

Essential Records, Disaster Preparedness and Recovery

Pari J. Swift, CRM, Senior Records Manager



40%




National Fire Protection Association



20%





National Federation of Independent Businesses



76%



National Federation of Independent Businesses




ESSENTIAL RECORDS

Remains of Waveland City Hall following Hurricane Katrina (David Carmicheal)

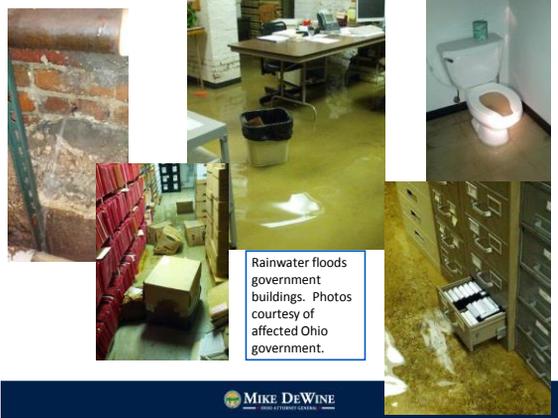


Recent Ohio Disasters






Photos courtesy of Muskingum County Records Center



Rainwater floods government buildings. Photos courtesy of affected Ohio government.



"Tornadoes rip 'war zone' of destruction" Northwestohio.com, June 6, 2010
Photos by: Clark Curtis, Spencer Norris, and ajbella uShare24



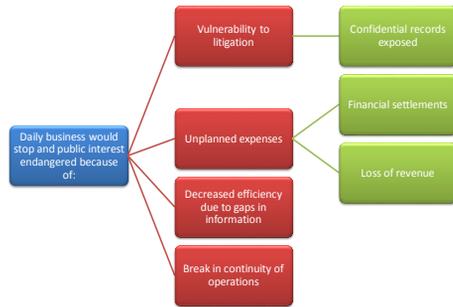
DETERMINING WHICH RECORDS ARE ESSENTIAL



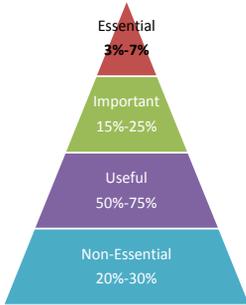
Records are Essential When They:



Liabilities Due to Loss of Essential Records



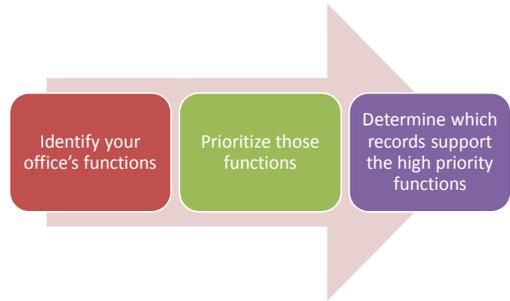
Value Pyramid



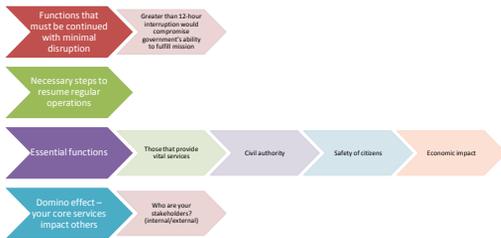
- **Essential** – Irreplaceable because they provide evidence of legal status, ownership, and financial status
- **Important** – Necessary to the continuation of business. Can be replaced or reproduced, but at considerable cost of both time and money.
- **Useful** – Useful to the uninterrupted operation of a business and are replaceable.
- **Non-essential** – no present value or short-term value has expired



Determining Essential Functions



Determining Essential Functions



Analyze and Prioritize Mission

- What is the **purpose** of the Finance Office?
- What are your office's major **functions** and how **critical** is each?
 - Ensure uninterrupted command/leadership
 - Protect critical facilities, systems, equipment and records
 - What if you didn't have access to these for 24 hours
 - Pay government's obligations
 - Are any functions unique to your office?
- Does your office have any **statutory requirements**?
- What is your office's **responsibility**?



