

DEPARTMENT OF THE INTERIOR  
**DEPARTMENTAL MANUAL**

Museum Property Handbook  
(411 DM, Volume I)

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Chapter 12 Museum Property Emergency Planning

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**A. INTRODUCTION<sup>1</sup>**

Disasters are probably the greatest single cause of attrition to the world's cultural and natural heritage. Disasters are a class of emergencies: not all emergencies become disasters, but all disasters are emergencies that have gotten out of control. The primary goal of emergency planning is to avoid the loss of resources (in this case, museum property) affected by the emergency. **Advanced planning is the key to meeting that goal.** The primary objectives of emergency planning are as follows:

- ! to anticipate and, if possible, to avoid emergencies;
- ! to retain control when an emergency occurs; and,
- ! to recover control as quickly as possible if it is lost.

How effectively damage is limited in a disaster situation depends to a very great extent upon the thoroughness of the planning effort.

An Emergency Management Plan for Museum Property identifies an organization's vulnerabilities to disaster; points out how some of them can be mitigated and others prepared for; details ways of responding to and controlling disasters that do occur; and provides a guide to the organization's ultimate recovery. The purpose of this Chapter is to present guidance for unit staffs in protecting museum property from the effects of serious emergencies and disasters. Refer to Appendix I, Sections A and B for laws and requirements relevant to emergency planning.

Each unit must have an Emergency Management Plan for Museum Property that is part of the unit's overall emergency plan. If the unit does not yet have a unitwide emergency operations

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<sup>1</sup>This chapter is similar to material published by John Hunter in the book Protecting Historic Architecture and Museum Collections from Natural Disasters edited by Barclay G. Jones (1986), pp. 2-11 through 2-30. The material is derived from early manuscripts written by the author for use in the National Park Service.

DEPARTMENT OF THE INTERIOR  
**DEPARTMENTAL MANUAL**

Museum Property Handbook  
(411 DM, Volume I)

---

Chapter 12 Museum Property Emergency Planning

---

plan, then the Emergency Management Plan for Museum Property may be written as a stand-alone document.

**B. HAZARDS TO MUSEUM PROPERTY<sup>2</sup>**

When planning for emergencies, it is important that all potential hazards be identified. It is equally important that all identified threats be evaluated in terms of how likely they are to occur and what would be the impact of their occurrence on museum property. Only in that way can the Emergency Management Plan for Museum Property focus on those emergencies and potential disasters that are most likely to occur or that are most likely to cause the greatest losses.

1. Identifying Hazards

The variety of hazards that can cause emergencies and disasters include but are not limited to the list in Figure 12.1. The kinds of damage that can be inflicted on museum property include: heat damage, water damage, physical damage, and chemical and radiological damage.

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|                                   |                                   |     |
|-----------------------------------|-----------------------------------|-----|
| * <u>Natural Disasters</u>        | * <u>Accidents that Involve</u>   | * ) |
| * Blizzard or heavy snow fall     | * Bodily injury                   | * ) |
| * Hurricane                       | * Broken fuel pipelines           | * ) |
| * Severe thunderstorm             | * Broken water or sewer pipes     | * ) |
| * Sleet, hail, and ice            | * Downed power or phone lines     | * ) |
| * Tornado and wind storm          | * Aircraft (crashes)              | * ) |
| * Flash flood                     | * Construction equipment          | * ) |
| * Slow-rising flood               | * Motor vehicles                  | * ) |
| * Tidal wave                      | * Ships and boats                 | * ) |
| * Range or forest fire            | * Trains                          | * ) |
| * Earthquake and mud slide        | * Transport of chemicals or fuels | * ) |
| * Volcanic eruption or lava flow  | * Transport of nuclear materials  | * ) |
| * Drought (prolonged)             | * Nuclear power plants or weapons | * ) |
| * <u>Industrial Disasters</u>     | * <u>Human Activity</u>           | * ) |
| * Electrical power failure        | * Accidents by individuals        | * ) |
| * Fuel supply failure             | * Armed robbery                   | * ) |
| * Water supply failure            | * Arson                           | * ) |
| * Sewer failure or backup         | * Bombing                         | * ) |
| * Explosion                       | * Bomb threat                     | * ) |
| * Extreme/prolonged air pollution | * Conventional warfare            | * ) |

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<sup>2</sup>Barclay G. Jones, Protecting Historic Architecture and Museum Collections from Natural Disasters



DEPARTMENT OF THE INTERIOR  
**DEPARTMENTAL MANUAL**

Museum Property Handbook  
(411 DM, Volume I)

---

Chapter 12 Museum Property Emergency Planning

---

potential problems that could cause an emergency situation to develop or, in the event of an emergency, could aggravate the situation. A hazards survey identifies those areas of concern that require emphasis in the formulation of the unit's Emergency Management Plan for Museum Property.

