

Chapter 3: Preservation: Getting Started

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Chapter 3: Preservation: Getting Started

A. Overview

This chapter provides an introduction on how to develop park procedures and programs to achieve one of the main goals of the National Park Service (NPS) museum program: the preservation of museum objects, specimens, and archival collections. These cultural and natural collections are significant resources that are integral to the park's mission. They provide baseline information about the park and are essential for on-going and future study and use. Historic objects and archival collections document the lives and history of eminent Americans, various groups and significant events important to the nation. Natural history specimens and their associated documentation record evolving park ecosystems and provide information that help parks manage natural resources. Archeological collections and their associated documentation record human activity and preserve collections and data for future investigation. Both archeology and natural history collections rely on reports, photographs, maps and other associated records for analysis and understanding of the resource.

The NPS uses the terms **preventive conservation** or **preventive care interchangeably** to describe the range of activities that preserve museum collections. These include collections management, preventive care for collections in storage and on exhibit, as well as the examination, documentation, and treatment of individual objects. The activities are supported by research, the application of best museum practices, and the education of those who come into contact with collections, such as park interpretation, maintenance, and protection staff. Refer to definitions of these and other terms in the glossary at the end of this chapter. NPS policies for the treatment of museum objects, excerpted from the NPS *Management Policies*, are in [Appendix A](#).

This chapter provides information on:

- preventive care and treatment for museum collections
- NPS resources for preventive care
- how to plan for object conservation
- the role of a collection management plan (CMP) in conservation planning
- the role of a collection condition survey (CCS) in preservation and conservation planning
- balancing the preservation of historic structures and museum objects housed in these structures

Museum collections care and conservation facilitates object preservation by slowing chemical and physical change. This is an ongoing process of **preventive care** for the collections as a whole and is supplemented by object **conservation treatment**.

1. What is preventive care?

The role of preventive care, also known as preventive conservation, is to avoid, block, or minimize the **agents of deterioration**. By using preventive care techniques, the imperceptible deterioration that occurs on a daily basis (cumulative over time) and the occasional catastrophic damage can be limited. Object conservation treatment is necessary when damage results from the absence of, or inappropriate application of preventive care techniques, other catastrophes, or if objects are inherently unstable.

The **agents of deterioration** are forces that act upon objects and cause chemical and physical damage. The Canadian Conservation Institute's [CCI] definitions of the **agents of deterioration** are listed below. Refer to the CCI web site for detailed information on the agents of deterioration.

- **Direct physical forces**, such as shock, vibration, and abrasion that can break, distort, puncture, dent, and scratch all types of objects. Damage from these forces may be *cumulative*, such as damage from improper handling or support or *catastrophic*, such as earthquake, war, or shelf collapse.
- **Thieves, vandals, or careless individuals** who misplace objects. Some of these agents are *intentional*, such as criminals who steal or disfigure objects. Others are *unintentional*, such as staff or users who misfile objects.
- **Fire** that destroys, chars, embrittles, scorches, or deposits smoke on objects.
- **Water** that causes efflorescence in porous materials, stains, swells organic materials, corrodes metals, delaminates and/or buckles layered components, and loosens joined components.
- **Pests**, such as *insects* that consume, perforate, cut, graze, tunnel and/or excrete and destroy, weaken, disfigure, or etch organic materials. Pests include *vermin* such as birds and other animals that gnaw organic materials and displace small objects, foul objects with feces and urine, and *mold and microbes* that weaken or stain objects.
- **Contaminants** that disintegrate, discolor, or corrode all types of objects, especially reactive and porous materials. This includes *gases* (such as pollution, ozone, formaldehyde, nitric acid, sulfur dioxide), *liquids* (such as plasticizers, grease), and *solids* (such as dust, soot, salt).
- **Light levels** including both ultraviolet radiation and visible light. *Ultraviolet* radiation disintegrates, fades, darkens, and/or yellows the outer layer of organic materials and some colored inorganic materials. *Visible light* fades or darkens the outer layer of paints and wood.
- **Incorrect temperature** that can be *too high* causing gradual disintegration, discoloration or embrittlement of organic materials; *too low* causing embrittlement, which results in fractures of paints and other polymers; or *fluctuating* causing fractures and delamination in brittle, solid materials. Fluctuations in temperature also cause fluctuations in relative humidity [RH.]

- **Incorrect relative humidity** that can be *damp*, causing mold and corrosion, or *above or below a critical value*, hydrating or dehydrating some minerals and corroding metals that contain salts or cause embrittlement of other materials. Organic materials will gradually disintegrate, become brittle or discolor, especially materials that are chemically unstable at any RH level. *Fluctuating* RH will shrink and swell unconstrained organic materials, crush or fracture constrained organic materials, cause layered organic materials to delaminate and/or buckle, and loosen joints in organic components.

Most objects are affected by a variety of these agents of deterioration simultaneously. By addressing each agent of deterioration through the implementation of policies and procedures outlined in this handbook, the preventive care of your collections will improve.

The park curator has primary responsibility for preventive care of the museum collections. This requires ongoing vigilance and attention to ensure that damage does not occur. To carry out a proper preventive care program, you should:

- know the causes and recognize the symptoms of object deterioration
- inspect collections on a regular basis
- monitor and control the museum environment (relative humidity, temperature, light, pests, dust, and other pollutants)
- practice proper techniques for the handling, storing, exhibiting, packing, and shipping of objects
- provide appropriate security and fire protection for collections
- prepare and be able to implement emergency preparedness plans for collections

This introductory chapter describes how to identify preventive care needs, and develop a strong program using a Collection Management Plan (CMP). It also provides guidance on how to plan for object conservation treatment and Collection Condition Surveys (CCS).

2. *What is conservation treatment?*

Conservation treatment is the deliberate alteration of the chemical and/or physical aspects of an object (including specimens and archival materials) from a museum collection, in order to prolong the object's existence. Treatment may consist of stabilization and/or restoration. **Stabilization** constitutes treatment procedures that maintain object integrity and minimize further deterioration. For example, when a conservator washes paper, the washing removes acidic by-products of deterioration. **Restoration** consists of treatment procedures intended to return a museum object to a known or assumed state, or to improve its appearance. This may involve the addition of non-original material.

