Storage Facilities and Procedures

Summary
As an employee of a Minnesota government agency, you are legally required to keep records of your agency’s activities so that you are accountable to the citizens of the state. While the law does not require you to keep records permanently, your approved records retention schedule may dictate that you keep them for extended periods of time (e.g., ten years or permanently). For practical reasons, you may want to remove the records that you do not refer to frequently from high-cost office space to a lower-cost storage facility until their disposal date. If you use a storage facility, you will need to consider:

- *The physical storage space.* Storing your electronic records in a space designed for that purpose will help you maintain your electronic records as long as legally and operationally necessary.

- *Access procedures.* Procedures for access and use of the storage facility must detail who may access the facility, check out records, add records, and dispose of records.

Your storage facility and procedures policy should mesh with your overall records management strategy. Address both operational and legal requirements to ensure that you store and handle your electronic records in accordance with Minnesota law, while also meeting your operational needs.

Legal Framework
For more information on the legal framework to consider when developing a storage facility and procedures policy, refer to the *Introduction* and Appendix D of the *Trustworthy Information Systems Handbook*. Also review the requirements of:

- Official Records Act (Minnesota Statutes, Chapter 15.17) (available at: <http://www.revisor.leg.state.mn.us/stats/15/17.html>), which mandates that government agencies must keep records to maintain their accountability and specifies that the medium must enable the records to be permanent. The Official Records Act further stipulates that you can copy a record and that the copy, if trustworthy, will be legally admissible in court.

- Records Management Act (Minnesota Statutes, Chapter 138.17) (available at: <http://www.revisor.leg.state.mn.us/stats/138/17.html>), which establishes the Records Disposition Panel to oversee the orderly disposition of records using approved records retention schedules. Coordinate your records retention schedules with your storage facility management to help ensure that you store and dispose of records in accordance with the Records Management Act.
• Minnesota Government Data Practices Act (MGDPA) (Minnesota Statutes, Chapter 13) (available at: <http://www.revisor.leg.state.mn.us/stats/13/>), which mandates that government records should be accessible to the public, unless categorized as not-public by the state legislature. Carefully consider which records are public and which are not-public under the MGDPA. You must be able to provide access to the stored public records, yet prevent unauthorized access to not-public records.

• Uniform Electronic Transactions Act (UETA) (Minnesota Statutes, Chapter 325L) (available at: <http://www.revisor.leg.state.mn.us/forms/getstatchap.shtml>) and Electronic Signatures in Global and National Commerce (E-Sign), a federal law (available at: <http://thomas.loc.gov/cgi-bin/query/z?c106:S.761:>). Both UETA and E-Sign address the issues of the legal admissibility of electronic records created in a trustworthy manner and the application of the paper-oriented legal system to electronic records.

Key Concepts
As you discuss and develop a plan for storage facilities and procedures, you will need to consider:

• Storage facility requirements

• Storage facility components

Storage Facility Requirements
The desirable qualities of a storage facility for electronic records are:

• *Adequate floor space.* You will need to consider:
  – The current volume of material (both electronic and paper) you need to store
  – The projected volume of material you will need to store in the future
  – Your records retention schedules, to see how much material is stored at a given time
  – The space requirements of different media (see the *Digital Media* guidelines)—especially if you are considering switching storage media (e.g., electronic media generally requires less space than paper media)

• *Security.* Allow only approved people to access the storage facility. You will want to consider, among other things:
  – A controlled entrance (e.g., security code keypad, smart-card swipe)
  – An alarm system that sounds if an unauthorized person attempts to enter the storage facility
• **Convenient location.** Consider how often you will need to access the records in your offline storage facility to help determine how conveniently located your storage facility needs to be.

• **Adjustable lighting.** Your storage facility will need to have adequate lighting available for people using the facility, but should be relatively dark when not in use to help preserve the stored materials. Bright lights can fade printed material.

• **Ventilation.** Good ventilation will help prevent dampness, mold, and pest infiltration.

