ 07074
(800) 804-8428
Archival papers and boards
www.archivart.com

Museum Services Corporation

385 Bridgepoint Way
South Saint Paul, Minnesota 55075
Phone: (651)450-8954
Fax: (651)554-9217
Archival and conservation materials.
E-Mail: info@museumservicescorporation.com
<http://www.museumservicescorporation.com/scat/toc.html>

DEMCO

PO Box 7488
Madison, WI 53707-7488
(800) 356-1200
Library materials, archival supplies, frames, office equipment.
<http://www.demco.com/>

Gaylord Bros.

Box 4901
Syracuse, NY 13221-4901
(800) 448-6160
FAX (800) 272-3412
Helpline (Thursday/Friday) (800) 428-3631
Conservation and archival supplies, hygrothermographs, free brochures.
<http://www.gaylord.com/>

Hollinger Corp.

PO Box 83600
Fredricksburg, VA 22404
(800) 634-0491
Acid-free paper products, folders, tissue, polypropylene, Mylar polyester film, textile boxes and tissue
<http://www.hollingermetalede.com/>

Light Impressions Corp.

439 Monroe Avenue

PO Box 940

Rochester, NY 14603-0940

(800) 828-6216

FAX (716) 442-7318

Technical Information: (716) 271-8960

Archival, conservation materials, framing, photographic storage materials, free brochures.

www.lightimpressionsdirect.com

TALAS

213 West 35th Street

New York, NY 10011

(212) 736-7744

Conservation supplies and tools.

<http://www.talasonline.com/photos/catalog.cfm>

Testfabrics, Inc.

PO Box 420

Middlesex, NJ 08846

(908) 469-6446

Textiles for conservation.

<http://www.testfabrics.com/>

University Products

PO Box 101

Holyoke, MA 01041

(800) 628-19122

FAX (800) 532-9281

Questions (800) 762-1165

Archival, conservation materials, stamp storage, framing, free brochures.

www.universityproducts.com

D. Published and Online

American Association of Museums (AAM)
1225 Eye Street, NW, Suite 200
Washington, DC 20005
(202) 289-1818
www.aam-us.org

American Association of State and Local History
172 Second Avenue North
Suite 202
Nashville, TN 37201
(615) 255-2971
FAX (615) 255-2979
www.aaslh.org

American Institute for Conservation (AIC)
1717 K Street, NW, Suite 301
Washington, DC 20006
(202) 452-9545
FAX (202) 452-9328
<https://www.culturalheritage.org/>

Can provide referrals for art conservators, training information, and basic conservation brochures.

American Society of Appraisers
535 Herndon Parkway
Herndon, VA 22070
(703) 478-2228
www.appraisers.org/
Can provide referrals for appraisers.

Art Hazards Information Center
5 Beekman Street #1050
New York, NY 10038
(212) 227-6229
<http://artswire.org:70/>

Canadian Conservation Institute (CCI)

1030 Innes Road

Ottawa, ON K1A 0M5

Canada

(613) 998-3721

FAX (613) 998-4721

<https://www.canada.ca/en/conservation-institute/services/conservation-preservation-publications/canadian-conservation-institute-notes.html>

Conserv O Grams

National Park Service

Museum Management Program

U.S. Department of the Interior

https://www.nps.gov/museum/publications/conservoogram/cons_toc.html

Getty Conservation Institute (GCI)

4503 Glencoe Avenue

Marina del Rey, CA 90292

(310) 822-2299

www.getty.edu/

Library of Congress

National Preservation Program

LM-G07

Washington, DC 20540

(202) 707-1840

www.loc.gov/

National Archives and Records Administration (NARA)

Regional Preservation Program

8th & Pennsylvania Avenue, NW

Washington, DC 20408

(202) 208-7890

www.nara.gov/

National Institute for Conservation (NIC)

The Papermill, Suite 403

3299 K Street, NW

Washington, DC 20007

(202) 625-1495

<http://www.heritagepreservation.org/>

U.S. National Park Service
Division of Conservation
Harpers Ferry Center
P.O. Box 50
Harpers Ferry, WV 25425-0050
<https://www.nps.gov/subjects/hfc/museum-conservation-services.htm>

Books, Videos and Articles

“Housekeeping for Historic Sites”, videos. National Park Service Northeast Museum Services Center, 1996
<https://www.youtube.com/playlist?list=PLF73955BF129CCCC4>

National Park Service, **Museum Handbook, Part 1, Museum Collections**. Revised 1998 Chapter 13: Museum Housekeeping. Note: This reference is specific for National Park Service Sites, but can be adapted for other locations.
<https://www.nps.gov/museum/publications/MHI/CHAP13.pdf>

The National Trust. **The National Trust Manual of Housekeeping**. Elsevier Butterworth-Heinemann, 2006.