Tools for Identifying Vital Records

- Mission statements (government and departmental)
- Retention schedules, record-keeping policy
- COOP, Continuation of Operation Plan
- Inventories and file plans
- Organizational charts



Duties of Treasurers

- Collection of local taxes
- Chief investment officer - oversees the county's portfolio
- Prepares daily/monthly statements of deposits
- Keep accurate account of all moneys received and disbursements made
- Manages moneys accruing to gov't and debts due
- Receive and disperse funds



Determining Essential Records

- Don't ask, "what records are essential?"
 - Ask specific questions about the loss of identified records
 - What records support these functions?
 - If a specific records series were gone, what functions could not be carried out?
- Identify specific operational, financial consequences to:
 - The Finance Office
 - The County/City/Township/Etc.
 - Citizens
 - Employees
- Identify irreplaceable records



Cartload of soaked, moldy index card files (Hurricane Katrina, 2005)

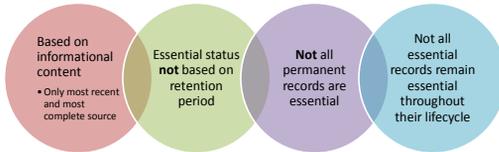


Understand the Essential Record

- How is it created/received?
- What is the dependency on distribution?
- **What storage methods are used?**
- What is the media of the record copy?
- Is recreation possible?
- How is it used?
 - By whom?
- **How long is it "essential"?**
- What is the Finance Office's reliance on that information for survival?
 - What about your citizens?



Determining Essential Records



Essential Records Schedule/Inventory

Essential Records Inventory

- List of essential records
 - Prioritized
- Descriptions
- Format
- Volume
- Locations
- Protection strategy/instruction
- Rotation Cycle
- Associated systems/databases

Steps to Creation

- Inventorying
- Analyzing
- Classifying
- Establishing priorities
- Choosing Media
- Choosing Method of protection

When staff have only days—or even hours—to locate and remove records, it is essential that they have a clear guide to the agency's most important records and their priority for rescue. (David Carmichael)



Emergency Operating Records (Type I)

Meet operational responsibilities under adverse conditions (emergency, security, disaster)

- Directly support emergency operations
- Provide legal status of your office
- Guidance on who is in charge
- Document how your office functions
- Needed in first 24-48 hours
- Essential to keep your office functioning
- Essential to reconstitute office after emergency

These records must be available at or near the vicinity of the relocation site and in usable form, and not relying on special equipment to view.



Hurricane Floyd, 1999 (Courtesy of the North Carolina State Archives)



TYPES OF ESSENTIAL RECORDS



Emergency Operating Records (Type I)

- Disaster Plan
- Delegations of Authority
- Phone trees
- Building plans/maps, utility maps
- Systems documentation
- Essential records inventories
- Restricted Access documents (high security, confidentiality)
- Access credentials/Security clearance roster
 - Onsite and emergency operating center
- Equipment/supply lists and locations
- Emergency Operating Procedures (EOP, COOP)
- Standard Operating Procedures (SOP)
- Media policy
- Other records related to the protection of citizens and maintenance of public health, safety and order



Fires resulting from tornado caused more damage in Xenia (Ohio Historical Society collection)

Legal and Financial Rights Records (Type II)

Protect legal and financial rights of the government and those affected by government activities

- Ensure office can carry out its legal and financial responsibilities and protect legal and financial rights.
- Document financial assets and liabilities of office
- Safeguard interests of:
 - Government, Employees, Citizens
- Needed after immediate emergency has passed when office is beginning to restore operations
- *Can be voluminous, so know which parts of these records are essential*



Priority 2 Financial Records

- Quick resumption of business
- Stored close to recovery site
- Need within 12-72 hours
- In-progress accounts payable and accounts receivable
- Contracts and agreements



