



College of Information Studies

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# ***Best Practices in Electronic Records Management***

A Survey and Report on Federal Government Agency's  
**Recordkeeping Policy and Practices**

Prepared for

National Archives and Records Administration  
Contract Number NAMA-M-0059, Task 0002

December 19, 2005

Center for Information Policy  
College of Information Studies  
University of Maryland

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Director, Center for Information Policy and Professor

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College of Information Studies, University of Maryland**

**Sponsored in part by  
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## **Abstract**

This report presents the results of the Electronic Records Management Best Practices Survey developed by the Center for Information Policy at University of Maryland with partial funding from the National Archives and Records Administration. The survey collected data primarily from twenty-one federal government agencies, two state government agencies, and one private sector organization regarding their individual policies and practices for electronic records management. The report provides information about the state of electronic records management in federal agencies; describes barriers to improving the management of electronic records; recommends strategies to improve management at the desktop; suggests approaches to strengthen NARA's role; and makes recommendations for future research based on questions that arose during the course of the study.

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## **Executive Summary**

In order to propose solutions to problems encountered by many government agencies and private businesses when managing electronic records created on desktop computers, the Center for Information Policy at the University of Maryland completed a study to identify current and best practices in electronic records management. The National Archives and Records Administration provided partial funding, advice, and reviewed the study in draft. The findings and conclusions are solely those of the research team, and do not necessarily represent our sponsors. The goal of the research was to ascertain the extent to which federal government agencies have adopted electronic recordkeeping systems and how the management of electronic records is incorporated with traditional records management strategies. After completing research in the field, the ERM research team refined the Electronic Records Management Best Practices Survey, based on a draft survey provided by NARA, and administered the questionnaire in three phases:

Phase One – On-site interviews with employees from twenty-one federal agencies to collect survey responses in-person.

Phase Two – A web-based survey directed at a larger audience of information management professionals.

Phase Three – Phone interviews with records managers from two state government agencies and one private sector business to gather information on recordkeeping policies and practices for these sectors.

### **Methodology and Data Analysis**

The Electronic Records Management Best Practices Survey consisted of fifty-five closed and open-ended questions. The data gathered by the ERM Research Team from the on-site interviews with federal employees (phase one of the project) was combined with responses provided by records managers from two state government agencies and one private sector business over the phone (phase three of the project). The on-site interviews allowed for an extensive dialogue of actual practices at agencies as well as providing an opportunity to view a demonstration of any electronic records management systems currently in place. Each survey question was analyzed in detail and the full results (often displayed as a chart for clarification) are included in this report.

A separate team of researchers from the Masters of Information Management Program at the University of Maryland completed the web-based portion of the survey (phase two of the project); thus the results of were analyzed separately from the in-person and phone interviews. The web-based survey (comprised of four sections: records management programs; paper records; e-mail records; and electronic records) was available online for 30 days and results were collected and analyzed from 119 participants. The web-based survey provided information on electronic records management best practices in organizations beyond the Federal government and was used as a basis for comparing and evaluating Federal practices.

### **Major findings of the Electronic Records Management Best Practices Survey:**

During the survey administration and analysis of the resulting data from on-site and telephone interviews, three major issues stood out to the researchers as problems encountered by the majority of agencies interviewed:

1. Agency or office size affects the implementation of Electronic Record Keeping Systems (ERKS); the larger the agency, the more complex the problems associated with effective implementation.
2. Employees delete electronic records, such as e-mails, one at a time, a cumbersome process which may result in retention of too many records for too long or premature disposition that is inconsistent with approved retention schedules.
3. Many offices maintain dual, redundant recordkeeping systems – paper and electronic – when all that is necessary is to maintain one record copy.