**C. PREPARING THE EMERGENCY MANAGEMENT PLAN FOR MUSEUM PROPERTY**

The unit's Emergency Management Plan for Museum Property should outline how the staff should respond when disaster strikes. The specific needs of museum property need to be addressed in the unit's written emergency operations plan. Unit managers retain ultimate responsibility for the emergency operations plan. This Chapter does not explain in detail how a disaster plan should be developed and written. Guidance on content should be sought in the sources cited in Section E, "Selected Bibliography". An outline of the emergency planning process, which leads to the preparation and execution of an Emergency Management Plan for Museum Property is as follows:

1. Assign Responsibility for Planning

Curatorial staff should prepare an EMP for the museum property collection or provide input to the unit's law enforcement or emergency preparedness staff as they prepare an emergency operations plan for the unit.

2. Gather Planning Tools

Gather references pertaining to emergency operations plans, including laws and requirements cited in Appendix H of this Handbook, publications from bureau staff, and from local or State public protection and civil defense agencies.

3. Contact Local Protection Agencies

Establish and maintain contact with local police, fire,

DEPARTMENT OF THE INTERIOR  
**DEPARTMENTAL MANUAL**

Museum Property Handbook  
(411 DM, Volume I)

---

Chapter 12 Museum Property Emergency Planning

---

and emergency services agencies throughout the planning effort, as well as after the plan is put into effect. Such close cooperation facilitates integration of local support into the unit's emergency operations plan. Conversely, effective support from such agencies is based upon their knowledge of the unit's museum property and its needs, and of the unit's emergency operations plan, and the unit's Emergency Management Plan for Museum Property.

4. Identify Hazards and Threats to Museum Property

Systematically identify and analyze the natural, industrial, and war-related hazards that exist in the unit and in its surroundings; determine which ones should be treated as threats to museum property; and assess the risks of damage. Prioritize the application of unit resources in order to counter first those threats that are likely to have the greatest impacts.

5. Identify and Prioritize the Museum Property Collection's Assets

Determine what assets (e.g., collections, records, exhibits, and equipment) can be damaged by various disasters and prioritize those assets according to their values and importance to the unit. Unless priorities are set in advance, during an emergency effort may be wasted on trying to protect or save low value objects and/or specimens at the expense of those that deserve the most attention.

6. Formulate Protection Methods

The objectives of this step are as follows:

- a. formulate ways to mitigate against threats (loss prevention);
- b. formulate ways to minimize unpreventable damage (loss

DEPARTMENT OF THE INTERIOR  
**DEPARTMENTAL MANUAL**

Museum Property Handbook  
(411 DM, Volume I)

---

Chapter 12 Museum Property Emergency Planning

---

- reduction);
- c. plan on how to respond to events as they occur (preparedness and response);
  - d. set general priorities for recovery from damage; and,
  - e. determine what outside support, personnel, equipment, supplies, and other resources may be needed to cope with disasters.

7. Plan for Command and Control

Determine who will be responsible for taking action during an emergency. The unit's plan should define an emergency operations mode in which the existing operation, with its known organization and resources, and its familiar command structure, simply adopts new priorities and then functions in a more flexible, more innovative, and more streamlined manner. It may be necessary to augment the existing organization in time of emergency with additional or non-bureau or unit staff.

