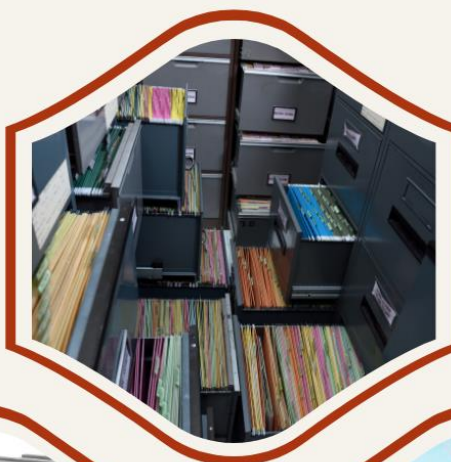




OFFICE OF THE SECRETARY
OFFICE OF PUBLIC RECORDS AND ARCHIVES

RECORDS MANAGEMENT HANDBOOK

*A training Manual for Records Managers in the
Government of the District of Columbia*



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(REVISED 3/2023)

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The District of Columbia *Records Management Handbook* is for Agency Records Managers or others who are responsible for maintaining records in their agency. It explains basic principles, standards, and procedures for managing District of Columbia records. This handbook includes information on topics such as: why records are important; steps needed to implement an agency's records management program; agency records surveys; developing an agency records schedule; the handling of electronic records and digitization; and other basic archives and records management procedures in the District of Columbia government. Future chapters will be added to this manual and distributed to Agency Records Management Officers as they are written.

Although this handbook attempts to answer most general questions about records management, handbook users should feel free to call on the expertise of the Office of Public Records (OPR) staff if your questions are not addressed. OPR staff may be contacted at:

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CHAPTER I: INTRODUCTION

The Need for Proper Documentation

Records can be thought of as the government's memory. District of Columbia government records contain information about the purpose, evolution, and administration of public policies and programs; they safeguard the legal rights of citizens and the government; and they constitute the resources for scholars and students to write the story of Washington's accomplishments and shortcomings. Official records enable us to understand our government, our society, and our culture. Records are the heritage from the past, the guideposts for the present, and the legacy to the future.

If, indeed, records are the government's memory, then Washington, D.C., may lose its memory if documentation that is essential for understanding critical government decisions exists in rapidly changing electronic technology; or if background information about major policy decisions lies in an individual's recollection of luncheon and hallway conversations; or if significant procedures are based upon information that is only in scribbled, cryptic notes.

Public officials have a duty to create and preserve records that adequately document the purpose, organization, functions, policies, decisions, procedures and important programs of their agencies. Such adequate documentation consists of those records that:

- **protect the legal, financial, and other interests of the government and its citizens.**

Officials must ensure that agreements, obligations and claims are substantiated; ownership of property by the government, private citizens, and organizations is properly recorded; information about citizens' rights to government services is protected; and unique and vital information, such as in birth, death, and marriage records, is preserved.

- **assist public officials and their successors in making informed policy and program judgements.**

Records must be made and maintained that document the development of program policies and purposes; plans for future programs; evaluation of past performances; and plans for securing continuity in public policy. Public officials should be able to reconstruct their predecessors' decisions without

relying upon word-of-mouth. They, in turn, should leave their successors written accounts of their decisions and actions.

- **provide the data required by those who are responsible for overseeing an agency's programs.**

The City Council, the D.C. Auditor, the Inspector General, and others are legally obligated to examine how government policies and programs are implemented and evaluate agency performance. It is imperative that the information needed to exercise these watchdog responsibilities is retained.

- **provide the information needed by citizens to cast their votes and to hold their public officials accountable.**

Citizens are the ultimate judges of the District government's effectiveness. They have a right to information that is required for evaluating how the public's business is conducted and measuring public servants' performance so that they may make informed decisions in the voting booth and elsewhere.

- **leave a lasting record of an agency's contributions to our city.**

How each agency interpreted its purpose, what it did or did not do to fulfill its mission, its successes, and failures, are matters of significance. A public institution has a duty to document both its major achievements and its significant shortfalls. It has a responsibility to present and leave for future generations an enduring account of its decisions and actions.

The Need for a Records Management Program

An effective records disposition program requires a system that controls the life cycle of records. Implementing and operating such a program is vital to the efficient and economical management of an agency. Without a records management and disposition program it would not take long for an agency to become cluttered with records that take up costly space and filing equipment. This congestion interferes with the efficient administration of agency programs and operations.

Recent studies of records management programs show that the benefits to the agency, and to the government readily outweigh the cost of the program. It has been estimated by the

National Archives that the cost to store agency records in valuable office space averages \$17.62 per cubic foot of records. By storing records that an agency only needs occasionally in a records center, the cost of storage drops to approximately \$1.25 per cubic foot. Using a records center to store records could result in savings the District government of over \$16.00 per cubic foot of records. Approximately 5 times as many records can be stored in one cubic foot of records center space as can be stored in expensive office filing cabinets.

The primary focus of a records management program is to control government information from the time it is created until the time it is either destroyed or is preserved in the D.C. Archives. This is difficult because of the size and complexity of District of Columbia government's programs; the application of electronic records to the records creating processes; and the widespread and often uncontrolled use of copy machines.

Functions of the D.C. Office of Public Records

A number of laws govern the keeping of records by government agencies and officials. The most familiar of these is the District of Columbia Freedom of Information Act which was passed by the City Council in 1976. This law ensures that citizens have the right to a rapid response to requests for information and initiates a procedure to request public information. Today, every state in the union, the District of Columbia, and many local governments have passed legislation about access to government information. District of Columbia and federal laws may also contain specific records retention and access provisions. Federal government laws that oversee audits, grants and contracts may apply to some records. Other laws that govern the keeping of records may include, but are not limited to, local auditing requirements and statutes of limitations.

In the District of Columbia, Law 6-19, also known as the District of Columbia Records Management Act of 1985, established a "comprehensive program of public records management, archival administration, and library of governmental information for the District of Columbia; and for other purposes." The law describes certain legal responsibilities of each District of Columbia agency in managing records and established the Office of Public Records to oversee the District government's archives and records management program.

The Office of Public Records completes its tasks through the following units:

- The **Office of the Administrator** has the traditional administrative functions for the office through the **Administrative Unit**. The **Training and Publications Unit** trains all agency Records Management Officers and OPR staff and is responsible for public

outreach. The Public Records Administrator is the head of the Office of Public Records. The Administrator organizes and administers a records center for the District of Columbia's semi-current records; implements regulations for effective and economical records management throughout the District government; and performs other functions necessary to implement Law 6-19 or related regulations.

- The **Records Management Division** administers the Records Center where District of Columbia records are stored at costs which are much less than the cost would be if expensive office space were used. The District of Columbia Records Center provides a vital link to agency disposition programs. Without the custodial and temporary storage services of the Records Center, an effective agency program could not exist and agencies would be cluttered with records in costly office space and excessive filing equipment which could eventually interfere with efficient agency administration. The Records Manager for the District of Columbia adapts and implements systems and controls for the maintenance, scheduling, disposition and retrieval of District of Columbia agency records.
- The **Archives Division**, surveys, appraises, accessions and preserves the District government's permanent records, that is, those records which have continuing or enduring value. The Archives Division also oversees the process by which government records are evaluated in terms of their historical or other value, are selected for permanent preservation or eventual destruction, and are properly listed on a timetable, or records schedule, to govern their movement. Through its reference service the government's executive, legislative and judicial branches have access to these records and other information about government, and then, as time allows, this information is made available to the public.
- The **Library of Governmental Information** contains copies of publications of the local government and other reference material that is accessible to the public and to others.

The secondary mission of the Office of Public Records is to develop a history of the District of Columbia's government and foster the public's interest in preserving and using their history. This is accomplished by providing access to records in the D.C. Archives to the public.

ORGANIZATION OF THE RECORDS MANAGEMENT PROGRAM

Objectives of the District of Columbia Records Management Program

The Office of Public Records¹ primary mission is to administer an archives and public records management program for executive agencies of the D.C. government, as well as for the Council, the Board of Education, and the Courts. OPR assists agencies in establishing a sound records management system that provides low-cost storage for semicurrent records, preserves historically valuable information in the D.C. Archives, and helps develop and improve record disposition schedules for all agencies of government. Wherever possible, these tasks are incorporated into a comprehensive records program that allows the most cost-effective operation possible.

Role of OPR in the Records Management Program

OPR assists agencies of the District of Columbia government to establish a sound records management program by providing low-cost storage for semicurrent records in the D.C. Records Center, developing general records schedules, and approving agency records retention schedules. The D.C. Archives assists in the appraisal and scheduling of agency records and provides a secure home for those agency records of lasting historical value. The Training Unit provides regularly scheduled training classes and in-house training programs for agency records management officers, senior agency managers, and other D.C. government employees.

The Responsibilities of Agency Records Management Officers

As outlined in D.C. Law 6-19, each agency should designate an official Agency Records Management Officer. Agency Records Management Officers assist both the agency and OPR in developing sound agency records management practices by:

- serving as an agency liaison with the Office of Public Records.
- developing and carrying out the records management program of the agency.
- complying with rules, regulations, guidelines, standards, and procedures issued by the Office of Public Records.
- preparing or amending Agency Records Retention Schedules in accordance with standards and procedures issued by the Office of Public Records.
- surveying agency records stored in the Records Center and ensuring that these

records are scheduled properly.

- arranging for transfers of records to the Records Center or the D.C. Archives.
- overseeing the implementation of the Agency Records Retention Schedules, General Records Schedules, and Disposal Lists in the agency.
- reviewing and updating the Agency Records Retention Schedule to make deletions, changes, or additions as necessary.
- preparing reports that may be required by the Office of Public Records; and
- carrying out related functions as they are assigned by the agency head or required by the Office of Public Records.

The Office of Public Records' staff and Agency Records Management Officers work closely together so that records from agencies are transferred smoothly and efficiently to the Records Center or Archives, and to assure that agency records are retrieved, and then either destroyed or saved in the most effective manner.

CHAPTER II: RECORDS MANAGEMENT FUNDAMENTALS

Records Management and Disposition Programs: An Overview

A successful records management program has two prime objectives:

- the selection of agency records which have historical and archival value, and the transfer of these records to the District of Columbia Archives where they will be permanently preserved; and
- the timely and systematic removal and storage of temporary records by the agency that created them, for later destruction by the agency or by the records center staff.

A successful records disposition program rests on the premise that almost all records created in the government, about 95 percent, cannot and should not be kept permanently or even for long periods of time.

Records: A Definition

Records can be thought of quite simply as "information." This information can be gathered, used, and stored in many different ways, depending on how agencies use the information in the performance of their duties. According to Law 6-19, records are "any book, paper, map, photograph, card, tape recording, microform, motion picture, sound recording, computer disk, tape, or other machine-readable medium, or other documentary material, regardless of physical form or characteristics, created or received by any agency or unit of the District in pursuance of law or in connection with the transaction of public business." Although paper records are the most familiar, it is important to note that computer databases, word processing files, USB drives, microfilm, architectural drawings, and other information, regardless of its form, are all considered to be government records.

All records fall into two categories, temporary or permanent. Temporary records are those records that eventually will be destroyed at some time. Destruction of information (records) must always be authorized by an approved records schedule. Permanent records, on the other hand, have enough historical value to merit continued preservation in the D.C. Archives beyond the time they are needed for administrative, legal or fiscal purposes in the agency. These permanently valuable records are preserved by the D.C. Archives because they provide evidence of the organization, functions, policies, decisions, procedures, operations, or other activities of the

District government, or because of the valuable historical information they contain.

It is important to remember that records belong to the government rather than to individuals. They are not personal property. Records can be legally destroyed only through the procedures of a records disposition program, and only by using an approved records schedule.

Physical Characteristics of Records

As mentioned above, records are not comprised only of paper materials. Electronic records, still pictures, motion pictures, sound and video recordings, charts, plats, plans, maps, and architectural drawings fall within the meaning of records as defined by law. Content and origin, not format, determine whether or not an item is a record. Once again, records are any information that is created, used, or maintained by a District government agency in the conduct of its business, regardless of its form.

Electronic Records

Special attention must be given to electronic records since these records are produced by devices that change frequently because of rapidly changing technologies. They may comprise word processing files, USB sticks, video files, PDFs, excel files, and cloud-based files includes those created in DocuSign, Microsoft Office Online and Google Drive. Unquestionably, those media are supplementing, and, to some extent, replacing paper records. Because of the nature of magnetic, photographic, or digital methods used to create and store these records, they need special scheduling, storage, and handling. Changes in temperature and humidity are especially damaging to computer tapes, disks, and microfilm, and often special backup and updating procedures are necessary to make sure they can be used if computer records are accidentally erased or damaged.

Nonrecord Material

For convenience and efficiency, not all documents in an agency are considered to be official records. "Nonrecord" material may include extra copies of documents, transmittal letters, library or museum materials, supply catalogs and supplies of blank forms, among other materials. Agencies are free to destroy these kinds of materials with agency approval alone, as long as the destruction of it does not diminish the official records of the agency.

Nonrecord materials may include:

- reading-file copies of correspondence; follow-up, or suspense copies of all documents maintained in the same file;
- extra copies of printed or processed materials, the official copies of which have been retained for record purposes;
- superseded manuals and other directives maintained outside the office that is responsible for retaining them;
- materials that document an agency's fringe activities such as employee welfare activities and charitable fund drives;
- routing slips and transmittal slips;
- working papers;
- drafts of reports and correspondence;
- stocks of blank forms;
- transcribed stenographic materials;
- processed or published materials that are received from other activities or offices and require neither action nor any kind of documentation (the office that originated the activity is required to maintain record copies);
- catalogs, trade journals, and other publications or papers that are received from other District of Columbia government agencies, commercial firms, or private institutions that require neither action nor are part of a case upon which action is taken;
- correspondence and other records of short term value that, after action has been completed, have neither evidential nor informational value, such as requests for publications and communications on hotel reservations;
- reproduction materials, such as stencils, photographic masters, and offset plates;
- information copies of correspondence and other papers on which no documented administrative action is taken; and
- physical exhibits, artifacts, and material objects that lack documentary value.

Personal Papers

District government records belong to the government, not to the individual. However, many officials keep personal papers in their offices. These are papers, which are usually private and nonofficial, and pertain to an individual's personal affairs, outside business pursuits or political associations, or are personal diaries, notes, and journals which do not relate to the transaction of government business. Personal papers should always be filed separately from official records to avoid inadvertent destruction or confusion with official records. Also, it is important to separate personal papers so that they are not confused with official records and are inadvertently made available under the D.C. Freedom of Information Act.

Some officials donate their personal papers after leaving office to a manuscript repository, university, or local library or historical society. In that way, they ensure that a record of their individual, personal accomplishments is preserved. While these papers surely add to the base of knowledge about our society, and researchers and historians may use them in later years to describe the significance of local administrations, they are not official government records.

Precautions: Nonrecords and Personal Papers

Nonrecords should not be mixed with official records in the same file. Also, sometimes papers normally considered nonrecord, such as transmittals or routing slips, acquire record status because they clarify the matter being documented. Such distinctions require careful thought and discretion.

Often, a copy of a document does not automatically become a nonrecord. For example, several copies of a single form may each have record status because each has a separate program purpose. Multiple copies of a single record, however, generally are nonrecords as long as the original or one copy has been designated the official record copy. A single set of publications may be called the record copy, and then is distinguished from distributed copies or stock copies of the same publications.

Nonrecord materials are disposable by agency authority alone. When it is difficult to decide whether files are record or nonrecord materials, the Records Management Officer should treat them as records. The Records Management Officer may consult with the Office of Public Records staff for help in making that determination. Within the agency, the Records Management Officers

should determine the record or nonrecord status of files. The indiscriminate use of the nonrecord label weakens the disposition program and can result in the loss of valuable records.

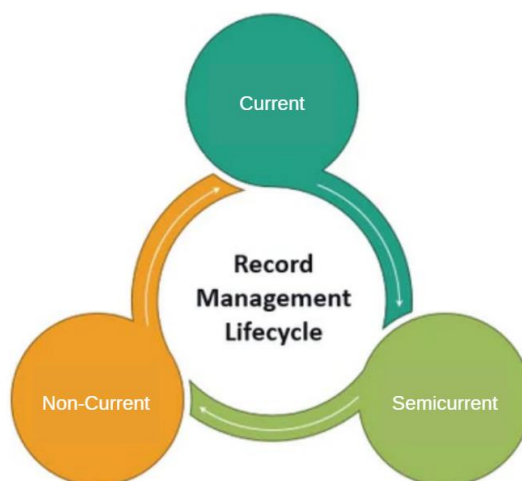
Life Cycle of Records

The life cycle of records is a major concept that underlies the archives and records management program in the District of Columbia government. This concept holds that all records pass through three stages: current, semicurrent, and noncurrent.

In the first, or current stage of the life cycle, records are made or received by an agency. This information may be permanent or temporary, and is stored, retrieved, and handled in various offices by, or for, a District of Columbia agency. Current records are used by the agency to conduct current agency business.

In the second stage of the life cycle, records are said to be semicurrent because they are only occasionally consulted. Again, these records may be permanent or temporary. When these records are no longer needed in active office space for frequent use, they may be destroyed according to the terms of a records schedule or transferred to the records center for storage. A general rule to determine when records become semicurrent is when entry into the file drawer they are stored in drops to once-a-month or less.

In the final stage of the life cycle, records become noncurrent, and are no longer needed by the agency to carry on its business. At this stage, the records are either destroyed according to the terms of an approved records schedule, or if they are appraised as permanent, they are transferred to the D.C. Archives.



Records Disposition

As stated previously, a records disposition program rests on the premise that most records cannot be kept permanently or even for long periods of time, nor should they be. All records, regardless of their nature or physical format, fall into one of two categories for records disposition purposes. They are:

- **permanent records**, or "archives," whose value for research and other purposes warrant their lasting preservation in the District of Columbia Archives. Although the averages may vary from agency to agency, permanent records usually comprise less than 5 percent of all District government records; or
- **temporary records** which are disposable after a fixed period of time or after an event. They may range in age from a few days or a month to longer periods, such as 20, 40 or even 100 years. About 95 percent of all District records are temporary.

A records disposition program's primary focus is determining how long current or active District of Columbia government records should be maintained in an agency; when they should be sent to the records center once they become semi-current; and when they are noncurrent, whether they should be transferred to the District of Columbia Archives or destroyed. These stages are governed by a document known as a records retention schedule. A records retention schedule is simply a timetable written by either the Office of Public Records or the agency that governs the disposition of records. It states what records are temporary and what records are permanent; and when records should move from an agency into storage in a records center, or into the archives for permanent retention, or when records should be destroyed. There are two kinds of records schedules: a General Records Schedule, and an Agency Records Schedule.