Butcher-Youngmans, Sherry, William T. Alderson. **Historic House Museums: A Practical Handbook for Their Care, Preservation, and Management**. 1996.

McGiffin, Robert F. Jr. **Furniture Care and Conservation**. AASLH. 1991.

Buck, Rebecca A. and Jean Allman Gilmore. **The New Museum Registration Methods**. Washington, D.C. American Association of Museums. 1998.

VIII. APPENDICES

Copies of these are available through the SitesCollections Liaison.

- *Conservation Work Request for Collections at Sites* form
- *Incident Report* form
- The Transport of Artifacts
- The Handling of Objects
- *Conserve O Gram*, “Choosing a Vacuum Cleaner for Use in Museum Collections”

MNHS CONSERVATION TREATMENT/WORK REQUEST

Person completing this form:

Today's date:

THIS FORM IS USED TO REQUEST CONSERVATION UNIT SERVICES or SPECIFIC CONSERVATION TREATMENT TO MHS PERMANENT COLLECTIONS. FORWARD COMPLETED FORM TO F-HP COLLECTIONS AND EXHIBITS LIAISON AT THE MINNESOTA HISTORY CENTER.

Need /Work requested:

Date work to be completed by:

All work requests require review by the appropriate curator, prior to approval.

Present location of collection/conservation need (Site/Building/Gallery/Section/Room/&c):

Are Site resources available to provide for packing and relocation of artifact(s) to and from Minnesota History Center Conservation labs?

Photograph attached to this request?

Collections Response (<i>Curator Name</i>):	Date:

TO BE COMPLETED BY F-HP COLLECTIONS AND EXHIBITS LIAISON ONLY:

Work Request Approved by Curator?		Yes	No
Date Site Notified:	By:		
Lab Work Request Sent to (attach copy):	Object	Paper	Textile
Date Sent:	By:		

MNHS Conservation Request Form/Rev. 5/6/2019

Conservation Work Request for Collections at Historic Sites and Museums

- Who completes this form?
The Site Manager, whoever is authorized by the Site Manager, or the organization authorized by contract, to manage the site, makes the request.
- What kinds of collections can be requested for treatment?
Any permanent collections at historic sites may be requested for treatment. Requests should be forwarded to the F-HP Collections and Exhibits Liaison.
- What reasons are there for a treatment request?
The artifact is damaged. The artifact is fragile and in danger of damage. The item has been on display for an extended period of time and requires stabilization. The artifact is dirty and requires professional conservation cleaning care. Be as comprehensive and as specific as possible describing condition and the need for treatment. If possible, attach visual documentation.
- How long does reviewing the request take?
You should submit your request as soon as a need has been determined (e.g. damage occurs, change in condition is observed, program date identified for special display of collections, &c.). The review process is completed and the site is notified within four weeks. Requests are reviewed according to the item's importance to the overall permanent collection, its value to the site's interpretive goals, identified site conservation priorities, need for treatment and staff schedules. Not all requests are approved. Actual treatment may be scheduled within a period of up to twelve months. Make sure that you identify the date you want to have the work completed by if you have a specific need.
- Who packs and moves the collection item(s) for treatment?
Packing and relocating collections will follow established museum and conservation standards. The cost of this is the responsibility of the site. In some instances these costs may be assumed by WITS (Work Integration for Sites).
- Is it possible that the artifact will not return to the site?
Occasionally, an artifact may be in extremely fragile condition and the proper environmental, pest management, storage or display conditions are not available at the site. In such a case, it might be determined that the item be moved to storage at the Minnesota History Center. If a replacement for this object is required, it sets another process in motion.
- Where can I get copies of this form?
This form is available at the MHS intranet (Fletcher) at:
<http://fletcher.mnhs.org/fletchdocs/Sites> .