Consider conservation treatment in the following cases:

- when preventive care measures are not enough to reduce the rate of

deterioration to a tolerable level, such as actively corroding metals

- when deterioration has proceeded to a point where the object is extremely fragile and is in danger under any circumstances, such as paint flaking from a painting
- when stabilization or restoration is required for exhibit
- when stabilization or restoration is required for research

Work with your regional curator to decide whether conservation treatment is required.

Note: In accordance with NPS Management Policies, conservation treatments are done as a last resort, kept to a minimum, and should be reversible. This approach reduces the chances of compromising the aesthetic, archeological, cultural, historical, physical, religious, or scientific integrity of objects. The NPS emphasizes preserving original materials as completely as possible and minimizing invasive treatments or modifications or restoration.

Any person who performs conservation treatments for the NPS must agree to adhere to the American Institute for Conservation of Historic and Artistic Works (AIC) Code of Ethics and Guidelines for Practice. Include this requirement in all requests for proposals (RFQs) and contracts with conservators. A copy of this Code of Ethics is included in [Appendix D](#).

B. Planning for Object Conservation

1. *Who is responsible for museum object conservation?*

Preventive conservation and collections care is the responsibility of all who work in and around museum collections, including collection managers, registrars, conservators, curators, museum technicians, archivists, archives technicians, interpreters, maintenance personnel, preparators, and researchers.

The **collection management specialist (curator, collections manager, or archivist)** has primary responsibility for the day-to-day management of the museum collection. The duties of these professionals include:

- acquisition and deaccession
- documentation
- preventive care (preventive conservation)
- interpretation, exhibits and education
- research and publication

A curator has expertise in material culture studies and is trained and skilled in the history and philosophy of museums, as well as the practical aspects

of preventive conservation and collections care.

The **conservator** is trained and skilled in the theoretical and practical aspects of preventive conservation and object conservation treatment. Most conservators specialize in the treatment of specific groups of objects (such as archeological or ethnographic objects, books, natural history specimens, fine and decorative art objects, photographic materials, paintings, paper, sculpture, textiles, or wooden artifacts). There is overlap among these groups, so one conservator may work on a range of these materials.

The collection management specialist (such as curator, collections manager, or archivist) and the conservator work together and with other professionals to develop a successful conservation program. Conservators are responsible for recommending and carrying out conservation treatments. **Untrained staff should NOT attempt to do treatments.** However, the collection management specialist has the ultimate responsibility for deciding on the care and management of the collections.

The roles of the collection management specialist and the conservator are illustrated in Figure 3.1.

<i>Preventive Care</i>	
<i>Curator/Collections Manager/Archivist</i>	<i>Conservator</i>
<ul style="list-style-type: none"> • Monitors and assesses condition of collections • Monitors and evaluates museum environment, including signs and causes of deterioration. • Takes preventive actions to minimize causes of deterioration • Practices proper methods and techniques for storing, exhibiting, handling, packing and shipping of objects, and pest management • Develops and implements ongoing Integrated Pest Management (IPM), and housekeeping/maintenance program for collections • Prepares emergency operation plan for museum collections often working with an outside expert • Implements the Collections Management Plan (CMP) recommendations 	<ul style="list-style-type: none"> • Assesses condition of objects; conducts Collection Condition Surveys • Alerts staff to signs and causes of deterioration • Provides technical guidance on museum environment, storage, exhibits, handling, packing and shipping, and pest management • Assists in development of Integrated Pest Management (IPM) and housekeeping/maintenance programs • Assists in development and preparation of emergency operation plans
<i>Conservation Treatment</i>	
<i>Curator/Collections Manager/Archivist</i>	<i>Conservator</i>
<ul style="list-style-type: none"> • Documents history, significance, value, and proposed use of each object to be treated • Determines what should be treated • Develops and monitors contracts for conservation services • Assesses, in consultation with conservator, the suitability of written treatment proposals and authorizes treatments • Monitors progress of treatment for each object • Incorporates results of conservation treatment into the catalog record • Ensures continuing care for treated objects 	<ul style="list-style-type: none"> • Examines and documents conditions and problems of individual objects and collections • Prepares treatment proposals for curatorial review and approval • Performs suitable treatments • Documents treatments performed • Recommends methods for the future maintenance and care of treated objects • Performs analysis for research and interpretation

Figure 3.1. Comparison of Roles of Curator/Collections Manager/Archivist and Conservator in Object Conservation Management in the Museum

2. *How are systematic field collections prepared?*

Scientific collections, such as natural history and archeology collections recovered in the field are often prepared by the collector with expertise in an academic discipline such as archeology, botany, herpetology, paleontology, etc.). Depending on the discipline, different techniques are used in the field to uncover, clean, sample, identify, stabilize, and preserve materials so that the collections can be used for research and exhibit, and to ensure their long-term preservation.

Some specimens such as certain marine invertebrates, soft-bodied insects, amphibians, reptiles, and fish may be preserved in ethanol. Initial preparation may include fixing the specimen with formaldehyde (or formalin) in the field prior to storing them in alcohol, so that decomposition does not occur. However, the use of formaldehyde to fix biological specimens makes the recovery of DNA more difficult and may compromise future research. Archeological collections may be washed and sometimes treated with chemicals to remove soil and/or mineral deposits so surfaces can be examined. However, washing ceramics and lithics, and treatment with chemicals may remove or contaminate protein residues present. For that reason, a subset of the sample should be stored without preparation. Within the museum, preparators often continue to work on collections, most notably with paleontology and biology collections. Many are responsible for collections care, as well as the fabrication of specimen mounts and supports.

All techniques used before accessioning an object or specimen, and later in the museum, directly affect its long-term preservation. Therefore, all work done on the object or specimen must be documented. There are also many health and safety concerns associated with certain preparation techniques. The curator and conservator must work with field researchers and preparators so that from the time the specimens and objects are collected, thoughtful choices are made to their long-term preservation, and that work is done in a safe environment. This collaboration should start before the collections are made. (See the [NPS Conserve O Gram](#) technical leaflet series for information on many of these concerns.)

