

Records Management



Henderson City Hall



Eureka County Courthouse



Nevada Local Government Records Management Program Manual

**Nevada State Library and Archives
2010**

This document is not an attempt to give legal advice. If any questions should arise concerning any information given in this document, you are directed to seek the advice of your legal counsel. This document is subject to change without notice.

Nevada State Library and Archives

Records Management Program

100 N. Stewart Street

Carson City, NV 89701

775-684-3411

1-800-922-2880 (in-state)

records@admin.nv.gov

www.nsla.nevadaculture.org

Adopted June 26, 2007

Table of Contents

<i>Chapter 1. Introduction</i>	<i>1-1</i>
Records Retention Requirements	1-1
Manual Updates	1-3
Unique Retention Schedules	1-3
<i>Chapter 2. NSLA Services</i>	<i>2-1</i>
Records Management Services	2-1
Records Management Training	2-1
Imaging and Preservation Services	2-2
Library Services	2-2
NSLA Location, Hours of Service	2-2
<i>Chapter 3. Records Management</i>	<i>3-1</i>
What is a Record?	3-1
What is Not a Record?	3-1
What is a Public Record?	3-1
Why Keep Records?	3-1
What is the Records Lifecycle?	3-2
Can Records be Destroyed?	3-2
What are Personal Papers?	3-3
<i>Chapter 4. Establishing a Program</i>	<i>4-1</i>
Develop a Program Statement	4-1
Establish the Records Management Program in Ordinance	4-1
Determine the Program Elements	4-2
Suggested Reading	4-6
<i>Chapter 5. Assigning Authority</i>	<i>5-1</i>
Records Manager	5-1
Records Management Review Committee	5-1
Department Records Coordinators	5-2
<i>Chapter 6. The Records Inventory</i>	<i>6-1</i>
The Records Inventory	6-1
Who conducts the inventory?	6-1
Planning the inventory	6-1
Conducting the inventory	6-3

<i>Chapter 7. Appraising and Scheduling</i>	<i>7-1</i>
Determining Value	7-1
Scheduling the Records	7-2
NSLA Schedule Approval	7-2
Destruction and Disposition	7-3
Suggested Reading	7-3
<i>Chapter 8. Electronic Records Management</i>	<i>8-1</i>
E-Records Management Considerations	8-1
<i>Chapter 9. Electronic Document Imaging Systems</i>	<i>9-1</i>
<i>Chapter 10. Micrographics</i>	<i>10-1</i>
Which records should be microfilmed?	10-2
Microfilming Requirements	10-2
Microfilming Services	10-2
Suggested Reading	10-3
<i>Chapter 11. Vital Records Management</i>	<i>11-1</i>
Importance of a Vital Records Program	11-1
Suggested Reading	11-4
<i>Chapter 12. Disaster Recovery Planning for Records</i>	<i>12-1</i>
Planning and Preparation	12-1
When Disasters Happen	12-2
Fly-away Kits	12-2
Online Resources	12-5
Suggested Reading	12-5
<i>Chapter 13. Inactive Records Center</i>	<i>13-1</i>
Determining Need	13-1
Selecting the Facility	13-2
Standards for Storage of Public Records	13-3
<i>Chapter 14. Sealed Records</i>	<i>14-1</i>
How to Seal Records	14-1
<i>Chapter 15. Personal Identifying Information</i>	<i>15-1</i>
<i>Appendix</i>	<i>1</i>
Glossary of Records Management Terms	3
Resources and Suggested Reading	7
<i>Exhibits</i>	<i>1</i>

Exhibit A: Sample Ordinance _____	3
Exhibit B: Sample Job Descriptions _____	7
Exhibit C: Records Inventory Worksheet _____	21
Exhibit D: Electronic Records Storage Terminology _____	23
Exhibit E: Sample Disaster Recovery Plan for Records _____	31



Chapter 1. Introduction

The Nevada State Library and Archives (NSLA) is pleased to present the Records Management Program Manual for use by all local governments in the State of Nevada. This manual provides instructions and guidelines for public records management based on the provisions of NRS Chapter 239 and NAC Chapter 239. This narrative section of this manual is not intended as an exhaustive treatment of records management but serves as a basic “how to” guide for managing records. This manual supersedes all previous versions.

The Nevada State Library and Archives is a division of the Department of Administration. The Division’s Local Governmental Records program is under the authority of NRS 239.125.

NRS 239.125 Local governmental records: Program for management; regulations of State Library and Archives Administrator.

1. A local governmental entity may establish a program for the management of records, including the adoption of schedules for the retention of records and procedures for microfilming, which must be approved by the governing body and comply with the applicable provisions of this chapter and any regulations adopted pursuant thereto.
2. The State Library and Archives Administrator shall adopt regulations to carry out a program to establish and approve minimum periods of retention for records of local governments. The proposed regulations or any amendment thereto must be submitted to the local government advisory committee, established pursuant to [NRS 354.594](#), for its advice and recommendations.

Records Retention Requirements

Records are a significant government asset. They contain valuable information used to support decision-making, sustain communications, control the delivery of services, substantiate citizen entitlement, and ensure accountability. All employees of a local government have a responsibility to manage records. This recordkeeping responsibility is especially important for the government leaders who make the decisions that establish public policy and guide program direction. This manual can meet these recordkeeping obligations.

The largest section of this manual consists of such schedule for records most commonly found in Nevada local governments. This schedule list collections of records, known as records series, and indicate minimum periods of time governmental officials need to keep them for administrative, legal, fiscal, or historical purposes. In developing this schedule, no attempt was made to identify all of the records in any one city or county nor to list all records that could possibly exist in all entities. Rather, functional categories common to the majority of entities were identified. The minimum retention periods take into account requirements of the Nevada Revised Statutes (NRS), the Nevada Administrative Code (NAC), and federal law. In cases where no law exists concerning appropriate retention periods, state and local officials who work with the records were consulted.

This manual meets the obligations established in NAC 239.161.

NAC 239.161 Dissemination of schedules for retention of public records; minimum period for retention of original record; disposal of duplicates. (NRS 239.125, 378.255)

1. The State Library and Archives Administrator will:
 - (a) Publish the schedules for the retention of public records established pursuant to NRS 239.125 in the Local Government Records Management Program Manual; and
 - (b) Provide a current copy of the Manual to each local governmental entity.
2. The periods established in the Local Government Records Management Program Manual indicate the minimum length of time that an original record of a local government must be retained in legal custody by the custodian of the record, regardless of its physical location.
3. All duplicates of records maintained within a local governmental office or within the files of a department, except those that must be kept until completion of an annual audit, may be disposed of as provided by the local governmental entity or department unless periods of minimum retention for the duplicates are specifically imposed by the Local Government Records Management Program Manual.

This manual should be adopted under the legal mechanism the local governmental entity has established for adopting ordinances or rules. For more information on his process, please refer to **Chapter 4**. Once legally adopted, the record retention schedule governs disposition of the record series, and adherence to the schedule is necessary for legal accountability. Any local government who adopts this schedule may regularly dispose of any of its records that appear on this schedule without seeking further approval from the Nevada State Library and Archives.

The Retention Schedule is subject to the following exceptions and limitations

- Local government offices may retain any of their records beyond the retention periods set by a schedule, as they deem necessary. A schedule establishes only a minimum period of retention. Before retaining a record longer than the minimum time required, however, the office should be certain that it has good reason to do so. Unnecessary retention of obsolete records can be expensive in space and filing equipment and may expose the office to costly litigation and discovery requirements.
- This schedule does not relieve local governments of retention requirements mandated by other state and federal statutes and regulations. When such an obligation does exist, then the longer retention period takes precedence.
- This schedule does not authorize destruction of records that could be deemed relevant to current or pending litigation. All records deemed relevant are to be placed on a Legal Hold and destruction is to be suspended until after the matter has been wholly or partially resolved and legal counsel releases the Hold and issues instruction to return to routine records destruction.

- These schedules generally reflect audit requirements in its prescribed retention periods, but audits are frequently not completed in a timely fashion. Note, any record required for an audit must be retained until completion of that audit, regardless of its stated retention period in the schedule.

Manual Updates

Because the laws pertaining to the retention and disposal of records change, the retention requirements will require periodic updating in order to continue to be effective. The Records Management program welcomes all comments and suggestions concerned with improvement of record retention schedules through modifications and additions.

Unique Retention Schedules

It should be noted that because some local governments are very large and perform unique functions from other local governments, it was impractical to include all of the unique series in this schedule. In such case, the records must be appraised for the appropriate retention period. This appraisal is an analysis of the administrative, legal, fiscal, and historical value in order to appropriately schedule the series. New schedules must be submitted to the Nevada State Library and Archives for approval. For instructions on how to submit new schedules, please refer to **Chapter 7 page 2**. These new schedules may also be considered for inclusion in future manual updates

Chapter 2. NSLA Services

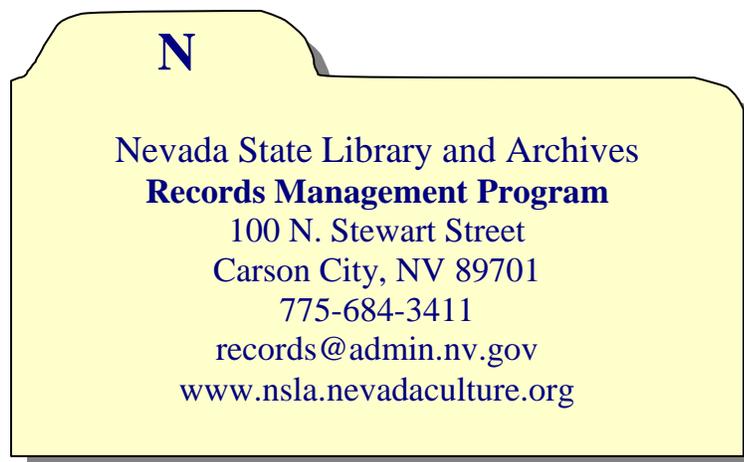
The The Nevada State Library and Archives (NSLA) is a Division of the Department of Administration. The NSLA exists to meet the information and research needs of State government; to coordinate and supplement a State network of library resources for Nevada; and to preserve, maintain and coordinate State and local government records and archives. Archives and Records works with the State Historical Records Advisory Board and the State Records Committee to ensure proper maintenance of and access to Nevada government records. The Nevada Electronic Records Committee serves in an advisory capacity to the State Records Committee and the State Historical Records Advisory Board in matters relating to the use of technology for Nevada Record Keeping in all of its political subdivisions. The Library works with the State Council on Libraries and Literacy in surveying and reporting on the status of libraries and literacy programs in Nevada and in making recommendations "to foster and further the establishment and proper maintenance of superior libraries." NRS 380A.011 The Library administers federal and State funds to local libraries. NRS § 378.081(h), 378.087 and 378.100

Records Management Services

The Records Management program provides expertise and assistance to local governments on managing records and information in the most effective, cost efficient, and legally compliant manner.

Records Management Training

The Records Management program hosts regular state-wide training classes. Call the program office at the number below to receive the current training schedule. In addition to our regular class offerings, our staff can provide, at no charge, on-site classes on records management to any local government office for groups of 10 or more attendees. Customized records management training and management briefings are also available.



Imaging and Preservation Services

The Imaging and Preservation Services program provides microfilming and imaging production services, including source-document digital scanning and microfilming, output of digital information to microfilm, scanning of microfilm images to digital, information redaction services, and microfilm processing and duplication. For additional information call the Micrographics and Imaging program at 775-684-3319.

Library Services

All of the reference materials listed in this publication are in the State Library and are available for loan. The Library directly loans materials to visitors who are Nevada citizens with a valid Nevada library card. The Library provides distance loans of materials from its collections when requested by another library that subscribes to the Interlibrary Loan Code.

In addition, the Library provides in-depth reference and research services to Nevada State government personnel, local governments, and Nevada citizens. Reference and Research Services: A staff of professional librarians provides reference and research services by utilizing its collections, databases, and other information sources to supply requested information. NRS 378.080(d)

For additional information call the Library Reference desk at 775-684-3360.

- **State Publications Distribution Center:** The Library provides a State Publications Distribution Center to acquire, index and distribute State, city and county publications. Every local government shall, upon release, deposit with the State Publications Distribution Center at least six copies of each of its publications. If the publication is in an electronic format or medium, the state agency or local government shall notify the State Publications Distribution Center of such release and provide the Center with access to the Publication.
- **Nevada State Data Center:** The Library, through contract with the U.S. Bureau of Census, is the State Data Center for Census information. The Library and State Data Center affiliates receive and disseminate census information to State government agencies, local governments and citizens.

NSLA Location, Hours of Service

The offices of the NSLA are in the State Library and Archives Building at 100 N. Stewart Street, Carson City, NV 89701-4285. Library and Archives hours are 10:00 a.m. - 2:00 p.m., Records Management hours are 8:00 a.m. – 12:00 pm and 1:00 pm – 5:00 pm, Monday through Friday with the exception of legal holidays. The toll-free number in-state is 1-800-922-2880.

Chapter 3. Records Management

Records management is defined as the application of systematic and scientific control to recorded information required in the operation of government business, standardizing access to complete information through common classification and indexing methods and ensuring the preservation of records in accordance with regulatory and operational requirements. Additional basic records management terms are defined in NAC 239.011, et seq.

What is a Record?

A local government record includes any information that is created or received pursuant to a law or ordinance or in connection with the transaction of the official business of any office or department of a local government. Official records include without limitation all papers, letters, unpublished books, maps, charts, blueprints, drawings, photographs, films, computer printouts, artifacts entered as exhibits in any proceeding in any court, information stored on a magnetic tape, computer, laser or optical disc, or on material which is capable of being read by a machine, including microforms and audio and visual materials, and any other evidence. NAC 239.101

What is Not a Record?

“Non-record” means published books and pamphlets, books and pamphlets printed by a governmental printer, worksheets used to collect or compile data after it has been included in a record, answer pads for a telephone or other informal notes, unused forms except ballots, brochures, newsletters, magazines, newspapers except those newspapers received pursuant to the provisions of NRS 247.070 or parts of newspapers retained as evidence of publication, scrapbooks, and property left or deposited with an office or department which would otherwise be defined as a record except that the ownership of that property does not reside with a local governmental entity. NAC 239.051

Examples of Records

Correspondence
Databases
E-mails
Faxes
Instant messages
Memos
Photographs and film
Presentations
Reports
Spreadsheets
Text messages
Voicemail
Word processing documents

What is a Public Record?

Records created or received in the course of business by a local government are considered public records and must be maintained and disposed of according to the terms of the Nevada Public Records Act. NRS Chapter 239. Unless the law restricts public records for reasons of confidentiality, they must be made reasonably accessible to the public.

Why Keep Records?

Records are essential to the operation of local government. Records are the government's memory of decisions and transactions across a range of legal, business and social issues. They

provide public servants the information they need to conduct programs, make decisions, and ensure administrative continuity. Managing records is critical to ensuring a capable, accountable government.

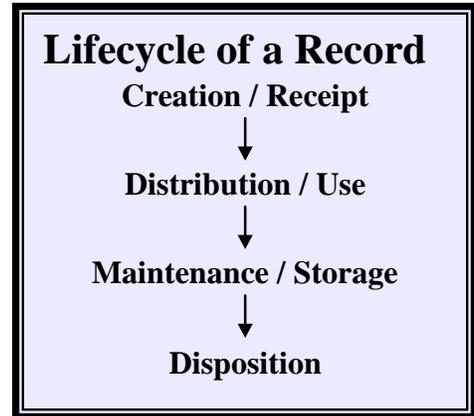
Records document the delivery of services, provide legal accountability, give evidence of the responsible management and expenditure of public funds, and document the historical development of government and the community it serves. In short, records are a public trust, an essential informational resource for local government and its citizens. Effective records management minimizes risk to government and enables the provision of an efficient service to the public.

What is the Records Lifecycle?

The records lifecycle is a model describing the various stages through which records pass during their existence. The application of the life cycle concept is the foundation of records management.

There are four phases identified as being part of the lifecycle of a record. These are:

1. Creation and Receipt deals with records at their beginning. This could include their creation by the government or receipt from an external source in order to provide adequate and proper documentation of government activities.
2. Distribution and Use occurs after records are distributed internally, and used to document business decisions, transactions, actions, or to serve other purposes.
3. Maintenance and Storage includes processes such as filing, retrieval and transfers. Retention periods are assigned to the records. The records are properly maintained to ensure they are returned and/or available to others who may need access for the length of their retention.¹
4. Records disposition is the final phase in the life cycle of the records. It normally involves two possibilities: Destruction or transfer to an archival facility for preservation.



Can Records be Destroyed?

State law and regulation require the use of retention schedules when disposing of records. NRS 239.125, NAC 239.155 Without a schedule in place, there is no legal authority to dispose of records. Unauthorized destruction of, or tampering with, official records can have serious consequences; a public officer or employee guilty of destroying public records without lawful

¹ *Caution:* Electronic records have unique concerns related to ensuring the format they are generated/captured in remains viable and the media they are stored on remains accessible. Electronic media is subject to both degradation and obsolescence over its lifespan, and therefore, policies and procedures must be established for the periodic conversion and migration of information stored electronically to ensure it remains accessible for its required retention periods.

authority may be imprisoned for up to five years and levied a fine of up to \$10,000. NRS 239.300 to 239.320, inclusive.