The nature of the survey also allowed the researchers to view and make note of strategies used by some organizations to help solve these three significant problems. The researchers observed and analyzed several techniques used by federal agencies, reviewed strategies and practices advanced in the literature and used by other organizations, and then developed recommendations which are intended to be effective and practical. Considering current financial resources, the best option for Federal agencies until they are able to implement an official electronic recordkeeping system is to synchronize their dual recordkeeping systems and simplify electronic records deletion. This can be done by developing a file plan or classification scheme that describes different types of files maintained in an office, how they are identified, where they are stored, how they should be indexed for retrieval, and references the approved disposition. A sample file plan and file structure example are included in this report.

### **Major findings of the web-based survey:**

The web survey, included as Appendix E of this report, showed that full support of records management policies by managers and supervisors is essential for their ongoing implementation. Employees need to understand their responsibilities to implement those policies. E-mail is a particularly important and ubiquitous form of electronic record but procedures for managing it are underdeveloped. Lack of management support and employee understanding of records management practices are major explanations for inadequate electronic records management in general and, in particular, for the failure to implement electronic recordkeeping systems.

In conclusion, this report advises using a well-crafted, organized, and purposeful file plan as a means to help alleviate problems transitioning to a full-featured ERKS. A meaningful media neutral file plan that mirrors both electronic and paper files and follows the same maintenance schedule will help to consolidate dual systems, assist with regular disposition, and prepare larger agencies for the switch to an appropriate long-term solution.

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## Introduction

The primary purpose of the Electronic Records Management (ERM) Best Practices Survey was to identify current and best practices in the field of electronic records management in order to make recommendations to the private and public sector on how to manage records created on desktop computers. The ERM Research Team reviewed current literature and previous studies in the area and refined a questionnaire drafted by NARA to ascertain the extent to which federal agencies, state government agencies, and private sector businesses have adopted electronic recordkeeping systems, and how the management of electronic records is incorporated with general records management strategies. After administering the questionnaire to employees from twenty-one federal agencies, two state agencies, and one private sector business, the ERM Research Team identified three major issues affecting the current state of electronic records management.

First, an organization's size and resources determines its ability to implement or plan for an Electronic Recordkeeping system [ERKS] (a system that uses records management software which collects, organizes, and categorizes born-digital electronic records to facilitate their preservation, retrieval, use, and disposition). Although there has been much discussion of "ERKS," an "official" definition of ERKS is not available, as the concepts are still under development. However, for the purposes of this study, we have used ERKS as being synonymous with Records Management Application [RMA]. DOD 5015.2-STD describes the required functionalities for a RMA. We do not apply the term ERKS to such electronic records keeping approaches as (a) folders conforming to a file plan on a shared drive; (b) a DMA which references approved dispositions, or (c) individual electronic filing systems such as just maintaining e-mail on an employee's hard drive. As used in this report, an ERKS must comply with, DOD 5015-2-STD, but does not need to be certified. Planning, developing, and implementing an ERKS requires direction from managers, training for employees, and a commitment from everyone creating records to make full and consistent use of the system. Providing the training, motivation, and understanding on the part of employees is essential. The survey results demonstrate that the majority of federal agencies currently using or in the process of implementing an ERKS have less than 10,000 employees, which indicates that the smaller the agency is, the further along it is likely to be in the process of adapting to electronic records management.

Second, in the absence of an ERKS, disposition of electronic records is entirely manual and unsystematic, meaning that employees select individual word-processing documents or e-mail records and delete them one at a time without following established procedures for reviewing and disposing of electronic records. This contributes to a problem found in the study that organizations are retaining too many records past their disposition.

Third, the majority of organizations still designate paper as their official recordkeeping format and most are maintaining a dual recordkeeping system where they retain the same record in multiple formats, usually paper and electronic.

However, the interviews also revealed that many federal and state government agencies are making concentrated efforts to control electronic records. Although only four federal agencies which participated in the study are using or are in the process of implementing an electronic recordkeeping system [ERKS] that meets DOD 5015 standards, nine are using some type of software application that assists in electronic records management. Many agencies without appropriate technology are using traditional records management strategies to handle electronic records, such as following file plans to manage their desktop files. The ERM Research Team evaluated current procedures in place at organizations, alongside these three major issues, with the intent to propose a solution for organizations not planning to build or purchase an ERKS in the immediate future.