Hard copies are available from the F-HP Collections and Exhibits Liaison.

**Minnesota Historical Society
Collections Incident Report**

Collections Incident Report

Form is to be completed by person most fully informed of incident as quickly as possible following incident. Copies of reports should be directed to the HPO Sites Collections and Exhibits Liaison for distribution to appropriate curator(s) and conservation.

Person completing this form:

Today's Date:

FORM IS USED TO REPORT DAMAGE, THEFT OR OTHER OCCURRENCE TO THE SOCIETY'S PERMANENT COLLECTIONS or LOANS. DIRECT COMPLETED COPY TO YOUR IMMEDIATE SUPERVISOR, WHO WILL SEND IT TO THE SITES COLLECTIONS LIAISON.

Collection(s) involved in incident (type/amount/accession/loan nos./&c):

Date of Occurrence:

Time of Occurrence:

Person/Department Notified:

Time of Notification:

Location of Occurrence (Building/Site/Gallery/Section/Room/&c):

Description of Incident/Problem:

Present location of collection(s) involved:

Photograph attached?

Yes

No

For Sites Collections and Exhibits Liaison Use Only:

Exhibits Staff Notified (if needed):

Staff: _____ Time

Estimate: _____

Description of work:

Date Completed: _____ Actual Time

Used: _____ Initials: _____

Curatorial and Conservation Staff Notified:

Curator/Central Registrar

Notified(Name/Date): _____

Staff: _____ Time

Staff: _____ Time
Estimate: _____
Treatment Needed:
Date Completed: _____ Actual Time
Used: _____

COLLECTIONS INCIDENT RESPONSE

Guidelines for Responding to Breakage, Packing and Transporting Sites Collections Objects



Paul S. Storch
Facilities-Historic Properties Department
Facilities and Risk Management Division
Minnesota History Center
345 Kellogg Blvd. West
St. Paul, MN 55102-1906
1992, slightly revised 1995, 2000, 2010, 2012, 2014, 2019

GENERAL PRINCIPLES AND PROCEDURES:

- When an object is damaged at a site due to any cause, examine the situation before moving the item. Rope off the area if possible, then document the accident with digital photographs and a brief written description, using the Collections Incident Report Form (Available on *Fletcher* and in this Handbook), with additional sheets if needed.
- Contact your immediate supervisor and inform them of the incident.
- Contact the Sites Collections and Exhibits Liaison and inform them of the situation@ (651) 259- 3257; C: (651) 263-0953.
Send the report form with images via email (not by texting)
- Do not dispose of the object or any parts/fragments/residues until further instructions from the Sites Collections and Exhibits Liaison and/or the Senior Curator.
- Have the proper packing materials on hand (see below) before picking up the object and its broken parts.
- **PLEASE DO NOT** transport an object to the History Center labs unless it is properly packed and the Sites Collections and Exhibits Liaison and a specific Conservator are expecting it's arrival.
- When you arrive at the History Center Loading Dock, do not unload the object (unless it is small enough to hand-carry). Go to the Mail Room or Physical Plant office and telephone the Sites Collections and Exhibits Liaison. The Sites Collections and Exhibits Liaison and other staff will come to the dock and assist you in off-loading the object and placing it on the proper conveyance for transport to the lab or a holding room.

The Curatorial and Conservation Unit staff are reachable at the following numbers:

3D Objects Curator:Sondra Reiersen W: (651) 259-3247

Books and Paper: Saira Haqqi W: 651-259-3380 C: 202-431-7436

Objects : Tom Braun W: 651-259-3382 H: 612-824-6121
C: 952-200-0938

Textiles: Ann Frisina W: 651-259-3385

Backup: Jenna Bluhm W: 651-259-3384

TRANSPORT OF OBJECTS FROM SITES

THE PROPER PACKING OF OBJECTS: WHY?

- Prevents further accidental breakage and damage.
- Helps to keep the previously broken pieces together for the conservator.
- Keeps broken surfaces from undergoing erosion from excess vibration.
- Will help to avoid the accidental transfer of foreign substances to object surfaces.
- Minimize the impact of the changing ambient environment during transport.