The Nevada Administrative Code requires that a local governmental entity may only dispose of records in accordance with a records retention schedule that has been approved by the State Library and Archives Administrator. NAC 239.155 The schedules presented in this manual are considered to be approved by the State Library and Archives administrator.

The Records Retention Schedule identifies the *minimum* time period the listed records must be retained, meaning records disposition may not occur before this time period expires. When the minimum retention period has been met, the recommended disposition of the records, such as destruction or transfer to the appropriate historical repository or archive, should be initiated.

Certain events (i.e., Legal Holds) may occur that will require a stop to disposition procedures.

Once a program has been established, records should be routinely destroyed. Destruction should be done systematically and in the ordinary course of business, meaning that destruction is done as a routine business process.

Random or selective destruction may create the impression that the records retention program has not been properly implemented and, in the event of pending litigation or government audit, can be viewed as intentional destruction.

Electronic records must be disposed of in a manner that ensures the information can no longer be retrieved and reconstructed. This includes overwriting, degaussing or the physical destruction of the storage media. NAC 239.135

Legal Hold Orders

At any hint of litigation, legal counsel will halt all destruction of paper and electronic records. As information becomes available, legal counsel may release certain records outside the scope of the litigation or audit for destruction. Once the matter is resolved, or once the threat passes without issue, legal counsel will allow the resumption of routine destruction processes.

What are Personal Papers?

Some information accumulated by staff and officials does not qualify as governmental records. These materials are considered personal papers (i.e., private property) if they relate only to an individual's personal affairs and do not affect the conduct of governmental business. Personal papers maintained in an office should be filed separately from governmental records. Examples include:

- Papers accumulated by an official before joining governmental service.
- Materials relating solely to an individual's private affairs, such as outside business pursuits, professional affiliations, or private political associations.
- Diaries, journals, or other personal notes that are not prepared or received in the process of transacting governmental business.
- Campaign materials.



Chapter 4. Establishing a Program

The long-term benefits of a records management program can be realized through the introduction of a well-conceived, preplanned, comprehensive program that handles records throughout their lifecycle.

Develop a Program Statement

The program statement provides a summary explanation of purpose and scope. It should include a mission, goals, objectives, and the resources necessary to successfully carry out the program.

Establish the Records Management Program in Ordinance

Sample Mission Statement

The mission of the records management program of the (city / county) is to maintain a cost effective program, as well as accurate and accessible retrieval and handling of all information generated in any recorded format by officers and employees of the (city / county) for the official conduct of the (city / county)'s business, and to preserve such records of historical significance for the benefit of both present and future generations.

Sample Goals & Objectives

- To lower the cost of operating (city / county) government by reducing the amount of time, storage space, and materials necessary to conduct the (city / county)'s business.
- To assure compliance with all applicable legal, historical, administrative, and fiscal requirements for record-keeping as set forth in federal, state, and local statutes.
- To provide courteous and professional access and reference services for officers and employees of the (city / county) as well as members of the general public to all materials stored and maintained by (city / county).

An ordinance, or similar legislation, will recognize the authority of the program and give it the necessary leverage for use in obtaining the required budget, staff, and space with which to operate. The ordinance should officially create the program and assign authority and areas of responsibility. For more information, please refer to *Exhibit A: Sample Ordinance*.

Determine the Program Elements

A records management program consists of several elements. Local governmental entities should determine which of these components will best serve the purposes of their program.

Archival Preservation

Archival records are those government records that have permanent value for historical and other research. Because these records are permanent, they require special attention to ensure their preservation and continued use.

Archival records witness the origin and history of a local government and the evolution of its functions. Archival records document essential actions and transactions of the government and provide evidence of its rights and obligations in the event that they are required either for defense of a local government's interests in a court of law or for future reference to support decision-making processes. They provide continuity with the past and illustrate interactions between government and citizens. Archival records also may protect individual rights and document government accountability.

A well-designed archival program:

- Identifies the archival records.
- Arranges and describes records.
- Provides storage and a stable environment for the records.
- Preserves records for the future.
- Makes the records available.
- Offers outreach and public programs.

Disaster Prevention Planning and Recovery

The objective of disaster planning is to prepare the organization to handle an emergency with minimal interruption. Records containing information necessary to restore operations must be protected. For more information, please refer to *Chapter 12 - Disaster Recovery Planning*.

A well-designed disaster planning and recovery plan:

- Identifies vital and other essential records.
- Identifies structural, logistical or other vulnerabilities to which records and information are exposed, and mitigate as many as possible. For example, if records must be stored in areas where water damage from pipes or mechanical equipment is possible, consider what can be done to protect them.
- Creates a viable plan in the event a disaster occurs. The plan should be practical, clear, supported by management and distributed to all those who would be expected to respond to a disaster (e.g., staff members, local emergency services, police and fire departments, and any other cooperating agencies).

Electronic Records Management

Electronic technologies have transformed the way governmental agencies create, use, disseminate, and store public records. Their effective management is therefore necessary to ensure that the electronic records maintained are authentic, reliable and complete and to ensure that they are protected and preserved as evidence to support future actions and to ensure current and future accountability.¹

Electronic records formats:

- Computer database(s).
- Desktop documents, e.g., spreadsheets, word processing documents, presentations.
- E-mail/instant messages.
- Web pages.
- Scanned images.

A well-designed electronic records management program:

- Enables agencies to transform the way they conduct business while dramatically improving productivity, effectiveness, and accountability.
- Saves space by freeing up filing cabinets and physical storage areas.
- Improves information retrieval time by reducing staff time required to access records.
- Offers increased convenience and a broader range of handling options to better serve citizens and other stakeholders.
- Allows for the economic and convenient sharing of records between multiple agencies.
- Plans for software and hardware upgrades and media migration.

Electronic records created by the use of a governmental entity's equipment and software belong to the entity and it is often necessary to manage employees' sense of "personal ownership." For more information, please refer to *Chapter 8 - Electronic Records Management*.

¹ For guidance on how to ensure the authenticity of electronic records please refer to *Legal Requirements for Nevada's Public Electronic Records*, Nevada State Library and Archives, 2005.

Files Management

Creation of filing system standards will increase overall office efficiency and is an essential part of good recordkeeping. The goal of a good filing system is to provide quick access to information by finding the record quickly and economically, regardless of its format.

A well-designed filing system:

- Offers quick and easy filing and retrieval.
- Ensures integrity and continuity of recordkeeping.
- Creates uniform practices.
- Allows for the easy identification and purging of inactive records.
- Provides clear and simple file categories.
- Is expandable and flexible.
- Also applies to electronic records and electronic forms.

Suggested reading: Bennick, Ann, Ed.D, CRM, 2000. *Active Filing for Business Records.*: ARMA International, Prairie Village, KS.¹

Inactive Records Center

A records center is a facility for the storage of semi-active or inactive records. A records center can provide the most economical method of storing hardcopy prior to destruction or eventual transfer to an archival repository. Built and maintained as warehouses, records centers maximize the use of space, providing the greatest economy in record storage. While storage rooms and basements provide some economy, they are usually viewed as potential office space -- records centers are not. Five times as many records can be stored per square foot in a records center as in equivalent office space. For more information, please refer to *Chapter 13 – Inactive Records Center*.

A well-designed records center:

- Provides:
 - Maximum efficiency and utilization of space.
 - Orderly arrangement and control.
 - Fast and easy box and folder retrieval.
 - Physical security.
 - Systematic legal disposition of records which have reached the end of their retention period.

¹ Available from the ARMA, International catalog 888-241-0598 <http://arma.org/bookstore/>. Also available at the State Library and Archives - for contact information, see Chapter 2, page 2.

- Protects:
 - Against damage or destruction due to natural or other disaster.
 - Confidential records from unauthorized access.
- Employs procedures which assure prompt and efficient handling of records.

Micrographics

Even though the trend is toward electronic records, microfilm still provides certain advantages for storing and preserving permanent records. Converting paper records to microfilm can reduce storage requirements to less than 5% of the space required for the paper records. Microfilming provides cost efficient storage, inexpensive duplicate distribution and a 'human readable' disaster backup for vital records.

Microfilm is a familiar, stable technology that has existed long enough for its procedures and requirements to be well-understood. When maintained in environmentally controlled conditions, microfilm can remain stable for over two hundred years. No matter how technology changes microfilm remains one of the most popular and cost effective formats for the long-term storage of valuable records. For more information, please refer to *Chapter 10 - Micrographics*.

Records Retention Schedule

The fundamental element of any records management program is managing the disposition of records, thus improving access and efficiency. These improvements will be recognized when dealing with paper records as well as electronic and microfilm records.

The records retention schedule ensures that records are retained as long as they are needed for administrative, fiscal, legal, or research purposes. NSLA determines minimum retention periods by carefully studying and analyzing records to determine their value. State law and regulation require the use of retention schedules to dispose of records. NRS 239.125, NAC 239.155 Local government records may be destroyed only under the authority of a valid records retention schedule. For more information, please refer to *Chapter 7 - Appraising and Scheduling*.

A records retention schedule:

- Provides guidelines so that records are not destroyed prematurely or kept too long.
- Allows records that are no longer useful to be legally destroyed.
- Saves space by freeing up filing cabinets and physical storage areas.
- Releases electronic storage space on computer disks, video, audio and magnetic tapes.
- Determines when records may be transferred to inactive storage.

- Assists with making reformatting decisions (e.g., microfilming or scanning).
- Provides information for a vital records protection plan.
- Ensures the preservation of records with historical value.
- Indicates which records are confidential.

Vital Records Management

The objective of vital records management is to prevent the loss of information critical to the continuing operation of an organization in the most efficient and economic manner possible. In the public sector vital records programs protect the public interest and ensure maintenance of individual rights. For more information, please refer to *Chapter 11 - Vital Records Management*.

Suggested Reading

Dearstyne, Bruce W. 1999. *Managing Government Records & Information*. ARMA International, Prairie Village, KS. Presents strategies and principles of developing records management programs and supporting the orderly, systematic management of government records. It presents government *records management* within the framework of government *information management*, the only viable approach in most settings where digital technologies have shifted government executives' attention to information as a strategic resource.¹

U.S. Legislative and Regulatory Affairs Subcommittee. 2000. *Essential Elements of Local Government Records Management Legislation*. 2nd ed. ARMA International, Prairie Village, KS. This second edition of Essential Elements of Local Government Records Management Legislation will assist local and state government records professionals, policy makers, and legislators in updating their laws and policies to establish comprehensive records management programs that reflect the accepted principles of the profession and provide a solid foundation for program development.²

Stephens, David O. 1991. *The Daily Management of Records and Information: A Guide for Local Governments*. National Association of Government Archives and Records Administrators (NAGARA) Local Government Records Technical Publications Series. NAGARA, Albany, NY.³

¹ Available from the ARMA, International catalog 888-241-0598 <http://arma.org/bookstore/>. Also available at the State Library and Archives - for contact information, see Chapter 2, page 2.

² Available from the ARMA, International catalog 888-241-0598 <http://arma.org/bookstore/>. Also available at the State Library and Archives - for contact information, see Chapter 2, page 2.

³ The on-line publication is available to NAGARA members only: <http://nagara.org/> (518) 463-8644. Also available at the State Library and Archives - for contact information, see Chapter 2, page 2.

Chapter 5. Assigning Authority

The assignment of responsibility and the support of management form the basis of a sound records management program. The records manager is assigned the responsibility and authority to develop and maintain the records management program. Smaller entities, whose volume of records cannot justify the position of records manager, can assign these responsibilities to an existing position.

Records Manager

The records manager for the office ensures that the maintenance, destruction, microfilming, electronic storage, or other disposition of the records of an office are carried out in accordance with the requirements of the Public Records Act, NRS Chapter 239, and the regulations adopted under the Act, NAC Chapter 239, and the policies of the local governmental entity.

Exhibit B: Sample Job Descriptions has several position descriptions that local officials may use to draft their own position descriptions.

Records Management Review Committee

Although not a requirement of a program, a records management review committee, consisting of high-level administrators from key departments, can provide effective program oversight and advice for the records manager and can command a greater degree of cooperation. The membership of the committee should be kept small and should not include all department heads in the government. The chief attorney for the local government and its chief fiscal officer should be members of the committee.

Committee members should include representation from the following areas:

- City/county clerk or recorder.
- Chief administrator (city, county, departmental and similar).
- Attorney (district, city, or other legal counsel).
- Chief fiscal officer or similar.
- Information technology, e.g., chief information officer (CIO) or chief information security officer (CISO).

Records Management Officer

Duties

The records management officer administers the records management and archives program; advises the records management review committee on program policies; inspects city records; ascertains the city's compliance with recordkeeping requirements established by state law, city charter and city code; prepares records retention and disposition schedules; provides and facilitates access to public information under the Nevada Public Records Act; and operates the Municipal Archives and Records Center.

- Risk manager.
- Records manager.

Committee responsibilities consist of:

- Reviewing and approving:
 - Records retention schedules.
 - Micrographics and electronic records systems.
 - All requests for the purchase of additional filing equipment.
 - Forms design.
- Providing administrative review of any denied public-access records request.
 - Acting as a clearinghouse for any records management-related proposals prior to presentation to the council or commissioners.

Department Records Coordinators

Department directors should designate one staff position as the department records coordinator. This person may be a supervisor or clerical person with substantial knowledge of the operation and the records in their department.

Duties of the records coordinator include:

- Administer the policies and procedures of the city records management manual and any department records procedures.
- Supervise the disposition of records, including destruction of records meeting the minimum retention periods and the transferring of inactive records to inactive storage. Destruction should only be carried out with the approval of the records manager.
- Assist in establishing and maintaining filing systems, standards, and procedures for record keeping.
- Serve as liaison between the department and the records manager.

Chapter 6. The Records Inventory

The implementation process begins with a records inventory. A records inventory is a detailed listing that includes the types, locations, dates, volumes, equipment, classification systems, and usage data of the records. The records inventory is the primary tool from which to develop a records management program.

The Records Inventory

The inventory identifies the "who, what, where, how, and why" of the records:

- Who creates, receives and uses the records?
- What types of records are stored?
- Where and how records are stored?
- How long records are retained?
- Why are the records needed?

Before starting the inventory, collect any existing information on the records.

- Organizational chart.
- Filing procedures.
- Office layout plan.
- File folder indexes – lists of what is stored in the file cabinets.
- File box indexes – lists of the boxes in storage.

Who conducts the inventory?

The records manager (or designee) shall conduct the inventory. A staff member in each of departments is appointed to either conduct or help with the inventory. Ideally, the individuals who conduct the inventory will have experience with the records, filing systems, and operations of government offices.

Planning the inventory

Communication

Since the success of an inventory project depends on the cooperation of the people involved with the records, top decision-makers must sign-off on the process. Prior to beginning, call a meeting of key person from every department. In the meeting, explain the inventory processes, introduce the people who will conduct the inventory, and answer questions. Before the work begins, the records officer or a designee should visit the office supervisors to discuss the project, enlist their cooperation, and make it clear that the inventory staffers must:

- Have access to all unrestricted records and be given the information they need about those that are restricted.
- Have access to staff to obtain information on the way the records are organized and used.

Preliminary survey

Survey all office and storage areas before beginning the inventory to:

- Identify the location of records.
- Estimate their total volume.
- Flag any hazards.
- Note any problems with space and storage.

Take a visual survey of every records storage locations. In each area, begin at the door and sweep from left to right identifying each storage location. Identify the conventional storage locations such as file cabinets, desk drawers, shelving units, bookcases, card files, CD stacks, diskette boxes, computer hard drives, hanging map files, etc. Note the haphazard file locations such as piles of unfilled records stacked on cabinet tops, credenzas, desks, and tables, and records piled on the floor. Also take note of the temporary storage locations such as to-be-filed baskets and records storage boxes, and the hidden storage areas located in garages, closets, attics, or sheds.

Assign a number to each location. On the layout diagram or map of the office, create a visual reference by numbering each storage location directly on the layout. A sample layout with storage locations numbered is shown in Figure 1 below.

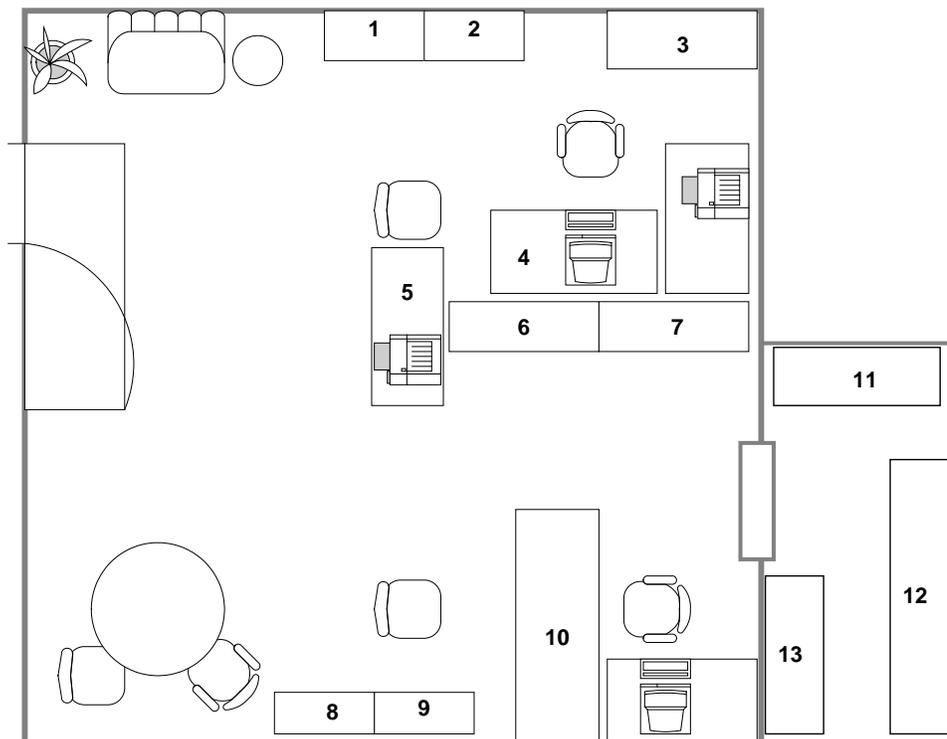


Figure 1 - A sample layout with storage locations numbered

Create a Location Index (Figure 2) to identify where and how all records are stored and who accesses these records. List the characteristics of each storage location. Describe the equipment, noting its size (letter or legal) and the number of shelves or drawers. Also, note the media types within the location. For example, does the equipment contain file folders, binders, diskettes, compact disks, etc? If it contains file folders, describe the type of file folder—letter- or legal-size file folders, top tab or side tab, manila folders, hanging folders, or folders with dividers. Finally, note the employees responsible for the records in each location.

