Document Drying How To And Restoration Techniques That Can Save Your Valuable Books, Paperwork And Other Records

Whether the reason for the occurrence is a natural calamity or manmade, water damage is one of the most unwanted situations that homeowners would not want to face. Torrential rains, fire sprinklers going off unexpectedly, a leaky roof, and burst pipes – such incidents can be very destructive to the home itself in the valuables that are contained therein. And some of the most important valuables in a home include documents and other paper-based items.

In this day and age where digital products and media have fast become the norm, some documents still remain in its original form. This includes books, certificates, licenses, contracts, photographs, maps, manuals and other documents. Although scanned copies can be stored in electronics form, most people still prefer to have the original physical form of the item, either as proof of identity or ownership or because of its sentimental value. However, such physical forms are susceptible to water damage with some older items like contracts and old photographs extremely fragile against the damaging effects of exposure to water.

On such occasions where water damage can occur, affecting valuable documents and similar items, the only resort that homeowners can lean on would be document drying and water damage restoration. Some of these methods can be done by homeowners themselves while other items, particularly the very fragile and expensive ones, may require the services of professional restoration companies.

The Effects of Water Damage on Your Documents

Water has very strong destructive properties and water damage has been known to cause structural and integral damage to a home and its components like wood, metal, cardboard and organic fibers. If left unabated oruntended, these items can result to rot, deterioration and eventually irreparable damage.

Books for instance can be ruined, warped or deformed beyond recognition or usability, particularly if the homeowners decided to dry them on their own accord using improper ways of performing document drying. Damage to water-exposed books can occur within a span of one or up to four hours after the items have been soaked in water. Pages can swell as the materials absorb more and more amounts of moisture. The bindings and the cardboard-based covers are of different materials from the pages and have different water-absorption rates. These differences would result to the pages swelling more and causing the bindings to deform. In some cases, the pages detach themselves from the bindings and causing further damage.

There are several methods of performing document drying for water damaged documents and similar items. The effectiveness of such methods depends on the extent of water damage that the item incurred, and the water absorption characteristics of the item itself. The item’s water absorption rate will depend in its age and condition, as well as the type of materials that the
document has been produced on. Thus, such items are more susceptible to deformation or mold infestation.

On some cases, water damage occurs not because of direct exposure to water, but due to other reasons such as humidity. High levels of humidity in damp places such as basements or attics, which result to higher moisture absorption, can eventually lead to water damage. This results to the rapid deterioration of the item and if left unattended would result to damage beyond repair.

**Document Drying: Can It Be Done?**

Depending on the extent of water or moisture absorption, document drying can be done using either state of the art technologies employed by professional restoration companies, or through do-it-yourself methods that can be performed by the homeowners themselves. Such methods include air-drying, dehumidification and vacuum-freeze drying, which are effective enough to restore water-damaged documents to almost its original conditions.

**Restoration Techniques: Loose Paper Sheets and Small Compilations**

Water-damaged loose paper sheets like certificates and licenses are easier to restore using document drying techniques. Loose paper sheets can be dried individually using the air-flow method, either through a low-powered hand blower or through a dehumidifier.

Loose paper documents and small compilations can also be restored in bulk through the freeze drying methods. Professional restoration companies have sophisticated equipments particularly for the vacuum freeze drying process. On the other hand, documents which are still wet can be frozen using standard household freezers, and then thawing out the item at a later time.

When handling loose paper sheets extra care should be employed to prevent further damage like tears or smudges. Dirt and grime, particularly if the water damage were caused by floods, can be removed using clean water. Each sheet can be layered out on paper towels to dry using an air blower. However, it should be noted by homeowners attempting the restoration process to use only plain paper towels and avoid using towels with ink prints on the surface.

**Restoration Techniques: Books and Manuals**

Books are very difficult to restore because of the bounded pages, which often result to pages sticking or adhering to one another causing irreversible damages. Another issue when trying to restore books is the problem on deformation, which can render the book useless. The most effective method to use that can recover a water-damaged book is the vacuum-freeze drying process. However, the equipment would only be available at document restoration companies and would entail certain costs.
In such cases, the homeowner should decide if the document or book is worth spending dollars with a restoration company. Rare, antique or irreplaceable books would best be restored by professionals while ordinary books and manuals can be attempted to repair using do-it-yourself method. On some cases, the books would not be worthy enough to spend energy and resources with and would just be discarded.

The following are some of the methods that can be used to restore books, documents in volumes, or manuals:

* **Air-Drying**

Use paper towels to remove extra water from the book surface, however, use only plain paper towels without any ink prints. The book should be held at both covers so the pages can be air-blown without the pages sticking to one another as they dry out. It would also be best to sprinkle the pages with talcum powder to prevent adherence.

* **Dehumidification**

Another technique that can be used for water-damaged books is to isolate them inside an enclosed area with a dehumidifier that can remove the moisture inside the area. Dehumidifiers can be the electromechanical type or the desiccant air-dry distribution type. Again, pages should be sprinkled with talcum powder to prevent them from sticking with one another.

The two methods above are effective in drying out wet books however the problem would be on how to prevent deformation during the drying process. The next method would be the solution to this dilemma.

* **Vacuum-Freeze Drying Method**

Restoration companies utilize the vacuum-freeze drying method to effectively remove moisture from water-damaged books or documents while preventing deformation from occurring as the moisture is drawn out. The freeze-drying process is also known as lyophilization or cryodessication and would need specialized machineries.

In this method, the wet item is frozen at a very fast rate to prevent the water from creating further deterioration on the paper material. A freezer that is set to -40deg Celsius is used for this purpose. The frozen book is then placed inside a vacuum chamber and the temperature inside the chamber is slowly elevated to thaw the material out. Evaporated moisture is removed from the chamber by the vacuum as the temperature is slowly elevated further. To prevent deformation, mechanical placeholders clamp down on the books hindering any movements resulting to warped pages or cover.

Any of these methods are effective restoration techniques however homeowners should expect that water-damaged books may not be fully restored to pre-damaged conditions. Ink smears
and tears prior to the recovery process will remain permanent. Recovery though is still at a high percentage and restored books would once again be usable. Again, the homeowners should gauge the worth of the book or document versus the cost incurred by availing these services from restoration companies.

**Restoration Techniques: Photographs**

Photo prints are some of the most endearing and most priced possessions in a household, particularly if the photographs are old and produced prior to digital photography has been established. Antiques and old photographs are irreplaceable even if scans and reprints can be performed. The sentimental or intrinsic values of these old photos can never be replaced.

When trying to restore water-damaged photographs, the sooner it is done the better. Water damage restoration and document drying should be done within 48 hours, otherwise molds and mildew would occur and create further damage to the photos. The key here is to reduce the humidity and prevent the growth of these microorganisms.

Photos should be handled carefully and on the edges only. The photo emulsion side should not be handled directly otherwise smears and smudges would be occur rendering the photo useless. Photos that have stuck together should never be pulled apart otherwise the photo side would be smeared beyond repair. These can be separated by slow rinsing in cold water until the individual photos separate.

Each photo should be laid out flat on paper towels with the photo-emulsion side facing up. Do not use printed paper towels as the ink may transfer to the photo. Slowly air dry them using a low-power air blower or place them inside an isolated room with a dehumidifier.

Digital copies can be excellent backups to these photos and other documents should water-damage occur and affects your photos. This is excellent particularly for newer photos and other documents. Still, this would be a pale replacement to the original print particularly for old photos, certificates, and other documents that have increased its worth and value throughout these years.

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