PACKING AND TRANSPORTING GUIDELINES:

PACKING MATERIALS:

- PLEASE DON'T USE:

newspapers toilet paper paper towels sawdust crushed mica flakes acidic kraft
 or tissue paper rigid plastic foams

- ACCEPTABLE:

acid-free tissue paper ethafoam wrapping sheets Styrofoam or Cellulose peanuts

polyethylene sheeting bubble wrap

clean 'newsprint' paper (if not in direct contact with the object)

PACKING DO'S AND DON'TS:

PLEASE DON'T:

- Transport an object without proper support and wrapping to protect from handling and moisture.
- Transport an object through the mail or by a commercial shipper without first contacting the Sites Collections and Exhibits Liaison.
- Stack objects in crates or boxes on one another.
- Place objects in station wagon or truck beds without padding and securing to the bed.
- Place both fragile (e.g. glass) objects and heavy (e.g. bronze) objects in the same packing container.
- Use dirty packing quilts.

PLEASE DO:

- Wrap each object and part separately. Label the containers properly.
- Stabilize loose parts with ethafoam and twill tape, when needed.
- Float pack fragile objects and parts.
- Modify crates with ethafoam padding to properly support object parts.
- Wrap larger, more stable objects in CLEAN packing quilts and support to prevent shifting during travel.

THE HANDLING OF OBJECTS

Guidelines for 3-Dimensional objects



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1992, slightly revised 1995, 2000, 2011, 2012, 2014, 2019

Rules for Handling Objects: WHY?

- Prevents accidental breakages that could be prevented
- Help to preserve the information inherent in the objects
- Will help to avoid the accidental transfer of foreign substances to object surfaces.
- Minimize the impact of the changing ambient environment during the moving of objects.

GENERAL PRINCIPLES:

- Think before you begin to pick up an object. Observe the construction, weight, components, and potential weak areas
- Quick, jerky movements are dangerous when handling objects or when working in a storage area.
- When working with objects use pencils only.
- Do not put brads, nails, staples or pins through any material.
- Never write on an artifact or artifact tag for any reason.
- Make sure that Collections personnel receive the tags from the artifacts.
- Do not eat, drink or smoke in an area when handling objects: accidents can happen and the damage may be irreversible. Crumbs and food residue can be an attractant and food source for insects and other pests.
- Be sure that there is sufficient light when handling artifacts.
- Never pick up an object unless you have a safe and stable surface to put it on.
- Don't take the chance of damaging a heavy, awkward or large item. Get another person to help you.
- **ALWAYS** read the instructions on packing crates before opening and removing objects.
- When handling objects, remember that the following items can damage artifacts during handling and should be avoided if possible:
 - Necklaces with pendants
 - Large belt buckles
 - Bangle bracelets and some rings
 - High heels

- Tie clips and pens in shirt pockets
 - Identification badges
 - Full, loose sleeves
 - Loose or bagging smock pockets
- Nitrile gloves should be worn when handling paper, textiles, costumes, leather, metals, unglazed ceramics, bone ivory, horn and wood. Obtain the non-powdered kind, since the fine powder that is used may be deposited on objects. Clean heavy weight cotton work gloves can be worn when moving heavy functional objects and transportation vehicles. Body oils (which include salt and acidic oils) and soiling can be very damaging, causing irreversible stains and chemical changes such as metal corrosion, etc. In some instances the need for a good grip, detail work or exhibit installation makes the use of gloves awkward and even dangerous. In these cases, well washed hands without hand lotion is the next best approach.
 - As stated earlier, observe the object for previous repairs, new cracks, missing pieces, and safe handholds.
 - Use two hands for proper support.
 - Do not pick up an object by the handle, rim or other projections. Lift the item from its base or strongest point.
 - Remove detachable parts, such as lids, and move separately.
 - Avoid carrying objects whenever possible. Place the object on a padded cart or platform dolly. When loading a cart, put flat objects at the bottom with more fragile items on top, if stacking cannot be avoided. Provide padding between the items so they can't roll into each other while the cart is in motion. Provide ramps over offset doorway thresholds to avoid bumping.
 - Be careful with long objects, such as 18th-19th century long arms. Plan your route carefully, measuring doorways, aisle widths, and ceiling clearances if necessary.
 - Small and valuable objects should be kept in boxes or locked up until actually installed in a case.
 - Large functional objects (LFO's) may be more easily moved if detachable parts are removed first. Contact the 3D Objects Curator and/or Daniels Objects Conservation Lab before proceeding with this.
 - Smaller Paintings should be carried with one hand supporting underneath and the other hand at the side. Never carry a picture by only the top of the frame or by the stretcher. Carry a larger painting to a picture A-frame cart and use that to move it any distance.