Location Index		
Location	Description	Responsibility
1.	bookcase 6 shelves high binders	Admin Asst II
2.	vertical file cabinet 5-drawer, letter size hanging folders with manila folder inserts	Admin Asst II
3.	credenza 2 letter-size file drawers plus 2 shelves hanging folders in drawers binders on shelves	Admin Asst II
4.	desk drawers 2 drawers, letter size hanging folders	Admin Asst II
5.	credenza 2 letter-size file drawers plus 2 shelves hanging folders in drawers supplies on shelves	Admin Asst II

Figure 1 - A Sample Location Index

Scheduling the inventory

Following the survey, work with the department heads to set up a schedule for inventorying each office and storage area. The schedule should be flexible enough to accommodate priorities – like the preparation of budgets, end-of-year reports, and so forth – and to revise as needed.

Conducting the inventory

When conducting the inventory, include all records and exclude non-records.

Inventory Form

An inventory form will ensure information is gathered in a consistent and routine manner. *See Exhibit C - Sample Inventory Form.* An inventory form should contain certain information:

- Name/Title: A descriptive title for the collection of records.
- Description: A brief description of the records and how are they are used.
- Copy type: Are the records the official copy or a convenience (non-record) copy.

- **Location Description:** Where the records are physically located and a description of the storage container or computer hardware.
- **Medium:** Identifies the records' storage medium. The most commonly used media is paper, but records are frequently maintained in other media such as microform or electronic formats. Some examples of different or varied paper media are oversized maps or drawings, photographs, postcards, business cards, specialized forms, tags, etc.
- **Date range:** Identifies the approximate date range of documents in each category.
- **File arrangement:** Identifies a) the current filing arrangement such as alphabetic, numeric, or chronologic, and b) the basic filing scheme or element of the arrangement. For example, a note may read alphabetically by client name, numerically by vendor number or chronologically by date received.
- **Records/File Cut-off:** Identifies the event when existing file folders are closed and new file folders are opened. The cut-off can refer to a specific event such as termination of employment, end of funding period, termination of contract, accreditation received. More often the cut-off is tied to a period of time such as the end of the quarter, calendar year, etc.
- **Use Frequency:** Identifies how frequently the records are accessed during a specific time period.
- **Retention Recommendation:** Identifies how long the users must have access to the records to do their work.
- **Electronic/Computer Media:** Identifies the operating system and version, application program and version, and the data format, such as .doc, .txt, HTML, PDF, JPEG.

Where to begin

Begin with the active records as they more accessible, better organized, and office staff are on-hand to answer questions. Once the inventory staff become familiar with the active records, it will be easier to undertake the less-organized inactive records in the storage areas.

Establish a system

Be systematic. Begin at a specific location in a room, proceed logically, tag or label each computer, cabinet or file drawer as it is inventoried, and flag those records that are vital or permanent. These precautions will spotlight valuable records and decrease the chance of overlooking or duplicating information. Open each file drawer, each box, and each book, and check the accuracy of each label – often old volumes with one title hold a number of different record series, and sometimes old labels are not removed when the contents of files are changed.

Completion

After completing the inventory forms, use the data collected to appraise the records and to create a needs assessment. Evaluate the records to determine their administrative, legal, historical and research value as well as factors which may be unique to a particular local government. The resulting needs assessment is a list of records management problems or issues based on data gathered from the inventory, discussions with staff, and observations and experience gained while conducting the inventory.

The inventory frequently produces some startling results. If a department has not been following a systematic records disposition program the inventory will probably reveal:

- 40% of the total volume will remain in the office.
- 30% of the total volume may be destroyed immediately, per existing retention schedules.
- 30% of the total volume may be boxed and shipped to inactive storage.



Chapter 7. Appraising and Scheduling

Every governmental asset has a value attached to it. If assets were erroneously misplaced, lost, erased, or destroyed, the entity would understandably suffer a loss. Although records are not tangible assets, the information contained within can be extremely valuable. As such, records should be protected and preserved as a governmental asset.

A records appraisal identifies

- Reasonable retention periods.
- Records that can be destroyed immediately.
- Records that can be transferred to a records center or other secure storage facility.
- Vital records.
- Confidential records.
- Archival/historical records.

Determining Value

The value of a record is equal to the need for the record.

- **Administrative Value.** Presumably, every record has this value to the office that generates or receives it. This value might be as temporary as the length of time it takes to read it, or endure throughout the life of the office. The record may be necessary to carry on routine business, perform a required function or useful as an inter-office reference source providing data for reports, studies or short-term and long range planning. Regardless of the reason, as long as the record has operational significance to the office, the record has administrative value.
- **Fiscal Value.** In each government office, money is generated, received, transferred, and spent. Each time a transaction involving public funds is completed, one or more records are created to document that transaction. Each of these records has fiscal value. Some records, generally referred to as audit trail documents, may be useful only until the annual audit has been completed. Others, such as ledgers, journals, and reports typically have a much longer period of value.
- **Legal Value.** Citizens, businesses, and governments have legal rights and obligations. Characteristically, these rights and obligations are stipulated in law and documented by one or more records as prescribed in statute, regulation or ordinance. A record has legal value for however long it is required to guarantee a right or ensure the satisfactory completion of any obligation.
- **Archival/Historical Value.** These are records that must be retained permanently due to their informational content. They provide documentation of the development of government or governmental policy, provide unique or best evidence about the lives and

activities of people, socioeconomic conditions, or the development of business and the community or must, by law, be retained permanently.

Scheduling the Records

A records retention schedule is a list comprised of the titles of each records series, a brief description, the assigned periods of retention, and the associated disposition method. The NSLA approves two kinds of retention schedules for local government records: general schedule and office-specific schedules.

- A **general schedule** is published by the NSLA in the *Records Management Program Manual* and covers the common record series found in most local government offices, such as personnel, purchasing, fiscal, public safety, etc. The general schedules will not cover all of the types of records held by a local governmental entity.
- **Office-specific schedules** are designed for a specific local government office and comprise record series not covered in the general schedule. These records series are considered unique to an entity and schedules must be requested and approved prior to being adopted by a local governmental entity. Instructions for preparing this type of record retention schedule can be found below.

NSLA Schedule Approval

NAC 239.155 Disposal of public record restricted; procedures for proposal and adoption of schedules for retention of public records.

1. A local governmental entity shall not dispose of any public record except in accordance with a schedule for the retention of such records approved by the Library and Archives administrator pursuant to this section.
2. Before adopting a schedule for the retention of public records, a local governmental entity shall submit a proposed schedule to the Library and Archives administrator for review and approval.
3. The proposed schedule must include:
 - (a) The title of each series of records;
 - (b) A brief description of the contents and purpose of each series of records;
 - (c) The proposed minimum period of retention for each series of records; and
 - (d) The proposed method of destruction.
4. After review, the Library and Archives administrator will return the proposed schedule to the local governmental entity with a signed and dated cover sheet.
5. The local governmental entity shall adopt the schedule approved pursuant to this section by ordinance or regulation.

Destruction and Disposition

At the end of the retention period, records can be destroyed or transferred to an archival facility where they will be preserved permanently. Confidential records must be destroyed in such a manner that the information can no longer be reconstructed. NAC 239.165 Non-confidential records may be discarded or recycled in accordance with established procedures. If a document shredding service is used, request a “certificate of destruction” from the vendor at the completion of the destruction process.

Electronic records should be destroyed when their retention period has ended. Electronic records must be destroyed in a reasonable manner that ensures the information can no longer be retrieved and reconstructed. This can be accomplished by overwriting, degaussing, using software created for this purpose, or the physical destruction of the storage media.

Suggested Reading

These books are available for check out from Library Services at the Nevada State Library and Archives or for purchase from ARMA, International. Request a catalog: 888-241-0598 or visit their on-line bookstore: <http://arma.org/bookstore/>.

- ARMA International. 2005. *Retention Management for Records and Information*. ARMA International, Prairie Village, KS. An ANSI/ARMA 8-2005 standard providing guidance for establishing and operating a retention and disposition program as a component of a complete records and information management program.
- ARMA International. 1986. *Developing and Operating a Records Retention Program—A Guideline*. ARMA International, Prairie Village, KS.
- Stephens, David O. CRM, FAI, and Roderick C. Wallace, CRM. 2003. *Electronic Records Retention: New Strategies for Data Life Cycle Management*. ARMA International, Prairie Village, KS.

N

Nevada State Library and Archives
Records Management Program
100 N. Stewart Street
Carson City, NV 89701
775-684-3411
records@clan.lib.nv.us
www.nevadaculture.org



Chapter 8. Electronic Records Management

Public records document the transaction of public business, provide evidence of decisions, and provide a history of government and the people. These records are valuable informational resources and business assets, and they need to be maintained appropriately to protect the administrative, legal, financial and historical interests of the citizens of Nevada.

Many functions that were once paper-based are now performed electronically. In some cases, paper is not produced at all, and the electronic version may be the only record created. Local governments, and the citizens they serve, risk losing access to public records stored in computer databases, e-mail systems, local area networks, desktop computers, and personal electronic devices; and on audio and video media and obsolete computer tapes or disks.

The emergence of widespread use of electronic records technologies changed the face and practices of local governmental recordkeeping. In the past, laws, regulations and procedures were based on the fact that records were created and maintained in paper or microfilm formats. Although very safe for long-term storage of records, those formats only allowed access to the records by one person in one place at one time.

While electronic record technology promotes broad and rapid access to local records, it also carries the danger that those records and the information contained therein can be easily lost. It is imperative that local governments ensure that because of changing technology, electronic records are not rendered unusable before their retention and preservation requirements are met. Electronic records must be maintained in a trustworthy manner so that the records, and the information contained in the records, are accessible and usable for subsequent reference at all times while the information must be retained.¹

E-Records Management Considerations

Destruction

Destruction of electronic records requires more than the normal file delete command. File deletion typically only erases the index pointer and not the record/file itself. If the record is stored on a computer, the location may eventually be overwritten, but until that occurs, the information is retrievable - if only by using forensic methods. Records stored on optical media (CD, DVD) will require that the physical disk be destroyed by crushing or pulverizing.

Once the record is destroyed, remember to destroy duplicate copies from system backups, secondary archive copies, etc.

¹ For guidance on how to ensure the authenticity of electronic records please refer to *Legal Requirements for Nevada's Public Electronic Records*, Nevada State Library and Archives, 2005.

Disaster Recovery

Electronic records must be protected in the event of a disaster which could be an event as simple as a power failure or as far reaching as an earthquake. To ensure protection of the records, work with IT staff to:

- Ensure the authenticity of electronic records.
- Preserve recorded metadata (information about the records).
- Set up appropriate electronic record lifecycle management processes, e.g., online, near line and offline storage.
- Create and implement an appropriate data backup strategy.

It is vital to make full, frequent, and regular backups of electronic records per NRS 239.051 and NAC 239.698(4). Backup strategies will vary and should be scheduled according to an organization's business continuity plan requirements.

Electronic Image Format: the Legal Requirement

All imaged records in their final form should be placed into a universally accepted non-proprietary TIFF (Tag Image File Format) format which will allow an image to be viewed by any software that supports it. TIFF is designed to promote universal interchanges of digital images. Compliance to this format will help mitigate compatibility problems between systems. Conversion of documents stored in other formats to TIFF image formats will also help to reduce the potential that imaged documents could be altered.

Electronic Signatures and Digital Signatures

Governmental entities requiring use of Electronic Signatures (*See* NRS Chapter 720) or Digital Signature (*See* NRS Chapter 179) technology are advised to seek legal counsel.

Additional Reading on Electronic Signatures

National Archives and Records Administration (NARA):

Records Management Guidance for Agencies Implementing Electronic Signature Technologies, 2000,
<http://www.archives.gov/records-mgmt/faqs/pdf/electronic-signature-technology.pdf>

Records Management Guidance for PKI Digital Signature Authenticated and Secured Transaction Records, 2005,
<http://www.archives.gov/records-mgmt/policy/pki.html>

E-mail messages as public records

When an e-mail message meets the definition of a public record, it is subject to the Public Records Act, NRS Chapter 239, which governs the public's right to inspect public records and the disposition of obsolete public records. The NSLA establishes retention periods for local government public records. NAC 239.125 Each local government is responsible for providing public access to the public records it creates in compliance with NRS Chapter 239.

***Maintenance and
Obsolescence
Considerations***

Obsolescence should be planned for – it is a “way of life” in the information technology world. Governmental entities need to keep pace with constant change and improvement. This requires a proactive approach to system maintenance and upgrade. New applications should be “backwardly compatible” with existing applications (i.e. they should support a previous file structures, as well as new file structures that support new capabilities). Administrators should also plan an annual budget of between 18% – 25% of the original system cost to cover the cost of maintenance, upgrading and media migration.

Metadata

Meta is a prefix that, in technology circles, means an underlying description or definition. Thus metadata is a description about data, similar to a library card catalog system that describes books. To enable location of information about electronic records, techniques commonly referred to as “metadata standards” have been developed, e.g., The Dublin Core.

Electronic records managers use metadata standards to store information about electronic records that they are responsible for archiving and managing, including GIS data. Application of metadata standards is necessary when implementing a system to manage electronic records that are transferred between systems.

***Preservation of
Long-Term Records***

Local governmental entities must have the capability to preserve electronic records residing on a system for the required lifecycle of the records or have the ability to migrate the complete record to another electronic records system.

Migration is the process of moving files to new media or computer platforms in order to maintain their value. The purpose of migration is to preserve the integrity of electronic records and to retain the ability of to retrieve, display and otherwise use them in the face of constantly changing technology.

A migration strategy is an essential component in ensuring long-term access to electronic records. Such a strategy should guide the movement of records from one generation of technology to another, as well as allow the recreation of access tools and necessary functionality for records use. Electronic records with a retention period of ten or more years will have to migrate at least twice during their lifecycle.

Electronic records must be retained, along with the hardware and software necessary to access the data, for the retention period assigned to the record, unless copies of the data generated from electronic storage are retained in paper or on microfilm for the full retention period.

Redaction

According to Nevada’s Public Records Law, all public records, except those specifically defined by law to be confidential, shall be open for public inspection. To comply with this law, electronic systems that

produce records for public inspection must have the capability to redact (mask or hide) certain confidential portions of documents or indexes. Redaction is a legal term for blocking out individual words, sentences or paragraphs that contain confidential information-prior to release of the record. NRS 239.010

Retention: Lifecycle Management

Any information that was a record when produced in paper remains a record when produced or maintained in any digital format, and that any information created as, or converted to, an electronic format is a government asset and must be retained for any period required by law or regulation.

It is important to establish a process for the lifecycle management of electronic records. Electronic records, like records in other formats, must be disposed of in a systematic manner in accordance with records retention schedules. All electronic records should be stored in such a way that they can be identified and destroyed as retention periods expire.

Retention: Software Applications

Records Management Application (RMA) is a term used in DoD 5015.2-STD, *Design Criteria Standard for Electronic Records Management Software Applications*, for software that manages records. Its primary management functions are categorizing and locating records and identifying records that are due for disposition.

RMA software also stores, retrieves, and disposes of the electronic records that are maintained in its repository. DoD 5015.2-STD requires that RMAs be able to manage records regardless of their media.

The DoD maintains a list of software products that have been tested and certified to comply with the mandatory requirements of DoD 5015.2-STD. (This information is from the National Archives and Records Administration's records management page).

The NSLA recommends use of systems certified to be compliant with DoD 5015.2-STD. For more information on DoD 5015.2-STD, *See* the Joint Interoperability Test Command Records Management Application (RMA) website at <http://jitc.fhu.disa.mil/recmgt/standards.html>.

Chapter 9. Electronic Document Imaging Systems

Document imaging systems consist of hardware and software that together convert paper or film to electronic images. The images are then indexed to facilitate their retrieval and made available to users for viewing and file sharing. Hardware generally includes scanners, computers and mass storage devices. Software is required for image capture, indexing, image retrieval, viewing and document management. They can range from simple desktop systems to complex systems, such as an Electronic Document Management System (EDMS), that work across wide-area networks.

