



# Disaster Planning and Response

New York State Archives  
www.archives.nysed.gov



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## Overview

- Introduction to disaster planning
- Importance of records
- Formulating a plan
- Business continuity



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## It Can't Happen Here...

- 6 to 8 governments in NY
  - Experience a records disaster each year
- Various causes
  - Fires
  - Flooding
  - Ice storms and heavy snowfalls
  - Vandals and sabotage
- Convince others that it does happen



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## Flooding Disasters on the Rise

- Widespread flooding in the Mohawk Valley, Schoharie Valley, and Southern Tier – 2006
- Hurricane Irene brings heavy flooding to the Mohawk Valley and Schoharie Valley – 2011
- Hurricane Lee brings heavy flooding to the Southern Tier - 2011
- Superstorm Sandy brings heavy flooding to Long Island and New York City - 2012
- Flooding in Oneida and Montgomery Counties. The Village of Fort Plain suffers major damage - 2013



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## SEVERE FLOODING IN NEW YORK 2006 → 2011 ↘



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## Costs are High

- 100 records repositories reported records damage due to flooding during Irene and Lee
- The NYC Department of Education alone suffered damaged to 300,000 cubic feet of records during Sandy
- Schoharie County lost 7,353 cubic feet of records and spent \$2 M to recover permanent or vital records
- The Archives approved the early destruction of 15,083 cubic feet of records after Sandy.



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### Schoharie County Clerk's Office



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### Mold Growth Can Start Quickly



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### Electronic Records Water Damage



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## Defining Records Disaster

- Suddenness
- Unexpectedness
- Significant damage



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## Seven Classes of Disasters

- Class 1: National in scope
- Class 2: Natural disaster affecting a local area
- Class 3: Damage to a major building during work hours
- Class 4: Damage to a major building after work hours
- Class 5: One or two functions affected
- Class 6: A subfunction affected
- Class 7: A lost document



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## Not Managing Records Disasters

- Leads to staff frustration and decreased productivity
- Makes it impossible to document revenue and assets
- Impairs ability to serve citizens
- Deprives you of evidence needed in court
- Can cause a public relations nightmare!



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## Benefits

- Guarantees a secure environment for records storage
- Ensures safety of staff who retrieve and manage records
- Provides framework for fast, efficient response
- Allows faster recovery after disaster



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## Phases of Disaster Management

- Prevention
- Disaster Preparedness
- Disaster Response
- Business Continuity



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## Disaster Prevention

- Identify critical records
  - Vital
  - Needed to respond
  - Historical
- Identify risks to those records
- Manage risk



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## Vital Records

- Needed to resume business functions
- Protect organization and citizens rights
- Differ from “important” records



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## Examples of Vital Records

- Your most active records
  - Unpaid taxes
  - Property records
  - Open contracts
  - Payroll records
  - Student records
- Usually about 5 to 10% of records



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## Records Needed to Respond

- Disaster response plan
- Insurance records
- Records relating to hazardous materials
- Records relating to emergency shelters
- Physical assets inventory
- Geographic Information System (GIS)
  - Maps and building plans
  - Residential and other property records
  - Important routing information
  - Population data



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## Discussion 1

- What vital records do you maintain?
- Why are they vital?
- How much time and money would you lose if they were destroyed?



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## Vital Records Program

- Identify vital records
- Develop methods of protection
  - Controlled offsite storage
  - Duplication and dispersion
  - Migration
  - Improved onsite storage
- Create procedures



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## Historical Records

- Government records identified as permanent on a state retention schedule
- Appraised as permanent because of local significance
- Not necessarily vital records



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## General Risk Management

- Identify potential risks
- Identify existing risks
- Assess probability and impact of loss
  - Loss of life
  - Actual costs
  - Loss of reputation



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## Identifying Risks

- Analyze
  - Geographic and climatic hazards
  - Human beings
  - Risks to electronic records
- Assess site
  - Building and storage risks
  - Adjacent environmental risks



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## Geographic and Climatic Hazards

- Storms
- Earthquakes
- Floods
- Fires



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## Human Beings

- Deliberate Destruction
  - Vandalism
  - Theft
  - Arson
  - Terrorism
- Carelessness
  - Records left exposed
  - Lack of backups



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## Risks to eRecords

- Hard drive crashes
- Accidental deletion
- Magnetic fields
- Loss of removable media
- Tampering
- Computer viruses
- Unauthorized disclosure
- Media storage capacity and vulnerability



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## Risk Management for eRecords 1

- Store backups offsite
- Increase frequency of backups
- Install virus protection
- Use passwords and firewalls
- Store in fire-resistant containers



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## Risk Management for eRecords 2

- Local mirrors of systems (RAID)
- Surge Protectors
- Uninterruptible Power Supply (UPS)
- Backup Generator to keep systems going in the event of a power failure
- Virtualization and cloud computing
- Alternate sites




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## Alternate Sites

- Cold sites
- Warm sites
- Hot sites
- Mobile sites
- Mirrored sites




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## Alternate Site Criteria Selection