The ERM team concluded that currently the best practice used by several organizations is to synchronize their paper filing system with a central electronic filing system located on a shared drive. This involves creating a detailed file plan that employees follow when they file all records (regardless of format) and setting up a folder directory on a shared drive that mirrors the arrangement of folders in a traditional filing cabinet. Using this approach, an office would maintain electronic versions of records on a shared office hard drive and paper records in a traditional paper file. Both sets of records would be filed the same way, and both would be retained as long as indicated on the appropriate records retention and disposition schedule. This solution does not fully address considerable e-mail management problems experienced by most organizations and measured throughout this study because it requires users to manually assign each e-mail to the appropriate file folder. The research team suggests future studies should be done in the area of e-mail management which builds on the information gathered by the Electronic Records Management Best Practice Survey.

## ***Background***

Most organizations, including governments, today create their records on desktop computers using word processing, e-mail, and various other types of software. The reasons why organizations have adopted personal computers as essential tools to complete work processes are obvious – computers allow documents to be saved, modified, duplicated, stored, and transmitted electronically. Essentially, the convenience of the personal computer has accelerated the pace at which organizations communicate and produce results.

The benefits of using technology to create records have also resulted in complications for many organizations trying to maintain and manage evidence of their business functions. The ease with which documents are saved and duplicated by individual employees on their desktops means that, potentially, many versions of non-essential and essential records are retained and held for periods longer than required. It also increases the likelihood that the records are being maintained according to individuals' preferences and conventions instead of records management principles. The volume of records and the haphazardness with which they are managed produce more work for people trying to

locate specific records for accountability purposes, which can have huge legal ramifications. Retaining an overabundance of records in electronic format also raises concerns over the reliability, authenticity, and longevity of records because electronic versions are easily changed, accessible by many employees within an organization, and software platforms can rapidly become obsolete.

In addition to publishing literature, establishing guidelines, and creating canons of good practices, the records management community has attempted to address many of these issues by completing studies in electronic records management. Cohasset Associates<sup>1</sup> surveyed 2,206 individuals about their organization's records management program in 2003. The questions in the Cohasset survey measured the level of importance organizations place on records management by capturing information about the formality of records management programs. The survey also evaluated employees' perceptions of the effectiveness of the records management policies and practices in place at their organization. The White Paper produced from the survey demonstrated that many organizations do not have effective records management programs. Organizations are currently failing to manage their electronic records efficiently and are not prepared to handle future electronic records compliance, legal, and preservation issues.

A study by SRA International<sup>2</sup>, which looked specifically at federal government agencies and evaluated their recordkeeping practices, found results similar to the Cohasset survey. SRA reported that while situational factors accounted for major variation in the quality and success of recordkeeping, in general, records management is a low priority in federal agencies, and employees do not know how to "solve the problem of electronic records." A key finding of the SRA study team was that agencies need and want guidance from the National Archives and Records Administration (NARA) on current records management issues.

Despite the publication of standards by NARA, state archival programs, and other leading records management professionals, many organizations are still puzzled over how to deal with the management of electronic records and solve major problems documented in reports such as the Cohasset survey and the SRA study. For example, the Sedona Conference brought together experts from the legal field and produced *The Sedona Guidelines: Best Practice Guidelines & Commentary for Managing Information & Records in the Electronic Age*.<sup>3</sup> The Sedona guidelines contain excellent strategies for implementing electronic records management policies and procedures, but do not provide many practical solutions for day-to-day management of information in electronic formats.

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<sup>1</sup> See Robert F. Williams, Cohasset Associates Inc., "Electronic Records Management Survey – A Call to Action," Cohasset/ARMA/AIIM White Paper (2004). Available through Cohasset Associates, <<http://www.merresource.com/whitepapers/survey.htm>> [Accessed on 8/9/05].

