Chapter 8. RECORDS DISASTER MITIGATION AND RECOVERY

1. Purpose: When emergencies or disasters occur, even the best of protective measures may not prevent damage to records. Consequently, offices should develop records recovery plans for timely and economical response to records disasters in order to salvage or replace damaged records and the information that they contain.

   Immediately after an emergency or disaster involving records occurs, the Records Officer will:

   - Determine whether contact should be made with the Federal Records Center to appraise them of a possible need for assistance and supplies.

   - When access to the affected area has been granted, the Records Management Staff assesses the situation and performs recovery or consults with contractors who provide records disaster recovery services.

2. Records Recovery Assessment:

   a. Stabilize Environment if possible

      If air conditioning system still works, it should remain on. It is imperative to establish good air circulation and bring the temperature and humidity down, as mold will appear within 48 hours in unventilated areas made damp and humid by water.

      If any of the records have been damaged by fire, extreme caution must be used in handling them. The records will be brittle and probably wet. Pieces of paper towels or blank newsprint should be placed under each charred page before moving the item. The towel or newsprint serves two purposes, to absorb moisture and to provide support. The corners of the towel or newsprint are then used to move the document.

   b. Establish Work and/or Storage Space

      Different kinds of work space will be required depending upon the situation. It is often necessary to establish a viable work space at the disaster site, even if this is only for preliminary sorting. Work and storage spaces may be required to hold undamaged materials and should be arranged through your facilities staff.

   c. Arrange Transportation

      The work plan will require the moving of materials from one location to another. Arrangement should be made through the facilities staff.

d. Remove and/or Stabilize Priority Items

Ensure that all materials are stabilized beginning with the priority items established. If materials are undamaged, but in jeopardy, they should be removed from the disaster site and moved to a designated location. If materials are damaged, decisions based upon the circumstances of the disaster will determine the proper treatment. The Records Management Staff may consult with contractors who provide records disaster recovery services if the damage assessment shows a need for their expertise.

3. Media Recovery Processes

a. Treatment of Paper Records Without Freezing

After assessing which material can be dried without freezing, drying rooms should be set up away from the affected area. Relative humidity of 35-50% is optimum. Electric fans should be used to circulate air on the documents. Work surfaces should be covered with plastic sheeting. Very little cleaning should be attempted on wet records that will not be frozen. After the documents are dry, muddy records can be brushed to remove the dirt. Attempting to remove mud while paper is wet forces the dirt deeper into the paper's fibers.

Bound volumes should be interleaved with blank newspaper or paper towels, changing the blotting material as frequently as possible and as often as necessary until dry. When partially dry, the volumes may be fanned if the pages are strong enough to support the found volume standing on end. Wet volumes containing coated pages should not be allowed to air dry; they will stick together permanently.

b. Treatment of Paper Records to be Frozen

For stabilizing and restoring a large volume of water damaged materials, freezing documents at low temperatures (below 20 degrees F) is the most effective method. Cold storage provides accessible and inexpensive space in which a large volume of material can be stabilized in the condition it was found, preventing further deterioration while awaiting treatment. It also provides time to assess the damaged material.

The procedure by which the damaged records will be dried determines the way they should be packed for freezing. If only a small volume of material is frozen, it is economically more feasible to send the records to a local refrigeration unit and air dry them later by staff personnel. Bound volumes should be wrapped in freezer or wax paper to prevent their sticking to each other. Groups of textual records are wrapped in the same type of paper in packages not to exceed two inches in thickness. All bundles and volumes should be labeled, and the information recorded in a notebook.

If a large volume of holdings is damaged, the least expensive and most successful method for drying is vacuum or freeze drying. This technique allows the water to pass from the frozen to the vapor phase without going through the liquid stage. It is also effective in

reducing stains on documents and odor caused by smoke. Vacuum drying should always be used with water damaged materials infested with mold at the time of freezing, as the records can be sterilized at the end of the drying process at little additional cost.

Materials designated to be vacuum or freeze dried should be placed in interlocking plastic milk crates. The milk crates are lightweight and provide for air circulation and drainage. Materials should be placed unwrapped in the cartons until they are loosely packed, approximately three-fourths full. Bound volumes should be wrapped with freezer or wax paper and placed in cartons on their lower edges so they will not fall over or be further distorted. They should not be packed too tightly, to allow for air circulation. Oversized material should be placed on uncolored cardboard and wrapped in packages not to exceed 2 inches in thickness. Burned and charred materials require special care in handling, as the paper or bindings are very brittle. Support single sheets on uncolored cardboard and secure them with another sheet of cardboard or heavy paper.

In case of massive destruction, either conveyor belts or a human chain should be used to move the damaged material. If possible, the material should be packed onsite in an adjacent dry area. Two teams containing the same number of members should be organized, one to collect the damaged documents and the other to pack the records. Since wet material is much heavier than dry records, personnel should be cautioned to use proper lifting methods to prevent back injuries. The milk cartons should be numbered, and if available, copies of location registers or other finding aids should be annotated to record where the materials are being transferred. Accurate labeling or inventorying of records as they are moved will save a great deal of time later when the records are returned.

Large volumes of wet materials should be moved directly from the building to the freezing facility, preferably in refrigerated trucks. For small collections of documents, dry ice may be used to freeze material for transport in un-refrigerated trucks to the freezing facility. Gloves should be worn when handling dry ice.

After material has been sent to the freezing facility, file areas should be repaired and sterilized. Documents should not be moved into the file areas until they are thoroughly clean and dry, and proper temperature and humidity have been restored. As large collections have been safely kept in a frozen state for as long as 6 years, there is ample time to reestablish conditions. During the period that the records are stored at a freezing or drying facility, a designated person should be responsible for ensuring the proper security and protection of the records.

c. Treatment After Drying of Records

After the critical drying operation is over, all returned dry materials should be placed in the file area and separated according to the different degrees of repair or restoration needed. Some documents may have escaped damage while others may require cleaning, flattening, or minor repairs. Consult with the Federal Records Center or a restoration contractor before attempting repairs.

Before being returned to their original locations, the records should be monitored daily for several weeks to ensure that mold or fungus has not developed. Random monitoring should continue at regular intervals for at least a year after refiling.

d. Treatment of Photographic Materials and Microfilm

Photographs, negatives, and microfilm are salvaged and restored in a different manner than are textural records and bound volumes. For emergency stabilization, wet black and white photographs, negatives, and microfilm should be sealed in polyethylene bags and placed in plastic (not metal) garbage cans under cold, clean running water. This should be done while the materials are still wet; they should never be allowed to dry before attempting to salvage. They may be left in running water for up to three days, although, treatment at a professional photo-finishing laboratory equipped to handle water damaged photographs should begin as soon as possible.

4. Additional Guidance: For additional information and guidance on recovering various types of record materials, please visit the National Archives and Records Administration Preservation Programs website at http://www.archives.gov/preservation/disaster-response/