- Owned by organization
- Contracted through vendor
- Reciprocal agreements
- Consider
  - Geographic area, accessibility, security, environment, and cost

Site	Cost	Hardware Equipment	Telecommunications	Setup Time	Location
Cold Site	Low	None	None	Long	Fixed
Warm Site	Medium	Partial	Partial/Full	Medium	Fixed
Hot Site	Medium/High	Full	Full	Short	Fixed
Mobile Site	High	Dependent	Dependent	Dependent	Not Fixed
Mirrored Site	High	Full	Full	None	Fixed




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## Building and Site Risks 1

- Equipment Malfunctions
  - Power failure
  - Sewer lines
  - Water and steam pipes
  - Faulty wiring
  - Explosions



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## Building and Site Risks 2

- Exterior
  - Flat roof
  - Gutters work poorly
  - Windows leaking
  - History of leaking
  - Roof not inspected regularly



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## Building and Site Risks 3

- Interior
  - Evaluate all areas of building
  - Assess
    - Fire protection
    - Electrical system
    - Plumbing
    - Security



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## Storage Risks

- Inappropriate shelving
- Inadequate boxing
- Poor storage conditions
- Lack of control over records



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## Adjacent Environmental Risks

- Chemical industries
- Hazardous material shipping routes
- Nearby construction
- Large trees
- Flag or utility poles



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## Discussion 2

- What risks are at your institution?
  - Geographic and climatic hazards
  - Humans
  - Electronic records
  - Site
- What can you do to limit these risks?



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## Preventive Measures

- Use risk assessment data
- Take immediate corrective action
- Integrate records into existing maintenance plans
- Prioritize space
- Develop a disaster management plan



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## Disaster Plan: Main Features

- Identification of risks
- Preventive measures
- Disaster response plan
- Business continuity plan



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## Formulating a Plan

- Assess impact of loss
- Assess insurance coverage
- Gain support
- Assign responsibility
- Test disaster plan
- Review plan periodically
- Distribute plan and train staff



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## Assess Impact of Loss

- Estimated cost of recovery
- File reconstruction
- Income loss
- Legal costs



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## Determine Dollar Amount

- |                                       |  |
|---------------------------------------|--|
| • Annualized loss expectancy (ALE)    | • Misplaced records<br>$1 \times \$5,000 = \$5,000$        |
| • Annualized rate of occurrence (ARO) | • Flood<br>$0.1 \times \$25,000 = \$2,500$                 |
| • Single loss expectancy (SLE)        | • Accidental destruction<br>$0.5 \times \$5,000 = \$2,500$ |



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## Assess Insurance Coverage

- Self insured
- Types of insurance policies
  - Replacement (or restoration) value
  - Actual cash value
  - Average cost
- Know the terms of your policy



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## Gain Support

- Confirm possibility of a disaster
- Demonstrate cost of a disaster
- Provide a proposal to develop plan
- Show initial support across organization
- Distribute memo of approval



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## Assign Responsibility: RMO's Role

- Work within the framework
- Educate others
- Show records are important
- Oversee development of plan



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## Assign Responsibility: Consultant

- Provide with detailed project specifications
  - Be specific on any special features you want
  - What issues and locations are involved
  - Timeline for completion
- Work with the consultant
  - Continue dialog during the process
  - Provide staff for interviews
  - Comment on draft plans



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## Disaster Management In-House

- Form a strong team
- Carry out serious research
- Set a clear project agenda
- Get help when you need it
- Use disaster planning software



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## Once Plan is Finalized...

- Distribute plan
- Train staff on use
- Test the plan
- Review plan periodically
  - Review plan after a disaster



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## dPlan™

- Free Online Disaster Planning Tool
  - Simplifies writing a Disaster Plan
  - Fill-in template
  - Generates a printed plan
  - Can be updated as changes occur
- Stored online
- [www.dplan.org](http://www.dplan.org)



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## When Preparedness Isn't Enough

- Conditions beyond your control
- Prevention exceeds cost of recovery
- Lack of time or money to address every risk right away
- Implement disaster response plan as needed



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## Disaster Response Team

- Team coordinator
- Team leaders
- Team members
- Press liaison



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## Resources

- Calling tree for disaster team
- Emergency telephone numbers
- Salvage priorities
- Equipment location
- Disaster response equipment



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## Disaster Response

- Identify an emergency
- Notify team and others
- Assess environment
- Assess damage
- Brief response team
- Stabilize environment
- Begin salvage plan



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## First Steps

- Identify an emergency
  - Contact disaster team coordinator
- Notify team and others
  - Coordinator notifies team member
  - Contacts vendors and authorities
  - Calls State Archives for assistance



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## Assess Situation 1

- Current temperature and humidity
- Standing water
- Mold growth
- New or continuing threats



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## Assess Situation 2

- Note type and extent of damage
- Take photographs of damage
- Evaluate means of response
- Assess and prioritize damaged records
- Determine need for additional security



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## Identify Appropriate Response

- Each disaster is different
- After assessment
  - Use disaster plan to set response
  - Discuss options
  - Direct team to respond
- Gather needed supplies



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## Stabilize the Environment