<sup>2</sup> See SRA International, Inc, *Report on Current Recordkeeping Practices with the Federal Government* (December 10, 2001). Available through the National Archives and Records Administration, <<http://www.archives.gov/records-mgmt/pdf/report-on-recordkeeping-practices.pdf>> [Accessed on 8/9/05].

<sup>3</sup> See *The Sedona Guidelines: Best Practice Guidelines & Commentary for Managing Information & Records in the Electronic Age*, The Sedona Conference Working Group Series (September, 2005).

Many experts in the field are optimistic that the emergence of electronic records management systems will reinforce records management guidelines, automate routine functions, and help alleviate the burden of managing large amounts of electronic records. Despite efforts to develop standardized practices and design software that can meet the needs of organizations, electronic records management problems persist, many organizations cannot afford to purchase or design technology that will solve their problems, and the information management community is still uncertain of best methods to ensure electronic records are properly captured, stored, and preserved.

The Electronic Records Management Research Team, co-sponsored by NARA, set out to build on current research in electronic records management and identify, analyze, and report on best practices in the field. The goal of the research project was to meet the needs of organizations and NARA for effective strategies to manage electronic records created and maintained by individuals on the desktop computer.

The project focused on how organizations can get control of electronic records with their current resources and technology while considering how they might handle the increasing complexity of electronic records management in the future. In order to build on previous studies and make reliable suggestions, our research incorporated successful techniques employed by Cohasset and SRA and surveyed outside organizations to determine current policies, best practices, and employees' perceptions about electronic records management and records management in general. We also reviewed the records management and archival literature on electronic records management and archival electronic records and the recommendations of consulting and survey firms such as Cohasset and SRA.

## ***Survey Methodology***

The Electronic Records Management Best Practices Survey proceeded in four stages:

In the first stage, NARA contacted Federal records officers to solicit the participation of his or her agency in the survey. NARA's contacts yielded 21 Federal offices or agencies that agreed to participate and NARA provided the University of Maryland's ERM Research Team with contact information for those offices. It should be noted that these 21 participants were simply offices that expressed a willingness to participate and thus are not necessarily a representative sample of agencies. It should also be noted that many agencies declined NARA's invitation to be included in the survey. The reasons are not certain and the project did not attempt to identify them. They may, however, have included lack of time on the part of the records officer to participate in the survey and apprehension about exposure of inadequate recordkeeping practices.

In the second stage, the ERM Research Team gathered data on the twenty-one federal agencies to ascertain the extent to which agencies have adopted electronic recordkeeping systems and how the management of electronic records is incorporated with traditional records management strategies. The ERM Research Team completed on-site interviews

with federal agency employees using a structured questionnaire (Appendix A). At the beginning of the project, NARA provided the Research Team with a model questionnaire concerning agency recordkeeping and the Research Team modified it for use in the survey. The interview questionnaire consisted of fifty-five questions, most of which contained layered follow-up questions. The questionnaire was crafted in a way to allow the flow of conversation to follow a natural course and make the participants feel comfortable and open with sharing information about their office or agency. Many of the questions consisted of multiple choice answers, but allowed for an option such as “other” or “none of the above” or “don’t know” to allow the respondents to explain their particular situation. Several questions were open-ended to allow participants to speak freely and add extra comments about their procedures and policies regarding electronic records management or records management in general. Performing the survey on location allowed the Research Team to meet records staff in person and also facilitated visual exploration and investigation of some of the records management methods being practiced by the agencies visited. If electronic recordkeeping systems were in use by the office, the research team asked for a demonstration of the system in order to get a feel for how it worked. This “hands-on” approach provided an in-depth exploration of actual practices at agencies. Two-thirds of the federal onsite interviews were also tape recorded with permission (see Informed Consent Form in Appendix C) and reviewed again by the research team for clarification of answers.

