

The Indiana Archives and Records Administration's Guide to Preventing Damage to Records

This guide is for any County/Local or State office that has paper, microfilm, or electronic records and who wants to ensure they are storing them in the best way possible. When it comes to records storage the adage, "An ounce of prevention is worth a pound of cure" could not be truer. The more steps you take to prevent damage, the better off your records will be in the long run and the better you can fulfill your public records responsibilities.

Paper and Microfilm Records

The best protection for paper or microfilm records is a cool, dry, stable, and secure environment with good air circulation and limited light exposure. Here are some tips to help you store your paper or microfilm records.

- **Investigate:** If you smell mold, mildew, rodents, or similar make sure to investigate until you find the source. Doing this early on can prevent more serious, and possibly irreversible, damage later.
- **React:** If you find damage, take immediate steps to mitigate it. For example, further water damage can be prevented by covering records in plastic sheeting until the source of the water can be eliminated.
- **Regular Checks:** If you store records in a seldom used area, make sure to regularly check the records and the storage space. Leaks can spring up overnight and going 6 months without checking could lead to extensive damage. Rodents and insects are drawn to dark, seldom used spaces especially if they are near a food source. The temperature may change if a system malfunctions and without regular checks you may not know in time to prevent damage.
- **Light:** Avoid storing records near direct sunlight, exterior windows, or strong fluorescent light to minimize light damage and fading.
- **Water:** Avoid storing records near or below a water source or pipes to prevent mold, mildew, and water damage.
- **Humidity:** Avoid storing records in spaces with high humidity as this can result in mold and mildew, as well as low humidity which can cause records to become brittle.
- **Capacity:** Avoid storing records in too small a space, as this can lead to poor ventilation, excessive strain on shelving, and damage when trying to access records. Store records off the ground and ensure floor support is sufficient to prevent a collapse.
- **Shelving:** Metal or painted wood shelves are best. Avoid un-painted wood when possible. Avoid particle board shelving when possible as it may not be strong enough and will bend and warp in high humidity or when exposed to water. If you have particle board shelving, check your records regularly to ensure the shelves are holding.
- **Ventilation:** Avoid storing records on the floor or flush against a wall. Especially avoid storing records on or flush against concrete surfaces as they tend to hold moisture. Store records on shelves that have space between the shelf and the floor when possible. Try to store records at least 2" away from the floor – a pallet is a good option if you do not have shelves.
- **Visibility:** Avoid storing records in a way that makes it hard to easily see them. For example, do not stack boxes so high that you cannot easily assess their condition without a ladder or moving them. Try not to store boxes deep in a corner or other dark space, so it requires extra effort to view them. Avoid stacking records too deep on a shelf, so that you would need to remove one or more boxes to see all boxes on the shelf. The harder it is to easily view all boxes, the easier it is to overlook damage until it's too late.

- **Infestation:** Avoid storing records near food or drink source areas like kitchens, break rooms, and food storage locations to minimize exposure to rodents and insects.
- **Dirt and Dust:** Dirt and dust are abrasive and can be especially damaging to microfilm, in addition to attracting pest. Records should be stored in closed containers and storage areas routinely dusted and cleaned.
- **Heat:** Avoid storing records near radiators, heat sources or in high temperatures to avoid heat damage over time or potential fires. When possible, store records behind fire-resistant doors or in a fire-resistant cabinet.
- **Temperature:** Avoid locations like basements and attics that experience extreme temperature and humidity fluctuations as repeated fluctuations degrade paper and microfilm. Attics and basements generally don't have good air circulation either.
- **Security:** Avoid storing records in a high-traffic, public area to limit and better control access. Access to records should be limited to only employees who require access. Develop and document procedures to ensure proper security measures are followed when storing records, especially records containing confidential or sensitive information, to avoid improper destruction or loss.
- **Off-site storage:** If you are storing your records off site, ensure the storage site can meet the above recommendations. Check your records regularly, especially after a weather event such as heavy rains, flooding, heavy snow, or a tornado.

Electronic Records

The best protection for electronic records is similar to those for paper and microfilm – a cool, dry, stable, and secure environment with good air circulation and limited light exposure. Electronic records may also require additional consideration when it comes to storage devices and if you are working with a software vendor for storage. Here are some tips to help you store your electronic records.

- **Investigate:** Keep an eye out for a file exhibiting early signs of file corruption, degradation, or bit rot. Doing this early on can prevent more serious, and possibly irreversible, damage later. Things to look for are fire opening errors, glitches, incorrect actions, file crashes, sudden blue screens, and any other strange behaviors involving the file.
- **React:** If you find damage, take immediate steps to mitigate it. For example, one step might be backing up a file into a new storage space if you suspect the hardware it is currently stored on is degrading.
- **Regular Checks:** If you have records on older media like CDs, devices like an external drive, or a seldom used computer make sure to regularly check that you are still able to access the records. Check that CDs or DVDs are playable, that the external drive is still viable, and that the computer still boots up.
- **Humidity:** Avoid storing computer equipment or electronic media (such as CDs) in spaces with high humidity as even plastic can be prone to mold and mildew. Unlike paper records, it can sometimes be impossible to restore computer equipment or electronic media that has molded or mildewed.
- **Water:** Avoid storing computer equipment or electronic media (such as CDs) near or below a water source to avoid leaks and water damage.
- **Capacity:** Be sure that you have enough storage space whether it be on your network or on external storage. If you are exploring potential external vendors to store your electronic records or already have a vendor, have the vendor confirm they provide adequate storage for the volume of your electronic records.
- **Ventilation:** Avoid storing computer equipment or electronic media (such as CDs) on the floor or flush against the wall. With servers, allow sufficient room for air circulation.

- **Dirt and Dust:** Dirt and dust are abrasive and can damage computer equipment and electronic media (such as CDs). Electronic media should be stored in closed containers and storage areas should be routinely dusted and cleaned.
- **Heat:** Avoid storing computer equipment or electronic media (such as CDs) near a heat source such as a radiator, vent, heat ducts or similar. Avoid storage locations that are unusually warm.
- **Temperature:** Avoid storing computer equipment and electronic media in locations that experience extreme or frequent temperature fluctuations.
- **Security:** Follow applicable policies on proper network and cyber security measures for electronic records to maintain their authenticity and integrity, as well as reduce the threat of malicious destruction or harm to records.
- **Vendor or Cloud storage:** If you are storing your records with a software vendor or in the Cloud, ensure the provider can meet the above recommendations. Pay particular attention to their disaster recovery policies and offerings.