Never touch the surface of the painting. Be wary of doorknobs and other projections that could tear or abrade the canvas.

SPECIFIC GUIDELINES FOR GALLERY INTERPRETERS...

- Gallery interpreters/docents act as the "eyes and ears" of the Collections in terms of spotting vandalism, deterioration, insect/rodent problems, etc.. Report any irregularities (i.e. moved objects, broken parts, dusty objects, etc.) using the form provided by F-HP (Collections Incident Report Form).
- Politely request guests not to touch and object or lean on exhibit cases. Encourage respectful guest behavior and enforcement of guest conduct rules is part of our preventive conservation program. Please refer to the MNHS Guest Conduct Policy: <https://drive.google.com/file/d/1tPu1bgA5jssvaPk7SYHlxoRyAtAKXh6z/view> and the MNHS Guest Conduct Policy Procedures: https://docs.google.com/document/d/1CvklUH_-yfUrvPMThagWUpDe3rjo6s_Rb35krfFSgPo/edit for specifics on how to deal with negative guest behaviors.
- If you have an object that appears to be difficult to handle or might be unstable, call the appropriate conservator for advice:

Textiles:	(651) 259-3385
Paper and Books:	(651) 259-3384
Objects:	(651) 259-3382

After large school groups come through the site, please check the objects and areas that could be receptacles for pencils, candy wrappers, gum wads, saliva (no kidding!), etc., etc.. Contact the Sites Collections and Exhibits Liaison for guidance on removing foreign substances from objects. In situations such as these, time is of the essence in terms of *removing the above mentioned substances from object surfaces. The longer gum or saliva remains on a porous surface, the harder it is to remove.*

MATERIAL CATEGORIES

Condition Problems to Check for

Categories:

Minerals:

Stone:

Can be broken or chipped from a sharp blow. Marble is brittle in cold weather.

Jade:

Susceptible to fracture.

Plaster:

Susceptible to chipping, cracking, hand soiling and water stains.

Metals:

Most polished metals show finger marks which are hard to remove.

Gold

Soft; dents and scratches easily.

Silver:

Scratches, dents and tarnishes; if high in copper content can be susceptible to hand acids and oils.

Iron, steel, and copper alloys:

Moisture causes corrosion. Old iron and bronze can be very fragile.

Medals

Susceptible to fingerprints and scratches.

Examine to see if it is a "sandwich" type medallion, if it is, then place on a support, if not handled by the edges.

Arms and Armor:

Always handle with gloves or a clean cloth.

Leather scabbards and other military leather objects may have stressed areas which could break if handled without additional support.

Non-Metals:

Ceramics:

Chipping and breakage are the biggest problems. Avoid stacking. Cracked glazes or unglazed pieces are susceptible to moisture.

Glass:

Don't dry-dust glass, it may scratch. Contact the Objects Conservator.

Organic Materials:**Wood:**

Easily chipped and scratched.

Old wood is brittle.

Water and humidity can warp and split wood.

Baskets:

Susceptible to dirt, dryness and splits. Don't lift by edges.

Don't stack baskets in each other.

Don't fold flexible baskets.

Lacquer:

Susceptible to finger marks. Flaking caused by temperature/RH changes.

Rubber:

Can be brittle and cracked; can also exude a sticky material that can damage other objects.

Lift with supports if it appears to be badly cracked.

Plastics:

Can be fragile if cracked. Susceptible to hand oils, moisture. Susceptible to light.

Paper:

Susceptible to light, insects, dampness, dryness and body oils.

Animal Products:**Textiles (Wool):**

Susceptible to insects, light.

Can easily be snagged by jewelry, etc.

Bone, Ivory:

Can be brittle and porous. Susceptible to staining from hand oils and other substances.

Wax:

Susceptible to heat and physical shock. Brittle in some cases.

IN SUMMARY...

