



Dear Dr. Book

Dear Dr. Book,

I discovered that my collection of old comic books and old science fiction masterpieces was damaged when a water pipe broke in my basement. How can I dry these volumes and save them for the future?

An Avid Book Collector

Dear Avid,

I am sorry about your damaged volumes. Unfortunately, questions about salvaging water damaged materials come up fairly often, especially after severe summer rains/flooding and after a cold spell in the winter that results in burst frozen pipes.

When dealing with water damaged materials, time is of the essence. Mold can begin forming within 48-72 hours from the time of the original damage. Drying paper materials is a fairly easy operation, but salvaging materials from mold damage is difficult.

Two procedures are most often used for drying paper materials – air drying and freeze drying.

If the volumes are only slightly wet and you have the time and space to spread them out for drying, this is an effective way to go. Air drying works especially well in the summer when “sun power” can be harvested. For example, if your comic books are wet only around the edges, and you have caught the damage almost immediately, they should air dry within a day or so and thus prevent any further damage. Using fans to increase air circulation speeds up drying.

If the volumes are quite wet, it is best to freeze the materials and then proceed with the most appropriate drying methods. When in doubt, *freeze the paper volumes*. Freezing does not harm the volume itself and prevents any further damage from occurring. It also gives you time to make an informed decision on the most appropriate option, including replacement of any volumes that are easily repurchased. Do not squeeze books to remove water. If the book has been distorted, reshape it very carefully. If volumes are dirty, they can be cleaned with water; however, paper is very fragile when wet and may tear at the slightest pressure. Wrap each volume separately in freezer paper and put them in a freezer. The wrapping technique need not be fancy, but it protects the volume, makes it easier to handle, and prevents color dyes from running from one volume to another. Store materials either flat side down or with the spine down. The faster the volumes are frozen the better, but a home freezer works just fine. One caution: if the materials were standing in potentially contaminated or very dirt water, make sure to use gloves and protective clothing.

Volumes can be air dried even after they have been frozen although it generally takes longer. If multiple volumes have been frozen they can be air dried a few at a time. The materials remaining in the freezer will be fine for as long as they are there.

University Libraries operates a Wei T'o book Dryer and Insect Exterminator which can dry approximately 200 volumes in several months with the actual time dependent on the type of paper and extent of water damage. The book dryer works well for small scale disasters and has been used by residents, businesses, and institutions around the Rocky Mountain Region for the last 13 years to dry various types of materials, including business and government agency records, church sheet music, university reference volumes, school yearbooks, children's books and various other personal papers and collections. The service operates on a cost recovery basis, charging for staff time and an additional University overhead charge, with an average base cost of \$100 to \$200.

After salvaging your treasures, there may be other follow-up treatments needed including repairing torn pages and rebinding,. Protective enclosures may be appropriate for the housing of the comic books. It is also recommended that you review your current storage arrangements. Most basements are used for general storage, but valuable materials should be housed away from outside walls/windows and overhead pipes, and elevated off the floor (pallets work well). Temperature extremes and direct sun light should also be avoided.

For information on preservation topics, please write to “Dear Dr. Book” in care of the *University Libraries Newsletter*, Colorado State University Libraries, Fort Collins, CO 80523 or visit the Libraries Preservation Services Web site at: <http://lib.colostate.edu/preserv/>.

University Libraries Vol.2, No. 2, Winter 2000