• **Temperature and humidity control.** Proper temperature and humidity are essential for preserving electronic records on digital media. Temperatures and humidity levels that are above or below the recommended range can deteriorate electronic and paper records. You should strive for a consistent environment, without sudden or drastic changes in temperature or relative humidity.
  
  − The temperature should be between 68 °F +/- 2 °F.
  
  − Relative humidity should be 40% +/- 5%.

• **Clean air quality.** The air in the storage facility should be free from pollutants (e.g., chemically strong cleaning solution fumes). Dust can be particularly damaging to digital media.

• **Damage prevention.** Protect your storage facility from:
  
  − Pest infestation (e.g., mice, cockroaches, silverfish)
  
  − Fire, smoke, and sprinkler damage
  
  − Water damage, either from leaky pipes and leaky foundations, or from trapped moisture in walls, floors, and ceilings
  
  − Damage from magnets, since magnets can damage digital data on electronic storage media, and thereby damage your electronic records

You may also consider using a third-party storage facility that can store, access, and deliver records to you. Be certain that the third-party facility can meet your operational needs and all legal requirements.

**Storage Facility Components**
Determine your needs, priorities, and budget for the following components of a storage facility:

• **Storage aids.** Appropriate storage aids for the media may include shelving, file cabinets, and storage boxes. You may also need special cleaning supplies (e.g., lint-free dusting cloths, cotton gloves for handling sensitive media).
• *Facility map.* You will need a map of the storage facility so that you know which records are stored in each area.

• *Circulation control.* Develop a circulation log or other method for tracking facility access and records circulation. For a reliable circulation control system, you will need to develop an indexing system that accounts for all the records stored in the facility. A central authority should manage the index’s content. Media options include a paper list, card file, or database. You should be able to look at the circulation control index and determine the exact status of each record (e.g., if checked out, with whom and when due; if disposed of, when destroyed or disposed of; date of final disposition).

• *Acceptance system.* Develop a process that allows agency members to place records into the facility. Items submitted for storage should have, at minimum, the:
  - Name of the records series
  - Public or not-public designation
  - Record series inclusive dates
  - Unique locator number or identifier
  - Name of the agency and/or department submitting the item
  - Records disposal date

• *Special consideration for vital records.* Your vital records should have the best storage facility you can devise and afford. A third-party vendor may provide your best option for the physical storage of vital records. An off-site storage location is best. Be certain that your facility map shows the location of vital records, so that you can locate them immediately should a disaster occur.

• *On-going maintenance schedule.* Establish an on-going system for maintaining the storage facility, including:
  - Regular cleaning, using chemicals that will not leave harmful residue or fumes
  - Procedures for checking deterioration of physical storage media (e.g., warped compact disks, cracked disks, moldy boxes)
  - Procedures for checking deterioration of electronic content (e.g., unreadable disks, inaccurately read records, missing or scrambled information on records)
  - On-going maintenance program (e.g., reading samples, spinning tapes to tighten them)
  - Regular maintenance of storage facility equipment (e.g., furnaces, air conditioners, dehumidifiers)
• **Reading room.** Establishing a separate reading room near the storage facility could improve security, by allowing you to monitor records use.

• **Disaster recovery plan.** As part of your policy, include a disaster recovery plan that provides a series of detailed actions (including who is responsible for executing each step of the disaster plan) if a disaster should occur at the storage facility. Include the response procedures for multiple types of disasters (e.g., flood, fire, smoke, explosion). The goal of the plan should be to have the facility operational and the greatest number of records recovered in the least amount of time. Train staff members and practice the disaster recovery plan. For more information on disaster recovery, refer to the Disaster Preparedness guidelines <http://www.mnhs.org/preserve/records/disaster.html> on the State Archives’ web site.

• **Access and use training.** Provide instruction and training for staff members who will be submitting items for storage, accessing stored records, and checking out records. Established guidelines and training will enable you to provide service, stay organized, and protect your records.