Priority 3 Financial Records

- Needed to continue essential functions if normal agency information were unavailable for a prolonged period
- Accessible outside of disaster area
- After first 72 hours
- Accounts payable and accounts receivable
- Existing contracts and agreements
- Unaudited financial records
- Payroll, OPERS
- Insurance



Dynamic v. Static

Dynamic Essential Records

- Must be kept up-to-date in order to be useful
 - Phone trees
 - Payroll/Personnel
- Protect the most current
 - Know how often they change

Static

- Do not require updating
 - Minutes
 - Contract
 - Titles/Deeds
- May eventually lose "essential" status, but do not change during "essential" phase

Critical Work in Progress

- What vital information is sitting unprotected in your work environment at the end of the day?

– Examples:

- Personnel or medical records
- Contracts and agreements
- Recently updated asset inventories
- Financial or claim documentation

– Establish procedures for protecting these records

- Clean desk policy





RISK ASSESSMENT

Risk Assessment



Risk Factor: Type of Disaster

Natural

- Tornadoes
- Severe Storms (wind, rain, hail)
- Floods
- Fires
- Earthquakes



Disaster planning must eliminate the hidden assumption that disasters will be localized. (David Carmicheal)

Risk Factor: Type of Disaster

Societal (Intentional)

- Arson
- Property Sabotage
- Terrorism
- Burglary
- Systems sabotage



Risk Factor: Type of Disaster

Societal (Accidental)

- Equipment Failures (burst pipes, floods, etc.)
- Computer systems failures
- Spills
- Kitchen fires



Risk Factors: Building

Exterior

- Age of building
- Construction materials
- Flat roof/skylights
- Gutters drain property
- Windows sealed
- Water leaks
- Sound foundation
- Surrounding areas (buildings, airports, railroads, chemical companies, etc.)



Risk Factors: Building



Interior

- Fire protection
- Electrical system
- Plumbing
- UV Lighting
- Clear walkways
- Water leaks/moisture
- Cyber security



Photos courtesy of Greene County Archives and Records Center

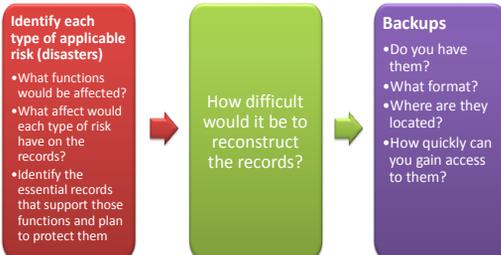


Risk Factors: Timing

- Timing
 - Business hours / Non-business hours
 - Available staff/personnel
 - Consider that if staff or staff's family is affected, they may not be available
 - Cross-training, redundancy



Risk Assessment



Impact of Risk

- Variables
 - Probability – likelihood
 - Impact – actual effect on operations
 - **Level of Impact**
 - 1 (no interruption) – 10 (catastrophic)
 - **Probability of Disaster**
 - 1 (never/rarely) – 10 (certain)
- Impact x Probability = Risk
- Records stored in basement in area prone to flooding
- 7 (high loss of function) X 7 (high probability) = 49



Prioritize the Risks

Identify and categorize vulnerabilities

- Categorize and rank risk factors
- Who can help you recover from each risk?
- What records could be affected by each type of risk?

Prioritize the risks based on:

- Cost to reconstruct lost data
 - Value of lost business/revenue/goodwill
- Cost of labor associated with reconstruction or loss
- Cost of defending against legal action

Establish timeframes for accessing essential records based on priority level



Document the Risks

- Document the identified risks
- Include:
 - Recommendations
 - Action steps
 - Necessary resources to protect records
- Eliminate or mitigate what risks you can
- Plan to protect records from those risks that you can't eliminate



PROTECTION STRATEGIES



Protection Strategies

- Prevention/protection
 - Passwords for electronic records security
 - Provide “use” copies instead of originals
 - Proper storage away from hazards
 - Leaky pipes, off of the floor, fire hazards
- Mitigation – minimize impact of disaster