3. *What are the NPS information resources for conservation?*

NPS museum resources on conservation and preventive care include the publications below and are available at www.nps.gov/history/museum:

- *NPS Museum Handbook*, Part I (*MH-I*) contains extensive information on the essential components of a preventive-care program. Review the chapters on techniques for setting up your preventive maintenance programs, including [security and fire protection](#), [pest management](#), [emergency planning](#), [environmental monitoring](#), [storage](#), and [handling, packing and shipping](#). Appendices contain specific information on the preventive care of a variety of materials, such as archeological or natural history objects, metals, ceramics, and glass.
- *NPS Conserve O Gram (COG)* leaflets are short technical leaflets on specific topics in collection care and planning intended for collections management staff. They expand and update the information contained in the *MH-I*. These leaflets cover a wide range of subjects including:
 - General museum collections care

- Security and fire protection
 - Emergency preparedness planning
 - Curatorial health and safety
 - Museum collections environment
 - Biological Infestations
 - Museum collections storage
 - Various object types, such as archeological objects, archival items, metal, natural history specimens, paper, and others
 - Handling, packing and shipping
 - Museum exhibits
 - Historic house museums and historic furnished structures
 - Creation, care, and storage of digital materials
- NPS *Tools of the Trade* is a listing of curatorial supplies and equipment. It includes museum record keeping materials, storage containers, specialty curatorial items, natural history supplies, museum cabinetry, shelving and racks, and environmental monitoring and control apparatus. *Tools of the Trade* provides instruction on how to obtain museum supplies and equipment and source information for purchasing supplies or equipment. The NPS Park Museum Management Program (PMMP) updates this list periodically and makes it available to regional offices, parks, and centers.
 - [Interior Collections Management System \(ICMS\)](#), formerly ANCS+, is the collection management documentation system provided to all parks for cataloging and other documentation purposes. It contains associated modules and supplemental records that allow you to incorporate information provided by a conservator. This includes condition description, treatment reports and maintenance recommendations. The conservation associated module (conservation module) allows park staff and conservators to efficiently incorporate survey, treatment, and analysis information into object documentation.
 - Several NPS conservation laboratories work on park museum objects. Conservators from these labs can assist with surveys, carry out treatments and provide advice on conservation and conservation contracting. The labs are at:
 - Harpers Ferry Center, Harpers Ferry, West Virginia
 - Northeast Cultural Resources Center, Lowell, Massachusetts
 - Western Archeological and Conservation Center, Tucson, Arizona

4. *What are some other sources for conservation information?*

There are many conservation information resources outside the NPS. Refer to the bibliography and web sources section, Chapter 8, [Conservation Treatment](#) of this handbook, and the *Conserve O Gram* bibliography. Consult with your regional curator and NPS conservators if you need more

information.

5. *What do I need to do to develop a preservation program for my park?*

There are a variety of actions to take in planning and carrying out your preservation program.

Remember: *Museum preservation is an ongoing process, not a one-time effort.*

A well-planned program makes for a more efficient use of staff time and funding. Your program should include the following actions:

- Document the collection as required by the NPS *Museum Handbook*, Part II: [Museum Records \(MH-II\)](#).
- Conduct a self-evaluation to identify deficiencies using the NPS [Checklist for Preservation and Protection of Museum Collections](#) (see Appendix F.) Use the [Automated Checklist Program \(ACP\)](#), one of the utilities in ICMS, to complete and submit your Checklist. You must keep the Checklist up-to-date. The Checklist is also used for NPS Servicewide and Department of the Interior (DOI) reporting requirements. Use reports from the ACP to provide the “number of standards met” and the “percentage of standards met” to report accomplishments. For more information, see the *ICMS User Manual*, Appendix G: The Automated Checklist Program.
- Start your preventive care program by correcting as many deficiencies as possible. As you correct each deficiency, your preventive care program will begin to take shape. Next, develop program documents to implement the recommendations in your Collection Management Plan and other surveys. The program includes:
 - monitoring, evaluating, and controlling the museum environment in storage and on exhibit
 - using proper techniques for the handling, storage, exhibit, and packing and shipping of objects
 - implementing a housekeeping plan
 - implementing a housekeeping plan
 - providing security and fire protection
 - planning for emergency operations
 - inspecting objects on a regular basis
 - applying for conservation treatment when necessary
- Complete a Collection Management Plan (CMP) to assess your park’s collection management program and to provide specific guidance on improving the care of the collections
- Complete a Collection Condition Survey (CCS) of the collection after

examining the objects and assessing condition and treatment needs. Based on this report and available information regarding use and significance of each object, develop a prioritized object conservation treatment list.

- If you have a historic structure housing museum objects, assess the condition and preservation needs of the structure. Make sure that the actions you take to preserve the museum objects don't harm the historic structure. See Section E for more discussion about preservation of collections in historic structures.
- Prepare budget documents to improve and maintain the collections care program. See Chapter 12: [Programming, Funding, and Staffing](#), for information on programming and budgeting.
- Develop and implement training sessions or obtain external training for park staff who handle and work with museum objects.

Use this handbook together with the CMP and CCS to establish and implement a long-term, ongoing program for the preventive care and treatment of your collection. These documents will help you budget time, funds, and staff to address preservation needs.

C. The Collection Management Plan

A [Collection Management Plan](#) (CMP) is a review of your park's collection management program. It identifies problems, captures current conditions and practices, and makes recommendations on the management and care of the collections. To prepare the plan, use consultants from outside the park that have expertise in different areas. They can advise on how to improve your program efficiently and effectively. A Collection Management Plan provide guidance on issues such as:

- Scope of Collection Statement (SOCS)
- museum records and documentation
- different types of collections, including archival and manuscript collections
- preventive care issues, including environmental conditions, storage, fire and security protection, and emergency management
- collections accessibility and use
- staffing and funding needs

Refer to Appendix F for an example outline of a CMP.

1. *Why should my park have a CMP?*

A CMP provides recommendations for improving collection management at your park. Use it as a prioritized planning document to identify and prioritize tasks and to identify long-range curatorial staffing needs, including:

- documenting your collections
- caring for them in a way that will best preserve them
- making them available for use

A CMP provides the framework to help you organize the variety of collections management tasks for which you are responsible.