8. Write the Plan

There is no standard format or content for an Emergency Management Plan for Museum Property. Refer to the publications cited in the "Select Bibliography" of this Chapter for sample formats and suggested content. Upon completion, the draft Plan should be reviewed by a designated bureau official at a higher level (e.g., region, area, or headquarters). Characteristics of a good plan are as follows:

- ! Is simple, flexible, and adaptable
- ! Facilitates good communication
- ! Facilitates speed in response
- ! Identifies emergency priorities
- ! Identifies all needed resources

DEPARTMENT OF THE INTERIOR  
**DEPARTMENTAL MANUAL**

Museum Property Handbook  
(411 DM, Volume I)

---

Chapter 12 Museum Property Emergency Planning

---

! Acknowledges sources of assistance

9. Train Personnel in How to Use the Plan

The effectiveness of the plan during an actual disaster will depend upon prior training of all personnel who have any responsibility for plan execution, and upon regular testing of the plan. Training topics may include: command and control, warning and emergency communications, evacuation and roll-call arrangements, emergency first-response actions, response and recovery priorities, relocation of museum property, and procedures for summoning outside assistance and resources. Staff readiness should be ensured through periodic retraining.

10. Test the Plan

Conduct periodic exercises to determine if the plan will function as intended. At a minimum, testing of the Emergency Management Plan for Museum Property should be done when the overall unit emergency operations plan is tested, and whenever local or state emergency services agencies conduct a test or exercise involving the unit. Revise the plan whenever a test reveals deficiencies.

11. Evaluate the Plan

Evaluation takes place whenever the plan is executed under actual disaster conditions. The plan and the performance of all participants in disaster operations should be subjected to a candid critique as soon as possible after operations have returned to a semblance of normality. Observation and good photographic records of what kinds of damage actually happened (possibly different from what was believed would occur) will permit appropriate revisions to the plan.

12. Keep the Plan Current

Update the plan to reflect changes in staffing, equipment, and other factors crucial to the plan's successful execution. The following techniques are

DEPARTMENT OF THE INTERIOR  
**DEPARTMENTAL MANUAL**

Museum Property Handbook  
(411 DM, Volume I)

---

Chapter 12 Museum Property Emergency Planning

---

useful means of addressing this problem.

- ! Establish a regular review period, preferably every three or six months, never less than annually.
- ! Report the results of the review to the person responsible for updating the plan and, as appropriate, to unit management.
- ! Ensure that amendments and changes to the plan are distributed to everyone who has a copy of the plan. New or replacement pages should be easily identifiable so that a copy of the plan can be checked quickly to determine if it is current.
- ! In the plan, include instructions on where to report needed changes; instruct persons who have copies of the plan to report any needed changes or suggested revisions to whomever is responsible for the plan.

The person responsible for keeping the plan updated should do the following:

- ! Maintain a list of plan holders.
- ! Periodically determine if anyone in the unit or outside who does not already have a copy of the plan should have one.
- ! Periodically check whether the telephone numbers listed in the plan are current, whether promised support equipment and services are still available, and so on.
- ! Periodically ask everyone assigned a role in plan execution to review those sections of the plan that define their responsibilities and actions to see if they are still valid and achievable.
- ! Distribute changes as soon as they occur.

DEPARTMENT OF THE INTERIOR  
**DEPARTMENTAL MANUAL**

Museum Property Handbook  
(411 DM, Volume I)

---

Chapter 12 Museum Property Emergency Planning

---

! Request changes that are sent out to be acknowledged by their recipients, such as by endorsement of a cover letter or by a return card.

**D. GUIDE TO EMERGENCY SUPPLIES AND EQUIPMENT**

This section suggests the types of supplies and equipment that may be needed to cope with a natural disaster or other event that causes damage to museum property or to the building that houses it. Each unit should acquire only those items that are likely to be of benefit depending on the kinds of emergencies and types of damage that have been anticipated. During the planning process, each unit should identify additional items that may be needed. These should be added to the unit-specific list of supplies and equipment.

Some of these items will be found in all units as a matter of course. They may be diverted for use in cleanup and repair operations whenever they are needed. However, those items that will be critical to the survival of museum property and that cannot be procured promptly from elsewhere after the emergency should be set aside or stockpiled in a safe place so they will be available if they ever are needed. Precautions should be taken to ensure that stockpiled emergency supplies and equipment are not pilfered or used for day to day operations.

Remember that some items (such as dry cell batteries) have a limited shelf life. Plan on replacing such items periodically so that fresh stock is always on hand. Include operating manuals or instructions with items of mechanical and electrical equipment in case someone not experienced with their operation needs to use them in an emergency.

The items listed below are considered to be the most critical to have on hand in response to a fire or to other disaster events that may result in water damage.