Protection Strategies

Automatic/Routine Dispersal

- Copies kept in more than one location
- Know where, how, when, and how often records are shared with other locations
- Dependent upon awareness and good communication to avoid inadvertent loss of essential information
- Least expensive



Protection Strategies

Planned Dispersals

- Deliberately copying and storing records in another location
 - i.e. microfilm, backups of electronic media
 - COOP – must have offsite copy



Protection Strategies

- Duplication of Original Records
 - Paper
 - Least expensive way to reformat
 - Most difficult to update and distribute
 - Off-site storage costs depend on quantity of records identified as “essential”
 - Microfilm
 - Eye-readable
 - Good for long-term essential records
 - Difficult to update and distribute



Damaged legal files, Beauvoir, MS (Hurricane Katrina, 2005)

Protection Strategies

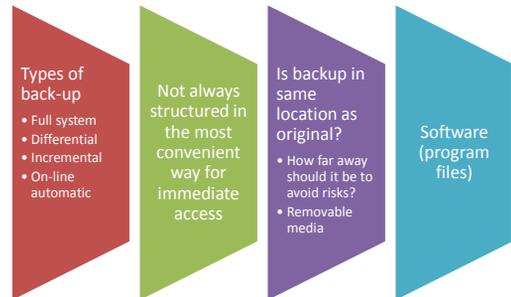
- E-Vaulting
 - Sending and retrieving digital records over private Wide Area Network (WAN) links or via Intranet
- Vaulting
 - Keep records on-site using fire-resistant cabinets or vaults
 - Risks will play into specifications on furnishings and storage areas



Protection Strategies: Digital Records



Protection Strategies: Back-up Tapes



Do your electronic backups make you feel more secure?

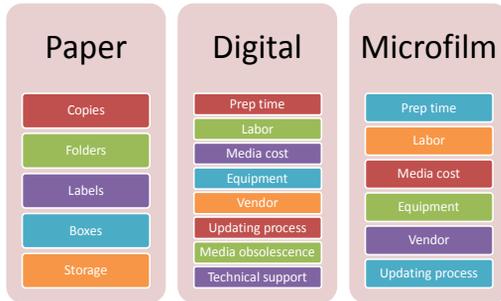
- Electronic records can provide a false sense of security
 - What is the IT staff is not available during an emergency?
 - What if a large area loses power?
 - What if backups don't occur as they're supposed to?
- Identify critical databases and systems
 - Know the order in which they should come back up
 - Otherwise, finding information will be like looking for a needle in a haystack
- When backing up computer programs:
 - Be sure the duplicate is updated with all changes made to the master file
 - Make sure the duplicates don't deteriorate while in storage

Determining Protection Strategy

- Format of record
 - Different storage requirements
- Equipment necessary to enforce method
- How essential is the record?
- Access and retrieval requirements
- Types of hazards the record may face
- Cost and effectiveness of method

Essential records may not necessarily be the same format as the original.

Cost/Benefit Analysis of Protection Strategies



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STORING ESSENTIAL RECORDS

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Storing Essential Records: On-Site

- Issues that could prevent staff from getting to on-site records:
 - Structural integrity – unsafe to enter building
 - Contamination (sewage, asbestos, chemicals)
 - Additional removal, decontamination, and restoration procedures
 - Additional costs
- Exclusive reliance on on-site storage for essential records is not recommended
 - Potential for total or near total destruction of a single location

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Storing Essential Records: On-Site

- Will there be proper temperature/humidity controls?
- Are there electromagnetic fields nearby?
- What security measures are in place to prevent unauthorized access? (storage and computer systems)
- Is building safe from natural disasters?
- Do cabinets, safes, or vaults provide adequate protection from fire, floods, earthquakes, etc.?
- If this is the only copy of a essential record, would you feel safer storing it on-site or off-site?

