Preparing for the Unthinkable, Planning for the Inevitable: Disaster Prevention, Response, and Recovery for Libraries.

David Walls, Preservation Librarian
U.S. GPO. August 30, 2023

Hurricanes: https://www.noaa.gov/news-release/2023-atlantic-hurricane-season-outlook

- Hurricane Season: June 1-November 30th.

- 5-9 hurricanes predicted for 2023.

- 1-4 hurricanes in 2023 could become a major storm category 3-5

Tornados

- Wind speed of 100 mph or more
- Ground speed varies
- U.S. has the most tornados
- Develop when warm moist air below mixes with cool air in higher clouds.
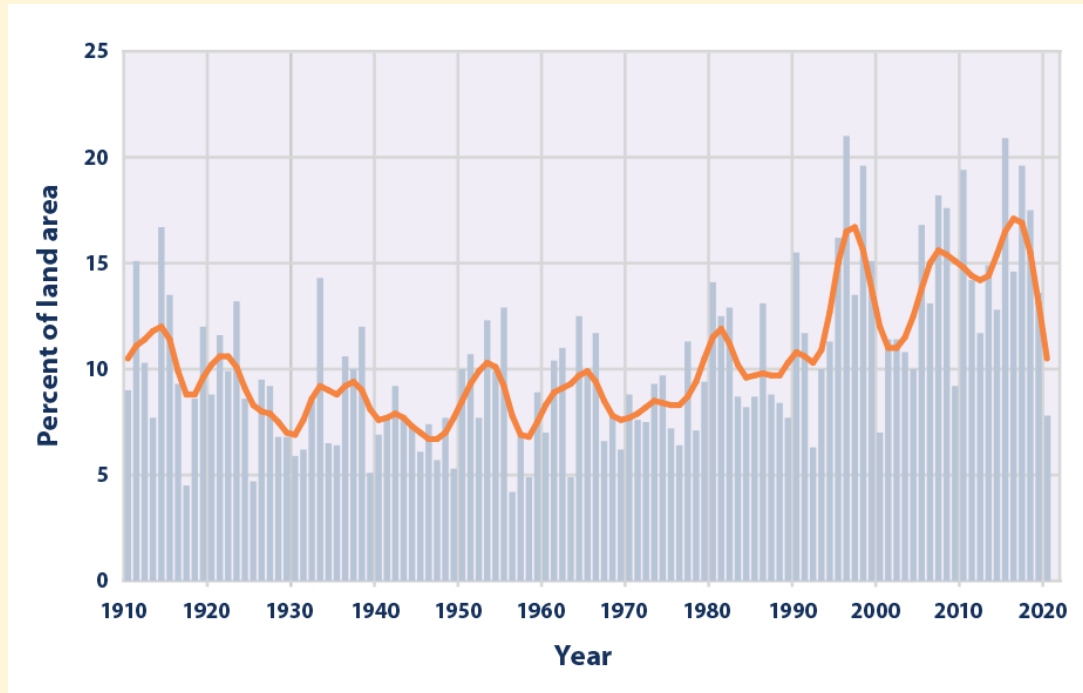- National Weather Services issues Watches, Warnings

Thunderstorms

- Downburst "cells" produce damaging winds.
- Cause flash floods where a season of rain may fall in hours
- Flash flooding is worse in urban areas due to impervious cover

"Precipitation Events"

Extreme One-Day Precipitation Events in the Contiguous 48 States, 1910–2020.

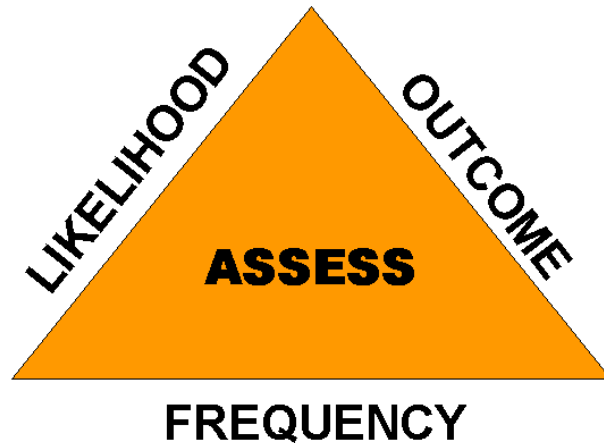https://www.epa.gov/climate-indicators/climate-change-indicators-heavy-precipitation

Managing Risk

Assessing Risk

Consider the risk...

