Security from Loss: Water and Fire Damage, Biological Agents, Theft, and Vandalism

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WATER AND FIRE DAMAGE
Disaster planning is an important component of overall preservation planning. A disaster plan should cover all hazards, including water and fire, that pose a reasonable threat to collections. A systematically organized, formally written plan enables you to respond efficiently and quickly to an emergency, minimizing danger to staff and damage to collections and the building. Such a plan should cover preventive measures as well as recovery procedures. It should also include a training component. For example, all staff should be shown the location and taught the operation of shut-off valves for water-bearing pipes in buildings where collections are housed. The plan should be reviewed with staff regularly, at least annually. The plan should include lists of steps to follow if a disaster strikes and sources of assistance and supplies that may be needed. The importance of having the plan in written form cannot be overstated. In the excitement and confusion of an emergency, procedures and sources of help are easily forgotten. Information recorded in writing is much less likely to be overlooked. Much valuable time can be lost during emergencies if staff members are unfamiliar with recovery methods. Copies of the plan should be distributed to all personnel responsible for disaster prevention and recovery. Several copies of the plan should be stored off-site as well as in the building(s) where materials are housed.

Protection from water damage is essential to the preservation of library and archival materials. Even a minor water accident such as a leaky pipe can cause extensive and irreparable harm to collections. Several precautions can be taken. Roof coverings and flashings should be inspected regularly and repaired or replaced as needed. Gutters and drains should be cleaned frequently. Materials

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should never be stored under water pipes, steam pipes, lavatories, mechanical air-conditioning equipment, or other sources of water. Materials should always be stored at least four inches above the floor, never directly on the floor. Storage in basements or in other areas where the threat of flooding is great should be avoided. If collections must be stored in areas where they are vulnerable to flooding, water-sensing alarms should be installed to insure quick detection of water.

Damage caused by fire can be even more serious than that caused by water. If collections survive at all, they are likely to be charred, covered with soot, brittle from exposure to high heat, wet from water used to extinguish the fire, moldy, and smelling of smoke. Several fire-suppression methods are available. Every institution should have at least one method in operation.

Automatic sprinklers are now considered by most fire safety professionals, librarians, archivists, and conservators to be the best protection from fire for libraries and archives. Opinion regarding the preferred type of sprinkler system varies at this time. Before making a choice, staff should consult an experienced fire safety engineer who is familiar with libraries and archives and with current developments in the field. Also, all relevant publications of the National Fire Protection Agency (NFPA), located in Quincy, Massachusetts, should be reviewed. Collections of very special value, which may be irretrievably damaged by water from a sprinkler system, have until recently often been protected by an automatic Halon gas suppression system. Halon extinguishes fire by interfering with the combustion process and leaves no water or harmful chemical residue on materials. Halon contains chlorofluorocarbons, however, and will become unavailable in the foreseeable future because of its damaging effect on the environment. Other methods of fire suppression for collections of special value are being developed. At the very least, every storage and use area should have several portable fire extinguishers of the ABC dry chemical type, and staff should be trained in their use. Any fire-suppression system should be regularly inspected and properly maintained. The manufacturer’s specifications should be followed.

All repositories that house library and archival materials should be equipped throughout with heat and smoke sensors wired directly to the local fire department or to another 24-hour monitor. Fixed-temperature heat sensors by themselves are insufficient because they will not detect smoldering fires; rate-of-rise sensors should also be installed since they are activated by a sudden, small increase in temperature. Smoke sensors alone are inadequate since they have a relatively high rate of mechanical failure. All detectors should be regularly tested and maintained according to the manufacturers’ specifications.

Staff members should work with the local fire department to develop a fire safety program. All existing fire hazards should be eliminated. Regular fire in-spections and drills should be held, and staff should be trained in evacuation procedures.
BIOLOGICAL AGENTS
The primary biological agents that cause damage to library and archival collections are mold, rodents, and insects, although dogs, cats, birds, and humans also harm materials. Mold damage can pose a serious threat, especially to institutions located in a hot, humid climate or near a large body of water where humidity is high. Mold spores are everpresent in the environment. Mold damage can be devastating, and measures should be taken to avoid its occurrence. The most important measures are maintaining proper levels of temperature and relative humidity, good circulation of air, and clean, clutter-free storage areas. Ideally, temperature should never go above 70°F or relative humidity above 50 percent. The higher the temperature and humidity, the greater the risk of mold. If a water-related emergency occurs, such as a flood or fire, wet materials should be dealt with immediately before mold growth develops.