1. Supplies and Equipment for Debris Removal and Cleanup

DEPARTMENT OF THE INTERIOR  
**DEPARTMENTAL MANUAL**

Museum Property Handbook  
(411 DM, Volume I)

---

Chapter 12 Museum Property Emergency Planning

---

Mops, mop buckets, and wringers  
Sanitizers (such as chloride of lime or high-test hypochlorite)  
Scrub brushes  
Sponges and rags or cloths  
Buckets  
Disinfectants  
Wash tubs or clean garbage cans  
Scouring powders or other cleaners  
Water hoses and nozzles  
Rubber gloves  
Leather work gloves  
Throw-away containers for trash

2. Tools and Equipment for Demolition, Repairs, and Rescues

Dollies or handcarts  
Hydrant and post indicator valve wrenches (if there is a sprinkler or standpipe system for fire suppression)

3. Construction Materials

Plywood for covering or replacing broken windows  
Dimensional lumber for temporary framing  
Nails, screws, bolts, nuts, and assorted fasteners  
Tapes of various kinds (e.g., masking, duct, or electrician's tape)  
Plastic sheeting for protection against leaks and splashes

4. Emergency Equipment

Emergency lights with extra batteries  
Flashlights or lanterns with extra batteries  
Fire extinguishers (ABC dry chemical recommended)  
Air breathers with extra oxygen tanks  
Resuscitation equipment  
Gasoline powered water pump (or pump which can be powered by the electrical generator) with appropriate hoses

DEPARTMENT OF THE INTERIOR  
**DEPARTMENTAL MANUAL**

Museum Property Handbook  
(411 DM, Volume I)

---

Chapter 12 Museum Property Emergency Planning

---

and fittings  
Extension cords, preferably equipped with ground fault  
interrupters

5. Personal Equipment and Supplies

Some of these items may be provided by the individual  
employees and volunteers who are to use them:

Necessary protective clothing  
Rubber boots or waders  
Rubber lab aprons  
Protective masks and goggles or safety glasses

6. Miscellaneous Supplies

Boxes for packing and moving artifacts, records, books,  
and equipment. Record transfer boxes are the easiest  
to use, carry, and store. They come flat for storage  
and are to be set up as needed; they may be  
reflattened later for storage and re-use.

Box sealing and strapping tapes

Tissue paper, clean newsprint, plastic "bubble pack," and  
other such materials for packing artifacts prior to  
relocation

Marking pens, preferably indelible; include some that  
will write on plastic

7. Miscellaneous Equipment

Fans

Space Heaters

Portable dehumidifiers

Hygrometers and/or psychrometers

Photographic equipment (e.g., 35mm camera, lenses,  
accessories, flash, film, and spare batteries)

Essential office equipment (manual typewriter, pocket  
calculator, pencil sharpener, stapler, rulers, etc.)

Essential stationery and blank forms and other such  
supplies to ensure capability of minimal  
administrative operations

DEPARTMENT OF THE INTERIOR  
**DEPARTMENTAL MANUAL**

Museum Property Handbook  
(411 DM, Volume I)

---

Chapter 12 Museum Property Emergency Planning

---

8. Conservation Supplies and Equipment

Various sizes of thick glass or smooth Masonite  
Newsprint (unprinted) in sheets  
Weights, such as leather shot bags  
Polyethylene bags in various sizes (such as Zip-Loc® or  
produce bags)  
Japanese tissue  
Towels or clean rags  
Clothes pins, preferably plastic  
Plastic garbage bags and ties  
Silicone release paper or wax paper

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DEPARTMENT OF THE INTERIOR  
**DEPARTMENTAL MANUAL**

Museum Property Handbook  
(411 DM, Volume I)

---

Chapter 12 Museum Property Emergency Planning

---

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DEPARTMENT OF THE INTERIOR  
**DEPARTMENTAL MANUAL**

Museum Property Handbook  
(411 DM, Volume I)

---

Chapter 12 Museum Property Emergency Planning

---

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DEPARTMENT OF THE INTERIOR  
**DEPARTMENTAL MANUAL**

Museum Property Handbook  
(411 DM, Volume I)

---

Chapter 12 Museum Property Emergency Planning

---

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DEPARTMENT OF THE INTERIOR

**DEPARTMENTAL MANUAL**

Museum Property Handbook  
(411 DM, Volume I)

---

Chapter 12 Museum Property Emergency Planning

---

12:16

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