General Records Schedules

General Records Schedules are developed and distributed by the Office of Public Records, and define retention periods for records which are common to all or many agencies in the District government. They provide agencies with ready-made schedules for the disposition of common agency records. For instance, most agencies in the government have purchasing and requisition files, time and attendance records, contracts, and other routine administrative records. These kinds of routine records are governed by one schedule, utilized by all agencies throughout the

District government. General Records Schedules usually cover about one-third of all agency records, and are based on the premise that many routine records have the same disposition regardless of the agency that creates them, and that a single retention period is valid for all agencies.

General Records Schedules frequently concentrate on administrative and housekeeping records because they are easy to segregate and can be destroyed routinely after a set time period. These General Schedules, or generic lists, usually cover the documentation for such functions as personnel management, procurement practices, travel, and information services records, and document functions performed by any agency regardless of its program responsibilities or mission. Use of the General Records Schedules helps promote uniform records disposition practices among all government agencies. In the District of Columbia, General Records Schedules also list types of records which usually are considered to be permanently valuable. Agency Records Management Officers can easily identify and transfer these records to the D.C. Archives when they become noncurrent by using the General Records Schedules.

Agency Records Schedules

The process of deciding what to keep and what to destroy generally begins with the agency that creates the records. An agency prepares a records schedule that lists each type of record created by the agency, assigns a specific time period for the agency to retain it, and instructs the agency staff on the record's disposition--temporary storage, destruction, or transfer to the District of Columbia Archives. These recommendations are made in cooperation with the Office of Public Records' appraisal Archivists. The Agency Records Schedule lists those records that are unique to the agency, and, hence, are not covered by the District of Columbia General Records Schedules.

Once the records in an agency are identified and described, given a retention period, and an agency schedule has been written and approved, the schedule serves as the agency's legal authority to store, transfer or destroy District of Columbia government records. The schedule should be revised yearly to keep it up-to-date, and it should be amended if the functions of the agency change. Appraisal decisions--what to keep and what to throw away--are the heart of an agency schedule. Records Management Officers assist in making these decisions in the agency, and implement the schedule after it is approved.

Disposal Lists

A Disposal List requests permission for immediate or future disposal of records no longer needed. For example, an agency may have records that were created by a special commission or other temporary body which has completed its job, or the records of a discontinued program. The Disposal List is a request for one-time disposal instead of the continuing disposal authorization requested in a schedule. The Disposal List should give:

- the title and content of each records series and dates;
- the quantity of records;
- finding aids or indexes, if any;
- physical characteristics of the records if they are nontextual records; and
- the action requested, such as immediate destruction, direct accessioning into the Archives, destruction after a period of time, or other disposition.

Disposal Lists are approved in the same manner as Records Retention Schedules. The D.C. Archivist may also initiate Disposal Lists for the records of defunct agencies, for unscheduled or inappropriately scheduled records in the Records Center, and for other purposes.

CHAPTER III: DEVELOPING AN AGENCY RECORDS SCHEDULE

The Records Survey Process: The First Step in Assembling the Schedule

The agency schedule is the key to a sound records disposition program and a records survey is the heart of the schedule. A survey that is haphazard or incomplete makes the final records schedule inaccurate and ineffective. Creating an agency records schedule requires finding out what records exist and appraising the records to determine their retention periods. The first step is referred to as a records survey. A records schedule is written only after a thorough survey has been completed.

Regardless of agency size, the survey and the schedule have the following common characteristics:

- They must cover all records.
- They must cover the entire agency or organization.
- They must be clear about records retention and disposition instructions. Nonrecord materials must be:
 - Covered in the survey.
 - Located, described, and evaluated in the same manner as record materials.

Simply defined, the records survey is a list of each type of record or record series, together with an indication of where it is located and other pertinent data. The survey is not a document-by-document listing; or a folder-by-folder listing.

Before the survey begins, agency structure, the source and levels of authority, and program responsibilities need to be understood. They are clues to the existence and location of records within the agency. The following should be considered:

- all line and staff offices;
- the programs that the agency has;
- the units that are responsible for developing policies; and
- the nature of staff support activities--legal, fiscal and budgetary, inspection.

Equally important is a prior knowledge of the agency records filing systems which should provide information about the use of:

- any prescribed agency-wide filing systems and how widely they are used;
- any prescribed file classification system and its nature--alphabetical, numeric, alpha-numeric, or other method of filing;
- an agency central filing system, and how it operates;
- where essential documentation is likely to be found in the event of a disaster.

Elements of the Records Survey

Ideally, Records Management Officers should conduct the survey because they are usually the best equipped to understand the project's purposes and the concepts involved. However, when speed is vital or when there is an unusually large volume of records to be covered, other agency personnel may be asked to assist with the job. In any case, training is a prerequisite, as is a commitment to the survey project from top agency officials.

What Is a Record Series?

Records are usually grouped together physically (as in a file cabinet) because they consist of the same form, relate to the same subject, result from the same agency activity or function, or have similar physical characteristics. For example, many offices maintain “open” and “closed” case files numbered sequentially by the fiscal year number, and a transaction or file number. Regardless of how many files, or file cabinets, these records occupy, or the kinds of information contained in the files themselves, these case files form a record series because of their relationship to one another. Another example that is common in the District government are an alphabetical subject files. This kind of file, arranged alphabetically by various “subjects” form a record series, regardless of the file topics, the number or volume of files, or the contents of them. Other examples of records series are personnel files, contracts, purchase orders, vouchers, project files, and photographs.

Record surveys, and, hence, records schedules, list all agency records by the series title. The record series forms the basis of the survey project. While records series may be a difficult concept to describe and to understand, they are much more easily recognized once the survey project is underway. Often, people responsible for filing records, or for maintaining files, have the necessary information to identify records series and filing arrangements, and can assist the Records Management Officer in filling out the survey forms.

To obtain the information needed to write the Agency Records Retention Schedule, the survey should include the following data for each record series throughout the agency:

- **Name** of office (including subdivisions or other organizational identification) and the telephone extension of the person taking the survey;
- **Location** of files precisely stated (example: room 307, District Building, 1350 Pennsylvania Avenue, N.W.);
- **Title** of records series and inclusive dates;
 - Each series must be given a title and a brief reference. Such a title can come from one of several sources:
 - the agency, which may be using a generally accepted title in its normal day-to-day procedures. (Example: project progress reports).
 - the person who conducts the inventory and who can supply a descriptive title. (Examples: property control records, meeting manuscripts files, loan analysis files).
 - the title of a single form if it applies to the entire series. (Examples: bills of lading, notifications of personnel action).
 - The earliest and latest dates of the records in each series are important parts of the description. This information can be a clue to the series' growth rate. It may be important if the series is later appraised as "permanent." Transaction files or correspondence files should have the earliest date expressed as the year only. Bound volumes of minutes or decisions should show more precise dates. The latest date for series still being created at the time of the inventory should be indicated with "to date" or "to present."
- **Purpose** of the records (identify the program or function to which the records are related);
- **Description** of records should include a clear description of the series and is basic to the success of the survey and the schedule. This information is used in the records' appraisal by the Office of Public Records. Further descriptions may be needed to clarify the title of a series. Examples of descriptions are:
 - correspondence files regarding agency inspections, including reports, questionnaires, and related papers;

- subject files regarding the operation and administration of the office, containing copies of requisitions, space reports, and personnel data;
- photographic files that comprise still pictures and motion picture film negatives;
- housing records on a computer that contain raw demographic data;
- requests from the public for forms and publications;
- record sets of directives and manuals; and
- copies of correspondence on division matters prepared for the director's signature, and related papers.

When record series consist primarily of agency forms, the survey description should emphasize the content of the forms rather than a list of just the form numbers found in the files. This is especially true in the case of transaction files, which consist of numerous forms and related memorandums and correspondence and constitute about three-fourths of all District of Columbia records. Examples of transaction files include loan files, clinical or medical files, and personnel files. Also, each series description must contain a sufficient profile so that the record's function, purpose, use, and content are shown. Terms that add nothing to the description should be avoided. Examples of terms to avoid using are "miscellaneous" or "various" since neither term helps describe or clarify the contents of the series.

- **Arrangement** is the internal arrangement of the series and should be simply described. For example:

- alphabetically by subject;
- alphabetically by the name of the claimant;
- chronologically by the date of the report;
- functionally by nature of the report;
- numerically by voucher number; and
- numerically by contract number.

- If the series, on examination, has no apparent arrangement, it should be carefully marked "not arranged." Many series are self-arranging because they relate to individuals or numbered transactions.

- **Records size and form, and method of storage.**

Indicate the number of filing drawers or cubic feet the series occupies, whether the series is letter- sized, legal-sized, or card files, and other necessary information

- **Indexes or other finding aids.**
- **Audit requirements? By whom?**
- **Estimated yearly build-up.**
 - Give the present volume and rate of storage required annually.
- **Are copies of these records available elsewhere? If so, where?**
- **Does the information in the paper records exist in another format? If so, describe.**
- **Period of time needed in office to conduct current business.**
- **Are there restrictions on use of the records? If so, describe.**
- **Recommended disposition.**
 - Describe how long the records should stay in the office, when and if they should be transferred to the records center, how long they should be stored, or when the records should be destroyed or transferred to the D.C. Archives. Those who know the record series best should be asked to suggest how long the series should be kept.
- **Appraisal note.**
 - Briefly describe the reasons for establishing the recommended disposition statement above. Be sure to cite any laws or regulations which govern records retention periods for the series.

Records Appraisal: Determining What to Keep and What to Destroy

The completed records survey in either the department or the agency forms the basis for the next step, the evaluation or appraisal of the records. If the inventory and survey project was carried out carefully, and the information entered on the survey forms is complete and accurate, the appraisal process is greatly facilitated. On the other hand, if the information is not complete, the survey is spotty, and personnel must go back several time to check information that was not entered fully, the appraisal and scheduling project can be prolonged, and the resulting schedule delayed. The key to managing a successful agency records scheduling project is maintaining the quality of the records survey.

Records appraisal is defined as "the process of determining the value, and thus, the disposition of records based on their current administrative, legal, fiscal use; their evidential and informational or research value; their arrangement; and their relationship to other records." The objective of records appraisal is to determine how long records should remain in the agency for current use; when they might be transferred to the records center; how long records should be stored either in the agency or at the center; and what the final disposition of the records will be

whether they will be destroyed after a certain period of time has passed, or in the case of permanently valuable records, when they will be transferred to the Archives. Records appraisal is intended to be an objective analysis of agency records series in all stages of the life cycle of records: current, semi current and noncurrent. Appraisal judgements are usually made by consulting with the record creators and users, agency records officers or coordinators, department heads, and archivists.

Appraisal Objectives

The determination of records values is basic to records disposition and archival management. Techniques cannot be devised that will reduce the work of deciding on values to a mechanical operation. Success depends on:

- Understanding how agency activities are documented; and
- Appreciating the function of archives and the importance of understanding the past.

Appraisers must realize that some record values go beyond the immediate interests of the agency. Agency needs are important, but, equally important are the data available in records long after they have ceased to have any value to the agency.

Analysis of the Records Survey

Records appraisal is the process of determining the value, and thus, the disposition, of records based upon their use, and the information that they contain. Record values cannot be reduced to exact standards but consist instead of general principles, or yardsticks. In reviewing the data obtained in the records survey, several kinds of record values need to be considered by Agency Records Management Officers to arrive at record disposition and retention decisions. Records appraisal is a complex process, but it is necessary to know that all record values fall into two broad, general categories: primary and secondary. The following sections will help explain the records appraisal process, and how these primary and secondary values are determined in the agency.

Record Values

Archivists usually evaluate records using two broadly defined theoretical values: *primary* (administrative, legal, and fiscal value), and *secondary* (historical or informational value). Most records created in an agency have some kind of primary value. In other words, they have an

immediate usefulness to the agency **in** terms of fiscal, legal, administrative, or operational needs. These kinds of records are often created, used, or maintained to carry out the agency's mission, to manage department fiscal affairs, to fulfill legal requirements, or to gather information used in the agency. The primary value of these records is to the agency that created or received them, and which is legally responsible for them.

Some records created in a department or agency have usefulness beyond the needs of the agency alone and may contain information which is useful for posterity. These records are said to have secondary value, meaning they contain important historical or evidential information that will be useful for historical research, and to succeeding generations of citizens. Agency records often contain important evidence of how the government functioned, what its policies were, how it was organized, and what its successes and failures have been. Agency records may also be important for tracing property ownership, neighborhood or family history, for future historians or genealogists, and for many other research purposes. These records are important to the government and its citizens for reasons other than what they were originally created for. Examples of records with high secondary values are deeds to property, wills, and minutes of high-level board and commission meetings, many kinds of photographs, and major policy subject files. The secondary values of records may not be readily apparent to the agency staff, records users, or the creators of the records, but archivists are trained to recognize both primary and secondary record values.

While the terms "primary" and "secondary" value are very broad, it is useful to apply them to records in an agency during the appraisal process, and then refine the actual analysis, focusing on specific types of primary or secondary values. After deciding which records have primary or secondary values, or perhaps both, it is necessary to determine the following more specific primary or secondary record values.

Primary Values

These values are usually of interest only to the agency, which keeps records as long as they are needed for administrative, legal and fiscal reasons. Once the records are not needed for current operations, a disposition program provides for their removal from office space so that their sheer bulk does not impede efficient agency operation or administration. Agency Records Management Officers are responsible for judging the usefulness of records for current or future operations of the agency.

Aspects of Primary Values

I. Administrative Value. Records have this value if they help an agency perform its current work. The time a records series is useful to an agency may be long or short, depending on the purpose it serves. Records such as routine requisitions have a short-term value. Closed transaction files may pertain to long-term fiscal, regulatory, or control operations, and their administrative value may last many years. Directives, orders, and regulations obviously have long-term administrative value. Many records at lower operating levels may have little administrative value because they are:

- Duplicated elsewhere, as in correspondence or directives;
- Summarized at higher agency levels, as in reports, raw data, and working papers; and
- Temporary controls, such as logs and tickler files.

Most housekeeping documents have short-term administrative value because they document routine transactions quickly completed. They may consist of requisitions, purchase orders, stock control records, procurement records, and the like.

II. Legal Value. Records have this value if they contain evidence of legally enforceable rights or obligations of the District of Columbia government. Among those obligations are the legal rights of persons to make claims against the District of Columbia government. Among records having legal values are:

- legal decisions and opinions;
- documents involving legal agreements, such as leases, titles and contracts; and
- evidence of actions in particular cases, such as claims papers and legal dockets.

The duration of legal value varies. For example, legal values of contracts and claims records diminish rapidly after the contract or claim's final settlement. A record may cease to have legal value once any pertinent statutes of limitations expire.

III. Fiscal Value. Records have this value if they relate to financial transactions. They may be budget records, voucher or expenditure files that document the purpose for which agency funds were spent, or they may be accounting records. Other agencies or the federal government may have auditing or oversight authority, and may require D.C. government records to be kept for those purposes. Records relating to the development of fiscal policy should not be confused with those of fiscal transactions. Fiscal policy files may

have permanent value.

Secondary Values

Secondary values continue to exist after records are no longer of value to agency officials, and the records are considered noncurrent. The record values are based on the long-range need of research and scholarship. Records with high secondary value are preserved so that the public can use them. Secondary values, which go beyond immediate needs and interests of the agency are of two types-- evidential and informational.

I. Evidential Values. Records which show evidence of agency organizational structure and functions have evidential value. Some records that contain such evidence are archival. These records show evidence of agency responsibility and how an agency carried out its programs. They are needed so that the experiences of an agency can be examined later. Records are evidentiary if they are:

- related to the origins of an agency, and reflect the conditions that led to its creation. These kinds of records may be statutes, executive orders, investigations, or other more scattered documentation.
- related to agency policy and procedure, and reflect the communication of policy and procedures to offices. Sources of policy and procedure records are:
 - directives, manuals and handbooks
 - organizational charts and directories
 - narrative and statistical reports
 - publicity material

II. Informational Values. The information that is created as a result of agency programs is important in determining the value of records. In looking for informational values, the appraiser is not particularly concerned with the agency that created the records, or what programs they involved, but with the information in them. The information is about people, things, places, and phenomena, and is as diverse as the work of the District of Columbia government. There are three tests for informational values--

- ***Uniqueness.*** If the information in a group of records cannot be found elsewhere in as complete and usable a form, the records are unique. The term "elsewhere" can

mean District of Columbia government or non-District of Columbia government sources.

- **Form.** This test mainly concerns the degree to which information is concentrated. It also relates to the physical condition of the records. Ease of access to the data often needs to be considered when choices must be made between two series, arranged differently, containing generally the same documentation. Choices may be made between paper records, electronic records, or records stored or processed by other media, but data concentration and ease of access are still important tests.
- **Importance.** This test concerns the research importance of a records series to historians, scholars, genealogists and others who may wish to use the records.

Informational values often concern records which will be important to document the history of the District of Columbia--it's government, it's people, the homes and businesses of it's citizens, it's neighborhoods, and other matters that are important to historians, genealogists, or the public. Records often contain information which concerns:

- **Persons and corporate bodies,** such as boards, commissions, and firms. Only summary data about people usually are important for population, sociological or similar studies. Records of corporate bodies include docket files of regulatory agencies, some of which may be valuable. As with individuals, records of firms may be valuable in the aggregate only, unless a single firm is historically important.
- **Things.** Informational values about things involve historic buildings, roads, and manmade objects in general. The value comes from the information that the records contain about the things themselves, not from information about what happens to the things. Records on buildings are usually important if the buildings themselves are important. The building may be significant because they are identified with important people or with architectural ingenuity.
- **Places.** Cartographic information about places refers to specific individual localities at various levels--areas, wards, or other geographic units. Records that reveal information about places include maps and charts, aerial photography, remote sensing imagery, still and motion pictures, field and survey notebooks,

place name decision files, and site location reports. Correspondence, reports, publications, and other written materials may also contain information about the topological, geological, and geographical features of an area as well as its history.

- **Phenomena.** Records relating to phenomena contain data about what happens to persons or things. They describe conditions, activities, events episodes and circumstances. Records on phenomena largely concern the masses of statistical data on social and economic matters such as industrial production, population, prices, income, and living costs.