When contemplating an imaging system implementation, take into account the following elements:

- **System Cost** - Imaging systems can be expensive, depending upon the system size and the equipment required; however, hardware and software systems do come in a variety of shapes and sizes. The volume of records and frequency of access should be high enough to justify the cost.
- **Document preparation** - This is the most labor-intensive part of the digitizing process. Will the retrieval rate of the imaged documents justify the amount of time required to digitize them? Or is the paper copy better stored properly offsite because it is seldom accessed but has a long retention period? Should all records in a series be digitized or does a day-forward scanning strategy make sense?
- **Standards** – Ensure that the system is built from hardware and software components that conform to commonly accepted standards and are non-proprietary. Vendors new to the market or selling a custom solution should be required to deposit a copy of the software code with a bank, archives, or secure records facility for use in the event of a business failure on their part.
- **Procedures** – Create and enforce written procedures for the proper care and handling of the imaging systems such as:
 - Methods for keeping the equipment in a clean area that is free from dust, food, drink and smoke and maintained at a constant temperature and humidity.
 - Use of surge protectors or line conditioners to protect the equipment from sudden power fluctuations.
- **Quality control** – The quality of digital images should be protected by periodic maintenance and annual recalibration. Sample the quality of scanned images and related index data periodically.
- **Migration plan** – Create a migration strategy to upgrade software, media and equipment as technology changes. The new system should be able to read and convert information written by the previous generation of technology. At least every 5 years, optical media should be recopied and data transferred to the next generation before the technology becomes obsolete and the records inaccessible.
- **Security Copy** – NRS 239.051 (3) requires that information that has been entered into a

computer system must be reproduced and a copy stored in a place to protect it from loss or damage. A backup security copy can be electronic media, microfilm (microfiche), or the original hardcopy documents.

- Retention Schedules – Electronic records, like records in other formats, must be disposed of in a systematic manner in accordance with records retention schedules. All electronic records should be stored in such a way that they can be identified and destroyed as retention periods expire.



Chapter 10. Micrographics

Micrographics refers to processes used to reduce any form of information to a micro image. In today's highly computerized and technology-driven offices, there is still a place for microfilm. Microfilming offers the advantages of space savings, security, and reliable preservation. No matter how technology changes, microfilm remains one of the most cost effective formats for long-term storage of valuable records.

Local governments may convert official records from their original paper or digital format to microfilm and dispose of the originals. The microfilmed copy will have the same force and effect as the original and shall be treated as the original in admissibility as evidence. NRS 239.051

Because microfilm has advantages as well as disadvantages over other methods of retaining records, careful analysis must be made to determine whether an entity should convert its paper records to microfilm.

Advantages

- Microfilm has the ability to:
 - Retain records for a long period of time.
 - Protect vital records.
 - Allow entities to control access to records and retain strict confidentiality.
 - Preserve historical records from aging and abusive wear and tear.
 - Provide fixed file integrity
 - Facilitate use of records that exist in odd sizes, shapes and/or conditions.

Disadvantages

- The records require the use of specialized equipment.
- Microfilming may generate additional costs.
- It may be difficult to compare documents side by side.

NRS 239.051 Reproduction of public records before destruction: Requirements.

1. Unless destruction of a particular record without reproduction is authorized by a schedule adopted pursuant to [NRS 239.080](#) or [239.125](#), any custodian of public records in this state may destroy documents, instruments, papers, books and any other records or writings in his custody only if those records or writings have been placed on micro photographic film or if the information they contain has been entered into a computer system which permits the retrieval and reproduction of that information. A reproduction of that film or that information shall be deemed to be the original.
2. Microphotographs made pursuant to this section must be made on film which complies with minimum standards of quality approved by the American National Standards Institute.
3. The custodian of the records or writings shall:
 - (a) Promptly store at least one copy of the micro photographic film or the tape, disc or other medium used for the storage of that information by the computer in such a manner and place as to protect it reasonably from loss or damage; and
 - (b) Maintain for the use of authorized persons a copy of a reproduction of the film or the information stored by the computer.

Which records should be microfilmed?

- Records that must be retained for more than twenty years should be filmed. Space savings of up to 95% can be realized if microfilm is stored instead of paper.
- Permanent or long-term valuable records should be filmed and the security microfilm copies stored off-site to guarantee that if fire, flood, or other disaster strikes an entity's offices, its recorded information will not be lost.
- Permanent or long-term valuable records retained on fragile media or on media subject to obsolescence should be filmed to assure media quality and stability for preservation. Microfilm is recognized as very durable media for permanent records with an estimated lifespan of 200 to 500+ years when stored in the proper environment.

As beneficial as microfilm may be, costs must be considered. Microfilm equipment, supplies and technicians are expensive. In order to justify an in-house microfilming operation, filming must be done in quantity on a regular basis. For most small cities, counties, and other local governmental entities it is more cost-effective to use the services provided by the Nevada State Library and Archives' Micrographics and Imaging program, or engage a quality, private-sector microfilming service bureau. The only way to determine accurately the least expensive alternative is to analyze the various possibilities as they may apply to individual circumstances.

Microfilming Requirements

All microfilming must comply with the standards of the American National Standards Institute (ANSI). <http://webstore.ansi.org/>

Permanent record microfilm must be used as the master negative. A governmental entity will use as the master negative only film that is composed and treated so that the silver halide image, as well as the film base, meet the technical standards for permanency as defined by ANSI.

Microfilming Services

Price schedules and other information relating to microfilm services provided by NSLA can be obtained from the Micrographics and Imaging program.



Suggested Reading

This book is available for check out from Library Services at the Nevada State Library and Archives or for purchase from ARMA, International. Request a catalog: 888-241-0598 or visit their on-line bookstore: <http://arma.org/bookstore/>.

- Saffady, William. Ph.D.2000. *Micrographics: Technology for the 21st Century*. ARMA International, Prairie Village, KS.



Chapter 11. Vital Records Management

Vital records are irreplaceable records which a governmental entity needs to perform its primary mission. They contain the information needed to continue or re-establish government operations following a disaster.

Importance of a Vital Records Program

Vital records document the government's legal or fiscal position and preserve rights of the government, its employees and citizens. Vital records are irreplaceable or too expensive to restore or replace. A vital records program is a cost-effective way to control the risk of loss of valuable assets.

Liabilities

Although only three to five percent of most local governments' records can be classified as vital, without these records the daily business of government would stop and the public interest would be endangered due to:

- Vulnerability to litigation.
- Exposure to unplanned expenses of financial settlements or loss of revenues.
- Disruption of efficiency due to gaps in information.
- Breaks in the continuity of operations.

The Process

To be successful, a vital records program must be approached from a corporate perspective to ensure that only the truly vital records and information receive special protection. Direction and support must be provided by top management. With the support of management, the records officer can develop a program that protects the interests of the entity, is effective, and easy to manage.

Three basic elements of a vital records program are:

1. Identification of the vital records.
2. Assessment of the risks.
3. Implementing protective measures.

Identification of Vital Records

Some examples of vital records include the current, regularly updated information needed for daily activities such as accounts receivable, master personnel files, police case files, computer

Vital Records Program

- Reduces vulnerability to litigation
- Limits exposure to unplanned (un-budgeted) expense
- Avoids loss of revenue or sudden loss of efficiency

backup tapes, minutes of meetings, irreplaceable research or developmental data, contracts or agreements, including change orders and amendments, and insurance policy information.

Other types of vital records are the ordinances and resolutions and the standing executive orders of mayors or managers. These records are considered vital because they provide the legal basis for a government's very existence and establish the policies which direct its operation.

Risk Assessment

A vital records program is a form of insurance that controls and minimizes risks. It is difficult to eliminate all risks and hazards to records but better decisions can be made before a disaster than during the chaos and pressure of an emergency.

Costs of implementing and maintaining the program must be compared with costs of recovery from a disaster. These costs will vary greatly, of course, depending on such variables as the mission, location, and type of records. For the program to be cost effective the consequences of losing certain records must outweigh the costs of protecting and preserving them.

If certain records can be replaced for less than it would cost to preserve them - they probably aren't vital.

Risk examples:

Identifying and eliminating as many hazards as possible can reduce exposure and the risk of a disaster to records and assure that an entity will be able to continue functioning reliably. Some examples are:

- Environmental – Includes nature and weather-related factors such as earthquakes, floods, windstorms, and ice storms resulting in long-term power outages, building damage or destruction. Also destruction and damage from insects and rodents.
- Human-related – Involves access to buildings, records, keys, locks, alarms, and purposeful destruction of important records. Other problems could be inadvertent deletion of data, files not backed up, inadequate storage of electronic and microfilm media, and incomplete software documentation. Health-related risks, such as a pandemic flu that could leave affect 30% of the workforce for weeks or months.
- Technological – Includes hazards to computer systems and records from power surges, static electricity, improper grounding, and poor virus protection. Building-related risks could include plumbing, wiring, inadequate alarm systems, heating/air conditioning systems, and leaking roofs.

Identifying and eliminating as many hazards as possible can reduce exposure and the risk of a disaster to records and assure that an entity will be able to continue functioning reliably. Lastly, once the vital records are identified and various risks analyzed and minimized, a decision should be made regarding economical and effective methods of protection.

Implementing Protective Measures

Estimating the severity of a calamity that could destroy the records is a basic step in determining appropriate protection measures for vital records. This projection, along with an examination of necessary costs and funding availability, provides a basis for choosing options.

The most important factor in choosing ways to protect vital records is cost-effectiveness. Since relative security is all one can expect to achieve, the best choice is that which most closely matches the cost of protection with the degree of risk.

Methods to Secure Records

The three most common ways to secure vital records are:

- **Duplication and Dispersal** – To distribute duplicate copies to one or more locations away from the central or primary government buildings. Records may be duplicated in multiple formats, such as on paper, microfilm, and magnetic or optical media. In choosing a format considerations should include volume, frequency of updates, storage requirements, equipment and power requirements, and costs versus funding availability.
- **On-site Storage** – When a central building is the only public facility or the only facility with staff, equipment, and supplies capable of housing vital records.
 - Building considerations include establishing a vault space that meets or exceeds the approved standards for records storage¹ with adequate floor load capacity, lighting and ventilation, fire ratings of walls and doors, smoke and fire alarms, and fire suppression systems.
 - Procedural considerations include routinely updating vital records, prohibiting food, beverages and smoking in records areas, segregating combustible material, and conducting periodic electrical, building and fire inspections.
- **Off-site Storage** – To keep vital records in a single location, but away from the central or primary government buildings. Select an off-site storage facility that can provide extra security and protection to original vital records and economical storage for those that are seldom accessed. It is less likely that an off-site storage facility will be affected by the same disaster that occurs to a primary building. Unlike dispersal techniques where vital records may be distributed to a number of off-site locations, a centralized off-site storage location is usually a secured, warehouse facility. Options include government-owned storage facility, commercial records centers, and cooperative records centers.

This facility should be located away from high-risk areas such as rivers, geological faults, and man-made structures which may pose a threat. The facility must be accessible 24-hours a day and carefully evaluated for fire safety, atmospheric conditions, pest control, security, and technical services. A communication link between the main office and the remote facility may be necessary.

¹ Records storage standards that are approved by the Nevada State Library and Archives are listed in Chapter 13 – Inactive Records Center, page 13-3.

The facility may also serve as a hot site, with installed computer and network operations in the event of a disaster, or a cold site, with office space available to install the equipment needed to continue operations.

Vital Records Manual

Because identifying vital records and selecting appropriate protection measures is necessary to prevent the loss of critical information in the event of a disaster, it is important for the records officer communicate policy and procedures to all offices and enlist their active participation and support.

Larger governments should consider publishing a vital records manual and conducting periodic seminars for officials and their staffs. Smaller governments may be able to use a more informal procedure, such as a vital records master list. If officials are aware of the importance of vital records and know the protection measures adopted by their local government, then it will be easier to assemble or reconstruct critical files. This will permit local government services to continue without interruption.

Suggested Reading

These books are available for check out from Library Services at the Nevada State Library and Archives or for purchase from ARMA, International. Request a catalog: 888-241-0598 or visit their on-line bookstore: <http://arma.org/bookstore/>.

- Lemieux, Victoria L. 2004. *Managing Risks for Records and Information*. ARMA International, Prairie Village, KS.
- ARMA International. 2004 *Vital Records: Identifying, Managing, and Recovering Business-Critical Records*. ARMA International, Prairie Village, KS. This American National Standards Institute (ANSI) standard (ANSI/ARMA 5-2003) sets the requirements for establishing a vital records program.

Training Resources

The National Archives and Records Administration (NARA) – Pacific Region conducts periodic classes on Vital Records Management. While the classes are designed for Federal employees, the material is very applicable for state and local governments. For more information on classes and how to register, check out NARA’s website at <http://www.archives.gov/records-mgmt/training/>.

Chapter 12. Disaster Recovery Planning for Records

Developing and implementing a reliable disaster recovery and business continuity plan is not an easy task and is often overlooked by management. Even in the wake of recent national disasters, local governments still under-emphasize recovery. In addition to establishing a vital records management program (*See Chapter 11 - Vital Records Management*), effective records management includes making all reasonable efforts to prevent, prepare for, and recover from disasters.

The focus throughout this section will be on the impact of a disaster on records of local government. Provisions for disaster planning to protect human life, buildings, or equipment are not addressed. This is not intended to be a comprehensive discussion on disaster recovery planning. Its intent is to highlight the prior planning that must be in place.

Planning and Preparation

The real disaster is when agencies fail to prevent those situations which are damaging to records but could have been avoided, or fail to be prepared to make an effective response when a disaster strikes so that valuable government records can be recovered.

The objectives of disaster recovery planning are to identify potential hazards to the maintenance of records and, as much as possible, to prevent emergencies from happening. In the event of an unavoidable calamity, local governments can still be prepared to ensure continuation of services to the public by efficiently recovering critical records.

Guidelines for Plan Development

Disaster preparedness is a process that involves periodic review and update of disaster plans, staff training, and inspections. It is based upon the premise that something can and, eventually, will go wrong. Disasters are events (either natural or man-made) whose timing is unexpected and whose consequences are seriously destructive, like fire, floods, earthquakes, wind, domestic and foreign terrorist actions, equipment and system failures, disgruntled employee actions, etc. Disaster preparedness, including creation of a disaster plan and continual staff education, is essential for effective disaster response.

Division of Emergency Management

For more information on emergency management, contact the Nevada's Division of Emergency Management (NDEM), a division of the Department of Public Safety (NRS Chapter 414).

NDEM's mission is to assist local and tribal authorities in response to emergencies. In addition, they staff the State Emergency Operations Center (SEOC) when a disaster or emergency threatens, as well as prior to and during large scale events.

An example of an outline of a disaster recovery plan can be found in *Exhibit E – Sample Disaster Recovery Plan*. Once completed, a plan should be reviewed, tested, and updated every year to reflect changes in personnel, records holdings, policies, and procedures. Sources should be contacted every year to determine whether the required supplies and services are still available and to re-confirm specified agreements.

It is recommended that each member of the recovery team receive two copies of the records management disaster recovery plan – one to keep at work and one to keep at home. Training in disaster recovery techniques should be available to all staff members and mandatory for those individuals serving on recovery teams.

When Disasters Happen

Damage Assessment

The type and degree of damage must first be examined. One or more disaster recovery team members should walk through the entire area and take notes to answer questions, such as:

- How much damage has occurred?
- What kind of damage is it (fire, smoke, soot, clean water, dirty water, heat, humidity)?
- Is it confined to one area or is the entire building damaged?
- How much of the records holdings have been affected?
- What types of record media have been damaged (paper documents, microforms, photographs, magnetic tapes and diskettes)?
- Are the damaged records easily replaced (is there a preservation duplicate stored off-site, are these convenience copies of records)?
- Are the damaged records irreplaceable and what is their value (is this the only copy of the information, how important are these records to the business of the agency)?
- Can the records be salvaged by the in-house recovery team, or will outside help be required?

A realistic and thorough assessment must be made as quickly, efficiently, and safely as possible. The damage to records should be appraised without handling the records whenever possible, as

Fly-away Kits

Essential employees who must be at the recovery site within two hours of the emergency should be provided with "fly-away" kits containing copies of the essential documents in the event they are away from the office. It is critical that the information in these kits is updated and current.

Examples of the documents to be included are:

- Disaster recovery plan,
- Delegations of authority, directions to the disaster recovery facility,
- Media procedures,
- Emergency telephone lists,
- Vital records plan,
- Passwords, access codes, emergency passes, etc.

further irreparable damage may result. Before handling the materials, photographs should be taken to document the damages.

Stabilizing the Environment

While the character and degree of damage is being assessed, steps must be taken to stabilize the environmental conditions affecting the records. Mold growth, which can appear within 48 hours, is encouraged by conditions of high humidity and high temperatures. By reducing relative humidity and temperatures, you can reduce the risk of mold and buy time for the recovery operations. The following equipment should be readily accessible to help stabilize the environment:

- Portable generators, in case a power failure occurs.
- Pumps, to remove large quantities of standing water.
- Fans, to circulate the air.
- Thermometers, hygrometers, or other devices to measure the temperature and humidity.

The air should be circulated in the damaged area to eliminate any stagnant air pockets. This may be accomplished by running fans constantly. If possible, the fans should expel the humid air from the area. Dehumidifiers can help to lower the humidity, although they are usually effective only in small, enclosed areas and tend to increase the temperature in a room. They can also freeze up in the lower temperatures required for salvage and recovery operations. Temperature and humidity should be monitored constantly.

