

# Preventing Fires in Library Book Returns

A devastating fire at the Danbury (Connecticut) Public Library in February 1996 was apparently caused by an arsonist who dropped burning materials into the Library's book return. The loss was estimated at over \$4 million, with books, computers, and furnishings consumed by fire or damaged by smoke, soot, and water. While the staff, users, and friends of Danbury Library repair the damage and make a fresh start, other librarians doubtless are evaluating the risk of arson at their own libraries.

Is the Danbury fire unusual? How common is arson in libraries? What can be done to prevent an arson fire catastrophe at *your* library?

## The Extent of the Library Arson Problem

*Incendiary fires*, also called *arson fires*, are the most frequent cause of fire in American libraries. The National Fire Protection Association reports that in the period from 1990-1994, 35% of all library fires were caused by arson. The NFPA also reports that arson fires account for nearly 80% of dollar losses caused by fire in libraries. Researchers have discerned three common methods arsonists use to set fires in libraries:

- forcing burning material into a book drop (book return) or mail slot
- breaking into the building (often in order to steal or vandalize), then setting a fire
- breaking glass in a window or door and throwing burning material inside
- entering an unguarded or unlocked back or side entrance to drop burning material

Other fires may be set deliberately in the library by library employees or users, or caused accidentally during construction or renovation projects.

## Why Are Library Buildings So Vulnerable to Fire Loss?

Library fires are often spectacular conflagrations, due to several factors that are present in many libraries, especially those housed in older buildings:

- classic, "monumental" design: soaring ceilings, wooden paneling, and open frame book stacks that act like chimneys during a fire, drafting fire, heat, and smoke throughout the building
- lack of automatic detection and alarm systems to alert to the presence of heat, smoke, or fire
- lack of automatic sprinklers or other automatic fire suppression devices

LOSS CONTROL TIPS

Of course, any library contains large amounts of highly combustible material: books, paper files, upholstered furniture, carpeting, electronic equipment, and other furnishings which burn quickly.

Why do so many libraries have inadequate fire suppression systems (i.e., sprinklers)? Persistent myths about how fire sprinklers operate prevent their being installed where they are most needed. Most sprinklers are activated by heat. If a fire breaks out in a sprinklered area, *only the sprinkler head(s) in the immediate area of the fire will discharge.* (see box on “Automatic Sprinkler Systems,” on page 3) Thus, a fire can often be extinguished *before* it has a chance to spread. The amount of water discharged by one or two sprinkler heads is very little compared to the deluge which will be brought in by fire fighters with hoses. A discharge from a sprinkler will be in a defined area and may last for just a few minutes. Although fire fighters will be as careful as possible, they will use far more water, and for a far longer period of time, than will an automatic sprinkler system. Fortunately, newer library buildings, and those which have undergone recent renovations, have better fire-resistive design and are equipped with better fire detection and suppression systems.

## Arson Prevention: Design and Construction for Book Return Areas

Knowing that most library fires are caused by arson, and knowing that most library arson starts in the book drop, it makes sense either to *eliminate* this potential source of fire, or *safeguard* it against arsonists. In addition to the obvious losses caused by fire, even the *smoke* from a fire in a book return can cause significant damage and inconvenience. What are alternatives to the traditional book drop located within the library building?

### Eliminate Book Drops From Library Buildings

Require users to return library materials to the circulation desk or other collection point during library “open” hours, or install a permanent curbside book drop box.

### Isolate Book Drops Within Library Buildings

Set up a separate book return or receiving area within the library building, and design and construct it so that the rest of the building is protected from fire.

- Use a small room or set-aside area near the library entrance.
- Choose a location that is easy to monitor.
- Use an area with fire resistive walls and doors. Use minimal furnishings.

- Install an automatic detection system for smoke and heat.
- Install an automatic sprinkler system, at least in the book return area.

### Modify Existing Book Drops

Any book drop, even one that is set apart from the building, should be fire resistive so that it will contain any fire that might start within it.

- Use fire resistive or non-combustible materials. Some libraries have tried a stainless steel chute and inner liner.
- If the book drop opens into the library, be sure that the receiving portion is self-contained and fire resistive. (The Danbury Public Library’s book drop opened into a carpeted area.)
- Install an automatic fire suppression unit within the book drop (it could use carbon dioxide or some other dry suppression agent).
- Install heat and/or smoke detection devices inside the book drop, even when it is isolated from the library building.
- Ensure that detection and suppression device systems are monitored (e.g., at police station, central station).

### Administer Book Return Areas Sensibly

Even a well-designed, fire resistive book return area can be vulnerable to arsonists.

- Staff the book return area.
- Install the book drop in a location that is easily monitored by library staff (for example, in a direct line of sight from the circulation desk).
- If either of the previous suggestions are not possible, conduct regular “security checks” in the area.
- Empty book returns often, both to detect possible vandalism or fire-setting, and to reduce the volume of material exposed to loss.
- Keep an eye on book drop areas. Take special note of any loiterers. An unsuccessful arsonist may make repeat attempts, thus making the library a special target.

If you are planning new library construction or a renovation project, don’t forget to plan for fire protection and security, especially in the book return area. Learn about applicable building and fire codes, and put them to work for you. Be aware that the National Fire Protection Association’s guide, *Recommended Practice for the Protection of Libraries and Library Collections*, is *not* a required building code or standard, and your community may not require that it be

implemented. Take the initiative to work with your architect or designer to be sure that your library will be safe from fire.

While it's true that arson remains a major cause of property loss in American's libraries, you can take many measures to prevent an arson fire in your library. Many administrative measures cost little or nothing to implement, but could represent big savings for your library and your community. It could make all the difference.

## Automatic Sprinkler Systems in Libraries

The most effective, and most economical, fire protection system for the protection of books, magazines, archives, and other paper records, is the *automatic wet-pipe sprinkler system*. Frequently, librarians and library directors are concerned about the installation of these systems in libraries due to the perceived risk of water damage. These facts should alleviate those concerns:

- Each automatic sprinkler head operates independently, and the operation of any single sprinkler head does not cause the operation of any other sprinkler head. *Only those sprinklers in the immediate fire area operate and discharge water.*
- Sprinkler systems constitute a method of *fire control* involving a *minimum*, rather than a maximum, amount of water. The amount of water distributed from a sprinkler system will be *far less* than the amount from a fire department's hose line should a fire occur in an unsprinklered building.
- Wet books, magazines, and records can be salvaged; *burned* materials can not be recovered.

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## Further Reading

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