Applying secondary values in a record appraisal is often difficult, and usually requires the advice of professional archivists. Secondary values often consider future needs, not all of which are readily apparent, even to the wisest archivist. Archivists can often bring knowledge about other records, other agencies, and similar information which can help identify secondary values, and assist the appraisal process. Also, archivists are trained in making information accessible to the public, and in preserving permanently valuable records that may need special care. Primary values, on the other hand, are often easier to identify, and appraisal for primary values should be done in the agency itself, with the assistance of record custodians, creators, users, and others with direct knowledge of how the records are used.

Determining a Record's Retention Period

Determining whether a record series is temporary or permanent, and finding a retention period for record series in the agency is the intention of the scheduling process. Several steps are required. The information used to determine the disposition of a record series comes from the fully completed and accurate records survey forms. Usually record retention periods are determined with the assistance of the people who create or use the records, or need them for the conduct of their current business. Decisions are usually arrived at in discussions with the Agency Records Management Officer, the department head responsible for the custody of the records, other agency personnel, and the staff of the D.C. Archives.

In general, most agencies want to keep records too long, or at least longer than is necessary to conduct current business. In the District of Columbia, the Office of Public Records has a "Five Year Rule" to help avoid keeping records longer than really necessary, and to keep other records center and management functions efficient. For records which are temporary, agencies

are free to determine retention and storage periods for a total of up to five years. If the agency determines that a record series must be retained longer than five years, a written justification is needed. There are often compelling reasons to keep records longer than five years, and there may even be specific laws which require that records be kept by an agency longer than five years. For example, the federal government requires that contract and grant records in amounts over \$10,000 be kept for 6 years. Personnel records are kept for a minimum of 75 years after the employee's date of birth, or 5 years after the latest separation, whichever is longer. Again, if an agency determines that some of its temporary records require a longer retention than five years, the reasons for the longer period must be given in writing to the Office of Public Records.

To briefly summarize the steps to determine a record retention period:

- Appraise the records--determine the primary and secondary values of the records.
 - Primary values consider the usefulness of the records in the agency for the current conduct of business. Secondary values determine the usefulness of the records for research and as historical information for future generations.
- Decide if the record series is "temporary" or "permanent."
 - Temporary records are those records which will be physically destroyed at some point in the future, regardless of the time involved. Permanent records are those which will be transferred to the DC Archives for permanent retention, and will never be destroyed.
- Check the DCGRS to see if the records have already been appraised and scheduled.
 - Records which are used in most or all agencies of the District government have already been scheduled. If the records are already scheduled on the General Records Schedule, follow the disposition instructions, and cite the schedule and item number on the inventory form. The DCGRS lists both permanent and temporary records to help in the appraisal and scheduling process.

If the record series does **not** appear in the DCGRS it must be included in the agency records retention schedule. For each records series in the agency survey **not** listed in the DCGRS:

- Determine if the records are "temporary" or "permanent" by:
 - Determining how long the agency needs custody of the records in either office space

or the records center.

- Determining if the records have continuing legal, fiscal, evidentiary, and historical value beyond the use of the agency itself.
- Determine how long the records need to be retained in the office for current use, and when they can be transferred to the records center. As a general rule, when reference to the records drops to about once-a-month per file drawer or less, they should be transferred to the records center.
- Determine when the records should be destroyed or transferred to the DC Archives if they are permanent.
- Write a records disposition statement for the record series that incorporates movement of records at each stage, i.e. current, semicurrent, and noncurrent. For example:
 - "Retain in office 1 year after close of file [current]. Transfer to records center for 3 years [semicurrent]. Destroy [noncurrent]."
 - "Retain in office 90 days after receipt [current]. Destroy [noncurrent]."
 - "Permanent. Retain in office for 3 years after close of fiscal year [current]. Transfer to records center for 5 years [semicurrent]. Offer to D.C. Archives when 8 years old [noncurrent]."

It is important to note that a records disposition statement contains instructions for each stage in the lifecycle of records. A well-written records disposition statement instructs agency personnel in handling records when they are current (in the agency), when they are semicurrent (in the records center), and when they are noncurrent (no longer of value to the agency). Also, the times for record movement at each stage should be clearly stated. In the examples above, note that files are moved from the office "... after close of file," or "...after receipt," or "...after close of fiscal year."

How to Schedule Records in an Agency

A schedule may be organized in several ways or in a combination of ways, as follows:

- **By Organization.** This is a listing by titles of bureaus, divisions, offices, and branches. Under each organization, each series is shown as a separate and distinct item. To prevent confusion, schedules must be amended promptly to reflect organizational changes.

- **By Function.** Series are combined in a functional schedule if they serve the same purpose. Each schedule item constitutes the largest practical grouping of separately organized and logically related materials that can be treated as a single unit. Records included in the schedule items are covered regardless of where they are created and maintained. In small agencies, all records may be described functionally so that organizational designations are not needed. In a larger agency a combination of functional and organizational arrangements may be desirable. A functional approach may be suitable for several offices performing the same work. For example, a schedule can cover all of an agency's field or regional offices. If records are described in terms of the functions involved, small differences in paperwork present no problems. The *DCGRS* is an example of a functional records schedule.
- **By Similar Files in Different Offices.** This is a listing of files commonly found in many offices. It avoids repetition of the same items in several different places in the schedule. This kind of description may include multipart forms located in different offices.

Scheduling Permanent Records

In the District of Columbia government, schedules which designate records series as permanent are reviewed and approved by the staff of the D.C. Archives. These records have enduring historical value because they document the organization and functions of the agency that created or received them, or because they contain significant information on persons, places, phenomena, problems, and conditions with which the agency dealt. They frequently contain historical information that is of interest to local historians, genealogists, scholars, and others who are interested in the history of the District of Columbia. When records are transferred to the District of Columbia Archives, legal title passes from the agency to the Office of Public Records and Archives under the authority of the State Archivist and Public Records Administrator.

Authorization and Transfer of Records to the District of Columbia Records Center

The State Archivist and Public Records Administrator issues instructions for transferring records to the Records Center. Any agency may transfer records to the District of Columbia Records Center or other storage facility subject to the following conditions:

- The records must be properly scheduled;
- The records are not authorized for destruction less than two years after the transfer to the Records Center, unless they are excepted from this restriction by the Administrator;
- The facilities for storing and providing reference to the records are available; and
- The transfer of personnel and certain payroll records to the National Personnel Records Center is done in agreement with procedures specified by the National Archives and Records Administration and the Office of Public Records.

Authorization and Transfer of Records to the Archives

Agency records more than 30-years-old may be transferred to the District of Columbia Archives on the authority of the Archivist alone. Other records listed as permanent on an approved schedule or Disposal List are offered to the Archives at the time specified in the schedule or list. Agencies and the Records Center should submit a records transfer authorization form to the Archivist to request a transfer of permanent records. The Archivist may approve or disapprove transfers of records to the Archives.

Scheduling Non-Textual Records: Audiovisual, Architectural, and Electronic Records

The description of nontextual records must be accurate, especially if they are permanent. Included in this category are:

•Photographic records

- Identify the production, project, collection, part of a collection, or other unit by description, title, or number, as appropriate.
- Indicate the physical form of the records, such as motion pictures, still pictures, negatives, slides, aerial mapping film, paper prints, sound recordings, video recordings.
- Indicate the kind of copy. For motion pictures, indicate film type, the size in millimeters, and whether the copies are negatives, master positives, or projection prints. If they are still photographs, indicate whether glass plates or film, and whether both negative images and positive prints are available.
- Indicate quantity by giving the number of reels for motion picture films, the number of rolls for aerial mapping films, and the approximate number of pieces for still photographs or paper prints. As part of the appraisal justification, provide any

information on the condition of the records or any other aspects that might support requests for disposal.

•**Sound recordings**

- Decide how the scheduled units will be constituted in terms of collection or production.
- Identify the unit by description, title, or number.
- Identify the physical form, such as cassette tapes, reel-to-reel tape, or other media.
- Identify the kind of copy, whether master, matrix, or service copy.
- Identify the number of disks, tapes or other media.

•**Maps, charts, and related graphic records**

- Identify separate map series and describe each series as a single schedule item.
- Describe the subject matter involved.
- Provide any related file headings, numbers or descriptive symbols.
- Provide titles or designations for the group of records.
- State origin of the collection if not produced by the agency.
- Show the purpose of the collection.
- Give inclusive dates.
- Provide data about the physical aspects of the collection, whether manuscript, annotated, photo-processed; whether portfolios, atlases, and the like; whether filed, rolled, or in some other form.
- Provide volume data in inches or feet and the approximate number of maps.
- Indicate where any related textual records can be located, such as finding aids, indexes, field surveys, notebooks, etc.

•**Architectural and engineering plan files**

- Identify separate architectural series and describe each series as a single schedule item.
- Provide file headings or symbols, if any.
- Describe the subject matter involved.
- State whether tracings, blueline, sepia-toned, or other types of reproductions are included.
- Show size of plans.
- State the purpose of the plans.
- Describe the origin of the plans if they were not produced by the agency.
- Provide volume data in inches or feet and the approximate number of architectural plans.
- Give inclusive dates.

•Electronic Records

- Electronic records should be treated similarly to their physical counterparts. For example, email is correspondence. Therefore, email should be retained according to the same standards as paper correspondence. Similarly, reports, surveys, studies and other electronic documents should be managed similar to their physical counterparts.
- For electronic records, the storage medium (i.e., Cloud Storage, network storage, USB drive, etc.) must be indicated.
- Valueless electronic records can be destroyed under the authorizations provided in the General Records Schedule.

Approval of Agency Records Schedules

An approved Agency Records Retention Schedule must specify the proper disposition for all unique or specialized agency records. Recurring series of records of continuing value are scheduled for permanent retention and eventual transfer to the Archives. Recurring series of all other records are scheduled for destruction after a specified period of time based on the series' administrative, fiscal and legal requirements. All Agency Records Retention Schedules should:

- be prepared in a form specified by the Office of Public Records;
- identify and clearly describe each series of records and contain disposition instructions that can be readily applied;
- be prepared so that each subordinate office will have standing instructions that detail the destruction, transfer, or retention of records in its custody;
- specify for temporary records a retention period of not more than 5-years after the records are created, or at the close of a transaction or case file, or after a specific event, such as "the end of the current fiscal year." Because of the tendency to keep records too long, a written justification is necessary if temporary records are to be retained longer than five years.
- Ensure that the description of permanent records shows the types of records, arrangement, content, purpose of the series, finding aids, indexes, restrictions on access, and physical form for such nontextual records as maps, photographs, sound recordings, electronic records or other nontextual records;

The Archivist examines the schedule to ensure that:

- it is complete, accurate, and clear;
- the permanent records listed in the schedule have sufficient value to warrant their transfer to the Archives;
- restrictions on access by the public comply with the D.C. Freedom of Information Act and other laws;
- no records that have permanent value are scheduled for destruction; and
- the retention period for temporary records is reasonable.

If prepared correctly, the schedule will be signed off and officially approved by the State Archivist and Public Records Administrator.

Maintaining a Records Schedule

Agencies should review and update their Records Retention Schedule annually, or as agency functions change. Agencies should schedule records from new programs within 2-years of the program's implementation. Both the agency and the Archivist may initiate amendments to the Records Retention Schedule. Amendments should be in a similar form to the schedule, must be reviewed and approved in the same way as the Records Retention Schedule. The head of each agency or the Records Management Officer is responsible for carrying out the provisions of the approved Records Retention Schedule. This must be done continuously and in a manner that ensures maximum economy of space, equipment and personnel.

Creating a Disposal List

A Disposal List requests authorization for the disposal of records that are no longer created. The records may be those from a special commission or other temporary body which has completed its job, or from a discontinued program. The Disposal List is a one-time request for one-time disposition instead of the continuing disposal authority requested in a schedule.

Implementing General and Agency Records Schedules

Too much time spent in implementing and applying records schedules can reduce program savings and efficiency. The following should be considered:

- records don't have to be destroyed at the exact time their retention period ends;
- disposal and transfer of records should be done annually or semiannually

rather than more frequently;

- a different timetable may be necessary if records accumulate rapidly;
- records may accumulate so slowly that annual transfers are unwarranted; and
- all paperwork and transfer arrangements are worked out with the Records Center.

Records should not be destroyed as scheduled if they are still needed. In those cases, the OPR staff should be informed of:

- what schedule and item is involved;
- what volume of records is involved;
- the reason for further temporary retention; and
- the anticipated date when the records will be destroyed.

A delay in destroying records should not be regarded as significant unless it lasts for more than a year. Careful timing of disposal and transfer actions will hold down the costs of handling records in the agency and in the Records Center. Above all, compliance with schedules should avoid interference with current operations. Records should be transferred during slack periods, if possible. In field offices, particularly in small units in remote areas, the volume of records may be so scant that disposal and transfer should be done at intervals longer than once a year.

Approval for Temporary Exemption from a Schedule's Terms

Program audits, litigation or investigations may require that records are retained beyond their scheduled destruction date. Since disposition instructions in an approved Agency Records Retention Schedule or General Records Schedule are mandatory, records approved for destruction should not be maintained longer without the prior approval of the Office of Public Records. Once the approved extension period has expired, the agency should apply the normal retention instructions according to the schedule.

CHAPTER IV: REQUESTING RECORDS FROM THE RECORDS CENTER AND FEDERAL RECORDS CENTER

The District of Columbia Office of Public Records provides a service that allows District agencies to use records that are stored in the Records Center. While records are in the physical custody of the Records Center, the agency still retains full legal custody of them, and the records can only be released for use with proper agency authorization. The same is true of records held in the federal records center.

Instructions for Requesting and Using Records Stored in the Records Center

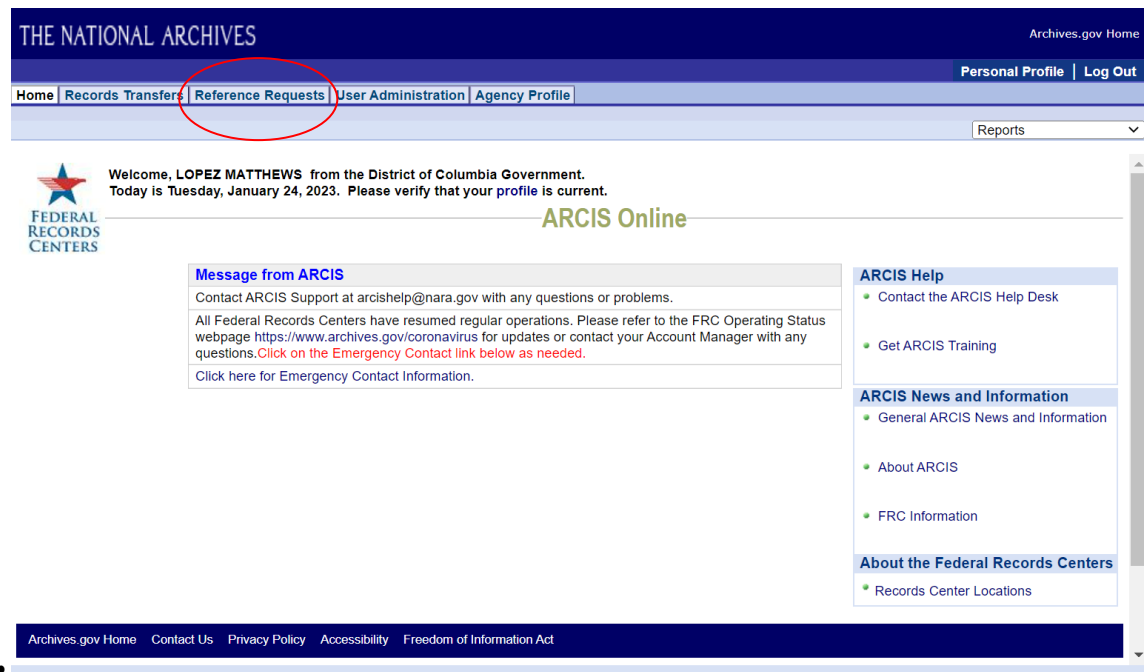
- Use Optional Form 11(OF-11), Reference Request, to recall records from the Records Center. The Records Center normally fills each request within 24-hours of receipt. Telephone requests will only be honored in the rare case of a genuine emergency. In these cases, call between 9 a.m. and 3 p.m. and arrange for pickup when making the request. To retrieve the OF Form 11 please visit <http://opr.dc.gov/rmforms>
- When completing the OF-11, agencies must furnish the accession number, agency box number, Records Center location number, and the nature of service. See appendix A for a sample of a completed OF-11.
- Use a separate OF-11 for each folder or box requested. Two or more contiguous file items, folders, or cartons, however, may be treated as one item and requested on one OF-11.
- If records are being requested under the provisions of the District of Columbia Freedom of Information Act, make a notation to that effect in the “Remarks” section of the OF-11 to ensure priority handling and immediate return.
- While recalled folders or boxes are in the agency, never refolder or rebox the records. They must be returned in the original folders or containers so that they may be accurately refilled. If, for some reason, the box is unusable for shipment, copy all information from its front onto the front of its replacement.

Accessing Records at the Federal Records Center

Like records held in the DC Records Center, records held in the Federal Records Center remain in the legal custody of the agency. Access to records held in the Federal Records Center is closely monitored by the Office of Public Records. Records are requested through the National Archives ARCIS Customer Portal.

Accessing the ARCIS system

- Each agency is provided with a single login to the ARCIS system
 - This is done for security and tracking purposes
 - To request an ARCIS log in for your agency please contact the Office of Public Records at archives@dc.gov or telephone at 202-671-1105
- Access to the ARCIS Customer Portal can be found at: <https://arcis.archives.gov/>
- After logging into the system you will click “Reference Requests” on the menu at the top of the screen.



- Click “Create”

THE NATIONAL ARCHIVES Archives.gov Home

Personal Profile | Log Out

Home | Records Transfers | **Reference Requests** | User Administration | Agency Profile

Reports

Reference Requests

Actions

- * CREATE**
Create requests; edit and track the requests you created.
- * CREATE LOT**
Create lot requests; edit and track the lot requests you created.

Views

- * PROFILE-SPECIFIC**
View requests whose properties (record group, charge account, etc.) match those in your profile.
- * AGENCY-WIDE**
View all requests from your agency, regardless of their properties.

Contact ARCIS

- Click Create Reference Request

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Home | Records Transfers | **Reference Requests** | User Administration | Agency Profile

Reports

Reference Requests I Created

My Workspace
Create reference requests; edit the requests you created.