- Stop the source
- Improve environment
- Establish security
- Stabilize and remove records



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## Salvage Priorities

- Base decisions on
  - Vital records
  - Records retention
  - Fragility of records
- Other considerations
  - Replacement possible
  - Replacement cost vs. restoration



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## Begin Salvage Plan

- Determine records to discard
- Identify records available elsewhere
  - Duplicate copies
  - Backup copy
  - Info available elsewhere
- Evaluate salvage options
  - Freeze drying
  - Air drying
  - Replacement



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## Salvaging Paper Records

- Pack large quantities for freeze-drying vendor
- Small quantities
  - Air dry under fans
  - Rinse photographs
  - Dry on laundry line



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## Recovering Bound Volumes

- Damp coated or uncoated paper
  - Fan pages open
  - Position fan so air circulates
  - Insert blotter paper
- Wet uncoated paper
  - Interleave with paper towel
  - When damp remove interleaving
- Wet coated paper
  - Interleave wet pages with waxed paper
  - Fan pages open



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## Business Continuity

- Remediation and recovery
- Clean or replace equipment
- Reorganize and store paper records
- Reload backup data
- Evaluate disaster response plan



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## Remediation and Recovery

- Determine cost of remediation and recovery
  - Contact insurance agent
  - Contact State Archives for grant eligibility
- Contact vendors
  - Data recovery
  - Wet paper records
  - Dehumidification and fumigation
  - Repairing or re-building facility



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## Clean or Replace Equipment

- Clean and reuse if possible
- Replace
  - Vendor agreements
  - Equipment inventory
  - Existing compatible equipment



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## Re-house and Store Paper Records

- Re-box
- Re-label
- Re-locate
- Re-create
- Re-think



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## Reload Backup Data

- Importance of offsite storage
  - Location based on risk assessment
- Put information back on network
- For more information see Advisory 12.01: Electronic Disaster Preparedness and Recovery
- Attend the workshop, Electronic Records Disaster Planning and Response



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## Keep in Mind with Electronic Records

- Never attempt to read wet or dirty media
- Actions suitable for water-damaged paper records may destroy electronic media
  - Some types of media should not be air-dried
  - Never freeze- or vacuum-dry electronic media
  - Never use heaters or heated blow driers to dry media
- Begin recovery of damaged media as soon as possible
  - Within 48-72 hours of disaster if at all possible



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## Evaluate the Response

- Evaluate organizational response
  - Positives
  - Negatives
- Maintenance of plan
  - Periodic review and update
- Store copy of current procedures offsite



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## State Archives Response Resources

- Regional Advisory Officers
  - Will conduct immediate site visit
  - Help with triage of damaged records
  - Write narrative for disaster response grant
- Albany-based conservators
  - Support RAOs in all of the above
- See Advisory 11.02: Services and Funding Available for Flood Damaged Records



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## State Archives Resources

- Emergency destruction of records
  - Permission required for records that have not passed their legal retention periods
  - Per Regulations of the Commissioner of Education
  - If records are made illegible or a human health hazard
  - Petition Director of Government Records Services
  - RAO asked to review and advise



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## LGRMIF Disaster Recovery Grants

- Maximum award of \$20,000
  - Submit within 30 days of disaster
  - Non-competitive
- But must make sense as a recovery project
- Can request funding for:
  - Freeze drying wet records
  - Decontaminating records
  - Imaging, microfilming, or photocopying damaged records
  - Data recovery costs
  - Consultant fees



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## State Archives Resources

- Disaster response email alert
  - ARCH\_SOS@mail.nysed.gov
- Forwarded to key Archives staff
  - RAOs
  - All managers in Government Records Services
  - Chief of Archival Services
  - Preservation/Conservation Archivist
- Not 24/7, but we will get back to you as soon as possible



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## Consultants and Vendors Lists

- Conservation services
- Disaster recovery vendors
- Data recovery vendors
- Fire suppression vendors
- Microfilming and imaging vendors



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## Pocket Response Plan (PReP)

- [www.statearchivists.org/prepare/framework/prep.htm](http://www.statearchivists.org/prepare/framework/prep.htm)
- Developed by Council of State Archivists
- Pocket-size list of first responders, key contacts, other resources
- Customize to your town



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## Other Resources: OEM

- Conduit for funding from FEMA
- Provides updates on flood warnings and weather watches and advisories
- *Comprehensive Emergency Management and Continuity of Operations Plan*
- Emergency equipment stockpile



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## Other Resources: NEDCC

- [www.nedcc.org](http://www.nedcc.org)
- 24-hour telephone assistance
  - 978-470-1010
- Emergency management preservation leaflets
- Online emergency management suppliers and services database
- dPlan



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## Other Resources

- NYS Dept of Labor
  - Crisis response assistance
  - 518-457-2574
- NYS Office of General Services
  - State Contract for Emergency Standby Services
- Council of State Archivists
  - Rescuing Family Records: A Disaster Planning Guide
- Disaster Recovery Journal
  - [www.drj.com](http://www.drj.com)



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## Questions? Comments?

Please fill out the evaluation survey!  
Thank you!



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