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Storing Essential Records: Off-Site

- Another office within agency/government
- Exchange with neighboring agencies or local governments
- “Hot” site – everything necessary to continue operations
 - Computers, phones, fax, copiers, scanners, office supplies, etc.
 - Costly – best for those offices responsible for recovery efforts or that require immediate access to computer systems

Duplicate records maintained in the vicinity of their originals are worthless... (David Carmicheal)

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Storing Essential Records: Off-Site

- “Cold” site – provides space, but you would have to bring the equipment
- Commercial storage facility
- Essential records sent offsite are generally duplicates of the original record
 - Duplicates can be disposed of once replaced with current information
 - Originals should be retained according to retention schedule
- Originals—only if protection of original signatures important

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Storing Essential Records: Off-Site

- How quickly could you retrieve records (ideally 24/7)
 - What type of filing/retrieval system is used?
- Does the facility meet ANSI standards for storage environment controls?
- Is the facility adequately insured?
- Is it constructed to minimize risk of damage from natural disasters?
- How does the facility protect against unauthorized entry?
- Does the facility protect against leaks, insects, rodents, and mold?



Storing Essential Records: Off-Site

- What type of fire prevention system is installed?
 - National Fire Prevention Association (NFPA) standards
 - Are detection systems connected to local emergency agencies?
- Does the facility have an auxiliary power source to maintain temperature, humidity, and security controls?
- Do they have a disaster plan in place?
- Does the facility have equipment to reproduce records, should the need arise?
- What types of materials are being stored in surrounding buildings?
- Cost of storage dependent on volume and media format



Procedures to Ensure Access

Ensure that responsible personnel are familiar with essential records plan

- Where are the keys to the storage area?
- Who has copies of the phone tree?

Document policies authorities, responsibilities of key officials

Document procedures governing essential records program in appropriate places such as directives and procedural manuals

- Clearly assign responsibility for coordinating recovery plans and activities
- Designate members of essential records recovery team

Distribute information to all appropriate staff



Continuity of Operations Plan

- Essential Records and Disaster Recovery Plan
 - Identified risks
 - Where essential records (including backups) are located
 - Action steps
 - Necessary resources to protect records
- Communication Plan
 - Internal
 - Annual training
 - How will response and recovery be handled in wake of disaster
 - External – the public will need to know



DISASTER PREPAREDNESS



Disaster Prevention

- Assess potential sources of emergencies to your office's records
 - Natural Disasters – tornadoes, floods, fire...
 - Structural Hazards – roof, construction, wiring, fire suppression...
 - Societal Disasters – Arson, burglary, terrorism, equipment failure, hacking...
- Put into effect all possible prevention measures



Disaster Protection

- Water detection equipment
- Fire detection/suppression equipment
- Supplies for protection and recovery
- Planning and training
- Control environment
- Records storage
 - Off floor
 - Away from hazards (pipes, chemicals, etc.)



Disaster Recovery Plan Contents

- Telephone number of emergency response team
 - Report Tree / Order of Succession
- Contact information for local emergency response agencies
 - Fire, Rescue, Police
 - Disaster Recovery Services/Consultants
- Location of supplies (on & off-site)
- Detailed recovery techniques for records



Disaster Recovery Plan Contents

- List (map) locating high priority items
 - Vital records
- Prevention and Protection assessment and recommendations
- Hardware/software documentation & manuals
- Appendices
 - Supply providers
 - Service providers
 - Maps
- Bibliography



Disaster Recovery Plan

- Give copies of plan to:
 - All members of the office response team
 - Fire & Police
- Store copies of plan off-site
- Update annually
- Make sure it is in writing
- Staff training



Disaster Response

- Look to person in charge for guidance
 - Predetermined in disaster recovery plan
- What is the extent of the disaster?
 - What and how much was effected?
- How serious is the damage to the records?
- Is the cause of the disaster being addressed?
- Are the records not affected being protected from potential damage?