FRC Workspace
Track reference requests that are being or have been processed by the FRC.

Create Reference Request | Query for Reference Request | Export

◀ No Records ▶

Copy Reference Request	Reference Request #	Request Category	Charge Account	Recipient Name	Status	Records Center	Submitted Date	Records Transfer #
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Contact ARCIS

- On the next screen, you will see that your information is already prepopulated. You will begin in the “About Records” section. Click the “Request Category” Dropdown menu and select “General Reference”

THE NATIONAL ARCHIVES Archives.gov Home

Home Records Transfers Reference Requests User Administration Agency Profile

Reports

About the Request

*Reference Request #: 0000-0000-0000

*Record Group: 351

Agency: District of Columbia Government

*Last Name: YOUR LAST NAME

First Name: YOUR FIRST NAME

*Nature of Service: Temporary Loan of Recon

*Service Level: NEVER CLICK ME

About the Records

Request Category: -Select-

About the Recipient

*Recipient Name: YOUR NAME

*Address Line 1: YOUR ADDRESS

Address Line 2:

City: WASHINGTON

State: DC

Zip Code: 20001

Country:

Phone #: YOUR NUMBER

Fax #:

E-mail: YOUR EMAIL

About Status and Shipping

*Status: Reference Initiated

*Shipping Method: Standard (billed)

Shipping Carrier:

Shipping Account #:

Comments:

- After selecting general reference complete the form with information regarding your records. Ensure you click “whole container” when completing this section.

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Home Records Transfers Reference Requests User Administration Agency Profile

Reports

About the Request

*Reference Request #: 0000-0000-0000

*Record Group: 351

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First Name: YOUR FIRST NAME

*Nature of Service: Temporary Loan of Recon

*Service Level: NEVER CLICK ME

About the Records

Request Category: General Reference

Records Transfer #:

Container #:

Case/File Information:

Whole Container: ☒

of Units: 1

Security Classification:

Security Level:

Charge Account:

*Stored At: FRC - WNRC (Suitland)

About the Recipient

*Recipient Name: YOUR NAME

*Address Line 1: YOUR ADDRESS

Address Line 2:

City: WASHINGTON

State: DC

Zip Code: 20001

Country:

Phone #: YOUR NUMBER

Fax #:

E-mail: YOUR EMAIL

About Status and Shipping

*Status: Reference Initiated

*Shipping Method: Standard (billed)

Shipping Carrier:

Shipping Account #:

Comments:

- Under shipping method, please select “Customer Pick Up”

THE NATIONAL ARCHIVES Archives.gov Home

Home | Records Transfers | Reference Requests | User Administration | Agency Profile

Reports

About the Request	About the Records	About the Recipient	About Status and Shipping
<p>★ Reference Request #: 0000-0000-0000</p> <p>★ Record Group: 351</p> <p>Agency: District of Columbia Government</p> <p>★ Last Name: YOUR LAST NAME</p> <p>First Name: YOUR FIRST NAME</p> <p>★ Nature of Service: Temporary Loan of Recon</p> <p>★ Service Level: NEVER CLICK ME</p>	<p>Request Category: General Reference</p> <p>Records Transfer #: ?</p> <p>Container #:</p> <p>Case/File Information:</p> <p>Whole Container: <input type="checkbox"/></p> <p># of Units: 1</p> <p>Security Classification:</p> <p>Security Level:</p> <p>Charge Account:</p> <p>★ Stored At: FRC - WNRC (Suitland)</p>	<p>★ Recipient Name YOUR NAME</p> <p>★ Address Line 1 YOUR ADDRESS</p> <p>Address Line 2</p> <p>City WASHINGTON</p> <p>State DC</p> <p>Zip Code 20001</p> <p>Country</p> <p>Phone # YOUR NUMBER</p> <p>Fax #</p> <p>E-mail YOUR EMAIL</p>	<p>★ Status: Reference Initiated</p> <p>★ Shipping Method: Customer Pick-up</p> <p>Shipping Carrier:</p> <p>Shipping Account #:</p>

Comments:

- **DO NOT** submit an emergency request. All requests are generally ready for pick up within 24 hours of submission.

- Once completed select “Continue” at the bottom of the page to submit your request

★ Record Group:
351

Agency:
District of Columbia Government

★ Last Name:
YOUR LAST NAME

First Name:
YOUR FIRST NAME

★ Nature of Service:
Temporary Loan of Recon

★ Service Level:
NEVER CLICK ME

Records Transfer #:
?

Container #:

Case/File Information:

Whole Container:
☐

of Units:
1

Security Classification:

Security Level:

Charge Account:

★ Stored At:
FRC - WNRC (Suitland)

★ Address Line 1
1300 NAYLOR COURT, N

Address Line 2

City
WASHINGTON

State
DC

Zip Code
20001

Country

Phone #
YOUR NUMBER

Fax #

E-mail
YOUR EMAIL

★ Shipping Method:
Customer Pick-up

Shipping Carrier:

Shipping Account #:

Comments:

Save and Finish Later Go Back Continue Help

Contact ARCIS

- To check the status of your request

- Log into ARCIS and click “Reference Requests” on the menu at the top of the screen.

THE NATIONAL ARCHIVES Archives.gov Home

Home Records Transfers **Reference Requests** User Administration Agency Profile

Reports

Welcome, LOPEZ MATTHEWS from the District of Columbia Government.
Today is Tuesday, January 24, 2023. Please verify that your profile is current.

ARCIS Online

Message from ARCIS
Contact ARCIS Support at arcishelp@nara.gov with any questions or problems.
All Federal Records Centers have resumed regular operations. Please refer to the FRC Operating Status webpage <https://www.archives.gov/coronavirus> for updates or contact your Account Manager with any questions. [Click on the Emergency Contact link below as needed.](#)
[Click here for Emergency Contact Information.](#)

ARCIS Help
• Contact the ARCIS Help Desk
• Get ARCIS Training

ARCIS News and Information
• General ARCIS News and Information
• About ARCIS
• FRC Information

About the Federal Records Centers
• Records Center Locations

Archives.gov Home Contact Us Privacy Policy Accessibility Freedom of Information Act

- Click “FRC Workspace”

THE NATIONAL ARCHIVES Archives.gov Home

Home Records Transfers **Reference Requests** User Administration Agency Profile

Reports

Reference Requests I Created

My Workspace
Create reference requests; edit the requests you created.

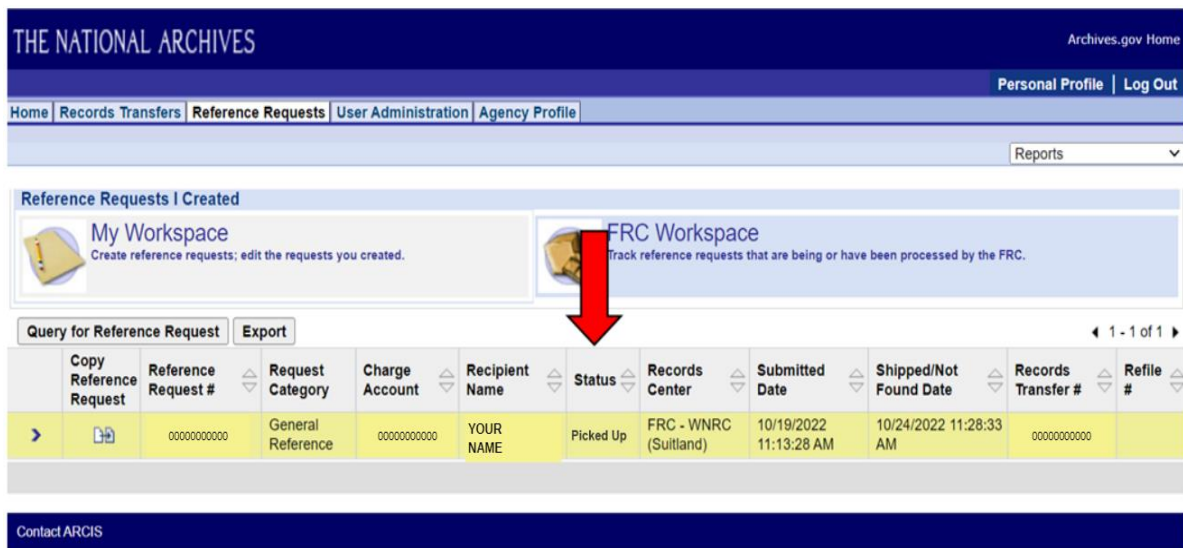
FRC Workspace
Track reference requests that are being or have been processed by the FRC.

Create Reference Request Query for Reference Request Export

Copy Reference Request	Reference Request #	Request Category	Charge Account	Recipient Name	Status	Records Center	Submitted Date	Records Transfer #
No Records								

Contact ARCIS

- Once there you will see the status of your submissions. When ready it will state “Ready for Pickup”



THE NATIONAL ARCHIVES Archives.gov Home

Personal Profile | Log Out

Home | Records Transfers | **Reference Requests** | User Administration | Agency Profile

Reports

Reference Requests I Created

My Workspace
Create reference requests; edit the requests you created.

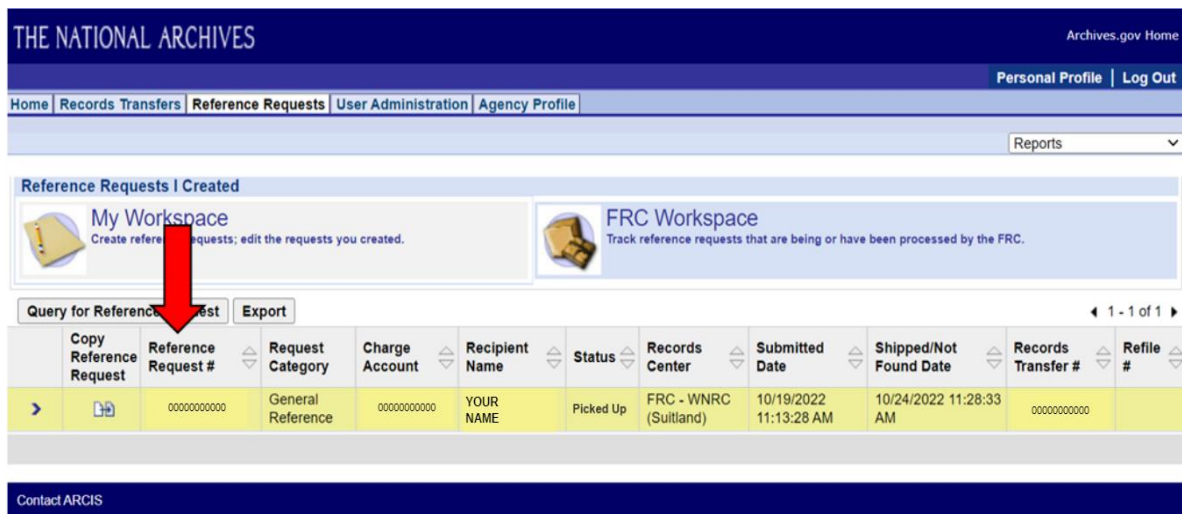
FRC Workspace
Track reference requests that are being or have been processed by the FRC.

Query for Reference Request | Export

Copy Reference Request	Reference Request #	Request Category	Charge Account	Recipient Name	Status	Records Center	Submitted Date	Shipped/Not Found Date	Records Transfer #	Refile #
>	000000000000	General Reference	000000000000	YOUR NAME	Picked Up	FRC - WNRC (Sultland)	10/19/2022 11:13:28 AM	10/24/2022 11:28:33 AM	000000000000	

Contact ARCIS

- If more information is needed, you can click the reference request number to view more information



THE NATIONAL ARCHIVES Archives.gov Home

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Home | Records Transfers | **Reference Requests** | User Administration | Agency Profile

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FRC Workspace
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>	000000000000	General Reference	000000000000	YOUR NAME	Picked Up	FRC - WNRC (Sultland)	10/19/2022 11:13:28 AM	10/24/2022 11:28:33 AM	000000000000	

Contact ARCIS

For issues or questions, be sure to reach out to your designated OPR Records Specialist for assistance.

CHAPTER V: ELECTRONIC RECORDS AND DIGITIZATION

The Importance of Electronic Records and Born Digital Files

Today, many of the records created by District government agencies are in an electronic format. These records are as important as their physical copies. Often electronic records are more fragile than their physical counterparts and are more easily lost or destroyed. They are also more easily manipulated so processes must be put in place to protect the integrity of the electronic records created and maintained by your agency.

An electronic record is any information created, used and retained in a form that only a computer can process. Examples of electronic records include: emails, websites, Word/Excel documents, digital purchase receipts, databases, text messages, social media postings, and information stored on SharePoint sites and content management systems (Catalyst, Slack, DropBox, etc.).

Metadata:

What is Metadata?

Metadata is critical for preserving and maintaining digital files. Metadata is defined as the data providing information about one or more aspects of the data; it is used to summarize basic information about data that can make tracking and working with specific data easier. It does not describe the content of the files.

There are three main types of metadata: descriptive, administrative, and structural.

- Descriptive metadata enables discovery, identification, and selection of resources. It can include elements such as title, author, and subjects.
- Administrative metadata facilitates the management of resources. It can include elements such as technical, preservation, rights, and use.
- Structural metadata, generally used in electronic records processing, describes relationships among various parts of a resource, such as chapters in a book.

Creating Your Metadata

The metadata will be how you track and locate the documents stored on your cloud drive and in the OPR Digital Preservation System. The Office of Public Records has developed a metadata gathering template for use in tracking your digital files. There are several international standards

for metadata. The Office of Public Records uses “Dublin Core” for its metadata standards.

Electronic File Names and Identifiers:

To maintain control of your electronic records, you need to establish a naming convention for your files. This naming convention should be based on the series and arrangement found on your agency records schedule. Each series on your records schedule contains a series number, and a description of the organization of the files.

Best practices for naming your electronic files for records preservation are as follows:

- General Rules:
 - Use hyphens, not spaces, in the file name
 - Example: OAG-DRI-Report-9883-201908140-DRAFT.docx
 - Include the date in the file name using the YYYYMMDD format
 - Example: OPR-LGI-PublicationReport-20171015.pdf
 - When referring to locations use official designated two-character abbreviations
 - Example: WMATA-DC-MD-VA-StatusReports-20160423.pdf
- All files are arranged in folders according to the record series number.
 - Example: X:\files\13\

An example from the Department of For Hire Vehicles Records Schedule is below:

Example #1:

Series #	Records Series Description	Total Retention	Years in Office	Remaining Retention in Records Center
14	<p>Hearing Case Files (General Counsel) This record documents cases brought before the administrative court of the agency, to address complaints against drivers and vehicle inspection officers. The record may include but is not limited to documentation of negotiations, correspondence, testimonies, transcripts, drafts settlement agreements, adjudicatory petitions, responses to motions, briefs, orders, and appeals. These records are organized by last name/first name of claimant.</p> <p>Restrictions: PII Media: Paper/Electronic (DFHV Secured Network Drive) Temporary: Records close upon final determination, exhaustion of all appeals or satisfaction of resolution requirements, whichever is later. Records cut off at the end of the calendar year. Retain the record for 5 years after cut off and then transfer to the Record Center for 7 years.</p>	Temporary 12 Years	5 Years An electronic copy maybe retained in the agency for a period not to exceed total retention.	7 Years

In this example, we will use the claimant “John Doe.” Doe’s case was heard on October 16, 2019. The File name developed based on the rules would be:

- Doe-John-20191016.pdf

It would then be maintained using the following file structure based on the series #:

- X:\DFHV\files\14\

Example #2

Series #	Records Series Description	Total Retention	Years in Office	Remaining Retention in Records Center
8	Organization Files (Executive Staff) Organizational Charts and reorganization studies that define descriptions of the arrangement and administrative structure of the functional units within the agency. Organized by date. Media: Paper / Electronic (Secure agency network) Permanent: Records close when the version is superseded or becomes obsolete; and cut off at the end of the corresponding Mayor’s administration. Records are transferred within 30 days of cut off to the Record Center for retention and will be transferred to the DC Archives after 4 years.	Permanent	None	4 Years

In this example, the files are organizational files organized by date. For this example, the record is an organizational chart from May 2014. In this case, the file name would be:

- 20140518-organizational-chart.docx

It would then be maintained using the following file structure based on the series #:

- X:\DFHV\files\8\

Record Identifier

The record identifier is a unique automatic identifier assigned to every record. This identifier is used to track the files of an agency. It is independent of the file name generated at the item level. The naming convention for digital assets should be: (AGENCY ACRONYM)_(SERIES #)_ID NUMBER

Example: Using the Department of For Hire Vehicles Records Schedule as an example, we will develop records identifiers. We will use the same records series.

Series #	Records Series Description	Total Retention	Years in Office	Remaining Retention in Records Center
14	<p>Hearing Case Files (General Counsel) This record documents cases brought before the administrative court of the agency, to address complaints against drivers and vehicle inspection officers. The record may include but is not limited to documentation of negotiations, correspondence, testimonies, transcripts, drafts settlement agreements, adjudicatory petitions, responses to motions, briefs, orders, and appeals. These records are organized by last name/first name of claimant.</p> <p>Restrictions: PII</p> <p>Media: Paper/Electronic (DFHV Secured Network Drive)</p> <p>Temporary: Records close upon final determination, exhaustion of all appeals or satisfaction of resolution requirements, whichever is later. Records cut off at the end of the calendar year. Retain the record for 5 years after cut off and then transfer to the Record Center for 7 years.</p>	Temporary 12 Years	<p>5 Years</p> <p>An electronic copy maybe retained in the agency for a period not to exceed total retention.</p>	7 Years

In our previous example we created the filename for “John Doe” (Filename: Doe-John-20191016.pdf)

- John Doe’s Case file is the 8765th record to be added to the Series #14 electronic archive folder. Therefore, the record identifier is:
 - DFHV_14_008765
 - (AGENCY ACRONYM)_(SERIES #)_ID NUMBER
- The next case file added to the list would be DFHV_14_008766, then 008767 and so on.

The record identifier is the permanent Identifier for the file in the records management system. Filenames can be updated; the locations of saved files may change but the record identifier that follows that file should not change.