2. *What is the process for having a CMP done at my park?*

Follow these steps to have a CMP done for your park:

Request the plan.

Include a project statement describing the need for a CMP in the Project Management Information System (PMIS). Consult the regional curator for assistance in requesting a CMP. Refer to Chapter 12 for guidance on programming and budgeting for museum collection management

Select a planning team.

To ensure objectivity and diversity of views, select a team of NPS or contract museum professionals with expertise appropriate to the nature and needs of the park's collections. The team is made up of curators or collections managers and may include an archivist and conservator. The regional curator may assist with the plan. The CMP team visits your park and collects information from park staff, the regional curator, and other regional specialists, as appropriate.

Prepare and review the plan.

Assign a team coordinator from outside the park. The coordinator's duties include:

- coordinating selection of team members
- planning the site visit
- coordinating pre-visit activities, such as preparing a pre-visit questionnaire for park staff and collecting previous planning documents
- coordinating on-site activity to ensure the team collects adequate and appropriate information
- preparing a briefing for the superintendent at the opening meeting and a summary of findings for the close-out meeting
- as requested, writing a trip report for the park and the region outlining the general findings and recommendations, including those that should be implemented prior to the completion of the CMP
- reviewing and editing the draft plan and forwarding it to the park for review and approval

Individual team member duties include:

- reviewing all relevant park documents ahead of the visit

- participating in the site visit
- evaluating collections, facilities, park procedures and record keeping
- writing assigned sections and submitting them to the team coordinator by the deadline
- revising sections as necessary based on comments

The coordinator submits a review draft of the CMP to the park and region. A draft may be submitted to PMMP and other WASO offices as appropriate. A revised draft addresses and incorporates comments as appropriate. The superintendent approves the final document upon recommendation by the regional curator and concurrence of the regional deputy director.

Distribute the final plan.

Distribute your CMP to all offices and repositories listed in Director's Order #28: NPS-28 *Cultural Resources Management Guideline, Appendix D: Distribution/Availability of Final Cultural Resource Reports*. There may be other offices designated by your park or region for distribution.

Note: Sensitive information, such as security systems, is considered restricted information and must be kept secure. **Do not release** to any individuals or offices, other than the superintendent and the facility manager.

Implement the plan.

The plan lists a variety of tasks that take time and often money to implement. Use these tasks to develop a strategic plan of accomplishable goals. Some tasks can be completed quickly; others require long-term planning and effort. Review the plan regularly to be sure you are completing necessary actions.

It may be necessary to update the plan as your situation changes; for example, as you add new collections or build new facilities. Consult with your regional curator about options for updating your plan.

3. *What other kinds of surveys and plans will help me preserve collections?*

There are several other useful planning tools. Each focuses on one aspect of **preventive care** and provides in-depth information. Some are requirements on the Checklist for Preservation and Protection of Museum Collections. Refer to the associated chapters in this handbook, the checklist in Appendix F and the ACP in ICMS unless otherwise specified. These documents include:

- security survey, which assists in planning for appropriate security systems (Checklist question H.2). See Chapter 9: Security and Fire Protection.
- fire protection survey, leading to a structural fire management plan (Checklist question H.3). See Chapter 9: Security and Fire Protection.
- storage survey, leading to a Collection Storage Plan (CSP) (Checklist question H.7). See Chapter 7: Museum Collections Storage.

- archival survey, to identify records that should be considered for inclusion in the park archives, provide a collection level description of materials, develop a draft processing plan, review legal issues, identify preventive care issues for the archival and manuscript collections, and provide planning advice for future work. See *MH-II*, Appendix D: Archives and Manuscript Collections.
- general condition survey, to evaluate the overall condition of collections and make recommendations about how to improve preventive conservation and care practices. This survey may be part of a CMP or a stand-alone document.
- written recommendations by an appropriately qualified professional, for improving the museum environment (temperature, relative humidity and light) based on ongoing park environmental monitoring (Checklist question H.1). See Chapter 4: Museum Collections Environment.
- The Collection Condition Survey (CCS) **identifies condition and treatment needs** and may include preventive care recommendations (Checklist question H.6.).
- Museum Housekeeping Plan that provides a **framework for routine and special housekeeping tasks** to ensure consistent care of collections. See Chapter 13: Museum Housekeeping.

D. The Collection Condition Survey

A Collection Condition Survey (CCS) is a report on the status of the condition of groups of like objects in a park's museum collection.

Select a conservator with the appropriate expertise for the segment of your collection to be surveyed, such as photographic conservator to survey your historic photographs to determine treatment needs and record baseline data for future assessment of deterioration. Another conservator may examine and evaluate the objects on exhibit for signs of deterioration, as well as the mounts, lighting, case design, and construction. The survey report may also include recommendations about preventive care needs, such as storage techniques, environmental conditions, and pest control.

Your goal is to achieve a comprehensive evaluation of the entire collection. Over time, you may need several different surveys by conservators who specialize in different types of materials. Your needs will depend on the size and type of your collections, and park programs and priorities.

<p><i>You must use a qualified professional conservator to do a Collection Condition Survey.</i></p>

You can work with a National Park Service conservator or an outside contractor. If you contract with a conservator from outside the NPS, consult with your regional curator and get recommendations and descriptions of previous work to be sure the individual is qualified.

1. *How do the CCS and the CMP overlap?*

The CMP and the CCS both contain information on preventive care. Recommendations on preventive care included in a CMP usually focus on general conditions in exhibit and storage areas. Curatorial specialists other than conservators may make these recommendations. The preventive care recommendations made by a conservator in a CCS provide guidance on how to slow or minimize deterioration outlined in the object-by-object survey. Generally, the CCS is requested once the CMP is completed. Conservation treatment is only appropriate once the collections are documented and preventive care programs are in place.

2. *What are the steps involved in the survey process?*

Request the survey.

To request a CCS, consult the regional curator for assistance. Refer to section C.2 and Chapter 12 for guidance on programming and budgeting. Be sure to include the need for a conservation survey in PMIS.

Select the conservator(s).