LIKELIHOOD
OUTCOME
ASSESS
FREQUENCY

- **What are the risks?**
- **How likely are they to occur?**
- **How often could they occur?**
- **What is the likely outcome if the risk event occurs?**

Protection and Risk

Assessing Risks: The Library

- The Library Building: Age, type of structure, type of roof and drainage.
- Your location: Type of storms, frequency, floodplain: https://msc.fema.gov/portal/home

Flood

- Fire suppression
- Hot and cold fresh water
- Hot water radiators
- Hot water to HVAC Heat Exchangers
- Steam to HVAC
- Chiller water to HVAC
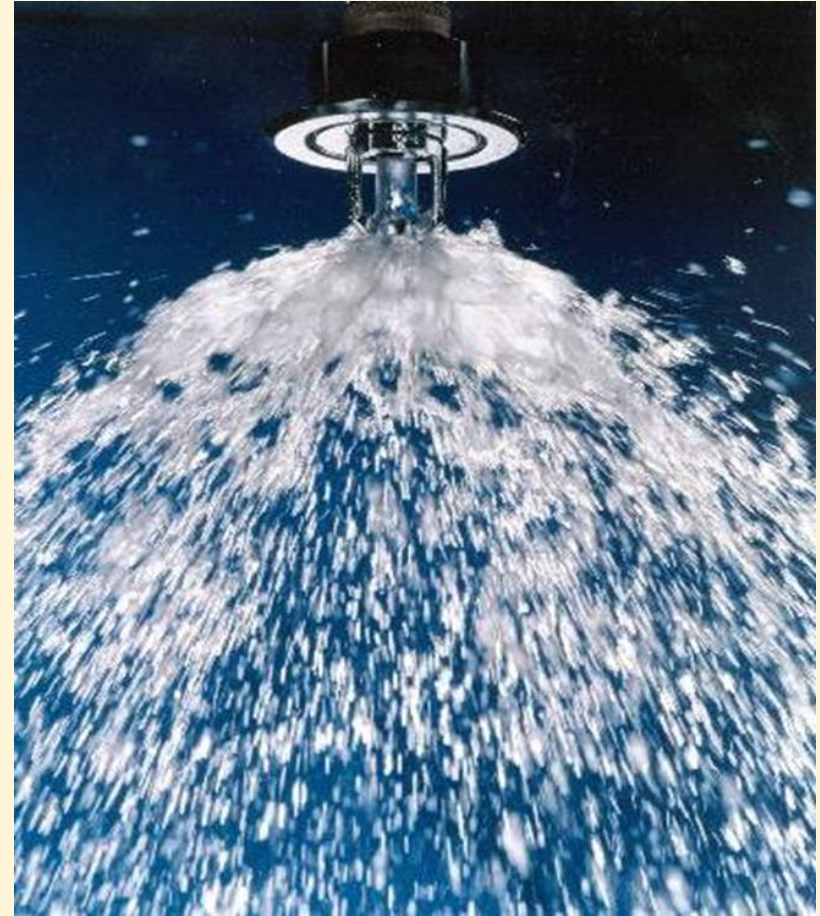- Condensation return
- Rain water
- Sewage

Flood

- Heed the warning signs
- Report signs of leaks as soon as they appear

Flood

Assessing Risks: Organizational Support

- Who responds?
- Do you know your facilities staff?
- Who monitors the building at nights, weekends, holidays?
- If water is flowing out from under a locked door, who has the keys?
- If you need supplies (a mop and bucket) how do you get them?
- Do you have remote loggers to warn of leaks?

Fire

- **Policy on use of electric space heaters**
- **Use of extension cords**
- **Ensure that enough electrical circuits exist for break rooms**
- **Enforce no smoking policy**

Fire

- Arson is a frequent cause of library fires
- Improve sight lines to public areas
- Be aware of suspicious behavior
- Ensure that fire detection and suppression systems are regularly inspected

Fire

- Fire Marshall or special Arson Investigation Unit
- Library becomes a crime scene
- Documentation of Fire pattern
- Staff/witness interviews
- Evidence collected

Rennovation

Mold

- Humidity consistently above 55% RH

- HVAC System Failure

- Renovation changes airflow

- Attempt to save $$$ on humidity and temp control

- $$$ to treat books

Planning

- Form a Disaster Prevention Response and Recovery Plan Task Force
- Assess risks to collections from building systems
- Monitor building systems regularly
- Build communication with maintenance and security staff for organizational support

Assessing Risks: The Collection

- Documentation of holdings
- Age of materials
- Special Collections
- Items with specific historic high research, or artifactual value
- Location of collections in the building?