Disaster Response

- Supplies and Services
 - Are they readily available?
 - Contracts in place?
 - Is extra space required for air drying?
 - Off-side storage available?
 - Will you need staff to assist
 - Will they be available if disaster is wide-spread?
- How will you deal with affected records?
- When will office services be restored?



Response Team Members



Supplies

- Store on-site/off-site/combination
- Waterproof containers
- Away from building hazards
- List in disaster plan
- Include supplies to keep staff safe (gloves, masks, protective eyewear)
- Have a vendor list for services
 - Contracts already in place



These photos were taken during a visit to Mississippi and Louisiana in November 2005, by a team of conservators and archivists from the National Archives and the Council of State Archivists.
The photographer is Karl Niederer, State Archivist of New Jersey.

WET RECORDS

Wet Records

Wet records must be stabilized to prevent mold and physical distortion.

- Keep temperature as low as possible
- Relative humidity at 40% or less
- Provide good air circulation
- Remove wet furnishings or carpets
- Freeze within 48 hours



Freezing

- Moderate to heavily wet records should be frozen ASAP to prevent mold and distortion until further decisions can be made
 - Blast freezing best
 - below -25 F
 - Any freezer with temperatures below 0 F
 - Do not freeze photos or negatives!



Wet Records

- Packing for freezing:
 - Boxes lined with plastic
 - Interline with wax/freezer paper
 - Allow for air circulation
- Contact specialized drying companies for computer and AV equipment
- Dehumidification for building and furnishings



Drying Techniques

Air Drying

- Physical distortion from swelling
 - Records will take up more space
- Mold
- Recovery inexpensive, but rehabilitation expensive
- Use on small quantities of records
- Lay flat – don't hang
- Place on buffer (window screens, towels, etc.)
 - Replace buffer when wet
- No more than ½" high

Dehumidification

- Not for coated papers
- Good for damp materials
- Freeze some, leave some for dehumidification



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Packing Wet Records

- Do not attempt to straighten pages
 - Could cause tears
- Pack bound records spine down
- Pack books one layer deep
- Loosely wrap every other book in wax paper to prevent adhesion or ink transfer
- Do not stack boxes more than 3-4 high
 - Lose stability when they absorb water from records
- Try to keep records in order
 - Can remain in folders or boxes
 - Records in file drawers or archival boxes can be transferred to freezer as is



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Document Irretrievable Records

- If possible, make copies of records before disposing of originals
- Document records disposal using RC-1 form
 - Give as much detail as possible as to which records were lost and why



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Resources

- Council of State Archivists
 - IPER
 - <http://rc.statearchivists.org/Content/IPER-Project.aspx>
 - Emergency Planning and Response
 - <http://rc.statearchivists.org/Resource-Center/Topics/Emergency-planning-and-response.aspx>
 - Essential (Vital) Records Management
 - <http://rc.statearchivists.org/Resource-Center/Topics/Essential-vital-records-management.aspx>
 - Pocket Response Plan
 - <http://www.statearchivists.org/prepare/framework/prep.htm>
- Online Disaster Planning Tool
 - <http://www.dplan.org/>
- Heritage Preservation - <http://www.heritagepreservation.org/index.html>
 - Field Guide to Emergency Response
 - Emergency Response and Salvage Wheel

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Conclusion

- When disaster strikes, you won't be able to save all of your records. However, having an Essential Records plan in place will:
 - Protect essential records
 - Lessen damage caused by disaster
 - Identify those records which merit restoration
 - Restore essential services and business functions
 - Protect the rights and obligations of your citizens and government

MIKE DEWINE
OHIO ATTORNEY GENERAL



How to contact us

Pari J. Swift
Senior Records Manager
Ohio Attorney General's Office
Pari.Swift@ohioattorneygeneral.gov
614-466-1356



MIKE DEWINE
OHIO ATTORNEY GENERAL
www.OhioAttorneyGeneral.gov