Required Metadata Collection Fields

For the collection of proper metadata OPR requires the following fields for all files:

- Record Identifier
 - Unique identifier automatically generated based on the agency
- File Name
 - Unique Identifier generated based on the records schedule
- Series #

- Subject grouping based on records schedule
- Title
 - The name of the file
- Creator
 - Individual responsible for developing the document or file
- Date Created
 - The date of the document's creation
- Date Last Modified
 - The date the file was last modified
- Abstract/Description
 - A description of the contents of the document or file
- Document type
 - Description of the type of record contained in the file. This could be a report, correspondence, chart, presentation, etc.
- File Format
 - The format in which the file has been saved. This could include the word document type DOC or DOCX, PDF, JPEG for images, etc.
- Restrictions
 - Is the file restricted or unrestricted
- Disposition
 - Identify whether the records are temporary or permanent
- Related Items (If applicable)
 - Note if any files are related to the document. In this field please include either filename or record identifier.
- Coverage (If applicable)

- Please use this field if the geographic location covered by the record is outside of the District of Columbia

A copy of the metadata collection template can be found on the OPR Records Manager website.

[illegible]

Image of the OPR Record Metadata Template

For a full description of the Metadata fields, please refer to *Appendix D: Using Dublin Core – The Elements*.

Digitization:

Digitization is the process of reformatting physical documents into digital form. In most cases, digitization is carried out for the purpose of ease of access. Storing a physical document electronically allows for information to be found and shared more easily than physical records. Many agencies, corporations and cultural heritage institutions are beginning to digitize their documents. It must be noted that digitization is not an appropriate process for destroying permanent records. It can be used for the destruction of temporary records if completed to digitization standards.

Digitization Standards:

OPR uses the Federal Agencies Digital Guidelines Initiative (FADGI) Technical standards as the standard for all digital projects. These standards were developed through a collaboration between federal agencies “to articulate common sustainable practices and guidelines for digitized and born digital historical, archival and cultural content.” A copy of the latest FADGI Guidelines is available on the OPR Records Management Support Guide.

Approval Process for Agency Digitization Projects:

Digitization projects require approval from OPR before they can begin. The process for requesting approval of a digitization project is detailed below:

- Step 1: The agency identifies records that they would like to digitize and completes the digitization project request form.
- Step 2: The agency and OPR meet to discuss the project and digitization requirements.
- Step 3: Agency seeks out vendors to complete the project or develops a strategy for in house digitization. OPR will provide support and consultation.
- Step 4: Final disposition: At the end of the digitization project, preservation copies of all files should be submitted to the OPR digital preservation system.

A Copy of the OPR Digitization and Digital Asset Management Policy can be found in Appendix B.

CHAPTER VI: PROTECTION OF ESSENTIAL RECORDS

Records essential to the continued functioning or reconstitution of an organization during and after an emergency and those records essential to protecting the rights and interests of the government and of the individuals directly affected by its activities, may be vital records as defined by District of Columbia Law. In coordination with the Homeland Security and Emergency Management Agency, OPR works to ensure the protection of essential records to ensure continuity of service.

The Administrator establishes and issues guidelines, standards, and instructions to identify essential records and provide for their security and preservation.

- Each agency establishes an essential records program in accordance with directives and instructions issued by the Administrator.
- The Administrator provides storage and protection for essential records or duplicate copies of essential records in a secure depository.

Cloud based off-site data storage protects computer-based files from such threats of destruction as temperature and humidity changes, accidental erasure, fire, explosion, accidental loss, theft, disgruntled employee action, flood or water damage, and magnetic disruption. Information that is vital to the District government, such as tax records, is protected in a secure location from the primary site of business. OPR contracts with a digital preservation system to provide this service.

Disaster Prevention Tips

Disaster prevention is everyone's responsibility. As records managers, you are the first line of defense in ensuring the preservation of government records. Resources to support disaster planning can be found on our OPR Records Management Online Guide. It can be accessed directly at <https://opr.dc.gov/recordsmanagement/disasterplanning>

The following tips were developed by the University of Washington. They are being provided as a guide to support your work in storing and preserving government records.

Disaster Prevention

By the University of Washington

Protective measures can be used on a daily basis to protect not only the Vital Records in your office, but all other records as well. These measures need to be followed regularly and evaluated to ensure that you are providing an appropriate level of protection for your records. Listed below are some general preventative tips for various types of disasters as well as a discussion of media formats.

Preventive Measures

General

- Reduce the use of fiber- or felt-tip marking pens for the creation of records unless you are certain they are not water-soluble. Handwritten entries in logbooks or other records that have long-term or historical value should be made in permanent ink to prevent loss of information through water damage.
- Follow approved retention periods for records to ensure the timely destruction/deletion of obsolete records, thus decreasing the amount of records in your office.

Fire

- Do not store records with chemicals, cleaning supplies, etc. Store flammable and combustible materials in a safe, cool place, out of sunlight and inside cabinets made specifically to store hazardous materials.
- Do not store records by a furnace, radiator, lights, or heaters. Ensure that electrical appliances are operated at a safe distance from flammable materials, and they are turned off when not in use. Comply with all local fire, electrical, plumbing, heating, and construction codes.

Water

- Locate all your drains and have them checked regularly.
- Regularly inspect the sprinkler system and water pipes. Check the general condition of the storage site to determine if the area is susceptible to flooding, if the building has structural defects, maintenance issues, is developing leaks, etc.
- Try not to store records directly on the floor, especially in carpeted areas. (Carpets may retain water and prevent drainage, thus creating a problem later when trying to stabilize the temperature and humidity of area).
- Try not to store records in areas that have exposed sewer pipes (to cut down on the threat

of leakage).

Theft/hacking

- Identify and inform staff responsible for locking windows and doors at closing time.
- Strict control of all building keys/codes, with locks changed when keys/codes are lost.
- Strict supervision of non-staff who enter the building, including cleaners and maintenance workers.
- Provide password-limited access to computer systems.

Animal/Insect Invasion

- Conduct a building inspection to identify and block all potential points of animal entry.
- Place strong, fine mesh screening over all necessary openings - such as windows or skylights, ventilators, chimneys and screened doors for all external doorways.
- Regular and thorough cleaning of ceilings, walls, floors and all furniture.

Specific Media Formats

Electronic

- Store systems off the ground to avoid damage in the case of a flood.
- Provide password-limited access to computer systems.
- Use a cloud service that aligns with the privacy requirements of your department. The only cloud-based service at UW that is both HIPAA and FERPA compliant is OneDrive for Business, which can be accessed by anyone with an active NetID. Check with your local IT or UW-IT for their storage recommendations, policies, and guidelines.
- Use virus protection. UW faculty, staff, students, researchers, clinicians, and those at Harborview Medical Center have free access to Sophos Endpoint through the university.

Paper

- Keep paper records in file cabinets or drawers when not in use.
- Consider creating a unique way to identify filing cabinets that hold Vital Records.

Photographs and negatives (including aerial photos)

- Store negatives and photographs separately.
- Do not expose photographs or negatives to direct sunlight.
- Use cotton gloves when handling original photos and negatives.
- Store in cool dry place away from overhead steam or water pipes, washrooms, or other sources of water. When not in use, store photos and negatives in individual paper or plastic enclosures (polyester, polyethylene, or polypropylene).
- Do not use manila envelopes, glassine envelopes, polyvinylchloride, rubber bands, paper

clips, bulldog clips, ACCO fasteners, etc.

- Never write on the back of a photograph with anything but a pencil.

Maps (including architectural drawings and cartographic items)

- Avoid storing maps and drawings rolled or folded. Optimal storage condition is in a flat shallow drawer map case. Store large, heavy atlases and other bound volumes of maps or drawings flat to reduce the amount of stress placed on the spine.
- Material should be placed inside acid free folders for added protection.
- Do not laminate oversized records. The process is difficult to reverse without damage to the records and has been replaced by other preservation, storage, and treatment options.
- Encapsulate old or fragile maps in clear stable plastic.

APPENDIX A - SAMPLE OF -11

REFERENCE REQUEST – D.C. RECORDS CENTER			NOTE: Use a separate form for each request		
Section I – To Be Completed By Requesting Agency					
Record Group No.	Accession No.	Agency Box Number	Records Locations Number		
009	009-15-007	6	2-1-23-6-9		
Description of Record(s) or information requested (include file number and title)					
BOX: 6					
FOLDER: 7 – Doe, John					
Remarks					
Nature of Service					
<input type="checkbox"/> Furnished Copy of Records ONLY <input type="checkbox"/> Permanent Withdrawal <input checked="" type="checkbox"/> Temporary Loan of Records <input type="checkbox"/> Review <input type="checkbox"/> Other					
Name of Requester Records Officer	Telephone No.	Date	Receipt of Records		
Johnathan Doe	202-555-5555	02-30-2022			
Name and Address → Johnathan Doe Department of Records Requester 8756 4 th Street, NW Washington, DC 20001		Requester please sign, date, and return form for file item(s) listed above,			
		Signature		Date	
Section II – For Use By Records Center					
<input type="checkbox"/> Records not in Center Custody <input type="checkbox"/> Wrong Box Number – Please recheck <input type="checkbox"/> Additional information required to identify records <input type="checkbox"/> Missing (neither record(s), information nor charge card found in container) <input type="checkbox"/> Records Destroyed		Remarks			
		Date	Service	Time Required	Searcher's Initials

APPENDIX B: LONG TERM DIGITAL PRESERVATION GUIDELINES



Office of Public Records Long Term Digital Preservation Guidelines

Purpose

The Office of Public Records (OPR) Digital Preservation Guidelines establishes a framework for long term maintenance and sustainable access to digital content and media. The goal is the development of a reliable digital preservation program that adheres to standards and best practices to ensure the OPR's success in providing long-term access to our digital collections. In this context, long-term means a period of time long enough for there to be concern about the impacts of changing technologies, including support for new media and data formats, on the information being held in a repository. This period extends into the indefinite future. To ensure the effectiveness of the digital preservation strategy, it is incumbent upon all key players to work together to ensure the health and maintenance of digital content. This is particularly important due to the higher risk of loss associated with digital content. Risks include obsolescence of file formats, software, and hardware. Risks associated with the effects of viruses and file corruption must also be mitigated.

SCOPE

These guidelines address all aspects of preservation of digital content and media for which OPR is the primary custodian. It is recommended that District agencies follow these guidelines as necessary. As such, these guidelines will cover the maintenance and long-term preservation of digitized and born digital content.

BASIC PRESERVATION ACTIVITIES

The following guidelines will be followed to ensure the accessibility and sustainability of both born digital and digitized content.

Criteria of file to ensure sustainability:

- Is in a format that is publicly documented (example: wav);
- Is in a format that is widely adopted (example: pdf);
- Is in a format that may be rendered by multiple software packages (example: txt);
- Is in a format that has lossless data compression (example: uncompressed tiff files); and
- Contains no embedded files or dynamic content (example: txt).

Actions:

- Technology conservation: maintaining obsolete hardware and software as a means of access in the short to medium term;
- Refreshing: copying information content from one storage media to the same storage media;
- Migration: transferring digital resources from one hardware/software generation to another (most likely due to format obsolescence);

- Persistent identifiers: the name for a resource that will remain the same regardless of the resource's location, so that links to the resource will continue to work, even if it is moved
- Preservation: Select the most appropriate and cost-effective strategy for the preservation of the digital object; and
- Basic preservation including:
 - bitstream maintenance
 - persistent, permanent identifier
 - preservation metadata
 - onsite and offsite backup copies
 - regular file corruption checks; and periodic refreshments to new storage media.

FILE FORMAT RECOMMENDATIONS

[Simplified Guidelines/File format recommendations:](#)

- **Audio** — Highly recommended: AIFF (.aif, .aiff) or WAV (.wav). Moderately recommended: MP3 (.mp3), AAC (.mp4, .mp4a, .aac), FLAC (.flac) or ALAC (.m4a).
- **Video** — Highly recommended: Uncompressed Quicktime Movie (.mov); uncompressed AVI (.avi). Moderately recommended: MPEG-1, MPEG-2 or MPEG-4 encoded video (.avi, .mpg, .mpeg, .mov, .mkv, .mp4).
- **Virtual Reality/3D** — Highly recommended: X3D (*.x3d). Please talk with the Digital Librarian to determine best output settings and format.
- **Image** - Highly recommended: Full color images @ 600dpi or higher saved as JPEG2000 Lossless (.jp2) or TIFF 24-bit, uncompressed (.tif, .tiff). Moderately recommended: lossy compressed formats limited to JPEG (.jpg, .jpeg), JPEG2000 (.jp2), TIFF (.tif, .tiff), or PNG (.png) at highest quality possible.
- **Text** - Highly recommended: Open Document Text (.odt), UTF-8 Unicode text (.txt), or PDF/A (.pdf). Moderately recommended: Rich Text Format (.rtf).
- **Presentation** - Highly recommended: Open Document Presentation (.odp). Moderately recommended: PDF/A (.pdf) for images only.
- **Spreadsheet** - Highly recommended: Open Document Spreadsheet (.ods). Moderately recommended: Comma separated value CSV (.csv) or Tab-delimited text file (.txt).

METADATA GUIDELINES

Guidelines for maintained electronic records information:

What is Metadata?

Metadata is critical for preserving and maintaining digital files. Metadata is defined as the data providing information about one or more aspects of the data; it is used to summarize basic information about data that can make tracking and working with specific data easier. It does not describe the content of the files.

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An example from the Department of For Hire Vehicles Records Schedule is below:

Example #1:

Series #	Records Series Description	Total Retention	Years in Office	Remaining Retention in Records Center
14	<p>Hearing Case Files (General Counsel) This record documents cases brought before the administrative court of the agency, to address complaints against drivers and vehicle inspection officers. The record may include but is not limited to documentation of negotiations, correspondence, testimonies, transcripts, drafts settlement agreements, adjudicatory petitions, responses to motions, briefs, orders, and appeals. These records are organized by last name/first name of claimant.</p> <p>Restrictions: PII</p> <p>Media: Paper/Electronic (DFHV Secured Network Drive)</p> <p>Temporary: Records close upon final determination, exhaustion of all appeals or satisfaction of resolution requirements, whichever is later. Records cut off at the end of the calendar year. Retain the record for 5 years after cut off and then transfer to the Record Center for 7 years.</p>	Temporary 12 Years	<p>5 Years</p> <p>An electronic copy maybe retained in the agency for a period not to exceed total retention.</p>	7 Years

In this example, we will use the claimant “John Doe.” Doe’s case was heard on October 16, 2019. The File name developed based on the rules would be:

- Doe-John-20191016.pdf

It would then be maintained using the following file structure based on the series #:

- X:\DFHV\files\14\

Example #2

Series #	Records Series Description	Total Retention	Years in Office	Remaining Retention in Records Center
8	<p>Organization Files (Executive Staff) Organizational Charts and reorganization studies that define descriptions of the arrangement and administrative structure of the functional units within the agency. Organized by date.</p> <p>Media: Paper / Electronic (Secure agency network)</p> <p>Permanent: Records close when the version is superseded or becomes obsolete; and cut off at the end of the corresponding Mayor’s administration. Records are transferred within 30 days of cut off to the Record Center for retention and will be transferred to the DC Archives after 4 years.</p>	Permanent	None	4 Years

In this example, the files are organizational files organized by date. For this example, the record is an organizational chart from May 2014. For this example, the file name would be:

- 20140518-organizational-chart.docx

It would then be maintained using the following file structure based on the series #:

- X:\DFHV\files\8\

Record Identifier:

The record identifier is a unique automatic identifier assigned to every record. This identifier is used to track the files of an agency. It is independent of the file name generated at the item level. The naming convention for digital assets should be: (AGENCY ACRONYM)_(SERIES #)_ID NUMBER

Example: Using the Department of For Hire Vehicles Records Schedule as an example, we will develop records identifiers. We will use the same records series.

Example:

Series #	Records Series Description	Total Retention	Years in Office	Remaining Retention in Records Center
14	<p>Hearing Case Files (General Counsel) This record documents cases brought before the administrative court of the agency, to address complaints against drivers and vehicle inspection officers. The record may include but is not limited to documentation of negotiations, correspondence, testimonies, transcripts, drafts settlement agreements, adjudicatory petitions, responses to motions, briefs, orders, and appeals. These records are organized by last name/first name of claimant.</p> <p>Restrictions: PII</p> <p>Media: Paper/Electronic (DFHV Secured Network Drive)</p> <p>Temporary: Records close upon final determination, exhaustion of all appeals or satisfaction of resolution requirements, whichever is later. Records cut off at the end of the calendar year. Retain the record for 5 years after cut off and then transfer to the Record Center for 7 years.</p>	Temporary 12 Years	<p>5 Years</p> <p>An electronic copy maybe retained in the agency for a period not to exceed total retention.</p>	7 Years

In our previous example we created the filename for “John Doe” (Filename: Doe-John-20191016.pdf)

- John Doe’s Case file is the 8765th record to be added to the Series #14 electronic archive folder. Therefore, the record identifier is:
 - DFHV_14_008765
 - (AGENCY ACRONYM) (SERIES #)_ID NUMBER
- The next case file added to the list would be DFHV_14_008766, then 0087667 and continue on.

The record identifier is the permanent Identifier for the file in the records management system. Filenames can be updated; the locations of saved files may change but the record identifier that follows that file should not change.

Required Metadata Collection Fields:

For the collection of proper metadata OPR requires the following fields for all files:

- Record Identifier
 - Unique identifier automatically generated based on the agency
- File Name
 - Unique Identifier generated based on the records schedule

- Series #
 - Subject grouping based on records schedule
- Title
 - The name of the file
- Creator
 - Individual responsible for developing the document or file
- Date Created
 - The date of the document's creation
- Date Last Modified
 - The date the file was last modified
- Abstract/Description
 - A description of the contents of the document or file
- Document type
 - Description of the type of record contained in the file. This could be a report, correspondence, chart, presentation, etc.
- File Format
 - The format in which the file has been saved. This could include the word document type DOC or DOCX, PDF, JPEG for images, etc.
- Restrictions
 - Is the file restricted or unrestricted
- Disposition
 - Identify whether the records are temporary or permanent
- Related Items (If applicable)
 - Note if any files are related to the document. In this field please include either filename or record identifier.
- Coverage (If applicable)
 - Please use this field if the geographic location covered by the record is outside of the District of Columbia

A copy of the metadata collection template can be found on the OPR Records Manager website.

APPENDIX C:

OFFICE OF PUBLIC RECORDS DIGITIZATION AND DIGITAL ASSET MANAGEMENT POLICY

1. Purpose
2. Principles
3. Background
4. Definitions
5. Roles and Responsibilities
6. Agency Digitization Plans
7. Collaborative Projects
8. Digitization Guidelines

I. PURPOSE

- This policy relates to the creation, management and oversight of digitization projects and activities at the Office of Public Records and Archives (OPR). It also outlines the functions and roles of the OPR Staff which oversees implementation of this policy.