Any standing water should be pumped from the area. Extreme caution must be taken, as standing water can conceal hazards.

Treating Water-Damaged Records

The choice of specific steps to be followed for salvaging records will vary according to the type of records medium being treated and the cause of the damage. The records most likely to be salvaged after a disaster are those that have water damage. A number of options are available for treating water-damaged materials.

Paper Records

A decision has to be made by the recovery team leader and/or the records management officer and any available conservation personnel whether water-damaged paper records will be air dried or frozen. When materials are slightly damp and the quantity is considered manageable, air-drying may be considered. If the material is soaked, it should be frozen, regardless of the quantity.

- Freeze and thermal vacuum-dry method – The most effective procedure for stabilizing water-damaged records and archival materials is to blast freeze them to a temperature of -20°(F) and then to dry them by a thermal vacuum process. Freezing offers several advantages because it allows time to:
 - Estimate recovery costs.
 - Prepare and coordinate subsequent steps in the drying and recovery operation.

- Clean up the affected areas of the disaster site.

In addition, freezing stabilizes water-soluble materials such as inks, dyes, etc., which may disperse during natural drying. The subsequent thermal vacuum-drying will cause water to pass from a frozen state to a vapor without returning to liquid form. Under such conditions, the feathering of inks is slight. Freezing and thermal vacuum-drying will also lessen stains and reduce and remove the odor caused by smoke.

- Drying without freezing method – If it is decided that the freeze and thermal vacuum-drying method is not practical, natural drying of the damaged material is possible. Rooms chosen to be drying areas must have good air circulation and low humidity; this requirement can be achieved by the use of fans, dehumidifiers, and/or air conditioning.

Microforms

In the handling of water-damaged microforms, speed is again essential in order to prevent the breakdown of the film emulsions and the onset of bacterial growth that will destroy film images. Generally, water-damaged microfilm and microfiche should not be frozen since development of ice crystals may be harmful. Damaged microforms should be kept under water, preferably distilled, and sent to a professional micro processing laboratory for film cleaning services.

Electronic Media

The disaster recovery planning for records stored on electronic media should include the implementation of an effective program for creating regular backups of critical or essential files and storing these in a safe location. Unless there is no other alternative, file recovery efforts should proceed through reliance on use of backup files rather than attempting to reuse damaged media. For electronic media disaster planning purposes, system support backup tapes and disks and documentation should be stored off-site. An appropriate backup strategy should be devised in conjunction with an entity's information technology organization.

If the circumstances require the salvaging of water-damaged electronic media, they should not be used until thoroughly cleaned and dried and the housing or containers replaced. This will avoid damage to equipment.

References providing more detailed instruction appear at the end of this section.

Post-Disaster Assessment

An essential component of the disaster recovery process is an assessment after the disaster recovery operation is completed. The assessment should note the effectiveness of the disaster plan and should include an evaluation of the sources of supplies and equipment, and of any off-site facilities used. Once the assessment has been made, the disaster plan should be amended where necessary to reflect any inadequacies that have been identified.

Online Resources

Disaster Preparedness and Response Planning

U.S. National Archives and Records Administration (NARA)

<http://www.archives.gov/preservation/disaster-response/>

Smithsonian Institution Archives: Disaster Planning, Prevention and Recovery Manual for the Smithsonian Institution Archives <http://www.si.edu/archives/report/disaster/>

Disaster and Emergency Response Services

BMS CAT (Desiccant dehumidification) <http://www.bmscat.com/>

Document Reprocessors (Disaster recovery services for water and fire damaged materials)

<http://www.documentreprocessors.com/>

Munters (Desiccant dehumidifiers, humidity control, water damage recovery)

<http://www.muntersamerica.com/>

Supplies

U.S. National Archives and Records Administration (NARA): Products Tested by the NARA Research and Testing Laboratory (1991-present) <http://archives.gov/preservation/storage/nara-tested-products.html>

Conservation/Preservation Information

Smithsonian Center for Materials Research & Education (SCMRE): <http://www.si.edu/mci/>

The Library of Congress: <http://www.loc.gov/preserv/>

Conservation Online: <http://www.conserveonline.org/>

Suggested Reading

These books are available for check out from Library Services at the Nevada State Library and Archives or for purchase from ARMA, International. Request a catalog: 888-241-0598 or visit their on-line bookstore: <http://arma.org/bookstore/>.

- Jones, Virginia A., CRM, and Kris E. Keyes. 2001. *Emergency Management for Records and Information Programs*. ARMA International, Prairie Village, KS. An essential guide to help prepare for and recover from natural or human-caused disasters. It contains a step-by-step guide through the essential phases of emergency management.
- ARMA International. 2004. *Vital Records: Identifying, Managing, and Recovering Business-Critical Records*. ARMA International, Prairie Village, KS. This American National Standards Institute (ANSI) standard (ANSI/ARMA 5-2003) sets the requirements for establishing a vital records program.

Training Resources

The National Archives and Records Administration (NARA) – Pacific Region conducts periodic classes on Disaster Preparedness and Response. While the classes are designed for Federal employees, the material is very applicable for state and local governments. For more information on classes and how to register, check out NARA’s website at <http://www.archives.gov/records-mgmt/training/>.

Chapter 13. Inactive Records Center

The inactive records center is a centralized area for the housing records whose reference rate does not warrant their retention in expensive office equipment and space. It is often helpful to segregate active records – those records in frequent use – from inactive records – records that must be retained but are seldom referenced. Active records should be stored in locations that are easily accessible. Inactive records are more efficiently stored in a low-cost off-site area away from the main office.

Records center efficiency is based upon:

- Use of low-cost equipment for maximum space utilization.
- Employ procedures which assure prompt and efficient retrieval and disposition of records.

Expensive office space and filing equipment should be reserved for records that are currently in use and must be available immediately. A four-drawer letter-sized conventional filing cabinet holds 6 cubic feet of records but consumes roughly 11 square feet of floor space, including cabinet foot print, drawer extension and user access space. Assuming that a filing cabinet costs \$300 and has a 10-year life and office space rents for \$18 per square foot per year, then the annual cost of records storage per cubic foot of records is \$38.

- Divide the cost of the cabinet (\$300) by the amortized life span of the cabinet (10 years) = \$30, the cost of the cabinet per year.
- Multiply the square feet the cabinet occupies (11 sq. ft.) by the annual cost per square foot (\$18) = \$198, the cost of the cabinet's floor space per year.
- Add the cost of cabinet (\$30) plus the cost of the floor space (\$198) per year = \$228, the annual cost of the cabinet.
- Divide this total (\$228) by the cabinet capacity (6 cubic feet) = \$38 per cubic foot of filing space per year.

Compare this to a typical records center facility which maximizes the use of space with high-density rack shelving. Records center storage is less expensive than office storage – records center shelving typically costs one-third less than office cabinets and shelves and warehouse floor space costs two-thirds less than office floor space. The annual cost per cubic foot of filing can be reduced to as little as \$1.50 to \$3.00 per cubic foot.

Determining Need

The first step in planning an off-site records center is to identify the quantity (in cubic feet) that could be transferred to a facility. Using a current inventory, estimate the volume of records that are determined to be inactive and are eligible to be transferred.

Inactive Records

Records that are referred to infrequently in the conduct of current business, but must be retained for legal or administrative reasons.

The volume can be measured in linear filing inches or file cabinet capacity and converted to cubic feet. One standard letter/legal-sized records storage box measuring 10 inches high by 12 inches wide by 15 inches deep holds one cubic foot of records. To determine the number of boxes you will need by using the conversion tables below. For example, for records in a letter-size file cabinet, two full drawers will fill three standard boxes; for records in a legal-size file cabinet, one full drawer will fill two standard boxes.

Conversion Table: File Drawers to Cubic Feet

Type of File Cabinet	Cubic Feet Per Drawer
4 Drawer, letter-sized vertical cabinet	1.5
5 Drawer, letter-sized vertical cabinet	1.5
4 Drawer, legal-sized vertical cabinet	2.0
5 Drawer, legal-sized vertical cabinet	2.0

Conversion Table: Linear File Inches to Cubic Feet

Size	Linear File Inches	Cubic Feet
Letter	15	1.0
Legal	12	1.0

Selecting the Facility

Once the total estimated space needed is known, the next step is selecting an appropriate facility to house the records. Typical choices are establishing an in-house facility or contracting with a commercial records center storage vendor. Rather than building a warehouse or renovating an existing warehouse, purchasing shelving, material handling equipment, and software, and hiring records center employees, a local government may find that outsourcing its inactive records as more viable option. A commercial records center is a vendor with a facility for box-storage and related services. Vendor charges include monthly cubic-foot charge, retrieval and delivery charges; refile charges; disposal charges; and (if applicable) permanent withdrawal charges. Only a detailed costs analysis will determine which option is the best.

Regardless of which type of facility is selected, all storage areas must be secure and provide a suitable environment for records storage. Records should be stored in fire-resistant structures and in areas in which the temperature and humidity are maintained at the levels required to insure optimum longevity of the paper, film, or tape on which they are recorded. Adequate light and access should be provided to permit retrieval of records. Adequate ventilation and protection

against insect or mold invasion should be provided. Steam, water, and sewer pipes, other than fire-control sprinkler systems, pose extreme hazard to records.

Caution! Public records of enduring value should not be stored where heat, breaks, drips, or condensation from pipes could damage them; where windows, doors, walls, or roofs are likely to admit moisture; where they will be exposed to sunlight or extreme temperature variations; and where they are not adequately protected from rodent or insect infestations.

Standards for Storage of Public Records

The following records storage standards were adopted by the Nevada State Library and Archives administrator per NRS 378.255 (1). To the extent allowed by appropriation, a local governmental entity should store public and official records in a facility that meets the standards set forth in these standards. NAC 239.145 (2)

These standards are available for purchase or may be borrowed from the State Library and Archives (for contact information, *See* Chapter 2, page 2).

Records Center Operations

ANSI/ARMA TR-01-2002 Records Center Operations, 2nd Ed.¹ An American National Standards Institute and ARMA, International's Technical Report on establishing and operating a records center.

National Fire Protection Association (NFPA)

NFPA 232 Standard for the Protection of Records². National Fire Protection Association (NFPA). Standard for records center storage facilities.

Storage of Paper Records

NISO TR01-1995 Environmental Guidelines for the Storage of Paper Records.³ A National Information Standards Organization's Technical Report recommending environmental parameters that influence the preservation of paper-based records in libraries and archives.

¹ Available from the ARMA, International catalog 888-241-0598 <http://arma.org/bookstore/>.

² NFPA 232: Standard for the Protection of Records, 2007 Edition. Available from the NFPA catalog 800-344-3555, <http://www.nfpa.org/catalog/>.

³ Available from NISO 301-654-2512 http://www.niso.org/standards/std_resources.html.



Chapter 14. Sealed Records

A local government that is required by any statute or court of competent jurisdiction to seal a record in its legal custody shall seal the record by physically removing the record from the filing system of the entity and placing it in a separate file which is not accessible to the general public, including, but not limited to, a filing cabinet or drawer which can be locked.

- The entity shall make a notation in its filing system that the record has been removed. The notation must include the name of the record, the date it was removed, and cite the legal authority for its removal.
- The entity shall place the record to be sealed and the court order, or a copy of the statutory authority pursuant to which the record is being sealed, into an envelope or closable file and place, on the outside of the envelope or file, a statement which is substantially in the following form:

Sealed by the authority of (cite the court order or statutory authority pursuant to which the record has been sealed), access by authorized personnel or by court order only.

- The entity should establish within its filing system a separate confidential file for the purpose of locating and retrieving the sealed records in the legal custody of the entity. The separate file may contain only such information as may be necessary to facilitate the location and retrieval of the sealed record.
- Once a record is sealed, the authorized personnel of the entity may review the record for administrative purposes only. The actual contents of a sealed record may be disclosed only upon the order of a court of competent jurisdiction.

Any electronic records, having a retention period of 10 years or more, that have been sealed should be written to microfilm.

Sealed records may be destroyed only in accordance with a valid records retention and disposition schedule (*See* NRS 239.125) when the retention period has been satisfied. Sealed records may also be ordered destroyed by a court of record at any time. The destruction of sealed records should be documented.

How to Seal Records

Logging Access to the Sealed Record

The log must include, without limitation the:

1. Name of each person who accesses the sealed record.
2. Time and date on which that access was made.
3. Purpose for accessing the sealed record.
4. Legal authority by which the person is accessing the sealed record.

Sealing Unitized Microfilm Records

For records on microfiche, in a microfilm jacket, an aperture card, or a micro card that requires sealing the local government must:

1. Remove the microfiche, microfilm jacket, aperture card or micro card and place it into an envelope or a closable file in accordance with this section.
2. Replace the removed microfiche, microfilm jacket, aperture card or micro card with an index or other similar card that includes the name of the removed record, the date of removal, and the legal citation authorizing the action.

Sealing Roll Microfilm Records

To seal records on roll microfilm, the local government must:

1. Remove the entire roll of microfilm and place it into an envelope or closable file in accordance with this section or
2. Cut from the roll that portion of the record which is to be sealed and place the removed portion into an envelope or closable file in accordance with this section. A target, a certification, and a copy of the court order or statutory citation authorizing the removal must be spliced between the ends of the cut roll of microfilm, in accordance with the standards of the American National Standards Institute (ANSI) and the Association for Information and Image Management (AIIM)

Sealing Electronically Formatted Records

To seal records electronically formatted, the local government must:

1. Transfer the records to a file format that is unalterable but allows for reading and printing. The records must not be left in a file format that allows for alteration or modification.
2. Create a certification and authentication page in accordance with NRS 52.260 to become part of the unalterable format. This should include a description of the record, when and why it was transferred to this format and the legal authority citation for sealing the record. A copy of the sealing order in electronic format may also be included.
3. Destroy all other copies of the record after it has been transferred to the unalterable format. These other copies must be destroyed in a secure manner so the sealed record cannot be reconstructed or retrieved (*See* NAC 239.165).
4. Create an index within the regular file system identifying the sealed record and indicating it has been sealed and removed from the regular files. A note indicating who to contact for further information to access the record should be included. Another index, restricted to authorized staff only, should be created indicating the location and file format of the sealed electronic file.
5. Transfer the unalterable record to a secure directory or off-line storage media, e.g., DVD or CD. In all cases, a security backup copy must be created and stored separately from all other media.

6. Create an access log that documents when, by whom (staff), for whom (requester) and under what authority access was granted.



Chapter 15. Personal Identifying Information

NRS 205.4617 “Personal identifying information” defined.

1. Except as otherwise provided in subsection 2, “personal identifying information” means any information designed, commonly used or capable of being used, alone or in conjunction with any other information, to identify a living or deceased person, including, without limitation:

(a) The current or former name, driver’s license number, identification card number, social security number, checking account number, savings account number, credit card number, debit card number, financial services account number, date of birth, place of employment and maiden name of the mother of a person.

(b) The unique biometric data of a person, including, without limitation, the fingerprints, facial scan identifiers, voiceprint, retina image and iris image of a person.

(c) The electronic signature, unique electronic identification number, address or routing code, telecommunication identifying information or access device of a person.

(d) The personal identification number or password of a person.

(e) The alien registration number, government passport number, employer identification number, taxpayer identification number, Medicaid account number, food stamp account number, medical identification number or health insurance identification number of a person.

(f) The number of any professional, occupational, recreational or governmental license, certificate, permit or membership of a person.

(g) The number, code or other identifying information of a person who receives medical treatment as part of a confidential clinical trial or study, who participates in a confidential clinical trial or study involving the use of prescription drugs or who participates in any other confidential medical, psychological or behavioral experiment, study or trial.

(h) The utility account number of a person.

2. To the extent that any information listed in subsection 1 is designed, commonly used or capable of being used, alone or in conjunction with any other information, to identify an artificial person, “personal identifying information” includes information pertaining to an artificial person.

NRS 205.461 to 205.4657, NRS 239B.030, NRS 378.255

A local governmental entity should establish written policies and procedures to protect the access to, and use of, personal identifying information such as the social security number (SSN) and other confidential information. “Personal identifying information” has the meaning ascribed to it in NRS 205.4617. Such written policies and procedures should include, but not be limited to:

- Identify the use and need for collecting the personal identifying information or other confidential information and, where possible, discontinuing the collection and use of such information except as required by state or federal law or regulation.
- Restrict the access to such information to authorized staff only.

- Reduce the exposure of information in paper files by never leaving them unattended.
- Store paper files in a secure manner such as within a locked and monitored room, locked file cabinets or boxes, or as otherwise required by state and federal law or regulations.
- Reduce exposure of information in electronic format by securing it in accordance with the policies, standards and procedures established by the local governmental entity, the Nevada State Library and Archives, or state or federal laws or regulations.

A local governmental entity should establish procedures for the secure access to such information including, but not limited to:

- Creating and maintaining an access log detailing to whom and when access was granted to the information by unauthorized staff, the public, or other governmental entities.
- Producing and maintaining an “out card” procedure where the accessed file is replaced with a card stating to whom and when access was granted.
- Obeying state and federal laws relating to whom, how, and where access may be granted.
- Following the policies, standards and procedures established by the local governmental entity, or those adopted by the Nevada State Library and Archives, or state or federal laws or regulations.

A local governmental entity should establish and implement a training program for all staff on a continuing basis in all laws, regulations, policies, and procedures dealing with the access, use, maintenance, storage, and disposal of such information.