Assessing Risks: Floor Storage

Assessing Risks: Organizational Support

- Who responds?
- Do you know your facilities staff?
- Who monitors the building at nights, weekends, holidays?
- If water is flowing out from under a locked door, who has the keys?
- If you need supplies (a mop and bucket) how do you get them?
- Do you have remote loggers to warn of leaks?

Assessing Risks: Information Technology

- Are the library catalog and essential business record systems backed up?

- Who would restore the catalog and other systems in the event of a disaster?

- Are IT access services for library users, (WiFi) part of the restoration of online services

Risk Checklist

- Known building system issues: leaks, drainage, flooding, humidity?
- Collections Stored in the basement?
- Collections stored remotely?
- Materials directly on the floor?
- Collections close to large windows
- Collection items inventoried through the catalog or other documents
- IT systems backed up and restorable
- Building and collection areas monitored

Planning

- Form a Disaster Prevention and Response task force and make developing a Disaster Recovery and Response Plan a priority
- Assess Risks
- Is your collection cataloged and inventoried?
- Determine how your insurance works – documentation required?
- Map the location of cut-off valves for water
- Map the location of special collection items
- Purchase Disaster Recovery supplies and secure them in a dedicated space

Planning

- Communication is essential: management, maintenance, security, first responders
- Arrange with administration for a source of emergency funds that can be used when normal city/campus offices are closed
- Develop an approved template for press releases and decide who will be the spokesperson
- Obtain a dedicated emergency triage space outside of the library
- Secure a contract with a Disaster Recovery Service

Planning Checklist

- Building and environmental risks assessed and monitored
- Disaster Response and Recovery Team organized and trained
- Disaster Response and Recovery supplies secured and accessible
- Disaster Response Plan developed with a telephone tree for staff and facilities.
- Disaster Response plan communicated with administration and building maintenance and security.

Disaster Planning

- Plan online but print each team member a copy
- Response team keeps copies at home
- Includes an emergency telephone tree for response team and other essential personnel
- Version control essential for updating
- Plastic sheets for triage instructions, maps

Supplies Checklist

- Plastic Sheeting
- Duct Tape
- Data loggers for remote monitoring
- Buckets and mops
- Wet dry vacuum
- Rubber or nitrile gloves
- Floor fans
- Space to dry books (tables or a clean, dry floor)
- Paper towels

Additional Supplies

- Plastic painters drop cloths
- Tyvek coveralls
- Rubber gloves
- Rubber boots
- Dust masks
- Paper towels
- Tables
- Fans
- Extension cords
- Emergency lights
- Flashlights / spare batteries

- Waterproof digital camera
- Large capacity camera chip
- Garden hose/water for rinsing
- Buckets
- Printed triage forms
- Boxes or milk crates for packing books for freezing
- Plastic bags
- Wax paper

Response

- Special Collection items
- Business Records
- Insurance Documentation
- Triage books from top to bottom of affected areas
- Microforms
- Computer hard drives

Plastic Sheeting

Recovery

- Clay coated paper first
- Interleaving paper towels between damp pages

Paper towels for drying wet books

Drying wet books

Recovery

- Safety first
- Predetermine when you call in a recovery service
- Triage criteria essential
- Practice interleaving and drying books in a disaster drill before the real thing happens

Recovery

- <u>Destroyed</u>: Burned and soaked = Document for discard

- <u>Severely Damaged:</u> Heat, smoke damaged, soot, wet = Freeze / dry

- <u>Damaged:</u> Soot, smoke, damp = Clean and dry

Establish limits!

- The response and recovery plan should have definite limits of what staff can be expected to do in response to a disaster.

- Moderate to Severe disasters may be too large for staff to handle without assistance from a disaster response and recovery service.

- Service contracts should be arranged in advance and services may be paid for by insurance.

Best Practices

- Assess Risk
- Plan an appropriate response and documenting it in a tangible plan
- Develop a response team and distribute copies of the plan
- Communicate the plan with administration and infrastructure support
- Respond to known risks when weather threats arise
- Respond to disasters within established safety limits
- Document the recovery effort to restore materials and services
- Communicate the recovery effort to appropriate sources
- Restock supplies
- Review effectiveness and adjust plan and training as needed.

Additional Sources

https://www.nedcc.org/free-resources/preservation-leaflets/overview

https://www.nedcc.org/preservation-training/acpw

David Walls, Preservation Librarian, U.S. Government Publishing Office

dwalls@gpo.gov OR
preservefedinfo@gpo.gov