- There are many items that have not been covered here. This handout is meant to serve as a quick guide.
- Thinking through the situation before acting can help to avoid accidents. Feel free to contact the Sites Collections and Exhibits Liaison with any questions concerning object handling procedures and problems.
- Remember, it's a lot less embarrassing to call us for help before something is broken than afterwards. We're here to help. Thanks!

Conserve O Gram

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Choosing A Museum Vacuum Cleaner

Every museum needs at least one high quality vacuum cleaner. Before you purchase a vacuum, be sure to consider how your vacuum will be used and what options you want. This will ensure that you can make an informed choice.

Museum vacuum cleaners can be used for:

- **general housekeeping**
- **dusting of collections**
- **removal of pest waste after an infestation**
- **responding to a mold outbreak**
- **flood cleanup**

Consider the following options before you purchase a vacuum.

Filtration System

Dry Vacuums

Filtration systems for museum vacuums must be very effective to keep most of the dust and dirt (particulates) from blowing through the exhaust and back out into the air. High Efficiency Particulate Air (HEPA) filtration is a more effective kind of filtration for dry vacuums than regular vacuum bags. Vacuums with HEPA filters are recommended for all museum applications. They are especially essential if there is a possibility items may contain mold, pesticide dusts, lead, arsenic, asbestos, insect eggs, soot, or any other contaminants. A HEPA filter must remove at least 99.97% of particulates 0.3 microns or larger in size. Any vacuum that you purchase should remove particles to at least 0.3 microns. ULPA (Ultra Low Penetration Air) filters remove particulates down to 0.12 microns and may be appropriate for specialized projects.

Dry vacuums will often have stages of bags and filters that remove more dirt and dust as the air moves through the vacuum cleaner. The large pieces are caught in a bag. There are high filtration bags available. The air continues to blow through the bag carrying small particles that are then caught in additional filters. The HEPA (or ULPA) filter will catch the smallest particles.

Wet Vacuums

Dental vacuums often use a water filter. Dirt is drawn down into a basin of water where it is caught and held. Such vacuums may be practical for specific uses because the power of the suction can be easily controlled and the nozzle size can be very small. Do not use regular water filtration floor vacuums, as they are not as effective as dry filtration vacuum cleaners with HEPA filters.

Wet-Dry Vacuums

Wet-Dry vacuums (Shop-Vac® and other similar brands) that can pick up water can be very useful in initial recovery efforts due to flooding. Your park's maintenance division prob

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ably has one or more such vacuums that you can use in an emergency, but it is a good idea to acquire one solely for emergency museum use. Such vacuums are relatively inexpensive and can be purchased at most hardware, home improvement, farm supply, and department stores.

As with other types of regular water filtration floor vacuums, wet-dry vacuums do not provide the filtering effectiveness of dry filtration vacuum cleaners with HEPA filters. Use wet dry vacuums only for initial recovery efforts aimed at eliminating excess flooded water from non-hazardous areas.

Be sure to coordinate all recovery efforts with your park's Safety Officer and wear any required Personal Protective Equipment (PPE). Only properly trained personnel under the direction of your park's HAZMAT Officer should attempt to clean up areas contaminated with hazardous materials. See Conserve O Gram 21/1 "Health and Safety Hazards Arising from Floods" for additional information.

Size and Manageability

Are you vacuuming the whole museum or historic structure, all of the furnishings in the building, or merely a few objects on a table? Do you want to be able to pick up the vacuum cleaner to get into tight spaces or do you want to be able to easily roll it around? Consider the following options and how they will affect using the vacuum:

- **Weight.** How heavy is the vacuum? Can all staff maneuver it around adequately to do the job? Do you want to be able to lift it? If so, you should purchase a lightweight model. Do you want it to remain on the floor? If so, the vacuum should have enough weight to remain stable even when the hose is tugged.
- **Casters.** Does it have casters and do they work well? You should be able to easily move the vacuum around the space.
- **Bumpers/padding.** Does the vacuum have rubber "bumpers" so that it will not damage furnishings (or you)? Remember to vacuum carefully near furnishings, don't rely on the bumpers alone.
- **Carrying straps.** Does the vacuum have a carrying strap to make it easy to carry around while working? There are also backpack models available.
- **Hoses and connections.** Ball joint connections make it move more smoothly and easily. Crush-proof hoses help eliminate damage to the hose.
- **Plug-in or battery powered.** Battery powered machines may give you more flexibility of movement, but batteries may add to cost. Battery-powered vacuums also may not possess the suction power of electric models.