**Key Issues to Consider**

Now that you are familiar with some of the basic concepts of storage facilities and access procedures, you can use the questions below to discuss how those concepts relate to your agency. Pay special attention to the questions posed by the legal framework, including the need for public accessibility and protection of not-public records as set forth in the MGDPA. Consider your current and future activities and records to help determine your requirements for a storage facility and access procedures. The answers to these questions will guide your development of a storage facility that meets your agency’s needs and legal requirements.

**Discussion Questions**

• What are our goals for a storage facility and access procedures? What priority can we place these goals in? How does this prioritization affect our budget?

• Are there other government agencies to share resources with?

• How long do we need to retain our records under the Records Management Act?

• Will we be storing an increasing volume of electronic records and fewer paper records?

• How frequently will the records need to be accessed? How strictly must access to the records be monitored? Will the public access our records directly, or will we access records on behalf of the public? How will we protect not-public records as defined under the MGDPA?

• What are our needs for floor space, storage aids, location, and security systems?

• Will the storage area be maintained in our daily work space or in a separate location? What are the cost differences of our options?
• Are we considering a third-party storage facility? How will we be sure that the third-party can meet all of our legal and operational requirements?

• Who is responsible for enforcing the storage system policy and procedures? Who will maintain the map and index?

• How will we accept and process records into the storage facility?
Annotated List of Resources

Primary Resources


This guide discusses the physical characteristics of various optical media, as well as methods for their proper care and handling to ensure longest possible use in any given environment. A useful glossary is included.

COOL, Conservation OnLine <http://palimpsest.stanford.edu>

A compilation of materials from other sources about electronic conservation, this web site includes links to resources on disaster recovery, electronic media, electronic formats, and storage environments.


This book provides a comprehensive overview of electronic records management, with chapters on key concepts, long-term access, best practices, and developing an action plan. The book also includes a comprehensive bibliography, as well as useful appendixes covering such topics as technology for records management, electronic records preservation costs, conversion standards, media life expectancies, and a preservation metadata model.


Developed for Minnesota government agencies, this overview of the basic principles of records management includes chapters on defining a government record, taking inventory of your records, developing records retention schedules, preserving archival records, disposing of records, and setting up a records storage area. A list of resources for more information is included, as well as information about applicable state law regarding electronic records management. NOTE: As of October 1, 2002, the Division ceased offering records management services, so references to its activities are no longer valid.

This book provides a thorough discussion of the basic principles of electronic records management. Chapters include concepts and issues, electronic storage media and formats, file formats, inventorying electronic records, retention schedules, managing vital electronic records, and managing files and media. The book also includes a comprehensive glossary and bibliography.

Additional Resources


Also available as a downloadable file, the information on these web pages summarizes the basic concepts of disaster preparedness, including disaster prevention, disaster planning, disaster recovery, and disaster preparedness resources.

Electronic Recordkeeping Resources


This web site provides a comprehensive list of links to other Internet resources related to electronic records management. The site is managed by Cal Lee, who originally constructed it while employed at the Kansas State Historical Society. Topics include security, preservation, access, and technology infrastructure.


This book provides chapters that focus on the different aspects of planning and managing archives for all media, including paper and electronic formats. Special topics of interest to the electronic records archivist include special formats (e.g., moving images, sound recordings), and using computers and document imaging systems.


This handbook provides an overview for all stakeholders involved in government electronic records management. Topics center around ensuring accountability to elected officials and citizens by developing systems that create reliable and authentic information and records. The handbook outlines the characteristics that define trustworthy information, offers a methodology for ensuring trustworthiness, and provides a series of worksheets and tools for evaluating and refining system design and documentation.

National Archives and Records Administration (NARA) <http://www.archives.gov/index.html>
For technical guidance on archival preservation and management, visit the web site of the National Archives and Records Administration.

The PC Technology Guide
<http://www.pctechguide.com/storage.htm>

This site is a comprehensive resource on all aspects of the personal computer. Topics include hardware, software, computer use, and digital media.