RECORDS RECOVERY

Donna Read, CRM, CDIA
Florida Gulf Coast ARMA Chapter
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**Records Recovery**

- **Fire--Building**
  - Building can be unstable
  - Bare electrical wires
  - Water and smoke damage
  - Extinguishing chemicals

- **Fire--Records**
  - Completely burned
  - Charred
  - Smoke damage
  - Water damage from fire fighting and sprinklers

*Records Center Fire, 1973*
Records Recovery

- Terrorism--Building
  - Varied levels of destruction
  - Need to conduct a criminal investigation

- Terrorism--Records
  - Damage depends on method
  - Staff needs to cooperate with investigation
  - Records might be the target

Oklahoma City, April 1995 (FEMA)
Records Recovery

Quiet Disaster--Records

- Pest problems (mice, insects)
- Media Decay
- Acid in paper
- Food spills
- Light
- Temperature
- Humidity
- Air quality
- Poor records management
RECORDS RECOVERY

- Cyber Crime
- Corrupted records
- Hacked system
- Hard Drive Failure
- Jump/thumb drive Failure
- Physically damaged discs
- Virus in the System
Records Recovery

Recovery and salvage--Step 1

- Environment
  - Make sure building is stable
    - Fire Department or other authorities will authorize entry

- For Electronics
  - Stabilize the equipment
  - Have necessary supplies to protect drives, etc.

- Assemble recovery team
- Assemble assessment equipment
  - Cameras, laptops, batteries, notepads, etc.
Before Entering the Area

➢ Do not enter the area until the official in charge has declared it safe to do so.

➢ Ensure that structural and contamination hazards have been corrected.

➢ Ensure that the location is secured and establish a security entry checkpoint.

Orleans Parish, Hurricane Katrina —2005
Records Recovery

Recovery and salvage--Step 1 (continued)

- Environment
  - Set up triage and other work areas
    - May need to increase the area’s size
  - Wear protective gear as needed

Volunteers at bleach hand wash, Fargo 2000
Records Recovery

Recovery and salvage--Step 2

- **Assessment**
  - How much damage and what kind
  - Document the damage
  - Are there enough resources
  - What is replaceable, what must be treated, what can be discarded
  - What media--computer, paper, film or all
ASSESSMENT TEAM—RESPONSIBILITIES

- Records Specialists and Preservation Specialists
  - Recording observations and recommending priorities
  - Photographing damage to records
  - Investigating, documenting, and indicating extent of the damage to and significance of the records
  - Estimating the volume
  - List locations
  - Noting additional risks

2000—Suitland, NARA
IDENTIFY DAMAGED RECORDS

- Identify the record types, including the finding aid or database
- Identify easily replaced records
- Identify formats
- Identify damage
- Identify records that require additional expertise and/or expense to recover
RECORDS RECOVERY

Recovery and salvage--Step 3

- Beginning recovery (partly concurrent with Step 2)
  - Needs depend on amount of damage
  - Contact vendors if necessary
  - Assemble equipment
  - Document everything; contacts, damage...
  - Begin stabilization
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Recovery and salvage--Step 4

- **Stabilize**
  - Stabilization depends on damage and media
  - Water damage found in many disasters
  - Stabilize by keeping wet things wet, dry things dry
  - Mold begins forming on wet/damp paper in 48 hours or less
  - Freezing is good way to preserve paper
    - Use commercial freeze-dryer company
  - Handle carefully
  - Try to do nothing that will damage the items further
  - Pack-out to salvage area
Records Recovery

Recovery and salvage--
Step 5

- Salvage
  - Some damage requires professional conservators

Conservators in paper lab (NARA)
RECORDS RECOVERY

Recovery and salvage--Step 5a

- Salvage
  - If you can, dry paper under controlled conditions to reduce mold
  - Dry computer media and equipment, do not touch magnetic surfaces
  - Rewash microfilm and dry
  - Photographs; air-dry is preferable, do not touch emulsion
Recovery and salvage--Step 5b

- Salvage
  - In case of fire damage, stabilize and salvage as much as possible
  - Some papers will be ash, others will be charred or have smoke damage
  - Records may be wet from fire hoses
RECORDS RECOVERY

Recovery and salvage—Step 6

- Recovery
  - Assess and document loss
  - Replace computer equipment as necessary
  - Re-create lost records through collateral records, etc.
  - Re-establish vital records with their duplicates
Assess the Nature and Severity of the Damage

- How many staff are available right now?

- How many records are affected?
  - What formats?
  - What is their value?

- Is this too large for you to handle?