After completing approximately half of the twenty-one onsite interviews, the ERM Research Team worked with a team of graduate students in Master of Information Management Program at the University of Maryland to administer a web-based survey. This second stage of the survey attempted to capture the same information as the federal agency interviews but from a larger audience. Our purpose here was to deepen our understanding of electronic records management problems, policies, and best practices beyond the Federal government that participated in the interviews. It was sent to records and information management professionals via records management and archives listservs and consisted of a condensed version of the questionnaire used during the on-site interviews (31 questions, 25 multiple choice, and 6 open-ended). The two teams decided what questions to use based on the quality of answers supplied by interviewees during in-person interviews; questions that yielded the most information were included. The wording of the questions was only changed to make terms apply to a more universal audience (i.e. agency was changed to organization) and questions pertaining only to government agencies were omitted.

The final stage of the survey involved administering the on-site interview questionnaire to two state government agencies and one private sector business. The two state agency interviews were tape-recorded but the private sector business was not. This non-Federal government sample was small but it provided valuable, first-hand insight into electronic records management problems and practices.

## **Data Analysis**

Analyzing the information collected at participating agencies consisted of several steps. First, researchers typed any hand-written notes into a more legible format and clarified any confusing answers by listening to tape recordings of interviews or contacting the agencies after the interview for additional information. Next, the answers to the interview questions were entered into a spreadsheet for comparison across agencies. For the open-ended questions, or where the agencies provided additional data beyond the scope of the initial question, the responses were categorized and grouped with similar answers. And finally, data was analyzed across agencies and across questions to identify similarities and differences or significant trends.

## **Study Limitations**

This study, which included an extensive questionnaire, on-site interviews, and considerable discussion and analysis, yielded invaluable insights about how electronic records are actually managed and what can be done to strengthen that management. It provides first-hand, empirical information. It actually yielded more information that we have been able to include in this report. The project has a few limitations. The survey covered only 21 Federal offices, which volunteered to be included, and it is therefore not a statistically valid sample and the insights for a particular office can't necessarily be generalized to the parent agency as a whole. A few questions were disregarded when it became apparent that their wording was not eliciting the intended level or type of information, as noted in narrative below. The work focused primarily on electronic records typically created by individuals on their desktop computers such as word processing documents, it touched on databases and web content, but it did not attempt to include a broader range of records such as digital images, sound bites, and instant messaging records. Its findings and conclusions should be considered with those facts in mind.

## **Questionnaire Results**

The following questionnaire (see Appendix A) was administered during the first phase of the research project, interviewing federal agencies, and the third phase, interviewing state agencies and a private sector business. It is broken down into manageable sections for easier reference and analyzed below.

*The term “Not Applicable” or “NA” is used to refer to any of three situations. One, offices provided that answer to indicate that a policy or practice did not apply to their particular situation. Two, occasionally interviewers omitted questions. Three, sometimes researchers felt that interviewees had not fully answered the questions but did not want to repeat them.*

## Introductory Section (1-5)

The introductory questions of the survey were primarily used for information gathering prior to site visits. The information was initially provided by NARA or researched by the ERM team before attending interviews at each agency.

*Question 1. What is the title and organization code of the office?*

To maintain the anonymity of the offices that participated in this survey, each one was classified by the type of category to which it belongs. Offices were identified as belonging in organizations that fall into Defense and International Relations, Other Civilian Agency, Infrastructure, or Environment<sup>4</sup>. Of the 24 offices surveyed, 6 were classified as “Defense,” 7 were “Other,” 6 were “Infrastructure,” and 5 were “Environment.”