Appendix

Appendix	Page
<i>Glossary of Records Management Terms</i>	3
<i>Resources and Suggested Reading</i>	7
• Information Resources	7
• Books on Records Management	7



Glossary of Records Management Terms

Active records	A group of records that are referred to frequently, such as daily, weekly or monthly. Active records should be maintained in the office for quick and easy access.
Archival records	Records with enduring value that are preserved for reference and research purposes because they reflect significant events or document the history and development of the governmental entity. <i>See also: NRS 239.123 Local governmental records: Submission to Division; accounting; return or reclamation.</i>
Archives	The facility responsible for selecting, preserving, and making available archival records.
Confidential record	A record that by statute or regulation requires special protection from unlawful removal, misuse, damage, alteration, destruction or loss. <i>See also: NRS 239.0105 Confidentiality of certain records of local governmental entities and NAC 239.165 Disposal of confidential public books or public records.</i>
Convenience copy	All copies of a record other than the official copy that were created for purposes of reference or research. <i>See also: Nonrecord. See also: NAC 239.031 "Duplicate" defined.</i>
Destruction Hold	<i>See: Legal Hold.</i>
Disposition	Any manner or method of changing the custody, location, or physical state of records. Final disposition includes transfer to archives and destruction. <i>See also: NRS 239.124 Local governmental records: Exclusive procedures for destruction; NAC 239.155 Disposal of public record restricted; procedures for proposal and adoption of schedules for retention of public records; NAC 239.165 Destruction of confidential records, electronic records and copies of records.</i>
Electronic records	Digitized records consisting of character-coded electronic signals that can be processed and read by computers (machine-readable), as opposed to human-readable or eye-readable information such as paper and microfilm records. Information meeting the definition of Nevada record that is created and stored in a form that only a computer can manage by a program when accompanied by appropriate certification and documentation. <i>See also: NAC 239.035 "Electronic record" defined.</i>
Imaging	The process of creating an exact image of a document utilizing either electronic (digital) or photographic (microfilm) technology.

Inactive records	Records that are referred to so infrequently in the conduct of current business that they may be removed from the office and either retired to an inactive records center or destroyed, per the appropriate records retention schedule approved by the Nevada State Library and Archives.
Inventory	A survey of files prior to the development or revision of disposition schedules. Generally includes such data as series title, inclusive dates, use, volume, arrangement, duplication, and other pertinent information.
Legal Hold	Suspending the process of routine destruction of records when it is determined that the records may be relevant to foreseeable or pending litigation, government investigation, or audit.
Lifecycle of records	The progression of records from creation and receipt through distribution and use; storage and maintenance, to final disposition.
Local-Government Records Disposition Authority (LRDA)	The control number assigned to the record retention schedule by the Nevada State Library and Archives. .
Machine-readable records	<i>See:</i> Electronic Records.
Microfilm	A high-resolution photographic film used to record reduced-size images of paper or digital records. The act of capturing micro-images on film. Formats include roll film, microfiche, aperture cards, COM fiche.
Nonrecord	This includes publications, worksheets, drafts, routine replies, telephone messages, blank forms, and extra copies of documents created for convenience or public distribution. Nonrecords may be destroyed when no longer administratively needed. <i>See also:</i> NAC 239.051 “Nonrecord” defined. NAC 239.131 <i>Destruction of nonrecords.</i>
Office of Record	The office designated as the official custodian of records for specified programs, activities, or transactions.
Official records	An accumulation of Record Copies documenting an action or providing valuable information. The official files include the originals of incoming correspondence and the initialed copies of the outgoing and interoffice correspondence, the original or action copies of reports, completed forms, maps, photographs, and other similar documents. <i>See also:</i> NAC 239.101 “Record of a local government” defined; NAC 239.161 <i>Dissemination of schedules for retention of public records; minimum period for retention of original record; disposal of duplicates.</i>
Public records	All documents regardless of physical form or characteristics created or received by an agency in the course of business that have not been

declared by law to be confidential. *See also: NRS 239.010 Public books and public records open to inspection; copyrighted books and records; copies to be provided in medium requested; NRS 52.125 Certified copies of public records.*

Record	Recorded information, regardless of medium or characteristics. Any paper, book, microfilm, card, magnetic tape, disk, map, or any copy or printout that has been received by an organization and has been used by that organization or its successors as evidence of its activities or because of the information contained. In databases, in electronic record keeping systems, a collection of related data fields. <i>See also: NAC 239.101 "Record of a local government" defined; NAC 239.161 Dissemination of schedules for retention of public records; minimum period for retention of original record; disposal of duplicates; NRS 52.260 Record made in course of regularly conducted activity; affidavit required; NRS 239.121 Local governmental records: Definitions.</i>
Record copy	The official copy of a record that is retained for legal, operational or historical purposes. Often the Record Copy is the original, but not always. <i>See also: NAC 239.101 "Record of a local government" defined.</i>
Records center	A facility for the economical storage of inactive records.
Records management	The life-cycle management of records to promote effective and economical documentation of government actions and transactions. <i>See also: NRS 239.125 Local governmental records: Program for management; regulations of State Library and Archives Administrator; NAC 239.106 "Records management" defined; NAC 239.145 Records management program: Documentation and standards required.</i>
Records manager or records officer	The individual responsible for the records management functions, including files organization and maintenance, records transfer, and records destruction.
Records storage box	A cardboard carton designed to hold approximately one cubic foot of records and to fit on specially configured industrial metal shelving.
Records retention schedule	A disposition schedule ensures government records have been retained for as long as they are needed and promotes prompt and legal disposition of records. <i>See also: NAC 239.161 Dissemination of schedules for retention of public records; minimum period for retention of original record; disposal of duplicates;</i>

- Records series** Records kept together because they relate to a particular subject or function, result from the same activity, document a specific kind of action, take a particular physical form, or because of some other relationship arising out of their creation, receipt, or use. Generally handled as a unit for disposition purposes. *See also: NAC 239.121* “Series of records” defined.
- Retention period** The period of time from when the record is created to the time it is final disposition. The retention period is usually triggered by an event (see also File Break), such as end of calendar year, end of fiscal year, creation date, termination date, expiration date, cancellation date, etc. *See also: NAC 239.155 Disposal of public record restricted; procedures for proposal and adoption of schedules for retention of public records.*
- Vital records** Irreplaceable records which a governmental entity needs to perform its primary mission. They contain the information needed to continue or re-establish government operations following a disaster.

Resources and Suggested Reading

Information Resources

ARMA, International (Association of Records Managers and Administrators)
13725 W. 109th Street, Suite 101, Lenexa, KS 66215
Phone: 913.341.3808, 800.422.2762 FAX: 913.341.3742, Email: hq@arma.org
www.arma.org

Books, guidelines, software, and other information are available at an on-line bookstore:
www.arma.org/bookstore.

National Association of Government Archives and Records Administrators (NAGARA)
48 Howard Street, Albany, NY 12207
Phone 518-463-8644, FAX 518-463-8656
www.nagara.org

Society of American Archivists (SAA)
527 S. Wells, 5th Floor
Chicago, IL 60607
Phone: 312-922-0140, FAX 312-347-1452
www.archivists.org

Books, guidelines, software, and other information are available at an on-line catalog:
www.archivists.org/catalog/

Books on Records Management

ARMA International. 1986. *Developing and Operating a Records Retention Program—A Guideline*. ARMA International, Prairie Village, KS.

ARMA International. 1995. *Alphabetic Filing Rules*. 2d ed. ARMA International, Prairie Village, KS. (This publication is accredited as an American National Standard by the American National Standards Institute (ANSI). It is an authoritative treatment of standard rules for alphabetic filing with each rule described and illustrated in detail.)

ARMA International. 2000. *Guideline for Managing E-mail*. ARMA International, Prairie Village, KS.

ARMA International. 2005. *Retention Management for Records and Information*. ARMA International, Prairie Village, KS. ANSI/ARMA 8-2005 standard providing guidance for establishing and operating a retention and disposition program as a component of a complete records and information management program.

ARMA International, U.S. Legislative and Regulatory Affairs Subcommittee. 2000. *Essential Elements of Local Government Records Management Legislation*. ARMA International, Prairie Village, KS. This second edition of Essential Elements of Local Government Records Management Legislation will assist local and state government records professionals, policy makers, and legislators in updating their laws and policies to establish comprehensive records

management programs that reflect the accepted principles of the profession and provide a solid foundation for program development.

Bennick, Ann, Ed.D, CRM. 2000. *Active Filing for Business Records*. ARMA International, Prairie Village, KS. A well-designed and maintained file system contributes significantly to sustaining a department or company's competitive edge. *Active Filing for Business Records* explores the records management concepts, principles, processes, and considerations in developing, implementing, and maintaining effective active file systems. In addition to discussing system development procedures, the author emphasizes the significance of company culture (organizational structure, degree of autonomy for subordinate organizations, management support, work style, and extent of document sharing).

Dearstyne, Bruce W. 1999. *Managing Government Records & Information*. ARMA International, Prairie Village, KS. Presents strategies and principles of developing records management programs and supporting the orderly, systematic management of government records. It presents government *records management* within the framework of government *information management*, the only viable approach in most settings where digital technologies have shifted government executives' attention to information as a strategic resource.

Flynn, Nancy and Randolph Kahn, ESQ. 2003. *E-Mail Rules: A Business Guide to Managing Policies, Security, and Legal Issues for E-Mail and Digital Communication*. American Management Association. A toolkit for protecting any company's electronic capital, E-Mail Rules shows how to: * Use technology, policy, and employee training to minimize the loss of data * Create enterprise-wide retention rules for the saving and disposal of messages * Gain control of transmission and ensure a secure electronic environment * Develop strategies for related technologies like instant messaging, list serves, and online chat E-Mail Rules shows readers how to maximize the effectiveness of their organizations' e-mail systems, and put an end to lost or compromised information.

Jones, Virginia A., CRM, and Kris E. Keyes. 2001. *Emergency Management for Records and Information Programs*. ARMA International, Prairie Village, KS. An essential guide to help prepare for and recover from natural or human-caused disasters. It contains a step-by-step guide through the essential phases of emergency management.

Kahn, Randolph A., ESQ., and Barclay T. Blair. 2004. *Information Nation*. AIIM International, Silver Spring, MD. This book incorporates the latest developments in law, technology, and business practices to guide readers through a proactive approach to their information management activities.

Exhibits

Exhibit	Page
<i>Exhibit A: Sample Ordinance</i>	3
<i>Exhibit B: Sample Job Descriptions</i>	7
Archives and Records Administrator	7
Records Supervisor	10
Records Analyst	14
Archives and Records Technician I	16
Archives and Records Technician II	18
<i>Exhibit C: Records Inventory Worksheet</i>	21
<i>Exhibit D: Electronic Records Storage Terminology</i>	23
<i>Exhibit E: Sample Disaster Recovery Plan for Records</i>	31



Exhibit A: Sample Ordinance

Sec. 1.

As used in this ordinance, unless the context otherwise requires, the words and terms defined in sections 2 to 16, inclusive, of this ordinance have the meanings ascribed to them in those sections.

Sec. 2.

"Division" means the division of records management of the (entity).

Sec. 3.

"Duplicate" means any accurate and unabridged copy of a record or series of records, which is not an original.

Sec. 4.

"Non-record material" means published books and pamphlets, books and pamphlets printed by a government printer, worksheets used to collect or compile data after that data has been included in a record, answer pads for a telephone or other informal notes, stenographers' notes after the information contained therein has been transcribed, unused forms except ballots, brochures, newsletters, magazines, newspapers except those newspapers received pursuant to NRS 247.070 (counties only) or parts of newspapers retained as evidence of publication, scrapbooks and property left or deposited with an office which would otherwise be defined as a record except that the ownership of that property does not reside with (entity).

Sec. 5.

"Office" means an office, department, board, commission, committee, entity, or any other sub-division of the (entity).

Sec. 6.

"Original" means an original as defined in NRS 52.205, a reproduction made pursuant to the provisions of NRS 239.051, or any record designated by the records committee to be an original. An original made pursuant to the provisions of NRS 239.051 consists of both the stored copy, and the copy maintained for the use of authorized persons.

Sec. 7.

"Record" means all documents, papers, letters, pamphlets, books, maps, charts, blueprints, drawings, photographs, films, software used to process electronic data, information stored on magnetic tape or computer, laser or optical disc, materials which are capable of being read by a machine, including microforms and audio and visual materials, computer printouts, newspapers received pursuant to NRS 247.070, artifacts entered as exhibits in any proceeding in any court, and any other evidence, including all copies thereof, made or received pursuant to a law or ordinance or in connection with the transaction of the official business of any office or department (entity).

Sec. 8.

"Records Committee" means the records committee established in section 12 of this ordinance.

Sec. 9.

1. Pursuant to the provisions of subsection 1 of section 125 of chapter 239 of the Nevada Revised Statutes, the division of records management is hereby created in the (insert office). The division is administered by the (official title).

2. It is the intent of the (governing body) that the division, in carrying out its functions, follows accepted:

a. Procedures for the management of records to increase the efficiency of the records keeping system and reduce the administrative costs associated with the creation, maintenance, use, retention, and disposition of records; and

b. Standards of archival practice to ensure the preservation of records with permanent value and maximum accessibility to records for the general public.

Sec. 10.

The division shall:

1. Establish standards, procedures, and techniques for the effective management of records;

2. Make continuing surveys of current practices for the management of records and recommend improvements in those practices, including the use of space, equipment and supplies to create, maintain and store records;

3. Establish standards for the preparation of schedules providing for the retention of records of continuing value and for the prompt and orderly disposition of records, which no longer possess sufficient administrative, legal, fiscal or research value to warrant their further retention;

4. Establish, maintain and operate a center for storing and receiving records of the several offices pending their disposition in a manner prescribed by law;

5. Establish a unit to provide micrographic services to the several offices of the city/county;

6. Establish a program for the management of forms and files;

7. Establish a program for the protection of records essential for the continuation or re-establishment of governmental operations in the event of natural or other disaster; and

8. Establish a program for the preservation and conservation of records designated by the state or the division as having a permanent retention value.

Sec. 11.

The division may employ separately or cooperatively with another local governmental entity a city/county records administrator to carry out the duties of the division.

Sec. 12.

1. A records committee is hereby established to be known as the
(insert name of city or county) records committee.
2. The records committee shall be composed of representatives from the following areas:
 - a. the city/district attorney/legal counsel's office
 - b. the city/county clerks office
 - c. the city/county/general manager's office
 - d. the finance director/county auditors' office
 - e. information technology, e.g., chief information officer (CIO) and/or chief information security officer (CISO) office
 - f. records manager's office

Sec. 13.

The records committee shall:

1. Draft, review, and prepare records retention schedules for the State Library and Archives Administrator's approval;
2. Approve all requests for the purchase of filing equipment or the creation of a new form, or an application for conversion to micrographics or optical imaging, word processing or data processing;
3. Review any request for access to information which was denied by an official to determine whether the denial was in keeping with prevailing law; and
4. Review all proposals for the expansion or modification of the records management program and make recommendations to the board of county commissioners/city council.

Sec. 14.

1. The rights of custody and control of records transferred to the city/county records center remain with the transferring office.
2. The rights of custody and control of accession to the city/county archives transfer to the division at the time the records are accepted as an accession.

Sec. 15.

Records may be disposed of only in accordance with the schedules for the retention and disposition of records prepared by the division and approved by the records committee.

Sec. 16.

1. Records to be destroyed must be disposed of in accordance with procedures approved by the records committee and NAC 239.165.
2. The records administrator or a representative of the office must supervise the destruction of all records in their care and attest that such destruction was carried out in the manner provided for by the records committee and NAC 239.165.



Exhibit B: Sample Job Descriptions



Archives and Records Administrator

DEFINITION

Under general direction; plans, directs, and, coordinates the City Archives and Records division of the City Clerk's Office; and performs related duties as required.

DISTINGUISHING CHARACTERISTICS

This class is distinguished as being at the division head level providing management, coordination, and direction to the staff of the records and information management division of the City Clerk's Office.

EXAMPLES OF ESSENTIAL FUNCTIONS

Essential functions include, but are not limited to, the following:

1. Plans, directs, and coordinates the activities of the Archives and Records division including scheduling, assigning, and evaluating the work of staff responsible for retaining, storing, and retrieving records and information in conformance with applicable federal, state, and local laws, codes, and regulations.
2. Provides records management support to all City departments by evaluating existing manual and automated records systems and recommending improvements such as cost control measures associated with creating, storing, and retrieving information, and automated applications including hardware and software designed to maintain and store records and information.
3. Coordinates the efforts of staff and the use of equipment to efficiently retrieve, store, retain, and secure records and information.
4. Answers inquiries from all levels of City staff regarding systems and methods designed to create, retrieve, retain, protect, and secure records and information
5. Oversees professional and technical training for the Archives and Records division.
6. Develops and coordinates training programs pertaining to records and information management for City employees; prepares training materials and manuals.
7. Monitors technical developments that may affect record storage and retrieval functions and evaluates the impact of such developments on the Archives and Records division.