- Can recover using in-house resources
- Within timeframe that does not put records at increased risk for mold
- With resources and expertise at hand
Medium-Scale Incident

- Staff will need to be reassigned
- A structure and response plan will be needed
- Limited outside expertise or contracted resources may be needed

NARA—Suitland fire—2000
LARGE-SCALE INCIDENT

- Affects all staff and the long-term mission of the agency
- Requires extensive resources and use of contractors, including labor, beyond that available in the agency

Gulfport SBA and Court—2005
COMMUNICATE DECISIONS WITH DOCUMENTATION OF DAMAGE

- Which records are affected
- Their current condition
- Decisions regarding recovery priorities and techniques
Incident that Requires External Resources/Contractors

- Damage is extensive
- Damage includes damage from fire, mold, or contaminated water

2005
—Hurricane Katrina
—Orleans Parish
CONTRACTOR SERVICES

- These services may include:
  - Dehumidification for the location
  - Freezer and cold storage facilities
  - Transportation in freezer trucks
  - Vacuum freeze dryers
  - Sanitization and decontamination services
  - Mold remediation services

- Magnetic tape recovery and preservation reformatting
- Microfilm recovery and preservation reformatting
- Data recovery services
- Preservation reformatting of textual materials
- Motion picture film recovery
- Equipment for transporting boxes (conveyors, pallet jacks, etc.)
Deliverables from Contractors

- Facility stabilization
- Re-housing records in new containers
- Re-labeling
- Transporting damaged records
- Retrieval and packing of damaged records
- Freezing water-damaged records
- Storage of frozen records until recovery is completed

- Vacuum freeze-drying water-damaged records
- Air-drying records
- Cleaning records
- Sanitizing and/or decontaminating records
- Recovery of special formats, including photographs, microfilm, magnetic media, film, electronic record formats such as CDs, DVDs, optical disks, hard drives, etc.
- Reformatting records
Plan Tracking System

- Move records from the affected areas to the on-site recovery area
- Track records which have been removed, their original location, their location during recovery, type(s) of damage, and all actions performed on them
- Use paper, pens, pencils, waterproof markers, and a clipboard to begin recording
- Determine which records need to be removed and in what order
- Develop codes and labels for tracking

2006—WNRC—NARA
IDENTIFICATION FOR TRACKING

- Make sure each container is identified on at least two sides

- **Create an inventory that lists:**
  - Unique identifier linked to content type
  - Original location

- **If necessary, include:**
  - Destination during recovery
  - All actions performed and by whom

Illustrating two kinds of tracking
Requirements for Recovery and Staging Areas

- Areas should:
  - Have good lighting
  - Have good air circulation
  - Have access to clean running water
  - Be securable with locks and certain to remain secured at the appropriate level for the records being handled

- Do not begin moving records until your salvage or staging area is prepared

- Determine removal methods

- Determine priorities
Freezing Records

- Freezing records is a good option if you cannot treat all of the wet records within 48 hours.

- Locate large freezers on-site, such as those in a cafeteria, or rent freezer trucks or freezers.

- You can also use a small household chest or upright freezer.

The range of freezer choices from trailer to chest.
Should Records Be Kept Wet and Recovered by a Specialized Contractor?

- Examples of records to keep wet: hard drives from computers, microfilm, and motion picture films
- These records should be sent immediately to a specialized contractor for recovery using specialized equipment
**Paper-based Records that Require Special Handling**

- Large or oversized paper (maps, architectural or engineering drawings)
- Coated papers
- Encapsulated and shrink-wrapped records
PHOTOGRAPHIC FILM AND PRINTS
CDs and DVDs

2006—
Suitland—
NIH material
COMPUTER HARD DRIVES

A CPU that was allowed to dry and rust. This illustrates the need to wrap and seal in static free plastic and recover immediately. (From one of the Orleans Parish offices, post-Hurricane Katrina, 2005)
Magnetic Tape

2006—WNRC—NARA
Mold Growing on Records

- Dangerous for staff to handle without protective gear
- Damaging to the records
- Difficult and expensive to recover from

NARA—Suitland—2000
Large Outbreaks of Mold

- Quarantine and freeze records
  Freezing will halt growth but not kill spores

- If too big for you to handle:
  - Call a contractor

- If you can handle:
  - Clean.
  - Vacuum freeze-dry.
Air-Drying Considerations

- **Pros:**
- Best results for photographs, if placed under restraint, and other special media (including magnetic tape)
- Best for plastic coated materials, and architectural or engineering drawings
- Best for minimizing corrosion of metal fasteners

Records air-drying
**Air-Drying Considerations**

- **Cons:**
  - Requires large surface areas
  - Is labor-intensive
  - Runs the risk of disruption of original order of records
  - Generates costs for absorbent materials
  - Alters the appearance
  - Requires time to dry records
  - Hinders access to records

*Records air-drying*
TIPS FOR AIR-DRYING

- Drying time will depend on optimizing environment and care. Temperature should be below 65 °F and RH as low as possible (below 60%).

- Use fans pointed at the ceiling and kept on 24 hours/day to keep the air circulating.

- Remove records from containers and spread them on surfaces to dry in the air.

- Ensure that the original container and order of records are identified, labeled, associated, and maintained throughout the drying process.

- Spread records out in stacks no more than ¼ to ½ inch thick.

- As records dry, change the absorbent paper underneath frequently and turn the records.
Summary

- What type of disaster has hit you
- Stabilize the environment
- Assess the damage
- Stabilize the records
- Salvage the records
- Determine best recovery methods
- Prioritize
- Recover the records
The End

Donna Read, CRM
CDIA+
Florida Gulf Coast
ARMA Chapter
dlread@verizon.net