A NPS or contract conservator or team of conservators will visit your park to observe, analyze and collect information that goes into the CCS. The team size depends on the types of materials to be examined at one time. Conservators conducting a CCS must be specialists in the treatment of the specific class of objects they are examining (such as, furniture, textiles, metals, archeological objects, paper, books, paintings, ethnographic objects, or natural history specimens). To ensure the conservator you select has appropriate knowledge and experience to evaluate your collection, ask for a written response to the following questions:

- What kind of training do you have? Conservators get training both through academic departments and internships. They should be willing to describe to you how their training is appropriate to your park's needs.
- How long have you been a conservator? You want to work with conservators who have finished their training and worked professionally for at least five years.
- What percentage of your business is conservation? The conservator should spend most of his/her time doing conservation work.
- Have you worked on this type of material/done this kind of survey before and how many times [separate occasions] you done this work?
- Can you give me references and contacts of previous clients?
- What museum conservation organizations do you belong to?
- Are you a member of AIC at the Professional or Fellow level?
- Do you agree to follow the AIC Code of Ethics and Guidelines for Practice?
- Are you available when I need you?

You are looking for a knowledgeable, experienced conservator who has considerable experience in working on the type of material that you have in your collection. If a conservator agrees to follow the AIC Code of Ethics

and Guidelines, they are agreeing to follow current and generally accepted standards and practices of the conservation profession.

See Figure 3.2 for an sample Scope of Work (SOW).

Conduct the survey.

The conservator needs to evaluate all your collections in storage and on exhibit in order to evaluate both the objects and the conditions in which they are housed. Each conservator will conduct the survey a little differently, but you should expect to provide:

- a staff member to work with the conservator to:
 - access collection storage rooms, vaults, cabinets, shelves, and other locations where objects are stored
 - assist in moving heavy or unwieldy objects
 - answer questions and provide data about environmental monitoring, IPM programs, preventive maintenance, collection use, housekeeping, object storage, storage plans, potential exhibit use, plans for future acquisition and deaccessioning and other information as necessary
- a suitable workplace near the objects
- catalog, accession, and previous conservation (treatment and survey) records when required
- access to Interior Collections Management System (ICMS) or pertinent collection documentation

Note: Access to ICMS is only necessary if the SOW requires the conservator conducting the survey to enter information from the survey directly into ICMS. Alternatively, the conservator can prepare the information using compatible software such as Microsoft Excel for park staff to enter into ICMS. Conservation documentation can also be scanned and attached to the pertinent ICMS record.

Prepare and review the CCS report.

Develop a written schedule outlining specific tasks at the start of the project, and agree when a draft report will be available for review. A one to three month period is a reasonable amount of time to produce a draft report. Review the draft carefully and request additional information and clarification where necessary. Multiple review drafts may be necessary. The conservator should be able to finalize the report within another month, once all NPS reviews have been incorporated.

Note: The CCS has a limited lifespan. Park staff should make sure that cost estimates are current.

Distribute the report.

Distribute the CCS to the park and the regional curator and to others designated by the park and region.

Implement the recommendations of the Collection Condition Survey report.

The CCS report documents the condition of the objects that the conservator examined, identifies treatment needs, and sets priorities for treatment based solely on physical condition and risk. Evaluate this information in terms of curatorial priorities, such as significance, interpretive programs, and research needs in deciding which objects to treat. Balancing preservation with access and use allows you to develop a conservation treatment program. Implement the preventive care recommendations from the CCS and engage a conservator to provide treatments.

Add CCS data on individual objects to collection records.

Section D.5 discusses how to incorporate this information into ICMS records. Adding this information to ICMS ensures that it will be retained with other information about the object for the long-term.

3. *What format should the CCS have?*

CCS reports will vary in the information they provide. Because they may give general preventive care recommendations in addition to object-by-object condition assessments, the structure will reflect the information they contain. The CCS **must** include the following information:

- *Introduction:* Narrative introduction that gives general information about the park visit (for example, park name, dates, name of conservator(s), and explanations of all technical terms).
- *General recommendations:* General recommendations and preventive care tasks as appropriate.
- *Object-by-object assessments:* Individual object assessments with a narrative (text format) and an optional checklist format of conditions. Include information to complete the ICMS condition field on the catalog record. See a description of this field below.
- *Summary wording:* Language that can be incorporated into Resources Management Plan (RMP) and/or Performance Management Information System (PMIS) statements. See Figure 3.3 for examples.

The conservation module in ICMS allows the incorporation of information on condition and maintenance collected in conservation surveys directly into ICMS collection management records. The *ICMS User Manual* provides guidance on how to use the Conservation Module. See Chapter 4, section II, *Associated Modules*.

4. *What is the Condition Field in ICMS?*

Have the conservator supply standard NPS abbreviations for the Condition field on the Collection Record for each object examined for the CCS. Incorporating this information into your ICMS catalog records will help parks, centers, and the Park Museum Management Program make better estimates of the condition of park collections Servicewide. It also allows you to track change in condition over time.

For objects, use one term from each of the two criteria groups below:

Group I		Abbreviation
Complete:	100% of object present	COM
Incomplete:	more than 50% and less than 100% of object present	INC
Fragment:	less than or equal to 50% of object present	FRG
Group II		
The following descriptions are for the object in hand regardless of whether it is complete, incomplete, or fragmentary. Note that an object can be incomplete, yet still be in excellent or good condition.		
		Abbreviation
Excellent:	No damage or deterioration. No treatment needed; no change will occur with good preventive conservation practices in place (such as a pristine porcelain plate).	EX
Good:	Minor damage and no active deterioration. No change will occur with good preventive conservation practices. Minor cosmetic treatment may be needed before exhibit (such as heavily used historic objects)	GD
Fair:	Some damage and/or slow but active deterioration. Treatment may be needed to stabilize or before object is exhibited (such as a decorative ceramic object with losses to the rim, or slowly rusting iron objects).	FR
Poor:	Significant damage and/or active deterioration. Treatment is needed to prevent additional damage or deterioration (such as a table with one leg missing, making it structurally unstable or an archeological copper alloy object with “bronze disease”).	PR

Make entries using a slash between each term, such as INC/FR. Examples include:

- An unbroken drinking glass with no surface deterioration and no deposits would be COM/EX.
- A single archeological painted ceramic sherd that had been abraded during burial would be FRG/GD.
- A chest of drawers with lifting and lost veneer would be INC/FR.
- A leather saddle with red rot would be COM/PR.