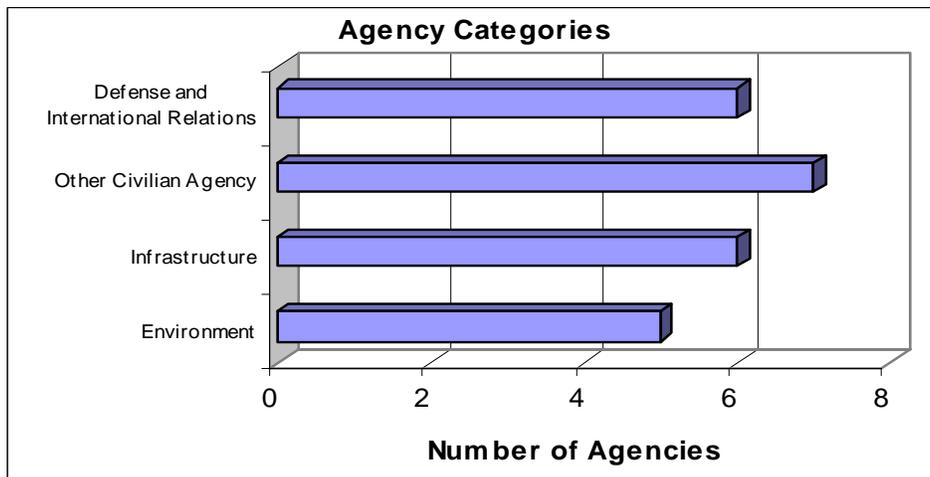


Figure 1: Agency Categories

*Question 2. What is the name of the records management (or other) contact person for this office? Was this person present during the interview?*

This question is being omitted from the general analysis to protect the identity of those agencies and representatives who opted out of being acknowledged as a participant.

*Question 3. What is the office’s physical location?*

Physical addresses were collected for each office visited or surveyed. Only the breakdown of location by State is provided here.

District of Columbia: 9

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<sup>4</sup> Defense and International Relations: All defense, intelligence community, and diplomatic organizations. Environment: Civilian organizations whose primary function is regulating environmental concerns or maintaining parks, forests, public land, or other natural assets. Infrastructure: Civilian organizations whose primary function is regulating or maintaining critical infrastructures, including roads, utilities, banking and finance, transportation, and energy. Other Civilian Agency: All other civilian agencies.

Virginia: 8  
Maryland: 4  
Other: 3

*Question 4. What is the primary function of the office?*

While the office function is an important consideration when setting up and operating an electronic recordkeeping system, the answers to this question were provided by NARA solely to provide the interviewers some background information on the agencies visited and further analysis was not pursued.

*Question 5. Does the agency maintain a Federal public web site?*

- a. If yes, did NARA include the agency on its Active Agency Domains list as a target for their harvest of Federal agency public web sites, as they exist on or before January 20, 2005?*

The researchers defined this as an *agency* that maintains a web site which is accessible to the general public outside of government buildings and without logins and passwords.

All 24 agencies surveyed maintain a federal public web site. Information concerning NARA's inclusion of the sites in their harvest of public web sites prior to January 20, 2001 was incomplete as the researchers did not have access to the harvest list.

### **Office Function and Organization (6-11)**

This segment of the questionnaire focused on the organization and makeup of the office employees and the work performed regularly.

*Question 6. What work does the office perform?*

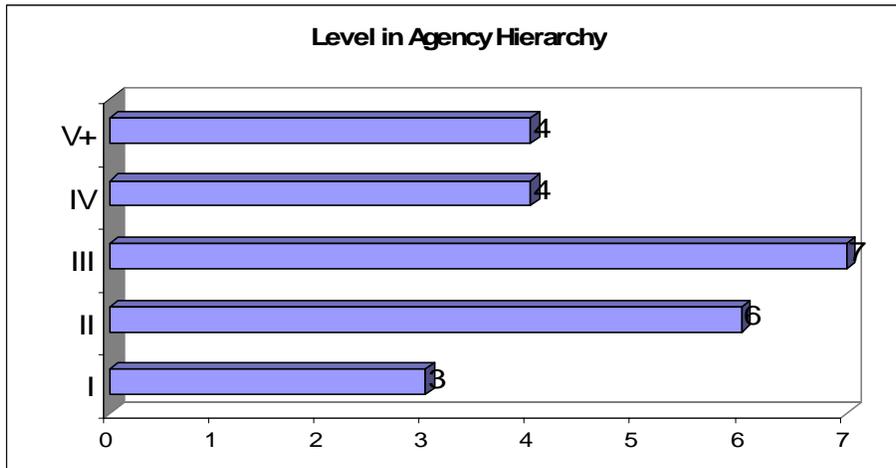
This question allowed the researchers to get an idea of the type of work the agency and office carried out in order to place many of the survey questions in context for the interviewees. The nature of the work performed by the offices varied significantly. The differences between the various agencies' missions and individual offices' responsibilities are too complex to categorize the work function in a way that would protect the identity of the agencies, while still eliciting useful information. The data collected has been kept on hand for future reference or research at the Center for Information Policy, but is not being analyzed in-depth for this report as it does not add to the value of the study.