Suction Strength and Variability

Textiles and other fragile collections should only be cleaned with a vacuum cleaner using low suction. (See Museum Handbook, Part I: Appendix K and your park's Housekeeping Plan for guidance.) You must be able to vary the suction strength either through an attached rheostat or a variable speed motor control. Many vacuums have a simple hole in the hose or wand that gives higher suction when covered. A variable speed model that also has a hose/wand hole provides even better suction control and flexibility.

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Choosing a Museum Vacuum Cleaner

Hoses and Attachments

There are a wide variety of hoses and attachments (wands, brushes, heads, and other tools). Crush-proof hoses are a good option to consider. Be sure that all hoses are long and flexible enough to use easily in the various spaces that will be cleaned. Anti-static wands and hoses are also available. Every museum should have a "micro-tool set" with assorted nozzles and tools that go down to a very small size. A tool set is inexpensive and these features can be very useful when cleaning museum artifacts. You can also buy additional nozzle attachments, so extras are available when you need them.

Adaptability

Consider a vacuum's adaptability. Can you buy different kinds of bags and filters (with various costs) that suit the needs of your particular cleaning problem? Can you use it to vacuum floors and artifacts?

Note: If you use the same vacuum to clean both floors and collections, you should have separate hose and tool attachments: one set for floors, another set for objects. Thoroughly clean the vacuum and replace the bag and filter before using on collection items. Nozzles and attachments should also be cleaned regularly with soap and water.

Cost

This is always part of the decision. There are a large number of vacuum cleaners available. Decide which models and options are important for your uses first and you will be able to make informed choices. Then cost considerations can be used to decide between several options.

Purchasing a Vacuum Cleaner

There are a variety of places you can purchase vacuums: vacuum cleaner stores, department stores, home improvement centers, museum supply firms, and other outlets. Your best source of information is to visit your local vacuum cleaner store. The staff is usually factory-trained and very knowledgeable about their products. Explain what you are looking for, and they can give you a wide range of information on a variety of vacuum cleaners. HEPA filter vacuums are often sold as allergy control vacuums.

Note: Be aware that some vacuums sold as "museum" vacuums may not have HEPA filtration and other attributes that you may want.

Supplies

Backpack Vacuums:

Li'l Hummer Fanny-Vac

Miracle Marketing Corp.

1174 East 2760 South #41 Salt Lake City, UT 84106

(800) 634-6102

HEPA Vacuums:

The Air Filter Store

27 Essex Drive Northridge, California 91324

(888) 246-8776

www.airfilterstore.com

Electrolux LLC

5956 Sherry Lane, Suite 1500

Dallas, Texas 75225

(800) 243-9078

www.electroluxusa.com

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Eureka Company
120 East Bell Street
Bloomington, Illinois 61701
(800) 282-2886
www.eureka.com

Miele USA 9 Independence Way Princeton, New
Jersey 08540
(800) 843-7231

www.miele.com
Nilfisk of America
300 Technology Drive
Malvern, Pennsylvania 19355
(800) 645-3475
www.pa.nilfisk-advance.com

Oreck Corporation 100 Plantation Road New Orleans,
Louisiana 70123
(800) 289-5888
www.oreck.com

Vacuum Micro-Tool Attachment Kits:
Clotilde, LLC P.O. Box 7500 Big Sandy, TX 75755
(800)-545-4002
www.clotilde.com
Micro-Mark
340 Snyder Ave.
Berkeley Heights, NJ 07922-1538
(800)-225-1066
www.micromark.com

University Products
P.O. Box 101
Holyoke, Massachusetts 01041
(800) 628-1912
www.archivalsuppliers.com

Wet/Dry Vacuums:

Oreck Corporation (see contact information above)
Sears, Roebuck, and Company
3333 Beverly Road Hoffman Estates, Illinois 60179
(800) 697-3277
www.sears.com

or your local Sears store
Shop-Vac
2323 Reach Road Williamsport, PA 17701
(570) 326-3557
www.shopvac.com

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