8. Develops and implements goals, objectives, policies, procedures, and work standards for the Archives and Records division to contribute to the overall quality of the City Clerk's service goals and to conform with new and revised laws, codes, and regulations.
9. Develops and directs the administration of quality assurance standards and quality control programs to conform with applicable laws, codes, and regulations.
10. Develops methods and techniques designed to protect records from potential disasters and to recover damaged records.
11. Prepares and directs the preparation of written correspondence, reports, procedures, and other written material.
12. Directs the preparation and administration of the budget for the division.
13. Researches the specifications and costs of new equipment and record systems by collecting information from vendors, suppliers, and other external sources; evaluates the usefulness and applicability of new systems, software, and equipment.
14. Confers with, and represents the City in meetings with representatives from other City departments, advisory boards, professional organizations, and outside agencies regarding records and information management.
15. Serves as member of professional organizations that are involved in records and information management.

KNOWLEDGE, SKILLS, AND ABILITIES

- Thorough knowledge of the rules, regulations, policies and operating procedures of the City Clerk's Office; records and information management and retention principles; public administration principles and practices including City of Henderson organizational structure and records needs of individual departments; federal, state, and local laws, codes, and regulations pertaining to records and information management; Chapter 239 of the Nevada Revised Statutes pertaining to records retention schedules; administrative principles and practices including goal setting, program development, and implementation and evaluation; supervisory practices and procedures including methods of scheduling, assigning, training, and evaluating the work of employees, disciplinary procedures, and the Civil Service Rules and Labor Agreements; training practices and methods; principles and practices of budget development and administration; computer software and hardware applications and automated systems and applications pertaining to records management, databases, word processing and spread sheets.
- Ability to supervise, train, and evaluate the work of employees; conduct research and analyze data to evaluate existing records and information management systems, identify problems and develop and implement solutions to problems; develop and implement goals, objectives, policies, procedures, and work standards pertaining to records and information management; provide training on methods and techniques pertaining to records and information management; motivate staff to meet goals and objectives and provide customer services in the most cost effective and efficient manner; maintain accurate records, logs, and files; prepare clear and concise reports, correspondence, training materials and manuals, and other written materials using correct grammar, spelling, and punctuation; use

initiative and independent judgment within established procedural guidelines; communicate effectively verbally; and establish and maintain effective working relationships with those contacted in the course of work.

- Skill in the use of office equipment including computers.

MINIMUM QUALIFICATIONS

Education, Training and Experience

Bachelor's degree in Archives and or Records Management, Public or Business Administration, or closely related field and four years of professional archives and records management experience, two of which must have been at a supervisory level.

Desirable Qualifications

Master's degree and previous experience supervising staff responsible for storing, retaining, retrieving, and securing records and information for a public agency.

Special Requirements/Licenses and Certificates

Must possess appropriate Nevada Driver's License at time of appointment and maintain a satisfactory driving record.

Professional Certification appropriate to the essential functions of this position.

Physical Characteristics

Vision sufficient to read codes, laws, policies, procedures, labels, records, and computer screens; hearing sufficient to hear conversations in person and over the phone; speech sufficient to make oneself heard in person and over the telephone; dexterity sufficient to operate office equipment utilized in the course of work; mobility sufficient to move in an office environment, operate a motor vehicles, visit other agencies as necessary, and inspect file rooms, vaults, and storage areas which may involve bending, kneeling, and stooping; strength sufficient to lift and carry routine office supplies as necessary; endurance sufficient to maintain efficiency on the job and stand as necessary for extended periods;

Working Environment

Primary work environment is in a climate-controlled office setting; however, work does involve travel in the local area to attend meetings.

FLSA Status

This is a salaried classification exempt from the overtime provisions of the Fair Labor Standards Act.



Records Supervisor

DEFINITION

Under general supervision, performs, coordinates, and supervises the work of records staff involved in the implementation and maintenance of a specialized records program; and performs related duties as assigned.

DISTINGUISHING CHARACTERISTICS

This classification is distinguished as having supervisory level responsibility for the implementation and maintenance of records retention schedules, conducting records studies, making recommendations with regard to records systems, and supervising the operations of records staff.

EXAMPLES OF ESSENTIAL FUNCTIONS

Essential functions may include, but are not limited to the following:

1. Plans, directs, coordinates, and evaluates the work of technical and clerical staff; Conducts employee performance appraisals.
2. Develops and implements goals, policies, and procedures; Recommends and implements process improvements.
3. Provides project management and support for records projects; Researches complex records requests and Subpoena requests.
4. Assists in the development of a performance budget for a specialized records program.
5. Develops and administers the business plan of a specialized records program with approval of division manager.
6. Coordinates work processes of a records workgroup with input from management of various departments.
7. Assists in the development and maintenance of a Citywide records program with regard to utilization, retention, preservation, and disposition of records in compliance with federal, state, local laws, and regulations.
8. Assists in implementing a Citywide vital record protection program; Assists departments in implementing efficient records systems;

9. Responsible for overseeing the recruitment and selection of personnel assigned to the Development Services Center Records Section; assists with recruitment materials.
10. Works to assure effective working relationships between the department and other City operations.
11. Represents the City Clerk's Office in meetings with representatives from other City departments, professional organizations, and outside agencies regarding records management.
12. Serves as member of professional organizations that are involved in records management; Conducts workshops on records systems for City personnel.
13. Audits record systems to ensure compliance with standardized policies and procedures.

KNOWLEDGE, SKILLS, AND ABILITIES

Thorough knowledge of:

- City government functions and records retention requirements; federal, state, and local laws, regulations, and codes, pertaining to records and information management; Chapter 239 of the Nevada Revised Statutes pertaining to records retention schedules; records principles, systems, specialized equipment and supplies; and computer applications to support business processes.
- Good knowledge of:
 - the rules, regulations, policies and operating procedures of the City Clerk's Office; records and information management and retention principles; public administration principles and practices including City of Henderson organizational structure and records requirements of individual departments; administrative principles and practices including goal setting, program development, and implementation and evaluation; supervisory practices and procedures including methods of scheduling, assigning, training, and evaluating the work of employees, disciplinary procedures, and Civil Service Rules and Labor Agreements; training practices and methods; principles and practices of budget development and administration; computer software and hardware applications, and automated systems and applications pertaining to records management, databases, word processing and spread sheets.
- Ability to:
 - analyze records systems and make appropriate recommendations regarding efficient and economical records management;
 - analyze records series and evaluate retention requirements; apply federal and state regulations relating to records management;
 - supervise, train, and evaluate the work of employees;
 - conduct research and analyze data to evaluate existing records and information management systems, identify problems and develop and implement solutions;
 - develop and implement goals, objectives, policies, procedures, and work standards pertaining to specialized records programs;

- provide training on methods and techniques pertaining to records and information management; motivate staff to meet goals and objectives and provide customer services in the most cost effective and efficient manner;
- maintain accurate records, logs, and files; understand and follow verbal and written instructions;
- explain rules, regulations, and procedures prepare clear and concise reports, correspondence, training materials and manuals, and other written materials using correct grammar, spelling, and punctuation;
- use initiative and sound judgment within established procedural guidelines; communicate effectively with individuals from various socioeconomic, ethnic, and cultural diverse backgrounds; and establish and maintain effective working relationships with those contacted in the course of work.

MINIMUM QUALIFICATIONS

Education, Training and Experience

Bachelor's Degree from an accredited college or university with a major in Business Administration, Records Management, or closely related field, and three (3) years of full-time experience in archives and records management, two (2) years of which must have been at a supervisory level.

Special Requirements/Licenses and Certificates

Must possess a valid Nevada Driver's License at the time of appointment and maintain an excellent driving record.

Physical Characteristics

- Vision sufficient to read policies, procedures, microfilm, computer screens, and other documents encountered in the course of work.
- Hearing sufficient to hear conversational levels in person, in meetings, and over the telephone.
- Speech sufficient to make oneself heard and understood in person, in front of groups, in meetings, and over the telephone.
- Mobility sufficient to safely move in an office environment and meeting rooms, and travel to locations throughout Henderson, Las Vegas, and out-of-state.
- Dexterity sufficient to operate office equipment including computers, microfilming equipment, and typewriters.
- Strength sufficient to lift and carry office supplies and other work related materials.
- Endurance sufficient to sit, walk, and stand for extended periods, and maintain efficiency throughout the entire work shift and during extended work hours.

Working Environment

The primary work environment is in a climate-controlled office setting and document storage area. Incumbent may come into contact with abusive and hostile individuals. Work does require travel to City-wide Departments and to attend meetings. Incumbent may be required to work evening, weekend, and holiday shifts.



Records Analyst

DEFINITION

Under general supervision, performs and coordinates work involved in the implementation and maintenance of the Citywide records program; performs other duties as required.

DISTINGUISHING CHARACTERISTICS

This class is distinguished as having journey level responsibility for the implementation and maintenance of records retention schedules, conducting records studies, and making recommendations with regard to records systems.

EXAMPLES OF ESSENTIAL FUNCTIONS

Essential Functions may include, but are not limited to the following:

1. Assists in the development and maintenance of a citywide records program with regard to utilization, retention, preservation, and disposition of records in compliance with Federal, State, and City laws and or regulations.
2. Assists in implementing a Citywide vital record protection program
3. Assists departments in implementing efficient records systems; including police records, etc.
4. Conducts workshops on records systems for City personnel.
5. Audits record systems to ensure compliance with accepted policies and procedures.
6. Responds to telephone queries on records maintenance issues.

KNOWLEDGE, SKILLS, AND ABILITIES

Thorough knowledge of Federal, State, and City laws and or regulations, records principles, systems, equipment, and supplies.

Good knowledge of City government functions and records retention requirements; computer applications to support business processes.

Ability to analyze records systems and make appropriate recommendations regarding efficient and economical records management; analyze records series and evaluate retention requirements; apply Federal and State regulations relating to records management; understand and follow verbal and written instructions; communicate effectively verbally and in writing; explain rules,

regulations, and procedures in person and over the telephone; establish and maintain working relationships with those contacted in the course of work.

MINIMUM QUALIFICATIONS

Education, Training and Experience

Bachelor's Degree from an accredited college or university and two years of experience in archives and records management OR an equivalent combination of closely related training and experience.

Special Requirements/Licenses and Certificates

Must possess a valid Nevada Driver's License at the time of appointment and maintain a satisfactory driving record.

Physical Characteristics

Vision sufficient to read policies, procedures, microfilm, computer screens, and other documents encountered in the course of work; hearing sufficient to hear conversational levels in person, in meetings, and over the telephone; speech sufficient to make oneself clear in person, in meetings, and over the telephone; dexterity sufficient to operate office equipment including personal computers, microfilming equipment, and typewriters; mobility sufficient to move in an office setting and meeting rooms; strength sufficient to lift and carry office supplies and other work related materials; endurance sufficient to maintain efficiency throughout entire shift.

Working Environment

Is primarily in a climate controlled office setting or document storage area.



Archives and Records Technician I

DEFINITION

Under direct supervision, performs work involved in the implementation of the Citywide records program; performs other duties as required.

DISTINGUISHING CHARACTERISTICS

This class is distinguished as being the entry-level in this series, responsible for assisting with reformatting of records and basic archival operations.

EXAMPLES OF ESSENTIAL FUNCTIONS

Essential functions include, but are not limited to the following:

1. Assists with reformatting records including preparing and organizing records; operating and maintaining microfilm and electronic imaging equipment; and quality control of reformatted records.
2. Assists with records center operations, including implementing schedules and purging records, maintaining records center database; shelving and retrieving records; and servicing internal and external reference inquiries.
3. Assists with archival operations including archival processing of records; maintaining finding aids; and servicing reference inquiries.
4. Performs general office clerical tasks such as filing, answering telephones, and greeting visitors.

KNOWLEDGE, SKILLS, AND ABILITIES

- Good knowledge of general office methods and procedures and office equipment operation, including basic knowledge of word processing and database entry.
- Ability to sort materials in alphabetical, numerical, or chronological order without errors; communicate effectively verbally and in writing; receive the public in person or over the phone; establish and maintain effective working relationships with those contacted in the course of work.
- Skill in the use of modern office equipment, including personal computers and other position specific equipment necessary to accomplish assigned tasks.

MINIMUM QUALIFICATIONS

Education, Training and Experience

Graduation from high school or the equivalent and a minimum of one year of relevant work experience OR an equivalent combination of related training and experience.

Special Requirements/Licenses and Certificates

Possession of an appropriate Nevada Driver's License, and maintenance of a satisfactory driving record.

Physical Characteristics

Vision sufficient to read records, documents and other job related printed materials; read these materials for extended periods; hearing sufficient to hear conversations in person and over the telephone; speech to communicate verbally in person and over the telephone; dexterity sufficient to operate office equipment; strength sufficient to lift and carry job related supplies and equipment weighing up to 35 pounds; and endurance sufficient to maintain effort throughout entire shift.

Working Environment

The primary work environment is a climate-controlled office environment.



Archives and Records Technician II

DEFINITION

Under general supervision, performs clerical and technical work involved in the implementation of the Citywide records program; performs other duties as required.

DISTINGUISHING CHARACTERISTICS

This class is distinguished as being the journey level in this series, responsible for reformatting records, assisting with maintaining the City records center and routine archival operations.

EXAMPLES OF ESSENTIAL FUNCTIONS

Essential functions include, but are not limited to the following:

1. Reformats records including preparing and organizing records, operating and maintaining microfilm and electronic imaging equipment, and controlling quality of reformatted records.
2. Assists with records center operations, including implementing schedules and purging records, maintaining records center database; shelving and retrieving records; and servicing internal and external reference inquiries.
3. Assists with archival operations including determining value and sensitivity of records; maintaining finding aids; and servicing reference inquiries.
4. Performs general office clerical tasks such as filing, answering telephone inquiries, and greeting visitors.

KNOWLEDGE, SKILLS, AND ABILITIES

- Thorough knowledge of records and archives procedures, general office methods and procedures and office equipment operation, including basic knowledge of word processing and database entry.
- Ability to sort materials in alphabetical, numerical, or chronological order without errors; communicate effectively verbally and in writing; receive the public in person or over the phone; establish and maintain effective working relationships with those contacted in the course of work.
- Skill in the use of modern office equipment, including personal computers and other position specific equipment necessary to accomplish assigned tasks.

MINIMUM QUALIFICATIONS

Education, Training and Experience

Associates Degree and a minimum of two years of relevant work experience OR an equivalent combination of related training and experience.

Special Requirements/Licenses and Certificates

Possession of an appropriate Nevada Driver's License, and maintenance of a satisfactory driving record.

Physical Characteristics

Vision sufficient to read records, documents and other job related printed materials; read these materials for extended periods; hearing sufficient to hear conversations in person and over the telephone; speech to communicate verbally in person and over the telephone; dexterity sufficient to operate office equipment; strength sufficient to lift and carry job related supplies and equipment weighing up to 35 pounds; and endurance sufficient to maintain effort throughout entire shift.

Working Environment

The primary work environment is a climate-controlled office environment.



Exhibit C: Records Inventory Worksheet					
Department			Organizational Unit		
Office				Phone Number	
Contact Name			Title		
Records Name/Title			<input type="checkbox"/> Official Copy	<input type="checkbox"/> Convenience/Use Copy	
Description of Records				Location Description	
Records Medium	<input type="checkbox"/> Paper	<input type="checkbox"/> Microfilm	<input type="checkbox"/> Electronic/Computer	Format	
	<input type="checkbox"/> Photograph	<input type="checkbox"/> Other	Describe		
Inclusive Dates in File		Beginning:		Ending:	
File Arrangement		<input type="checkbox"/> Alpha by	<input type="checkbox"/> Numeric by	<input type="checkbox"/> Chronologically by	
Record/File Cut-Off		<input type="checkbox"/> After Calendar Year	<input type="checkbox"/> After Fiscal Year	<input type="checkbox"/> After Event	Describe
Volume of Records (choose one)		# Cubic Feet	# Linear Inches	# File Drawers	
Use Frequency of Records		Current Year: references per month		2 through 5 years: references/month	
		Past Year: references per month		Over 5 years: references/month	
Retention Recommendations					
<input type="checkbox"/> Office– On site storage		years after	(event)		
<input type="checkbox"/> Off-site storage		years			
Electronic/Computer Media					
Operating System:					
Application Program:					
Data Format:					
Comments					
Retention Research					
<input type="checkbox"/> Legal Requirement		years after	(identify event)	Legal Citation	

Page of Date Completed by



Exhibit D: Electronic Records Storage Terminology

Bar Code Technology

A bar code is printed horizontal strip of vertical bars used for identifying specific items or numbers. The codes, which represent numerical data, are read by a bar code reader and interpreted via software or hardware decoders.

In a linear bar code system, the code itself contains no information about the item to which it is assigned but represents a string of identifying numbers or letters. When an optical scanner reads the code linked to a computer, the computer can provide and record information about the item, such ID number, account number, vendor number, etc.

Bar code coding techniques can be used as a component of an RMA system for the identification of documents and forms and may provide for automation of indexing of documents.

COM and COLD Technologies

Computer-output-to-microfilm (COM) is the term used to describe computer systems and microfilm hardware technologies that index, store report information from other computer systems onto human-eye-readable microfiche.

Computer-output-to-laser-disk (COLD) is used to describe computer systems that index, store and retrieve computer report information from other computer systems onto laserdiscs. While laserdiscs are still in use, other types of storage media (magnetic disks, RAID, magnetic tape, optical Disks, CD-ROM and most recently, DVD) are also frequently used.

Traditional computer based report distribution systems typically used a report name as their most finite point of access. COLD systems can provide this same functionality, and in addition, can provide enhanced indexing of reports by individual data items contained within the report (customer name, account number, invoice number, column headings, numerical totals, etc.) thereby allowing for enhanced “data mining” and search and retrieval techniques to be applied.