5. *What other information can I add to the ICMS collection management program?*

The ICMS Conservation Module provides a way for parks to easily extract data from the condition assessments and include that data in the collection management records. The conservator doing the survey can enter data directly into the conservation module or use compatible software, such as Microsoft Excel that will allow the park staff to import the data into the appropriate fields in ICMS. The *ICMS User Manual* includes instructions for using the conservation module and importing data. See Chapter 4: II for use of the Conservation Associated Module and Chapter 8: IV for importing data into ICMS.

Condition description: The Condition Description (Cons Descrip) field appears in two places in ICMS; the catalog record and the conservation module. If there is existing data in this field, append it with the new data from the current condition description and include the conservator's name and date.

Conservators may use terms that are different from ICMS field names. Have the conservator identify the equivalent ICMS field names in their documentation. See Figure 8.1 in this handbook for a listing of equivalent terms that will allow you to copy and paste information from the conservator's documentation into the catalog record. Be sure to incorporate it as a requirement in your SOW and contract.

Some conservators use a narrative form that is readily copied and pasted into the field, others use a checklist. The curator can also scan conservation reports into the catalog record.

Preservation Supplemental Record: Use the Preservation supplemental record in ICMS to record the treatment priority determined by the conservator, see the *NPS ICMS User Manual*, Chapter 3: Supplemental Records, XIV Preservation Supplemental. Record that the object was surveyed as well as any treatment priority indicated by the conservator.

Maintenance Associated Module: Use this module to record regular maintenance recommended by the conservator. This module will help you develop schedules for carrying out and documenting maintenance treatments. For example, if a conservator recommends monthly vacuuming of all upholstered furniture on display, record it here. For information, see the *NPS ICMS User Manual*, Chapter 4: Associated Modules, VI Maintenance Associated Module.

E. Preservation of Historic Structures Housing Park Collections

Museum collections may be housed in a historically significant structure. Historic structures have their own preservation needs that may differ from the needs of the museum objects. Be aware that the environment that best preserves museum objects may differ from the best environment that preserves the structure. This requires balancing the needs of managing museum objects housed in a historic structure with the preservation needs of the historic structure itself.

Certain conditions that are optimal for museum collections may cause more wear on the structure than its original use. These include:

- Installation of museum exhibits or storage areas may impose loads or require physical design changes to the structure in conflict with its original design and historic integrity.
- Controlling and maintaining certain relative humidity levels may cause serious damage to the structure such as condensation within walls and spalling of exterior finishes.
- Installation and operation of modern mechanical, electrical, plumbing, security, and fire detection and suppression systems will require changes that impact and may damage the historic and structural integrity of the structure.

Find passive ways to control climate and light levels whenever possible

Rather than installing a complex mechanical system that may damage the structure and be hard to maintain, find passive and sustainable ways to control temperature, relative humidity and light. This includes using historically sympathetic methods such as installing appropriate period blinds or shutters.

To improve collections care in the historic structure, first do a systematic assessment of risks. By identifying, quantifying and prioritizing risks and appropriate actions, you will be able to make an informed decision that ensures the long-term preservation of both the collections and the historic structure. Consult with the regional curator, historical architects and preservation engineers familiar with these issues. Seek the assistance of other curators, conservators, historical architects, and preservation engineers who have done similar projects. Consider the following factors in your decision-making process:

- nature, condition, and preservation needs of the museum collection
- nature, condition, and preservation needs of the historic structure housing the museum collection
- effects of the planned use (for example, interpretive programs) on the historic structure and the museum collections

The concerns for preserving objects and historic structures that house them are outlined in the [New Orleans Charter for Joint Preservation of Historic Structures and Artifacts](http://www.apti.org/resources/charters1.cfm). (<http://www.apti.org/resources/charters1.cfm>).

Use these principles when developing your own preventive care projects for museum collections in historic structures in your park.

You must have a Historic Structure Report (HSR) completed prior to a major intervention (such as an intrusion detection system, fire detection/suppression system). Any project, activity, or program that can result in changes in the character or use of historic properties that meet

National Register criteria are subject to Section 106 review (36 CFR 800). Consult with your park or regional office historical architect and preservation engineer, and refer to D.O. #28: Cultural Resource Management Guideline for guidance.

When structures cannot be conditioned to ensure proper collection storage, consider centralized storage.

F. Glossary

Agents of deterioration – those agents that act upon museum objects to cause physical and/or chemical changes that limit their lifespan due to deterioration or damage. The agents are listed in Section A.1.

Archivist – a professional responsible for managing and providing access to archival and manuscript collections

Collections Manager – a professional responsible for managing and providing access to museum collections

Conservator (museum objects) – a person trained in the theoretical and practical aspects of preventive conservation and care, and in performing treatments to prolong the lives of museum objects. Most conservators specialize in specific classes of collections. They formulate and implement conservation activities in accordance with an ethical code such as the AIC Code of Ethics and Guidelines for Practice.

Curator – in the NPS, a person professionally responsible for the management, preservation, and use of museum collections. Collection management responsibilities include acquisition and disposal, documentation and cataloging, preventive conservation and care, storage, access, interpretation and exhibition, and research and publication. The curator is a discipline or material culture specialist (such as archeology, history, biology, or fine arts). Curators on park staffs who work directly with collections are known as museum curators; curators in other offices are known as staff curators. In the absence of archivists, curators are responsible for archival collections.

Object Conservation – measures taken to prolong the life of a museum object and its associated data

Preservation – the act or process of applying measures to sustain the existing form, integrity, and material of an object by activities that minimize chemical and physical deterioration and damage and prevent loss of information; primary goal of preservation is to prolong the existence of cultural property

Preventive Conservation (or Preventive Care) – non-interventive actions taken to prevent damage to and minimize deterioration of a museum object. Such actions include monitoring, recording, and controlling environmental agents; inspecting and recording the condition of objects; establishing an integrated pest management program; practicing proper handling, storage, exhibit, housekeeping and packing and shipping techniques; and incorporating needed information and procedures about objects in emergency operation plans.