II. PRINCIPLES

- The following principles are the basis for this policy:
 - i. Digitization of the collections and management of the digital assets support the goal of increasing access and the research capabilities of the overall District of Columbia government and its various agencies.
 - ii. Units within the District of Columbia Government are responsible for setting priorities for digitization. However, the Office of Public Records may suggest items for digitization.
 - iii. Digital assets are intended to be usable and accessible to the public.

III. BACKGROUND

The digital program under the Office of the Administrator in the Office of Public Records was established in 2022. The goal of the program was to manage digitization projects within OPR and provide guidance to agencies seeking to digitize their records.

IV. DEFINITIONS

- **Accessibility** - refers to the relative ease with which digital assets are available through technological means to be accessed, shared, exchanged, and otherwise used.
- **Digital asset** - content that is recorded and transferred in a digital format. It may include text, still images, moving images and sound recordings, collections that

are digital (i.e., digital art, research datasets and other types of media originally created in digital format or digitized from another format or state (i.e., a digital surrogate) that are created, stored, or maintained by the DPC. For the purpose of this directive, digital assets also include metadata used to describe the digital asset and its content.

- **Digitization** = a set of processes that converts physical resources to a digital form, or that creates materials in a digital form (born digital). These processes include:
 - i. Identification, selection and prioritization of materials to be digitized;
 - ii. Digital asset creation or conversion;
 - iii. Creation of descriptive and technical metadata sufficient to allow retrieval and management of the digital assets and to provide basic contextual information for the user; and
 - iv. Quality control of digital assets and metadata.
- **Metadata** - the information used to describe the intellectual content as well as the technical properties of a digital asset, such as date/time of creation, subject, restrictions, equipment used, dimensions, location, title or other descriptors. It may be structured (following [Dublin Core metadata](#) standards) in ways that allow easier access and that ensure the asset can be used in the long term.
- **On Demand Digitization** – The scanning of a few documents held by an agency that does not amount to a full scale digitization project.
- **Preservation** - the process of maintaining digital assets in a usable form across time, formats, and media.
- **Project digital asset management plan** - a written plan associated with a digitization project that defines the roles, responsibilities, and processes needed to ensure the systematic attention to a digital asset throughout its life cycle, from creation or collection, through use, preservation and, if appropriate, disposition. The plan addresses aspects such as impact and use, creation and receipt of data, description of data, access issues, preservation for long-term sustainability, and ownership (in an information technology context, these plans may also be referred to as data management plans).

V. ROLES AND RESPONSIBILITIES

- The Administrator is responsible for establishing the Institution's goals to facilitate digitization of OPR resources at the highest standards of excellence, for scholarly research, and educational purposes. The Director may delegate to other staff the responsibility to implement this policy and carry out the direct management of digitization activities.
- The Digital Archivist (or the Administrator) is responsible for ensuring that digitization at OPR is carried out in compliance with this policy through oversight of curator/archivists and by approving unit digitization plans. The Digital Archivist or their delegates may recommend overarching digitization goals for their units, reflecting OPR priorities and programs as a basis for agency digitization plans and digitization goals.
- Agency Records Managers are responsible for ensuring that their agency's digitization activities, including development of unit digitization plans (and their associated progress reports) and project digital asset management plans, are carried out in compliance with this policy, and are attainable with available resources.

Agency Records Managers are the initial approval authority for these plans, and submit them to the OPR for review. Agency Records Managers may delegate authority and assign responsibility for the development of these plans to appropriate unit staff.

VI. AGENCY DIGITIZATION PLANS

- The scope of digitization will be outlined in the Digitization plan. This includes whether the entire collection will be digitized or if the project is subject based and a portion of the collection will be digitized. Each agency's digitization plan will be approved by the Agency Records Manager and submitted to the Office of Public Records for review and final approval. OPR shall provide units with guidance on the development of these plans.

VII. COLLABORATIVE PROJECTS:

- Collaboration with other agency's within the District Government and external parties are welcome and will be handled using the following guidelines:
 - i. All collaborative digitization projects must be approved by the Agency Records Manager and State Archivist and Public Records Administrator.
 - ii. All digitization activities will be handled on site unless an OPR approved third party is contracted.
 - iii. Completed digital assets will be maintained by the OPR and the agency.

VIII. DIGITIZATION GUIDELINES:

- Requirements for all digitization projects:
 - I. Digital Asset Management:
 - a. Digital assets will be maintained in three formats:
 - i. Preservation, Access, Public use:
 - 1. Preservation assets: 600 DPI Tiff or PDF (documents only)
 - 2. Access Assets: 300 DPI JPEG or PDF
 - 3. Public Use: 96 DPI JPEG or PDF
 - ii. Digital Asset Storage – Digital Assets will be stored on hard drives and or Network Drives located in the agency. Electronic copies should also be stored within the OPR Digital Preservation System. Shared drive storage of digitized material is discouraged due to space requirements associated with these types of drives.
 - II. Each file contains a unique identifier

The record identifier is a unique automatic identifier assigned to every record. This identifier is used to track the files of an agency. It is independent of the file name generated at the item level. The naming convention for digital assets should be: (AGENCY ACRONYM)_(SERIES #)_ID NUMBER

Example: Using the Department of For Hire Vehicles Records Schedule as an example,

Example

Series #	Records Series Description	Total Retention	Years in Office	Remaining Retention in Records Center
14	<p>Hearing Case Files (General Counsel) This record documents cases brought before the administrative court of the agency, to address complaints against drivers and vehicle inspection officers. The record may include but is not limited to documentation of negotiations, correspondence, testimonies, transcripts, drafts settlement agreements, adjudicatory petitions, responses to motions, briefs, orders, and appeals. These records are organized by last name/first name of claimant.</p> <p>Restrictions: PII</p> <p>Media: Paper/Electronic (DFHV Secured Network Drive)</p> <p>Temporary: Records close upon final determination, exhaustion of all appeals or satisfaction of resolution requirements, whichever is later. Records cut off at the end of the calendar year. Retain the record for 5 years after cut off and then transfer to the Record Center for 7 years.</p>	Temporary 12 Years	<p>5 Years</p> <p>An electronic copy maybe retained in the agency for a period not to exceed total retention.</p>	7 Years

- John Doe's Case file is the 8765th record to be added to the Series #14 electronic archive folder. Therefore, the record identifier is:
 - DFHV_14_008765
 - (AGENCY ACRONYM)_(SERIES #)_ID NUMBER
- The next case file added to the list would be DFHV_14_008766, then 008767 and continue on.

The record identifier is the permanent Identifier for the file in the records management system. Filenames can be updated; the locations of saved files may change but the record identifier that follows that file should not change.

III. Required Metadata Collection Fields

For the collection of proper metadata OPR requires the following fields for all files:

- Record Identifier
 - Unique identifier automatically generated based on the agency
- File Name
 - Unique Identifier generated based on the records schedule
- Series #
 - Subject grouping based on records schedule
- Title
 - The name of the file
- Creator
 - Individual responsible for developing the document or file
- Date Created
 - The date of the document's creation
- Date Last Modified
 - The date the file was last modified

- Abstract/Description
 - A description of the contents of the document or file
- Document type
 - Description of the type of record contained in the file. This could be a report, correspondence, chart, presentation, etc.
- File Format
 - The format in which the file has been saved. This could include the word document type DOC or DOCX, PDF, JPEG for images, etc.
- Restrictions
 - Is the file restricted or unrestricted
- Disposition
 - Identify whether the records are temporary or permanent
- Related Items (If applicable)
 - Note if any files are related to the document. In this field please include either filename or record identifier.
- Coverage (If applicable)
 - Please use this field if the geographic location covered by the record is outside of the District of Columbia

. ON-DEMAND DIGITIZATION:

- i. At times, there may be on demand requests for digitization. On demand requests require the approval of the Agency Records Manager.
- ii. The price of or if an agency charges for on-demand digitization is at the discretion of the Agency Records Manager but should cover the costs of digitization.
- iii. The disposition of these digital assets will be at the discretion of the Agency Records Manager.

IX. REQUIREMENTS FOR DIGITIZING TEMPORARY RECORDS.

- (a) If an agency intends to digitally reproduce (digitize) temporary records in order to designate the digitized version as the recordkeeping copy and destroy the original source records, the agency must:
 - (1) Digitize the record to meet the following standards:
 - (a) Capture all information contained in the original source records;
 - (b) Include all the pages or parts from the original source records;

(c) Ensure the agency can use the digitized versions for all the purposes the original source records serve, including the ability to attest to transactions and activities;

(d) Protect against unauthorized deletions, additions, or alterations to the digitized versions; and

(e) Ensure the agency can locate, retrieve, access, and use the digitized versions for the records' entire retention period.

(f) Records are digitized at 300 dpi.

(2) Validate the digitization according to the following guidelines:

(a) Agencies must validate that the digitized versions are of suitable quality to replace original source records.

(b) Agencies may establish their own validation process or make use of third-party processes to validate that the digitized versions comply with the above standards. The process may be project-based or agency-wide policy.

(c) Agencies must document the validation process and retain that documentation for the life of the process or the life of any records digitized using that process, whichever is longer.

(d) OPR may review validation documentation as needed.

(b) When the agency designates the digitized version as the recordkeeping copy, the original source record becomes an intermediary record. Agencies may dispose of intermediary records after approval of the request for destruction of temporary records has been submitted and approved by OPR.

X. REQUIREMENTS FOR DIGITIZING MODERN PERMANENT PAPER AND PHOTOGRAPHIC PRINT RECORDS.

This document describes the minimum requirements appropriate for digitizing paper records. Depending on the physical characteristics of the source records, the agency must select the applicable specifications described in either Table 1 to Section I of this document for textual paper records or table 2 to Section II of this document for photographic prints and paper records with fine details. Agencies must implement appropriate equipment, lighting, special handling, or imaging methods to ensure the capture of all information. Agencies may exceed these requirements, if necessary, to capture fine detail or to meet their own business needs.

1. *Image quality parameters.* The performance parameters are based on FADGI three-star aim points and tolerance ranges.
2. *Equipment requirements.* The equipment used to digitize Federal records must be appropriate for the media type, and capable of achieving documented project objectives without damaging the source records.

I. Requirements for digitizing modern textual paper records.

For these records, produce image files at a minimum of 400 ppi sized to the source document.

(1) Records suitable for the specifications in Table 1 for modern textual paper records are modern textual documents with a well-defined printed type (such as typeset, typed, laser-printed) and with moderate to high contrast between the ink of the text and the paper background. Performance metric values in Table 1 for modern textual paper records conform to the FADGI “Documents (Unbound): Modern Textual Records” category and are appropriate when source records do not have visible content with L^* values darker than 20. Neutral reference patches on the evaluation test target with L^* less than 20 are not used for analysis.

(2) For other paper records such as manuscripts, illustrations, graphics, and documents with poor legibility or diffuse characters (such as carbon copies or Thermofax) that have visible content with L^* values darker than 20, agencies must evaluate neutral reference patches on the evaluation test target with L^* greater than 20. (These values equate to FADGI three-star for “Documents (Unbound): General Collections”).

(3) The agency must digitize in an acceptable RGB color mode if records contain color or other characteristics that are necessary to interpret the information of the source record, or that would be lost when digitizing using grayscale gamma 2.2.

(4) At a minimum, the agency must digitize the paper records covered by this paragraph to the following parameters:

Table 1 to Section I—Requirements for Digitizing modern Permanent, Textual Paper Records Table

Digital file specifications	Attributes
Color mode	color or grayscale.
Bit depth	8 or 16.
Color space	gray gamma 2.2, AdobeRGB1998, sRGB, ProPhoto RGB, ECIRGBv2
Resolution (Sampling Frequency) (Units are Pixels Per Inch/ppi minus Reproduction Scale Accuracy)	≥ 294 ppi (400 ppi—2%)
Measurement parameters	Performance metric values Difference from aim (applies to $20 \leq L^* \leq 100$).
Tone Response (OECF) L^* (Units Colorimetric ΔL^*) gray patches that meet the measurement parameters	± 5 .
White Balance (Units Colorimetric $\Delta E(a^*b^*)$) gray patches that meet the measurement parameters	$\leq 4\%$.
Lightness Uniformity (Units Colorimetric—Standard Deviation Divided by Mean L^*)	$\leq 3\%$.
Average Color Accuracy (Units Colorimetric—Mean ΔE 2000—for patches meeting the measurement parameters)	≤ 3.5 .

Color Accuracy 90th Percentile (Units Colorimetric—2.5 times average deviation for patches meeting the measurement parameters)	≤ 8.75 .
Color Channel Misregistration (Units Pixels)	< 0.5 pixel.
SFR 10 (Sampling Efficiency) (Measurement is a Ratio %)	$>80\%$.
MTF50 (50% SFR) (Percentage of Half Sampling Frequency) [Lower, Upper]	Percentage of half sampling frequency: [$>40\%$, $<75\%$].
Reproduction Scale Accuracy (Units % Difference from Header PPI)	$<\pm 2\%$.
Sharpening (Units Max Modulation)	< 1.1 .
Noise (Upper Limit) (Units Std Dev of L*)	≤ 2 .
Noise (Warning Limit) (Units Std Dev of L*)	$\geq .25$.

II. Requirements for digitizing photographic prints and paper records that have fine details.

Records that have fine detail, require a high degree of color accuracy, or have other unique characteristics must be captured using the specifications in Table 2 of this section for photographic prints and paper records with fine details. For these records, produce image files (as described table 2) at a minimum of 600 ppi sized to the source document (these performance values equate to FADGI three-star category “Prints and Photographs”). It may be necessary to apply a higher resolution than the minimum for some records that have fine detail.

1. These specifications apply to records such as photographic prints, graphic-arts prints (for example, lithographs or intaglio), drawings, embossed seals, and records that have information that cannot be captured by the parameters in table 1 to Section I of this section for modern textual paper records.
 - i. For records in which the smallest significant detail is 1.0 mm or smaller, such as aerial photographs and topographic maps (which require a high degree of enlargement and precision to ensure the dimensional accuracy of the scans), the agency must increase the resolution to capture all the information in the source record.
 - ii. For many imaging devices, increasing the ppi settings may not increase the actual resolution level or capture the desired detail. The equipment for digitizing records with fine detail must be capable of meeting the higher quality parameters. It may be necessary to exceed the parameters in table 2 to capture all the information inherent in the records.
- b. The agency must digitize photographic prints, including monochrome and black and white, using a color mode.

- c. The agency must digitize in an acceptable color mode if records contain color or other characteristics that are necessary to interpret the information of the source record, or that would be lost when digitizing using grayscale gamma 2.2.
- d. At a minimum, agencies must digitize all records covered by this paragraph to the following parameters:

Table 2 Section II —Requirements for Digitizing Permanent, Photographic Print Records and Paper Records That Have Fine Details

Digital file specifications	Attributes
Color mode	color or grayscale.
Bit depth	8 or 16.
Color space	Gray gamma 2.2, AdobeRGB1998, ProPhoto RGB, ECIRGBv2.
Resolution (Sampling Frequency) (Units are Pixels Per Inch/ppi minus Reproduction Scale Accuracy)	≥ 392 ppi (400 ppi—2%).
Measurement parameters	Performance metric values
Tone Response (OECF) L^* (Units Colorimetric ΔL_{2000}^*) for any given gray patch	± 4 .
White Balance (Units Colorimetric $\Delta E(a^*b^*)$) for any given gray patch	≤ 4 .
Lightness Uniformity (Units Colorimetric — Standard Deviation Divided by Mean)	$< 3\%$.
Average Color Accuracy (Units Colorimetric— Mean ΔE_{2000} —average deviation of all patches)	< 3.5 .
Color Accuracy 90th Percentile (Units Colorimetric—2.5 times average deviation of all patches)	< 8.75 .
Color Channel Misregistration (Units Pixels)	< 0.5 pixel.
SFR10 (Sampling Efficiency) (Measurement is a Ratio %)	80%.
SFR50 (50% SFR) (Units Percentage of Half Sampling Frequency) [Lower, Upper]	Percentage of half sampling frequency: [$> 40\%$, $< 75\%$].
Reproduction Scale Accuracy (Units % Difference from Header PPI)	$< \pm 2\%$.
Sharpening (Units Max Modulation)	< 1.1 .
Noise (Upper Limit) (Units Std Dev of L^*)	< 2 .
Noise (Lower Limit) (Units Std Dev of L^*)—A warning should be raised if the image doesn't meet this criteria	$\geq .25$.

III. Requirements for digitizing permanent mixed-media records

Mixed-media files are records that belong together or relate to a common topic and are stored on more than one media type. Mixed-media files result from the processes agencies use to create, maintain, and use records. For example, a case file may include paper records, online digital records, and digital records on storage media.

For any non-paper media, agencies must analyze the contents to determine whether any files are records.

- (1) If the media contains records that are temporary, manage them according to their appropriate GRS or agency-specific records authority.
- (2) If the media contains records that are permanent, but not part of the digitized record series, locate their disposition schedule and capture them in a digital information system that complies with the requirements
- (3) If the media contains born-digital components of mixed-media files that are related to the digitized records series, capture the born-digital records in a recordkeeping system in accordance with OPR's Long Term Digital Preservation Guidelines and associate the born-digital records with any related records once they are digitized using the "Relation" metadata elements in your metadata spreadsheet.
- (4) If they are permanent records stored on a media type that is out of scope for this subpart, document this information according to the instructions in the Digitization and Digital Asset Management Policy. Agencies must maintain the association between records using the "Relation" metadata element.

XI. REQUIREMENTS FOR DIGITIZING BOUND AND UNBOUND HISTORIC DOCUMENTS

By utilizing these guidelines and the information contained in this document, it is possible to have a cultural heritage imaging common language and to create industry-wide standardized output. These guidelines do not claim to be a how-to guide, because we recognize that there are often multiple methods for achieving a single outcome. Recommending a single method would stifle potential innovation in the field. The previous sections describe the requirements for the desired end result; the subsequent sections describe the specifics needed to achieve the various FADGI star ratings.