COLD systems were originally designed to replace microform archival applications with online computer systems. The average microform lookup historically took up to 4.5 minutes to find the proper page, and even longer to find the exact information requested

COM and COLD systems are most often used to eliminate printing. As many large reports are produced daily within most governmental entities, it is not uncommon for an end user to request a copy of a report that is thousands of pages long just to see one short section.

Disk Storage

Magneto Optical (MO) Disk, Optical Disk, CD-ROM, Laserdisc, DVD and WORM Disks are plastic-coated disks of various sizes that store digital data, such as music or text as tiny pits etched into the surface by laser (acronym for light amplification by stimulated emission of radiation) technology.

The terms “Laserdisc” and “CD-Rom” are commonly used to refer to the entire group of MO Disk, Optical Disk, CD and CD-ROM, Laserdisc or DVD platters. It is important to understand there are differences in physical size, storage content, and capacity.

An MO system achieves its high data density by using a laser and a magnetic read/write head in combination. Both the laser and the magnet are used to write data onto the diskette. The laser heats up the diskette surface so it can be easily magnetized, and also to allow the region of magnetization to be precisely located and confined. A less intense laser is used to read data from the diskette. Data can be erased and/or overwritten an unlimited number of times, as with a conventional 3.5-inch diskette. Although the techniques used to create other laser etched optical disks vary, the essential technique is similar in concept to Magneto Optical and all use Laser technology for both reading and writing.

DVD (digital versatile disk) is a newer optical disk technology that is rapidly replacing the CD-ROM disk (as well as the audio compact disk). The digital versatile disk (DVD) holds 4.7 gigabytes of information on one of its two sides, or enough for a 133-minute movie. With two layers on each of its two sides, it will hold up to 17 gigabytes of video, audio, or other information. A CD-ROM disk of the same physical size holds 600 megabytes of information. The DVD can hold 28 times more information.

DVD uses the MPEG-2 file and compression standard. MPEG-2 images have four times the resolution of MPEG-1 images and can be delivered at 60 interlaced fields per second where two fields constitute one image frame. (MPEG-1 can deliver 30 non-interlaced frames per second.) Audio quality on DVD is comparable to that of current audio compact disks.

Laserdisc is a technology and the physical medium used in storing and providing programmed access to a large database of text, pictures, and other objects, including motion video and full multimedia presentations. The laserdisc itself is 12 inches in diameter and holds much more information than a CD-ROM disk can currently hold. Laserdiscs require relatively expensive players and are more expensive to distribute than CD-ROM disks. However, for school and corporate education purposes, for any presentation requiring a great deal of motion video and for the ability to create scripted or programmed access to selected

portions of the laserdisc, the technology can be useful.

WORM is an acronym for Write-Once, Read-Many and is used to define non-erasable disk technology. Like CD-ROM, the term is rapidly becoming somewhat obsolete as technologies evolve allowing Laserdiscs to be erase-able and write-able.

Caution: When storing records to disk, first review the specific records retention responsibilities in relationship to the Nevada Revised Statutes and know what constitutes a defensible legal document in a court of law.

Disks - Magnetic (Conventional Disks)

A memory device covered with an iron oxide magnetic coating material on which information is stored by magnetization of microscopically small needles. These are the same recording techniques used by magnetic tape devices except that the magnetic coating is placed on round platters of various sizes. Some magnetic disks consist of multiple layered platters (hard disks). The 3.5" floppy disk and the hard drive in personal computers are magnetic disks.

Imaging Space

Bit – smallest unit of measurement in the computer world. It represents either ON or OFF

Byte – basic unit of storage media and memory. One byte represents enough information to hold one character (in text form). A byte can be thought of as the information stored when one key of the keyboard is pressed. Eight (8) bits of information is equal to one (1) byte.

Kilobyte (KB) – 1024 bytes which is enough space to hold approximately 2 pages of double-spaced text.

Megabyte (MB) – 1024 kilobytes or 1,048,567 bytes. A MB will hold enough text for approximately 2 reams of paper (1000 sheets).

Gigabyte (GB) - 1024 megabytes. A GB will hold enough data for a small library of books (text only).

Terabyte (TB) – 1024 gigabytes

Jukeboxes

Jukeboxes are essentially large platter changers. They consist of one or more modules for accommodating the media (MO, CD, DVD, Laserdisc platters, etc.), a robotics mechanism and one or more optical laser drives used to read and write to the storage media. A lift controlled by the robotics mechanism travels along the data media slots, removes the selected medium and transports it to a drive. Jukeboxes are the most popular storage option for document management solutions.

Jukebox management software make the jukebox available by mimicking the familiar drive-letter accesses of hard drives. Jukebox management systems cache data on a hard drive to improve the apparent speed of the jukeboxes under management. Optical storage devices tend

to be slow. Even fast optical drives like 5.25-inch magneto-optical can't compete with hard drives in terms of speed.

Network Attached Storage

Network-attached storage (NAS) is hard drive storage that is set up with its own network address rather than being attached to the department computer that is serving applications to a network's workstation users. By removing storage access and its management from the department server, both application programming and files can be served faster because they are not competing for the same processor resources. The network-attached storage device is attached to a local area network (typically, an Ethernet network) and assigned an IP address. File requests are mapped by the main server to the NAS file server.

Network-attached storage consists of hard drive storage, including multi-disk RAID systems, and software for configuring and mapping file locations to the network-attached device. Network-attached storage can be a step toward and included as part of a more sophisticated storage system known as a storage area network (SAN).

NAS software can usually handle a number of network protocols including Microsoft's Internetwork Packet Exchange and NetBEUI, Novell's Netware Internetwork Packet Exchange, and Sun Microsystems' Network File System. Configuration, including the setting of user access priorities, is usually possible using a Web browser.

Optical Character Recognition (OCR) and Intelligent Character Recognition (ICR) Technologies

Optical character recognition (OCR) is a method for machine reading of text, numbers, and symbols using optical sensing and a computer. The light reflected by a printed text is recorded as patterns of light and dark areas by an array of photoelectric cells in an optical scanner. A computer program analyzes the patterns and identifies the characters they represent. RMA systems typically allow optional OCR engines to be used for data acquisition from scanned documents. OCR engines are capable of up to 95% to 100% accuracy.

OCR-related technology solutions include: automatic comparison of check amounts to payment receipts, automated file maintenance, name and address comparisons, automatic posting and accounting, automatic acknowledgement and automated workflow and routing, analysis of relationships between documents by content, etc.

The technique for sensing hand written characters is known as intelligent character recognition (ICR). Hand-written documents can be read with a lesser probability of accuracy than OCR.

Optical Mark Recognition (OMR) and Intelligent Mark Recognition (IMR) Technologies

Optical mark recognition or intelligent mark recognition (sometimes referred to as mark sense technologies) are techniques used for reading "tick box" information from pre-printed forms into a computer using a scanning device known as an optical mark reader. An optical mark reader detects the presence of a mark by measuring the reflected light. The forms used to collect the marks are pre-designed and can be used conveniently. A simple pen or pencil mark is made on the form in a pre-defined box to indicate each selected response such as answers to survey questions, voting selections, test answers, etc. Once an optical mark reader scans the completed forms the OMR reader or supporting OMR software then interprets the pattern of marks into a data record and sends this to a computer for storage, analysis and reporting.

RAID

RAID (redundant array of independent disks) is a way of storing the same data in different places (thus, redundantly) on multiple hard drives. By placing data on multiple disks, input and output (I/O) operations can overlap in a balanced way, improving performance. Since multiple disks increase the mean time between failures (MTBF), storing data redundantly increases fault-tolerance.

RAID arrays appear to the computer operating system as a single logical hard drive. RAID employs the technique of *striping*, which involves partitioning each drive's storage space into units ranging from a sector (512 bytes) up to several megabytes. The stripes of all the disks are interleaved and addressed in order.

In a single-user system where large records, such as medical or other scientific images, are stored, the stripes are typically set up to be small (perhaps 512 bytes) so that a single record spans all disks and can be accessed quickly by reading all disks at the same time.

In a multi-user system, better performance requires establishing a stripe wide enough to hold the typical or maximum size record. This allows overlapped disk I/O across drives.

RAID – Types

There are at least nine types of RAID plus a non-redundant array:

RAID-0. This technique has striping but no redundancy of data. It offers the best performance but is not fault-tolerance.

RAID-1. This type is also known as *disk mirroring* and consists of at least two drives that duplicate the storage of data. There is no striping. Read performance is improved since either disk can be read at the same time. Write performance is the same as for single disk storage. RAID-1 provides the best performance and the best fault-tolerance in a multi-user system.

RAID-2. This type uses striping across disks with some disks storing error checking and correcting (ECC) information. It has no advantage over RAID-3.

RAID-3. This type uses striping and dedicates one drive to storing parity (an error checking technique) information. The embedded error checking (ECC) information is used to detect errors and data loss. Data recovery is accomplished by calculating the exclusive OR (XOR) of the information recorded on the other drives. Since an Input or Output operation an address all drives at the same time, RAID-3 cannot overlap I/O. For this reason, RAID-3 is best for single-user systems with long record applications.

RAID-4. This type uses large stripes, which means you can read records from any single drive. This allows you to take advantage of overlapped I/O for read operations. Since all write operations have to update the parity drive, no I/O overlapping is possible. RAID-4 offers no advantage over RAID-5.

RAID-5. This type includes a rotating parity array, thus addressing the write limitation in RAID-4. Thus, all read and write operations can be overlapped. RAID-5 stores parity information but not redundant data (but parity information can be used to reconstruct data). RAID-5 requires at least three and usually five disks for the array. It's best for multi-user systems in which performance is not critical or which do few write operations.

RAID-6. This type is similar to RAID-5 but includes a second parity scheme that is distributed across different drives and thus offers extremely high fault- and drive-failure tolerance. There are few or no commercial examples currently.

RAID-7. This type includes a real-time embedded operating system as a controller, caching via a high-speed bus, and other characteristics of a stand-alone computer. One vendor offers this system.

RAID-10. This type offers an array of stripes in which each stripe is a RAID-1 array of drives. This offers higher performance than RAID-1 but at much higher cost.

RAID-53. This type offers an array of stripes in which each stripe is a RAID-3 array of disks. This offers higher performance than RAID-3 but at much higher cost.

**Routing, Workflow,
and Business
Process
Management
Technologies**

Workflow (sometimes referred as routing) is the tasks, procedural steps, staff, input and output information, and tools needed for each step in a business process. Workflow management focuses on processes, not documents.

A workflow engine is the component in a workflow automation program that knows all the procedures, steps in a procedure, and rules

for each step. The workflow engine determines whether the process is ready to move to the next step.

Once modeled, the business processes can be controlled and executed via the model. Changes can be tested. Bottlenecks in processes can be identified in real time. The model can be changed “on the fly” and the process changed in real time based on the changes in the model. Impacts of changes can be monitored and corrected if necessary.

**Scanning and
Scanner
Technologies**

Scanning (also referred to as imaging) is the technique used to capture images from a human-eye-readable format (documents, microfilm, photographs, newspaper pages, magazine pages and similar sources) for computer editing and display.

Scanners usually attach to a computer using a hardware interface and come in hand-held, higher speed multiple document feed-in and single sheet flatbed types. Scanners are designed to support either black-and-white only or color documents and to support specific document sizes.

Very high-resolution scanners are used for scanning of documents that require a high level of fine detail (photos, maps, etc.), but lower-resolution scanners are typically adequate for capturing documents for document management systems.

Scanners and scanning stations are supported with scanning software and hardware that allows for quality improvement of a captured image. Quality-assurance (QA) and quality-control (QC) processes guarantee the quality of documents and information captured during the scanning process is the single most important activity performed to assure the integrity of an RMA.

**Storage Area
Network (SAN)**

A storage area network (SAN) is a high-speed special-purpose network (or sub-network) that interconnects different kinds of data storage devices with associated data servers on behalf of a larger network of users. Typically, a storage area network is part of the overall network of computing resources for an enterprise. A storage area network is usually clustered in close proximity to other computing resources such as IBM z990 mainframes but may also extend to remote locations for backup and archival storage, using wide area network carrier technologies such as ATM or SONET.

A storage area network can use existing communication technology such as IBM's optical fiber ESCON or it may use the newer Fiber Channel technology. Some SAN system integrators liken it to the common storage bus (flow of data) in a personal computer that is shared by different kinds of storage devices such as a hard drive or a CD-ROM player.

SANs support disk mirroring, backup and restore; archival and retrieval of archived data, data migration from one storage device to another; and

the sharing of data among different servers in a network. SANs can incorporate sub-networks with network-attached storage (NAS) systems.

Tape - Magnetic

Magnetic Tape refers to device, method, and the media for storing information. Electronic signals are recorded by lining up small bits of magnetic materials in the iron oxide coating of a magnetic tape. The magnetic tape used as a media to store the information. Magnetic tape devices and the tape come in various sizes and shapes. Ordinary tape recorders and video recorders and players use magnetic tape.

**TIFF: Tagged
Image File Format**

TIFF is a common format for exchanging raster graphics (bitmap) images between computer applications programs including those used for scanner images. A TIFF file can be identified as a file with a “tiff” or “tif” file name suffix. TIFF files are very common and are used to support most common graphic formats commonly used in desktop publishing, faxing, 3-D graphics applications, medical imaging and document imaging programs. A committee chaired by Aldus Corporation (now a part of Adobe) jointly developed the TIFF image format standard in 1986. Microsoft and Hewlett Packard contributed to the standard.

Exhibit E: Sample Disaster Recovery Plan for Records

NAME [of Entity/Department]

DATE [completion or update]

PERSONNEL: Agency staff to be called in the event of a disaster:

Disaster Recovery Team	Name	Telephone Numbers (home and office)
Leader		
Members/alternates		
Building maintenance		
Building security		
Legal advisor		

[Insert **TELEPHONE TREE** of who is to call whom upon discovery of a disaster.]

SERVICES: Emergency services to be called (if needed) in the event of a disaster:

Service	Contact	Telephone Numbers
Ambulance		
Buildings and Grounds		
Cold Storage Facility		
Emergency Management		

Service	Contact	Telephone Numbers
Environmental Stabilization		
Fire Department		
Food Services		
Information Technology		
Janitorial Service		
Locksmith		
Micrographics		
Pest Control		
Police Department		
Temporary Personnel		
Temporary Equipment and Transportation Rental		
Utility Companies		
Other individuals/groups to assist in cleanup		

ON-SITE EMERGENCY SUPPLY LOCATIONS. Locations of in-house emergency equipment and supplies. Attach map or floor plan with locations marked.

Item	Location
Batteries	
Badges	
Camera and film	

Item	Location
Cut-off switches and valves	
Electric	
Gas	
Water	
Sprinkler system (if separate)	
Extension cords (heavy duty)	
Fire extinguishers	
First aid kits	
Flashlights	
Ladders	
Mops, sponges, buckets, brooms	
Nylon monofilament	
Packaging tape and string	
Paper clips (non-rust)	
Paper towels (not colored)	
Pencils/waterproof ball point pens	
Plastic trash bags	
Rubber gloves	
Scissors	
Transistor radio (battery powered)	

Item	Location
Wiping cloths	
Writing tablets	

OFF-SITE EMERGENCY SUPPLY LOCATIONS. Sources of off-site equipment and supplies (if maintained on-site, note location)

Item	Contact	Telephone Numbers
CB Radio		
Dehumidifiers		
Drying space		
Dust masks		
Fans		
Fork lift		
Freezer or wax paper		
Freezer space		
Fungicides		
Generator (portable)		
Hard hats		
Pallets		
Plastic milk crates		
Plastic sheeting (heavy)		
Pumps (submersion)		

Item	Contact	Telephone Numbers
Rubber boots or overshoes		
Refrigeration truck		
Safety glasses		
Spotlights		
Trash cans (plastic, small/large)		
Unprinted newsprint		
Vacuum/freeze-frying facilities		
Waterproof clothing		
Wet-dry vacuum		
Work tables and chairs		

SALVAGE PRIORITY LIST

Attach a copy of the records retention schedule identifying all vital records series. The location and record medium of the preservation duplicate for each vital records series should be noted.

It is also very helpful if other records series are reviewed to determine their priority for salvage should a disaster occur. The following questions can be helpful in determining priorities:

- Can the records be replaced? At what cost?
- Would the cost of replacement be less or more than restoration of the records?
- How important are the records to the agency?
- Are the records duplicated elsewhere?

To identify this process, priorities may be assigned as follows:

- 1.Salvage at all costs (for example, records that are historically valuable or non-vital records that are important to agency operations and very difficult to recreate)
- 2.Salvage if time and resources permit (for example, records that are less important to the agency or somewhat easier to recreate)
- 3.Dispose of as part of general cleanup (for example, records that do not need to be salvaged because they are convenience copies and the record copy is at another location)

AGENCY DISASTER RECOVERY PROCEDURES

Attach a list of specific procedures to be followed in the event of a disaster, including responsibilities of in-house recovery team members.

FOLLOW-UP ASSESSMENT

If a disaster does occur, a written report, including photographs, should be prepared after recovery and attached to a copy of the disaster plan. The report should note the effectiveness of the plan and should include an evaluation of the sources of supplies and equipment, and of any off-site facilities used.

Adapted from Toby Murray, *Basic Guidelines for Disaster Planning in Oklahoma* (Tulsa: University of Tulsa Libraries, 1990)