Reformatting – for preservation, producing a copy of an original item or copy in the same or a different format to preserve the information it contains. Making a copy negative or digital copy of an original photographic negative is an example of reformatting.

Restoration – interventive treatment action taken to bring an object as close as possible to its original or former appearance by removing accretions and later additions and/or by replacing missing elements

Stabilization – interventive treatment action taken to increase the stability or durability of an object when preventive conservation measures fail to decrease its rate of deterioration to an acceptable level or when it has deteriorated so far that its existence is jeopardized

Treatment – the deliberate alteration of the chemical and/or physical aspects of museum objects, aimed primarily at prolonging their existence; treatment may consist of stabilization and/or restoration

G. Selected Bibliography

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- Rose, Carolyn L., Catherine A. Hawks, and Hugh H. Genoways, eds. *Storage of Natural History Collections: A Preventive Conservation Approach*. Iowa City, Iowa: Society for the Preservation of Natural History Collections, 1995.
- Thompson, John M.A. *Manual of Curatorship: A Guide to Museum Practice*. Oxford, UK: Butterworth-Heinemann, 1992.

H. Web Resources

- American Institute for Conservation of Historic and Artistic Works (AIC): www.conservation-us.org/
_____. 'Find A Conservator' database
- _____. AIC Code of Ethics and Guidelines for Practice.
- Canadian Conservation Institute (CCI): www.cci-icc.gc.ca/index-eng.aspx
_____. Agents of Deterioration

Conservation On-Line

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

National Park Service

- _____ [Harpers Ferry Center Conservation:](#)
- _____ [Park Museum Management Program.](#)
- _____ [NPS *Museum Handbook*](#)
- _____ [NPS *Conserve O Gram* Technical Leaflet Series](#)
- _____ [National Center for Preservation Technology and Training](#)

J. List of Figures

- Figure 3.1 Comparison of Roles of Curator/Collections Manager/Archivist and Conservator in Object Conservation Management in the Museum
- Figure 3.2 Sample Scope of Work for Requesting a Collection Condition Survey (CCS)
- Figure 3.3 Sample Project Management Information System (PMIS) Statement for Requesting Conservation Treatment Based on CCS

SCOPE OF WORK (Sample)
Collection Condition Survey

[Park Name]

I. Background Statement

Provide information on the size and breadth of collections and why a Collection Condition Survey is needed.

The park requesting a Collection Condition Survey of collections is:

[Name - Address - Telephone number - Email Address]

II. Purpose/Objectives

A. The purpose of the work is to 1) conduct an on-site Collection Condition Survey (CCS) at [PARK] and 2) produce a report identifying the conservation and preservation needs of individual objects stored and exhibited at [PARK]

The survey will focus on material stability to determine object conservation treatment needs; including determining and recording the condition of individual objects or groups of objects in the collection in need of professional conservation treatment. The survey will also include recommendations for preventive care, and improvements to museum storage and exhibit conditions.

The results of the survey will provide guidance to (PARK) and regional curatorial staff in setting priorities for object stabilization and/or treatment, and preservation management of the park collections. The survey will also facilitate budgeting, scheduling, and subsequent communications with conservators regarding treatment. Object-specific data, using a compatible documentation or software format that identifies equivalent ICMS data fields from the survey will be entered into ICMS, the park's automated collections management system. The survey will identify ICMS compatible

B. The conservator must comply with the *Code of Ethics and Guidelines for Practice* of the American Institute for Conservation of Historic and Artistic Works (AIC) in all work performed.

C. A time will be set for the site visit in conjunction with the park Superintendent and the Conservator when it is convenient for both parties.

D. Prior to the visit the park will provide:

- a copy of the Scope of Collection Statement (SOCS),
- copies of any previous surveys or reports that may assist the conservator in understanding the history of park collections including:
 - Collection Management Plan
 - Collection Storage Plan
 - Environmental monitoring records
 - Fire protection survey
 - Emergency Operation Plan (EOP)
 - Structural Fire Plan
 - Intergrated Pest Management
 - Facility Checklist
 - Housekeeping Plan

Figure 3.2. Sample Scope of Work for Requesting a Collection Condition Survey (CCS)

E. Approved in advance by the Superintendent, the park staff will provide on-site:

- a suitable work space
- supervised access to collection storage rooms, vaults, cabinets, shelves, and other locations of museum objects
- opening and closing of storage cabinets and vault or other containers that may be locked
- assistance with moving heavy or unwieldy objects
- access to museum property accountability (catalog and accession) and conservation (treatment and survey) records when required
- answers to questions about existing environmental monitoring and control, preventive care of objects, uses of objects, plans for future acquisition and disposition of objects, plans for future exhibition of objects, and the park's pest management program
- other information as needed

F. Prior to the visit the Service Provider/Conservator will provide:

- A vitae that clearly demonstrates an expertise in the conservation of museum objects and a history of completing work of this scope and character. Qualifications must include a comprehensive work history showing specialized training in the field of conservation.
- A list of references from museum professionals with first hand knowledge of work performed.
- Condition Worksheet, blank and completed
- Final report of work completed

III. Tasks

The conservator will

- A. Conduct an entrance interview with the Superintendent and designated park staff (curatorial, maintenance and other resources staff) upon arrival at the park. The purpose of the interview is to explain to the staff the conservator's methodology and anticipated survey schedule and to detail any local support that may be needed.
- B. Conduct a hands-on survey of collections by examining each object individually, or, as appropriate, by examining representative samples of large groups of similar objects.

The following factors will be considered in determining the object condition and conservation treatment needs of groups of similar objects in storage and on exhibit:

- The nature of the environment in which collections are stored or exhibited including building structure, temperature, relative humidity, dust, natural and artificial light sources, pests, air pollution, and other agents of deterioration, as well as the local climate conditions.
 - Storage methods, mounts, and techniques including appropriateness, quality, and efficiency of use.
 - Evidence of recent damage or deterioration, including failure of preservation treatments, damage to objects during their use for interpretation and study, effects of visitor handling or vandalism, and deterioration due to adverse environmental factors.
 - Any other general or specific issues concerning the collection's preservation, conservation, and/or treatment needs.
- C. Upon completion of the survey, the conservator will meet with the park Superintendent and designated curatorial staff to review the survey results. The close-out meeting should cover the findings and recommendations the Conservator anticipates including in his/her report. At this time, the conservator will gather any data or information not already obtained that will be required for production of the survey report.

