

RECORDS MANAGEMENT SERVICES

OPTICAL DISK: POLICY STATEMENT AND RECOMMENDED PRACTICES

Policy Statement

The Colorado State Archives revised this policy on April 7, 1995.

Purpose: This policy clarifies the position of the Colorado State Archives regarding the use of optical disk technology for the maintenance of public records.

Authority: Section 24-80-101 through 24-80-111 of the Colorado Revised Statutes, as amended, provides the authority for the establishment of this policy.

Scope: This policy statement applies to the records of all public bodies as defined by Section 24-80-103 of the Colorado Revised Statutes, as amended.

Statement: To ensure accessibility, reduce the risk of premature disposition, and preserve records of permanent (archival) value, the following policy is established for the disposition of public records stored on optical disk.

[Special Note: This policy does not supersede existing laws and regulations (federal, state, or local) that require the maintenance of public records and documents in a prescribed format.]

Records with an established retention of ten years or less

State and local government officials can maintain public records with an established retention of ten years or less in an optical disk system and can dispose of the originals after receiving an authorization for disposal from the Colorado State Archives. If the records are appraised as vital records, a security copy should be stored off-site in a secure location.

Non-permanent records with an established retention of more than ten years

State and local government officials can maintain non- permanent public records with an established retention of more than ten years in an optical disk system and dispose of the originals provided they:

1. maintain security copies of the disks and indexes in off- site storage;
2. **either** migrate and convert both the working and security copies of the disks and indexes, if optical systems are up- graded or changed in a way that prevents access to the contents of the disks created by the old system or recopy to new disks every ten years, whichever occurs first;
3. sample both the working and security copies of the disks and indexes at least once a year to make sure the data is readable and recopy to new disk immediately if any loss of information is detected;
4. obtain an authorization for disposal in advance from the Colorado State Archives.

Records of permanent value - Transfers to Archives

Records of permanent value that are scheduled for transfer to the Colorado State Archives can be maintained in optical disk systems. However, it is highly recommended that a microfilm copy be generated that meets state microfilm standards in the absence of national optical standards. ([See footnote 1](#)).

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Records of permanent value - Non-transfers to Archives

Public records of permanent value that are maintained in an optical disk system but not scheduled for transfer to the Colorado State Archives can be disposed of provided state and local government officials comply with 1-4 above. If the optical disk is the original medium for the records -- as it is with the procedural or transactional recording of law enforcement information, for example -- we highly recommend the generation and permanent retention of a microfilm copy that meets state microfilm standards. If paper or microform copies are not to be generated and retained, state and local government officials must certify in writing their intention to comply with 1-4 above before using the optical disk system.

Recommendations for the selection and use of optical systems

The Colorado State Archives recommends the use of the following guidelines for the design, selection, and operation of optical disk systems. These guidelines and practices will help you produce records and copies that will be acceptable in legal proceedings; they will enable you to maintain and retrieve information in ways that will meet your statutory obligations and operational needs as a records custodian; and they will help you to fulfill public requests. These considerations are particularly important for records that must be kept for a long time or permanently.

Footnote 1: Micrographics Quality Control Standards for the Microfilming of Public Records (Colorado State Archives, as amended)

Legally-acceptable records management program

To ensure the acceptance of government records as legal documents, you should maintain and dispose of those records (including records stored in optical systems) as part of a legally-acceptable records management program. To conduct such a records management program, you should:

- Include every record and all reproductions on records retention schedules that adequately describe the records and define the period for their retention and manner of disposition. These schedules, which must be approved by the State Archives, are of two types:

Agency specific schedules: These schedules are written for records that are unique to a particular agency, office, or jurisdiction. They list the different physical forms of each record separately (i.g., paper, magnetic tape or disk, microfilm, optical disk) because each form may have a unique use, value, and retention period.

General schedules: These schedules cover categories of records that many offices and agencies have in common; they typically do not specify particular physical forms. When you implement general schedules, however, you must take into account the various reproduction and storage requirements of these physical forms.

- Carry out records retention and disposition procedures systematically as part of the regular course of business.

Maintain the documentation that supports the development and implementation of retention schedules.

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- Regularly dispose of records when their retention period has expired, either through destruction or transfer to an archival repository, as the schedule specifies.