Bound Volumes: Rare and Special Materials

Performance Level:	1-Star	2-Star	3-Star	4-Star
Master File Format		TIFF, JPEG 2000, PDF/A	TIFF, JPEG 2000, PDF/A	TIFF, JPEG 2000, PDF/A
Access File Formats		All	All	All
Resolution (Sampling Frequency) (Units are Pixels Per Inch/ppi minus Reproduction Scale Accuracy)		≥ 242.5ppi (250 ppi – 3%)	≥ 294ppi (300 ppi – 2%)	≥ 396 ppi (400 ppi – 1%)

Bit Depth		8	8 or 16	16
Color Space		Adobe RGB (1998), ProPhoto, ECIRGB_v2	Adobe RGB (1998), ProPhoto, ECIRGB_v2	Adobe RGB (1998), ProPhoto, ECIRGB_v2
Color Mode		Color	Color	Color
Measurement Parameters				
Tone Response (OECF) L* (Units Colorimetric $\Delta L2000^*$) for any given gray patch		≤ 4.5	≤ 3	≤ 1.5
Gain Modulation Highlight Patches (average L* between 95 and 85)		Gain between 0.6 and 1.3	Gain between 0.7 and 1.2	Gain between 0.8 and 1.1
Gain Modulation all other patches		Gain between 0.3 and 1.6	Gain between 0.6 and 1.4	Gain between 0.7 and 1.3
White Balance (Units Colorimetric $\Delta E(a*b^*)$) for any given gray patch		≤ 6	≤ 4	≤ 2
Lightness Uniformity (Units Colorimetric – Standard Deviation Divided by Mean L*)		$\leq 5\%$	$\leq 3\%$	$\leq 1\%$
Average Color Accuracy (Units Colorimetric – Mean $\Delta E2000$ – average deviation of all patches)		≤ 5	≤ 3.5	≤ 2
Color Accuracy 90 th Percentile (Units Colorimetric – $\Delta E2000$ of all patches)		≤ 10	≤ 7	≤ 4
Color Channel Misregistration (Units Pixels)		≤ 0.8 pixel	≤ 0.5 pixel	≤ 0.33 pixel

SFR10 (Sampling Efficiency) (Measurement is a Ratio %)		$\geq 70\%$	$\geq 80\%$	$\geq 90\%$
SFR Response at Nyquist Frequency (Units Modulation)		< 0.4	< 0.3	< 0.2
SFR50 (50% SFR) (Units Percentage of Half Sampling Frequency) [Lower, Upper]		Percentage of half sampling frequency: [$>35\%$, $<85\%$]	Percentage of half sampling frequency: [$>40\%$, $<75\%$]	Percentage of half sampling frequency: [$>45\%$, $<65\%$]
Reproduction Scale Accuracy (Units % Difference from Header PPI)		$< \pm 3\%$	$< \pm 2\%$	$< \pm 1\%$
Sharpening (Units Max Modulation)		< 1.1	< 1.05	≤ 1.02
Noise (Upper Limit) (Units Std Dev of L*)		≤ 3	≤ 2	≤ 1
Noise (Lower Limit) (Units Std Dev of L*) – A warning should be raised if the image doesn't meet this criteria		≥ 0.25	≥ 0.25	≥ 0.25

Note: The white rows with light gray text in the table above are informative only, and are not required parameters for each FADGI star level. The Digital Count metrics have been removed from this version of the *Guidelines*.

Bound Volumes: Rare and Special Materials

Rare and special bound materials represent various types ranging from illuminated manuscripts, incunabula, works that feature illustrations of special artistic or graphic interest (e.g., intaglios, gravures, or inset photographs); also bound documents with poor legibility or diffuse characters, e.g., carbon copies, Thermofax, etc.

Recommended Imaging Technologies

- Manually operated planetary book scanners with or without glass or plastic platens
- Digital cameras with book cradles with or without glass or plastic platens
- Automated page turning book scanners^{1F2}

² There have been significant improvements in automated book scanning technology, and there are now commercially-available capture devices that are suitable for imaging some cultural heritage digitization projects. Organizations should evaluate the devices on the market to determine if they are appropriate for digitizing their collections. Do not use automatic book scanners that cause damage to collections materials.

Not Recommended Imaging Technologies

- Flatbed scanners
- Lighting systems that raise the surface temperature of the original more than 4 degrees F (2 degrees C) in the total imaging process
- Linear scanning processes (digital scanning back cameras) are not appropriate because of the potential for the original to flex during the scanning process, producing artifacts that cannot be corrected in post processing and that may not be seen in QC.
- Vacuum tables

Notes

- While other material categories include specifications for meeting one-star FADGI conformance, this is not appropriate for rare and special materials. One-star imaging is appropriate for applications where the intent is to provide a reference to locate the original or when there is no ability to image to a higher star level. Rare and special materials should be imaged at a high quality level in order to produce the best possible digital reproduction.
- To be FADGI compliant, all imaging performed on special collections materials must be done by personnel with advanced training and experienced in the handling and care of special collections materials. FADGI compliance requires proper staff qualifications in addition to achieving the performance levels defined in this document. It is out of the scope of this document to define proper staff qualifications for cultural heritage imaging.
- If a volume is dis-bound, the FADGI recommendations apply as if the volume was individual pages, capturing all edges of the page.
- Special collections materials will often contain colors that are outside of the gamut of current color reproduction systems, and will require special imaging techniques to approximate the original in digital form. Note that color accuracy is measured against the color test target, not the artifact.
- Alternative imaging techniques, including but not limited to texture lighting, multiple light source exposure, and multispectral/hyperspectral imaging may be used to best reproduce the original. These techniques should be accomplished as single exposures, not blends of multiple exposures. An “image cube” of multiple single exposures may be considered an archival master file, but a single base image must meet the

specifications in the chart above for FADGI compliance in all respects.

- If a backing sheet is used, it must extend beyond the edge of the page to the end of the image on all open sides of the page.
- Collections materials should be maintained at the same temperature and humidity while being imaged as they are maintained in the collection.
- Special collections materials should not be placed in contact with glass or other materials in an effort to hold originals flat while imaging without appropriate approval and assistance. This technique can lead to physical damage to the original; this is particularly true for pigmented and gold leaf materials. Spatulas or other implements to assist in holding pages flat for imaging may be used, but must not obscure informational content. If used, these should not be edited out of master files.
- No image retouching is permitted to master files.
- Limited use of image processing techniques may be used for the creation of access files in FADGI.
- Bound materials must not be opened beyond the point where the binding is stressed. In some cases, that may mean that the volume cannot be opened sufficiently to image using traditional imaging technique.
- In any situation where there is potential harm to the original, stop immediately and seek assistance.

Bound Volumes: General Collections

Performance Level:	1-Star	2-Star	3-Star	4-Star
Master File Format	TIFF, JPEG 2000, PDF/A	TIFF, JPEG 2000, PDF/A	TIFF, JPEG 2000, PDF/A	TIFF, JPEG 2000, PDF/A
Access File Formats	All	All	All	All
Resolution (Sampling Frequency) (Units are Pixels Per Inch/ppi minus Reproduction Scale Accuracy)	$\geq 190\text{ppi}$ (200 ppi – 5%)	$\geq 242.5\text{ppi}$ (250 ppi – 3%)	$\geq 294\text{ppi}$ (300 ppi – 2%)	$\geq 396\text{ ppi}$ (400 ppi – 1%)
Bit Depth	8	8	8 or 16	8 or 16

Color Space	Gray Gamma 2.2, sRGB	Gray Gamma 2.2, sRGB, Adobe RGB (1998), ProPhoto, ECIRGB_v2	Gray Gamma 2.2, sRGB, Adobe RGB (1998), ProPhoto, ECIRGB_v2	sRGB, Adobe RGB (1998), ProPhoto, ECIRGB_v2
Color Mode	Grayscale or Color	Grayscale or Color	Grayscale or Color	Color
Measurement Parameters				
Tone Response (OECF) L* (Units Colorimetric ΔL_{2000}^*) for any given gray patch	≤ 6	≤ 4.5	≤ 3	≤ 1.5
Gain Modulation Highlight Patches (average L* between 95 and 85)	Gain between 0.5 and 1.4	Gain between 0.6 and 1.3	Gain between 0.7 and 1.2	Gain between 0.8 and 1.1
Gain Modulation all other patches	Gain between 0.25 and 1.7	Gain between 0.3 and 1.6	Gain between 0.6 and 1.4	Gain between 0.7 and 1.3
White Balance (Units Colorimetric $\Delta E(a^*b^*)$) for any given gray patch	≤ 8	≤ 6	≤ 4	≤ 2
Lightness Uniformity (Units Colorimetric – Standard Deviation Divided by Mean L*)	$\leq 8\%$	$\leq 5\%$	$\leq 3\%$	$\leq 1\%$

Average Color Accuracy (Units Colorimetric – Mean ΔE_{2000} – average deviation of all patches)	≤ 6.5	≤ 5	≤ 3.5	≤ 2
Color Accuracy 90th Percentile (Units Colorimetric – ΔE_{2000} of all patches)	≤ 13	≤ 10	≤ 7	≤ 4
Color Channel Misregistration (Units Pixels)	≤ 1.2 pixel	≤ 0.8 pixel	≤ 0.5 pixel	≤ 0.33 pixel
SFR10 (Sampling Efficiency) (Measurement is a Ratio %)	$\geq 60\%$	$\geq 70\%$	$\geq 80\%$	$\geq 90\%$
SFR Response at Nyquist Frequency (Units Modulation)	< 0.5	< 0.4	< 0.3	< 0.2
SFR50 (50% SFR) (Units Percentage of Half Sampling Frequency) [Lower, Upper]	Percentage of half sampling frequency: [>30%, <95%]	Percentage of half sampling frequency: [>35%, <85%]	Percentage of half sampling frequency: [>40%, <75%]	Percentage of half sampling frequency: [>45%, <65%]
Reproduction Scale Accuracy (Units % Difference from Header PPI)	$< \pm 5\%$	$< \pm 3\%$	$< \pm 2\%$	$< \pm 1\%$
Sharpening (Units Max)	< 1.15	< 1.1	< 1.05	≤ 1.02

Modulation)				
Noise (Upper Limit) (Units Std Dev of L*)	≤ 4	≤ 3	≤ 2	≤ 1
Noise (Lower Limit) (Units Std Dev of L*) – A warning should be raised if the image doesn't meet this criteria	≥ 0.25	≥ 0.25	≥ 0.25	≥ 0.25

Note: The white rows with light gray text in the table above are informative only, and are not required parameters for each FADGI star level. The Digital Count metrics have been removed from this version of the *Guidelines*.

Bound Volumes: General Collections

General collections bound materials span the range from new, clean and easy to handle materials to extremely brittle materials which may have poor legibility. Selection of appropriate digitization technology to efficiently digitize these materials is key to successful digitization.

Recommended Imaging Technologies

- Planetary book scanners with or without glass platens
- Digital cameras
- Auto page turning book scanners^{2F3}

Not Recommended Imaging Technologies

- Flatbed scanners
- Lighting systems that raise the surface temperature of the original more than 6 degrees F (3 degrees C) in the total imaging process
- Linear scanning processes without glass or plastic platens (scanners and digital scanning back cameras) are not appropriate because of the potential for the original to flex during the scanning process, producing artifacts that cannot be corrected.

Notes

- If a volume is dis-bound, FADGI recommendations apply as if the volume was individual pages, capturing all edges of the page.
- If a book is “guillotined” for the purpose of scanning, it is no longer considered to be a book for the purposes of FADGI compliance. Refer to the section on

document scanning.

- For master files, pages should be imaged to include the entire text block of the page. The digital image should capture as far into the gutter as practical but must include all of the content that is visible to the eye.
- If a backing sheet is used, it must extend to the end of the text block on all open sides of the page.
- Collections materials should be maintained at the same temperature and humidity while being imaged as they are maintained in the collection.
- No image retouching is permitted to master files.
- Books may be imaged in contact with glass or other materials in an effort to hold originals flat while imaging. However, the binding of the book must not be stressed in the process. The use of spatulas or other implements to assist in holding pages flat for imaging is approved, but must not obscure any informational content. If used, these must not be removed in master files.
- Bound materials must not be opened beyond the point where the binding is stressed. In some cases, that may mean that the volume cannot be opened sufficiently to image with traditional imaging techniques.
- In any situation where there is potential harm to the original, stop immediately and seek assistance.

Documents (Unbound): Manuscripts and Other Rare and Special Materials

Performance Level:	1-Star	2-Star	3-Star	4-Star
Master File Format		TIFF, JPEG 2000, PDF/A	TIFF, JPEG 2000, PDF/A	TIFF, JPEG 2000, PDF/A
Access File Formats		All	All	All
Resolution (Sampling Frequency) (Units are Pixels Per Inch/ppi minus Reproduction Scale Accuracy)		$\geq 242.5\text{ppi}$ (250 ppi – 3%)	$\geq 294\text{ppi}$ (300 ppi – 2%)	$\geq 396\text{ ppi}$ (400 ppi – 1%)
Bit Depth		8	8 or 16	16

Color Space		Adobe RGB (1998), ProPhoto, ECIRGB_ v2	Adobe RGB (1998), ProPhoto, ECIRGB_ v2	Adobe RGB (1998), ProPhoto, ECIRGB_ v2
Color Mode		Color	Color	Color
Measurement Parameters				
Tone Response (OECF) L* (Units Colorimetric ΔL_{2000}^*) for any given gray patch		≤ 4.5	≤ 3	≤ 1.5
Gain Modulation Highlight Patches (average L* between 95 and 85)		Gain between 0.6 and 1.3	Gain between 0.7 and 1.2	Gain between 0.8 and 1.1
Gain Modulation all other patches		Gain between 0.3 and 1.6	Gain between 0.6 and 1.4	Gain between 0.7 and 1.3
White Balance (Units Colorimetric $\Delta E(a^*b^*)$) for any given gray patch		≤ 6	≤ 4	≤ 2
Lightness Uniformity (Units Colorimetric – Standard Deviation Divided by Mean L*)		$\leq 5\%$	$\leq 3\%$	$\leq 1\%$

Average Color Accuracy (Units Colorimetric – Mean ΔE_{2000} – average deviation of all patches)		≤ 5	≤ 3.5	≤ 2
Color Accuracy 90 th Percentile (Units Colorimetric – ΔE_{2000} of all patches)		≤ 10	≤ 7	≤ 4
Color Channel Misregistration (Units Pixels)		≤ 0.8 pixel	≤ 0.5 pixel	≤ 0.33 pixel
SFR10 (Sampling Efficiency) (Measurement is a Ratio %)		$\geq 70\%$	$\geq 80\%$	$\geq 90\%$
SFR Response at Nyquist Frequency (Units Modulation)		< 0.4	< 0.3	< 0.2
SFR50 (50% SFR) (Units Percentage of Half Sampling Frequency) [Lower, Upper]		Percentage of half sampling frequency: [>35%, <85%]	Percentage of half sampling frequency: [>40%, <75%]	Percentage of half sampling frequency: [>45%, <65%]
Reproduction Scale Accuracy (Units % Difference from Header PPI)		$< \pm 3\%$	$< \pm 2\%$	$< \pm 1\%$
Sharpening (Units Max Modulation)		< 1.1	< 1.05	≤ 1.02

Noise (Upper Limit) (Units Std Dev of L*)		≤ 3	≤ 2	≤ 1
Noise (Lower Limit) (Units Std Dev of L*) – A warning should be raised if the image doesn't meet this criteria		≥ 0.25	≥ 0.25	≥ 0.25

Note: The white rows with light gray text in the table above are informative only, and are not required parameters for each FADGI star level. The Digital Count metrics have been removed from this version of the *Guidelines*.

Documents (Unbound): Manuscripts and Other Rare and Special Materials

Rare and special materials represent manuscripts, illustrations of special artistic or graphic interest; also documents with poor legibility or diffuse characters, e.g., carbon copies, Thermofax, etc.

Recommended Technologies

- Planetary scanners – manually operated
- Digital cameras

Not Recommended Technologies

- Lighting systems that raise the surface temperature of the original more than 4 degrees F (2 degrees C) in the total imaging process.
- Sheet fed scanning systems

Notes

- While other material categories include specifications for meeting one-star FADGI conformance, this is not appropriate for rare and special materials. One-star imaging is appropriate for applications where the intent is to provide a reference to locate the original or when there is no ability to image to a higher star level. Rare and special materials should be imaged at a high quality level in order to produce the best possible digital reproduction.
- To be FADGI compliant, all imaging performed on special collections materials must be done by personnel with advanced training and experienced in the handling and care of special collections materials. FADGI compliance requires proper staff qualifications in addition to achieving the performance levels defined in this

document. It is out of the scope of this document to define proper staff qualifications for cultural heritage imaging.

- Special collections materials will often contain colors that are outside of the gamut of current color reproduction systems and will require special imaging techniques to approximate the original in digital form. Note that color accuracy is measured against the color test target, not the artifact.
- Alternative imaging techniques, including but not limited to texture lighting, multiple light source exposure, and multispectral/hyperspectral imaging may be used to best reproduce the original. These techniques should be accomplished as single exposures, not blends of multiple exposures. An “image cube” of multiple single exposures may be considered an archival master file, but a single base image must meet the specifications in the chart above for FADGI compliance in all respects.
- If a backing sheet is used, it must extend beyond the edge of the page to the end of the image on all sides of the page.
- Collections materials should be maintained at the same temperature and humidity while being imaged as they are maintained in the collection.
- Single exposure total area capture systems are considered the most appropriate technologies when imaging special collections materials. However, FADGI permits the use of other technologies that may be appropriate as long as none of the stated restrictions are compromised by the use of that technology.
- Special collections materials should not be placed in contact with glass or other materials in an effort to hold originals flat while imaging, without the approval of a paper or book conservator. This technique can lead to physical damage to the original. Spatulas or other implements to assist in holding pages flat for imaging may be used, but must not obscure informational content. If used, these should not be edited out of master files.
- Holding down an original with the use of a vacuum board should also be approved by a paper or book conservator. Air forced through the original over the vacuum ports can permanently degrade some originals.
- No image retouching is permitted to master files.
- Image processing techniques are approved for the creation of access files in FADGI.
- For master files, documents should be imaged to include the entire area and a small amount beyond to define the area. Access files may be cropped.
- Image capture resolutions above 400 ppi may be appropriate for some materials, but imaging at higher resolutions is not required to achieve 4* compliance.
- Single exposure total area capture scanning systems are considered the most appropriate technologies when imaging special collections materials, including documents. However, FADGI permits the use of other technologies that may be appropriate as long as none of the stated restrictions are compromised by the use of that technology.
- In any situation where there is potential harm to the original, stop immediately and seek assistance.

APPENDIX D: METADATA ELEMENTS

Using Dublin Core™ - The Elements

NOTE: This text was last revised in 2005.