Figure 3.2. Sample Scope of Work for Requesting a Collection Condition Survey (continued)

D. The conservator will prepare a written report of the completed survey using software designated by the park. The report shall include the following elements:

- Brief description of the schedule, sequence, procedures, and methodology used in conducting the survey in the park; identification of person(s) conducting the survey; identification of park staff who were involved in the survey and how they were involved; a brief summary of the entrance and exit interviews
- Condition information on individual objects and/or groups of objects in a park-compatible electronic format.

This information must either be entered into or be transferrable to the ICMS Conservation Module [required and optional fields are described in the ICMS *User Manual*, and see also figure 8:3 for equivalent conservation terminology.] The contractor will provide data for these fields on disk using a template provided by the park. If the Conservator does not enter then data directly into the ICMS conservation module the park will transfer this information into ICMS.

E. When preventive maintenance treatment or simple treatments can be done by the park; park staff will be identified, the treatment will be briefly described and materials will be recommended. All recommended materials shall be commonly used by conservators and selected for reversibility, stability, and ease of use. Materials shall be described generically, though brand names also may be given for reference purposes.

F. Provide instructions for the park curatorial staff to follow when carrying out work that the conservator recommends they perform. In most instances, instructions will be common practices.

G. Provide a time estimate required for a professional conservator to carry out each recommended treatment. If possible, provide a cost estimate for the treatment if done by a conservator specializing in that discipline. The park can use this information to program funds to accomplish the work. When appropriate, note economies of cost or other benefits that might be realized by simultaneously treating similar objects, or objects with similar treatment needs.

IV DELIVERABLES AND PAYMENT SCHEDULE

A. Provide five copies of the draft survey report on single sided 8 1/2" x 11" paper. Each line must numbered on the left side of the page. The following must be included; a title page listing the park name, the conservator's name, project completion date and numbered table of contents. An electronic file of the document must be provided to the park. Individual object information must be provided in electronic format as described in the *ICMS User Manual*.

B. The final CSS report must be on 8 1/2" x 11" neutral pH, high alpha cellulose, white paper such as Permalife Bond Paper or equivalent, single-sided and paginated, and printed using carbon-based, black laser printer ink. The following must be included; a title page listing the park name, the conservator's name, project completion date, and paginated table of contents. An electronic copy and two hard copies must be provided to the park. The electronic file (CD or DVD or other compatible format) must be labeled with the same title as the report plus the file name. Any revised individual object information must also be provided in electronic format as described in the *ICMS User Manual*.

C. Photographic documentation

The conservator must provide the following:

- Digital files with full color images of each object in an uncompressed TIFF format with Dublin Core metadata provided for each image. JPEG files or any form of lossy compression files will not be accepted.
- Hard copy color prints all images photographed.
- A signed release form granting copyrights of all photographs to the park. (See *NPS Museum Handbook*, Part III, Figure 3.4, Assignment of Copyright by Contractor.). The Conservator may keep a copy of each image for private or educational use. Images kept by the Conservator may not be used in for-profit publications, for , for commercial distribution, or for exhibitions by the surveyor or any other individual or institution without written permission from the Superintendent or Park Curator. The credit line shall include the following information: "Courtesy of the National Park Service," Park Name, Object Name, Object Date, Catalog Number.

Figure 3.2. Sample Scope of Work for Requesting a Collection Condition Survey (continued)

- A separate sheet of photographic captions will be prepared and electronic file will be included in the disk (CD or DVD) with the report. When applicable, the captions will link directly to an object's accession or catalog number. The number shall be written in carbon black ink or pencil on the non-emulsion side of the image on the border or non-image area in neat, easily readable print.

D. Payment shall be made in two phases.

- Phase I involves the site visit and preparation of the DRAFT Collection Condition Survey. The first draft shall be due 30 days following the site visit. Upon receipt of the draft document and an invoice for 50% of the total sum shall be delivered to the contractor. The park will provide government review comments within 30 days.
- Phase II includes delivery of the final document, which is due 30 days following receipt of the review comments. Phase II payment of the remaining 50% of the total sum will be delivered upon receipt and acceptance of the final documents and receipt of an invoice.

The final Collection Condition Survey shall be sent to:

[Name - Address - Telephone number – Email address]

Figure 3.2. Sample Scope of Work for Requesting a Collection Condition Survey (continued)

Project Description

The park has a collection of approximately 300 desiccated wood and fiber objects recovered from dry caves throughout the Southwest. These materials include basketry, sandals, textiles, cordage, and a number of small wooden artifacts. In 2011, a conservator carried out a Collection Condition Survey (CCS) on this collection. Objects were prioritized for treatment and a basic treatment methodology was recommended.

All objects will be treated in accordance with the recommendations outlined in the CCS. A professional conservator with experience in wood and fiber will perform the work. The conservator will photo-document the objects in high resolution digital format and provide reports of the treatments performed on this group of objects. All activities will follow the Code of Ethics and Standards of Practice of the American Institute for Conservation of Historic and Artistic Works. The conservator will provide information that for inclusion in ICMS..

Needs: Stabilization of loose fragments, basic cleaning, removal of deposits from burial and construction of specialized mounts. Conservation treatment will also identify fiber and wood types, stabilization and cleaning protocols and mount construction methodology. These objects are primary sources for archeological research and conservation treatment is necessary so that the materials can safely be made available to researchers for study. Analysis carried out during treatment will add to the documentation available about these objects.

Recommendations will guide management decisions on future access and use, including exhibition. Photographs resulting from the project will be included in ICMS database and made available online through the NPS Museum Collections search module to increase public access to NPS collections.

Figure 3.3. Sample Project Management Information System (PMIS) Statement for Requesting Conservation Treatment Based on CCS