Other legal considerations

Government offices and agencies must maintain data in optical storage systems according to the terms of the Colorado Open Public Records Act (Sections 24-72-101 through 24-72-402 of the Colorado Revised Statutes, as amended). This act categorizes records as either restricted from or open to the public. Each agency must adopt procedures that protect restricted records from unauthorized access and allow access to open records. Other laws applicable to particular governmental jurisdictions, functions, or records may require you to restrict specific records or information within certain records. Your procedures should cover these records as well.

Selection and use of optical storage systems

Optical storage systems require hardware (equipment) and software (computer programs) to retrieve and translate information into an eye-readable form. Because the storage medium itself is not permanent, you must select an appropriate system and operate it in a way that will let you retain and retrieve information over time as hardware and software change and the optical disks deteriorate physically.

Since few nationally-accepted standards have been set for optical systems, the Colorado State Archives offers the following suggestions to help you use this technology. These recommendations represent generally accepted principles and practices and address issues of concern. In this changing technical environment, these recommendations will help you to keep your records accessible and your programs in conformity with national standards as they are developed. This subject is discussed in detail in a technical report issued by the Association for Information and Image Management, *The Use of Optical Disks for Public Records*. ([See footnote 2](#))

System documentation: If you wish to maintain an effective operation and continue to retrieve data as your operating environment changes over time, you must keep full documentation of:

- Hardware and software, including brand names, version numbers and dates of installation, upgrades, replacements, and conversions.
- Data structure and content, including the file layout and data dictionaries.
- "Enhancement" algorithms
- Operating procedures, including methods for scanning or entering data; revising, updating, or expunging records; indexing; backing up disks, tapes, microfilm, etc.; testing the readability of records; applying safeguards to prevent tampering and unauthorized access to protected information; and carrying out the disposition of original records. In addition, to provide audit trails, you should document procedures for logging and tracking. Full documentation of your operating procedures will contribute to the legal acceptability of your records management program and will help to make the data you produce from optical disks admissible as evidence in legal proceedings.

Footnote 2: Association for Information and Image Management. Technical Report for Information and Image Management. -- The Use of Optical Disks for Public Records (AIIM TR25-1990) (Silver Spring, MD:AIIM, 1990)

Hardware and software:

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- When you are selecting a system, strongly consider those with open rather than proprietary designs; open systems will give you most flexibility when you are choosing equipment and will support interconnection, information system integration, and information sharing, refreshment technology and portability of data.
- Prepare specifications for hardware and software that will require your vendors to continue to support and maintain their products.
- Establish performance standards, incorporate them into your specifications for hardware and software, and require vendors to support them with a substantial performance bond.
- Select systems that provide a scanning resolution with enough density to produce a high-quality image.
- Seek vendors who use standard rather than proprietary compression algorithms to make future migrations of data more certain and reliable.
- Require vendors to supply programs or provide services to test the readability of your disks periodically.
- Consider systems that will allow you to index or incorporate other retrieval information directly onto the optical disk.

Verification and inspection: Include visual inspection in your operational procedures to verify the completeness and accuracy of the scanning process once documents have been transferred to a disk.

Indexing: When information is stored in a medium that is not eye-readable, complete and accurate indexes are essential. Your system design, therefore, must include provisions for appropriate indexing. When information will be retrieved for many years (from records that will be retained and used over a long period, for example) you must develop and document indexes with future users in mind and include in your operational procedures an index check for accuracy at the time the index is created.

Labelling: Label disks, tapes, and other storage containers with particular care since it is impossible to determine content merely by looking at a disk or tape. Labelling is critical when the disk and its index are stored on different media.

Back-up and storage: It is vital to make full, frequent, and regular backups of optical records and magnetic indexes. Store your security copies in secure and suitable facilities, preferably off-site, and since environmental conditions for the storage of optical disks have not been established, follow the manufacturers' specifications.

Refreshment, migration, and conversion plans: Prepare an appropriate plan for "refreshing" data and for migrating and converting images and corollary indexes to new storage media as needed to preserve the records in an accessible form.

Risk management: Develop a comprehensive risk or disaster prevention and recovery plan.

For more information

Direct your comments, suggestions, and questions about this policy to the [Colorado State Archives](#).