4. The Elements

This section lists each element by its full name and label. For each element there are guidelines to assist in creating metadata content, whether it is done "from scratch" or by converting an existing record in another format.

In the element descriptions below, a formal single-word label is specified to make the syntactic specification of elements simpler for encoding schemes. Although some environments, such as HTML, are not case-sensitive, it is recommended best practice always to adhere to the case conventions in the element names given below to avoid conflicts in the event that the metadata is subsequently converted to a case-sensitive environment, such as XML.

Some information may appear to belong in more than one metadata element. While there will normally be a clear preferred choice, there is potential semantic overlap between some elements. Consequently, there will occasionally be some judgment required from the person assigning the metadata.

4.1. Title

Label: Title

Element Description: The name given to the resource. Typically, a Title will be a name by which the resource is formally known.

Guidelines for creation of content:

If in doubt about what constitutes the title, repeat the Title element and include the variants in second and subsequent Title iterations. If the item is in HTML, view the source document and make sure that the title identified in the title header (if any) is also included as a Title.

Examples:

Title="A Pilot's Guide to Aircraft Insurance" Title="The Sound of Music" Title="Green on Greens" Title="AOPA's Tips on Buying Used Aircraft"

4.2. Subject

Label: Subject and Keywords

Element Description: The topic of the content of the resource. Typically, a Subject will be expressed as keywords or key phrases or classification codes that describe the topic of the resource. Recommended best practice is to select a value from a controlled vocabulary or formal classification scheme.

Guidelines for creation of content:

Select subject keywords from the Title or Description information, or from within a text resource. If the subject of the item is a person or an organization, use the same form of the name as you would if the person or organization were a Creator or Contributor.

In general, choose the most significant and unique words for keywords, avoiding those too general to describe a particular item. Subject might include classification data if it is available (for example, Library of Congress Classification Numbers or Dewey Decimal numbers) or controlled vocabularies (such as Medical Subject

Headings or Art and Architecture Thesaurus descriptors) as well as keywords.

When including terms from multiple vocabularies, use separate element iterations. If multiple vocabulary terms or keywords are used, either separate terms with semi-colons or use separate iterations of the Subject element.

Examples:

Subject="Aircraft leasing and renting" Subject="Dogs" Subject="Olympic skiing"
Subject="Street, Picabo"

4.3. Description

Label: Description

Element Description: An account of the content of the resource. Description may include but is not limited to: an abstract, table of contents, reference to a graphical representation of content or a free-text account of the content.

Guidelines for creation of content:

Since the Description field is a potentially rich source of indexable terms, care should be taken to provide this element when possible. Best practice recommendation for this element is to use full sentences, as description is often used to present information to users to assist in their selection of appropriate resources from a set of search results.

Descriptive information can be copied or automatically extracted from the item if there is no abstract or other structured description available. Although the source of the description may be a web page or other structured text with presentation tags, it is generally not good practice to include HTML or other structural tags within the Description element. Applications vary considerably in their ability to interpret such

tags, and their inclusion may negatively affect the interoperability of the metadata.

Examples:

Description="Illustrated guide to airport markings and lighting signals, with particular reference to SMGCS (Surface Movement Guidance and Control System) for airports with low visibility conditions."

Description="Teachers Domain is a multimedia library for K-12 science educators, developed by WGBH through funding from the National Science Foundation as part of its National Science Digital Library initiative. The site offers a wealth of classroom-ready instructional resources, as well as online professional development materials and a set of tools which allows teachers to manage, annotate, and share the materials they use in classroom teaching."

4.4. Type

Label: Resource Type

Element Description: The nature or genre of the content of the resource. Type includes terms describing general categories, functions, genres, or aggregation levels for content. Recommended best practice is to select a value from a controlled vocabulary (for example, the [DCMIType vocabulary](#)). To describe the physical or digital manifestation of the resource, use the FORMAT element.

Guidelines for content creation:

If the resource is composed of multiple mixed types then multiple or repeated Type elements should be used to describe the main components.

Because different communities or domains are expected to use a variety of type vocabularies, best practice to ensure interoperability is to include at least one

general type term from the [DCMI Type vocabulary](#) in addition to the domain specific type term(s), in separate Type element iterations.

Examples:

Type="Image" Type="Sound" Type="Text" Type="simulation"

Note: The first three values are taken from the DCMI Type Vocabulary, and follow the capitalization conventions for that vocabulary. The last value is a term from an unspecified source.

The item described is an *Electronic art exhibition catalog*:

Type="Image" Type="Text" Type="Exhibition catalog"

Note: The first two values are taken from the DCMI Type Vocabulary, and follow the capitalization conventions for that vocabulary. The last value is a term from an unspecified source.

The item described is a *Multimedia educational program with interactive assignments*:

Type="Image" Type="Text" Type="Software" Type="InteractiveResource"

Note: All values in this example are taken from the DCMI Type Vocabulary, and follow the capitalization conventions for that vocabulary.

4.5. Source

Label: Source

Element Description: A Reference to a resource from which the present resource is derived. The present resource may be derived from the Source resource in whole or

part. Recommended best practice is to reference the resource by means of a string or number conforming to a formal identification system.

Guidelines for content creation:

In general, include in this area information about a resource that is related intellectually to the described resource but does not fit easily into a Relation element.

Examples:

Source="RC607.A26W574 1996" [where "RC607.A26W574 1996" is the call number of the print version of the resource, from which the present version was scanned]

Source="Image from page 54 of the 1922 edition of Romeo and Juliet"

4.6. Relation

Label: Relation

Element Description: A reference to a related resource. Recommended best practice is to reference the resource by means of a string or number conforming to a formal identification system.

Guidelines for content creation:

Relationships may be expressed reciprocally (if the resources on both ends of the relationship are being described) or in one direction only, even when there is a refinement available to allow reciprocity. If text strings are used instead of identifying numbers, the reference should be appropriately specific. For instance, a formal bibliographic citation might be used to point users to a particular resource.

Because the refined terms used with Relation provide significantly more information to a user than the unqualified use of Relation, implementers who are describing heavily interrelated resources might choose to use qualified Dublin Core™.

Examples:

Title="Reading Turgenev" Relation="Two Lives" [Resource is a collection of two novellas, one of which is "Reading Turgenev"]

[Relationship described is **IsPartOf**. [Part/Whole relations are those in which one resource is a physical or logical part of another]

*Title="Candle in the Wind" Subject="Diana, Princess of Wales" Date="1997"
Creator="John, Elton" Type="sound" Description="Tribute to a dead princess."
Relation="Elton John's 1976 song Candle in the Wind"*

[Relationship described is **IsVersionOf**.

[Version relations are those in which one resource is an historical state or edition, of another resource by the same creator]

Title="Electronic AACR2" Relation="Anglo-American Cataloging Rules, 2nd edition"

[Relationship described is **IsFormatOf**]

Title="Landsat TM dataset of Arnhemland, NT, Australia" Relation="arnhem.gif"

[Relationship described is **HasFormat**]

[Format transformation relations are those in which one resource has been derived from another by a reproduction or reformatting technology which is not fundamentally an interpretation but intended to be a representation.]

Title="Morgan's Ancient Society" Relation="Engels' Origin of the Family, Private Property and the State"

[Relationship described is **IsReferencedBy**]

Title="Nymphet Mania" Relation="References Adrian Lyne's 'Lolita'"

[Relationship described is **References**]

[Reference relations are those in which the author of one resource cites, acknowledges, disputes or otherwise make claims about another resource.]

Title="Peter Carey's novel Oscar and Lucinda" Relation="1998 movie Oscar and Lucinda"

[Relationship described is **IsBasisFor**]

*Title="The movie My Fair Lady" Relation="Shaw's play Pygmalion" [Relationship described is **IsBasedOn**]*

[Creative relations are those in which one resource is a performance, production, derivation, adaptation or interpretation of another resource.]

Title="Dead Ringer" Relation="Gemstar e-book"

[Relationship described is **Requires**]

[Dependency relations are those in which one resource requires another resource for its functioning, delivery, or content and cannot be used without the related resource being present.]

4.7. Coverage

Label: Coverage

Element Description: The extent or scope of the content of the resource. Coverage will typically include spatial location (a place name or geographic co-ordinates),

temporal period (a period label, date, or date range) or jurisdiction (such as a named administrative entity). Recommended best practice is to select a value from a controlled vocabulary (for example, the Thesaurus of Geographic Names [Getty Thesaurus of Geographic Names, <http://www.getty.edu/research/tools/vocabulary/tgn/>]). Where appropriate, named places or time periods should be used in preference to numeric identifiers such as sets of coordinates or date ranges.

Guidelines for content creation:

Whether this element is used for spatial or temporal information, care should be taken to provide consistent information that can be interpreted by human users, particularly in order to provide interoperability in situations where sophisticated geographic or time-specific searching is not supported. For most simple applications, place names or coverage dates might be most useful. For more complex applications, consideration should be given to using an encoding scheme that supports appropriate specification of information, such as [DCMI Period](#), [DCMI Box](#) or [DCMI Point](#).

Examples:

Coverage="1995-1996" Coverage="Boston, MA" Coverage="17th century"
Coverage="Upstate New York"

4.8. Creator

Label: Creator

Element Description: An entity primarily responsible for making the content of the resource. Examples of a Creator include a person, an organization, or a service. Typically the name of the Creator should be used to indicate the entity.

Guidelines for creation of content:

Creators should be listed separately, preferably in the same order that they appear in the publication. Personal names should be listed surname or family name first, followed by forename or given name. When in doubt, give the name as it appears, and do not invert.

In the case of organizations where there is clearly a hierarchy present, list the parts of the hierarchy from largest to smallest, separated by full stops and a space. If it is not clear whether there is a hierarchy present, or unclear which is the larger or smaller portion of the body, give the name as it appears in the item.

If the Creator and Publisher are the same, do not repeat the name in the Publisher area. If the nature of the responsibility is ambiguous, the recommended practice is to use Publisher for organizations, and Creator for individuals. In cases of lesser or ambiguous responsibility, other than creation, use Contributor.

Examples:

Creator="Shakespeare, William" Creator="Wen Lee" Creator="Hubble Telescope"
Creator="Internal Revenue Service. Customer Complaints Unit"

4.9. Publisher

Label: Publisher

Element Description: The entity responsible for making the resource available. Examples of a Publisher include a person, an organization, or a service. Typically, the name of a Publisher should be used to indicate the entity.

Guidelines for content creation:

The intent of specifying this field is to identify the entity that provides access to the resource. If the Creator and Publisher are the same, do not repeat the name in the Publisher area. If the nature of the responsibility is ambiguous, the recommended practice is to use Publisher for organizations, and Creator for individuals. In cases of ambiguous responsibility, use Contributor.

Examples:

Publisher="University of South Where" Publisher="Funky Websites, Inc."
Publisher="Carmen Miranda"

4.10. Contributor

Label: Contributor

Element Description: An entity responsible for making contributions to the content of the resource. Examples of a Contributor include a person, an organization or a service. Typically, the name of a Contributor should be used to indicate the entity.

Guideline for content creation:

The same general guidelines for using names of persons or organizations as Creators apply here. Contributor is the most general of the elements used for "agents" responsible for the resource, so should be used when primary responsibility is unknown or irrelevant.

4.11. Rights

Label: Rights Management

Element Description: Information about rights held in and over the resource. Typically a Rights element will contain a rights management statement for the

resource, or reference a service providing such information. Rights information often encompasses Intellectual Property Rights (IPR), Copyright, and various Property Rights. If the rights element is absent, no assumptions can be made about the status of these and other rights with respect to the resource.

Guidelines for content creation:

The Rights element may be used for either a textual statement or a URL pointing to a rights statement, or a combination, when a brief statement and a more lengthy one are available.

Examples:

Rights="Access limited to members" Rights="http://cs-tr.cs.cornell.edu/Dienst/Repository/2.0/Terms"

4.12. Date

Label: Date

Element Description: A date associated with an event in the life cycle of the resource. Typically, Date will be associated with the creation or availability of the resource. Recommended best practice for encoding the date value is defined in a profile of ISO 8601 [Date and Time Formats, W3C Note, <http://www.w3.org/TR/NOTE-datetime>] and follows the YYYY-MM-DD format.

Guidelines for content creation:

If the full date is unknown, month and year (YYYY-MM) or just year (YYYY) may be used. Many other schemes are possible, but if used, they may not be easily interpreted by users or software.

Examples:

Date="1998-02-16" Date="1998-02" Date="1998"

4.13. Format

Label: Format

Element Description: The physical or digital manifestation of the resource. Typically, Format may include the media-type or dimensions of the resource. Examples of dimensions include size and duration. Format may be used to determine the software, hardware or other equipment needed to display or operate the resource.

Recommended best practice is to select a value from a controlled vocabulary (for example, the list of Internet Media Types [<http://www.iana.org/assignments/media-types/>] defining computer media formats).

Guidelines for content creation:

In addition to the specific physical or electronic media format, information concerning the size of a resource may be included in the content of the Format element if available. In resource discovery size, extent or medium of the resource might be used as a criterion to select resources of interest, since a user may need to evaluate whether they can make use of the resource within the infrastructure available to them.

When more than one category of format information is included in a single record, they should go in separate iterations of the element.

Examples:

Title="Dublin Core™ icon"

Identifier="http://purl.org/metadata/dublin_core/images/dc2.gif" Type="Image" Format="image/gif" Format="4 kB" Subject="Saturn" Type="Image" Format="image/gif" Format="40 x 512 pixels"

Identifier="http://www.not.iac.es/newwww/photos/images/satnot.gif" Title="The Bronco Buster" Creator="Frederic Remington" Type="Physical object" Format="bronze" Format="22 in."

4.14. Identifier

Label: Resource Identifier

Element Description: An unambiguous reference to the resource within a given context. Recommended best practice is to identify the resource by means of a string or number conforming to a formal identification system. Examples of formal identification systems include the Uniform Resource Identifier (URI) (including the Uniform Resource Locator (URL), the Digital Object Identifier (DOI) and the International Standard Book Number (ISBN).

Guidelines for content creation:

This element can also be used for local identifiers (e.g. ID numbers or call numbers) assigned by the Creator of the resource to apply to a particular item. It should not be used for identification of the metadata record itself.

Examples:

Identifier="http://purl.oclc.org/metadata/dublin_core/"

Identifier="ISBN:0385424728" Identifier="H-A-X 5690B" [publisher number]

4.15. Language

Label: Language

Element Description: A language of the intellectual content of the resource. Recommended best practice for the values of the Language element is defined by RFC 3066 [RFC 3066, <http://www.ietf.org/rfc/rfc3066.txt>] which, in conjunction with ISO 639 [ISO 639, <http://www.oasis-open.org/cover/iso639a.html>]), defines two- and three-letter primary language tags with optional subtags. Examples include "en" or "eng" for English, "akk" for Akkadian, and "en-GB" for English used in the United Kingdom.

Guidelines for content creation:

Either a coded value or text string can be represented here. If the content is in more than one language, the element may be repeated.

Examples:

Language="en" Language="fr" Language="Primarily English, with some abstracts also in French." Language="en-US"

NOTE: Audience, Provenance and RightsHolder are elements, but not part of the Simple Dublin Core™ fifteen elements. Use Audience, Provenance and RightsHolder only when using Qualified Dublin Core™.

4.16. Audience

Label: Audience

Element Description: A class of entity for whom the resource is intended or useful. A class of entity may be determined by the creator or the publisher or by a third party.

Guidelines for content creation:

Audience terms are best utilized in the context of formal or informal controlled vocabularies. None are presently recommended or registered by DCMI, but several communities of interest are engaged in setting up audience vocabularies. In the absence of recommended controlled vocabularies, implementors are encouraged to develop local lists of values, and to use them consistently.

Examples:

Audience="elementary school students" Audience="ESL teachers" Audience="deaf adults"

4.17. Provenance

Label: Provenance

Element Description: A statement of any changes in ownership and custody of the resource since its creation that are significant for its authenticity, integrity and interpretation. The statement may include a description of any changes successive custodians made to the resource.

Guidelines for content creation:

Examples:

Provenance="This copy once owned by Benjamin Spock." Provenance="Estate of Hunter Thompson." Provenance="Stolen in 1999; recovered by the Museum in 2003."

4.18. RightsHolder

Label: Rights Holder

Element Description: A person or organization owning or managing rights over the resource. Recommended best practice is to use the URI or name of the Rights

Holder to indicate the entity.

Guidelines for content creation:

Since, for the most part, people and organizations are not typically assigned URIs, a person or organization holding rights over a resource would be named using a text string. People and organizations sometimes have websites, but URLs for these are not generally appropriate for use in this context, since they are not clearly identifying the person or organization, but rather the location of a website about them.

Examples:

RightsHolder="Stuart Weibel" RightsHolder="University of Bath"

4.19. InstructionalMethod

Label: Instructional Method

Element Description: A process, used to engender knowledge, attitudes and skills, that the resource is designed to support. Instructional Method will typically include ways of presenting instructional materials or conducting instructional activities, patterns of learner-to-learner and learner-to-instructor interactions, and mechanisms by which group and individual levels of learning are measured. Instructional methods include all aspects of the instruction and learning processes from planning and implementation through evaluation and feedback.

Guidelines for content creation:

Best practice is to use terms from controlled vocabularies, whether developed for the use of a particular project or in general use in an educational context.

Examples:

InstructionalMethod="Experiential learning" InstructionalMethod="Observation"
InstructionalMethod="Large Group instruction"

4.20. AccrualMethod

Label: Accrual Method

Element Description: The method by which items are added to a collection.
Recommended best practice is to use a value from a controlled vocabulary.

Guidelines for content creation:

Terms from controlled vocabularies may be developed for the use of a particular project or in general use in a cultural materials context.

Examples:

AccrualMethod="Deposit" AccrualMethod="Purchase"

4.21. AccrualPeriodicity

Label: Accrual Periodicity

Element Description: The frequency with which items are added to a collection.
Recommended best practice is to use a value from a controlled vocabulary.

Guidelines for content creation:

Terms from controlled vocabularies may be developed for the use of a particular

project or in general use in a cultural materials context.

Examples:

AccrualPeriodicity="Annual" AccrualPeriodicity="Irregular"

4.22. AccrualPolicy

Label: Accrual Policy

Element Description: The policy governing the addition of items to a collection. Recommended best practice is to use a value from a controlled vocabulary.

Guidelines for content creation:

Terms from controlled vocabularies may be developed for the use of a particular project or in general use in a cultural materials context.

Examples:

AccrualPolicy="Active" AccrualPolicy="Closed"



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