Once mold growth appears, the affected items should be isolated from the collection. Gloves and a respirator should be worn when handling moldy materials. The items should be dried thoroughly and, once dry, the mold should be removed from them. A conservator should be contacted for advice on how best to do this given the particular circumstances of the situation.

Library and archival materials are appetizing to rodents and insects, and all possible steps should be taken to control them. They are attracted by clutter and food remains. Clutter, dust, and dirt should not be allowed to accumulate, and storage areas should be kept clean at all times. Eating and drinking should be prohibited in buildings containing collections, especially in storage areas. Staff members should eat only in a staff room that is located as far away from collections as possible. All garbage receptacles containing food should be removed from buildings every day.

High temperature and, in particular, high relative humidity also encourage rodent and insect activity so these should be controlled. Windows, doors, and vents should be kept closed as much as possible because insects enter through these. Buildings should be well maintained because cracks or breaks in the building fabric are another point of entry. Grass and plantings should be trimmed back at least 18 inches from any building that houses collections. If possible, all materials entering the building should be checked for rodents and especially insects. This includes new items for the collection, items being returned after a loan, and all equipment, supplies, and packing materials.
Once an infestation is discovered, immediate action is required. Several kinds of traps for catching rodents are available commercially, but hiring a professional exterminator is advisable for reasons of staff safety. If an insect infestation is discovered, the affected items should be isolated from the rest of the collection. Items adjacent to affected ones should also be isolated. The insect should be identified, as this will aid in extermination and may help to determine the source of the infestation. Spray-type insecticides should not be sprayed directly on collections; the chemicals may damage them. Controlled freezing is another method of treating insect-infested library and archival materials, often preferred because it avoids the use of toxic chemicals. Other methods of nonchemical fumigation, such as modified atmospheres, are being investigated and hold promise for the future. If an infestation is discovered, contact a preservation professional for the most up-to-date information.

THEFT AND VANDALISM
Because of the high value of materials in libraries and archives, adequate protection from theft and vandalism must be provided. This protection can range in complexity from simple locks to elaborate security systems. In general, libraries and archives that house collections of permanent value should be well secured during hours when the building is closed to the public. The best protection is provided by perimeter intrusion alarms and internal motion detectors wired directly to the local police department or to another outside 24-hour monitoring agency. During working hours it is best to have only one entrance/exit, to be used by researchers and staff alike. All other doors should be alarmed so that unauthorized use can be detected. Windows should be kept closed and locked. Building keys and keys to areas where materials of special value are kept should be strictly limited. A list of keyholders should be kept current, and staff members should be required to return keys when they leave the employ of the institution. Access to storage areas should be strictly limited, and researchers should be accompanied by a staff member if they enter these areas.

Use of materials by researchers should be carefully controlled and strictly monitored. Researchers should never be left unattended. Ideally, they should use materials in a room separate from book storage areas. Coats, bags, and personal books should be left outside the reading area, and researchers should be allowed to bring only a pencil and paper into the room. Researchers should sign a register, present an identification card, and leave that identification card in the hands of a staff member, who should retrieve the requested object. Requests for the use of materials in special collections should be made in writing. Call slips should be retained to provide a record of use. One object at a time should be given to researchers. If several objects are needed, they should be carefully counted out by the staff member in front of the researcher before and after use. Staff should check
the materials visually before and after use for evidence of vandalism. Identification cards should be returned to researchers only when the objects are returned to the staff member and when the staff member is satisfied that no damage has been done.

If you discover that valuable materials have been stolen from your collection, consult the following for advice on what action to take: “Guidelines Regarding Thefts in Libraries” (see bibliography below under RBMS Security Committee), and Rare Books and Manuscript Thefts by John J. Jenkins (see below). You will need a way to prove ownership of valuable materials. Marking the item itself is a curatorial decision. Written descriptions as well as photographs or high-quality photocopies of identifying details should be kept on file.

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