*Question 7. What is (are) the functional title(s) of the program workers in the office (e.g., action officer, management analyst, scientist, engineer)?*

After results were evaluated from all surveys, the responses to this question were too broad and cover too many areas to be of relevance. This question has been withdrawn from any further evaluation, but the data collected has been kept at the Center for Information Policy.

*Question 8. What offices are above this office in the agency hierarchy?*

Offices at the top of an agency hierarchy were designated as “I,” offices at the second level as “II,” and so on. Offices at a level five down or lower were grouped together. The majority of offices visited fell two to three levels down from the top of their agency.



**Figure 2: Level in Agency Hierarchy**

*Question 9. How is this office organized internally (i.e., is it subdivided into branches or other subunits)?*

This is defined as the number of divisions or separate groups within the office, informal or formal, as understood by the office and communicated to the interviewers. For example, the Management and Budget office of the National Ocean Service (a division of the National Oceanic and Atmospheric Administration) is broken down into five divisions: Policy Planning and Analysis, Information Management, Resource Management, Special Projects, and Communications and Education. This particular office would be assigned an internal organization of 5+ to represent the five divisions within the office.

The answers are as follows:

- 7 offices had no splits
- 6 offices had 2 separate groups within the office
- 3 offices had 3 separate groups within the office
- 1 office had 4 separate groups within the office
- 3 offices had 5 separate groups within the office
- 1 office had 7 separate groups within the office
- 1 office had over 50 separate groups managed by the office
- 2 offices explained that this question was not applicable to their office or did not answer the question

In addition to the number of divisions within the office, the researchers investigated the size of each agency and corporation (by number of total employees) to attempt to gain an understanding of the implications of records management for the agency as a whole. To continue with the previous example, at the agency level, this number would represent the number of employees at the National Oceanic and Atmospheric Administration and was researched online if not provided by the interviewee. The agency size breakdown is as follows:

0-100 employees: 3  
101-1000 employees: 1  
1001-5000 employees: 3  
5001-10,000 employees: 4  
10,001-50,000 employees: 7  
50,001+ employees: 3  
Unknown: 3

*Question 10. Approximately how many staff members are in the office?*

The number of staff members was evaluated much like the agency and division size but on a more narrowly defined level. Again, to continue with the previous example, the number of staff members in the office would be defined as the number of employees working only in the Management and Budget Office of the National Ocean Service (to include all five divisions). The number of staff members in the office by itself was not as revealing to the researchers as was the comparison of staff size to the number of records staff in the office. Please see question 11 below.

*Question 11. How many records liaison staff does the office have?*

Records staff or records liaison staff is defined as the number of people designated by an office with responsibility for making decisions about the management of records in that office.

The number of records staff (from question 11) was compared to the number of staff members (from question 10) in the office as a means of determining the percentage of employees within an office who are responsible for making decisions about records management.

The results show the great variation in how responsibility for records management is assigned in various settings. Nine offices – more than a third of those surveyed – indicated that less than 5% of their staff have these responsibilities, while three offices reported that over half of their staff have them.

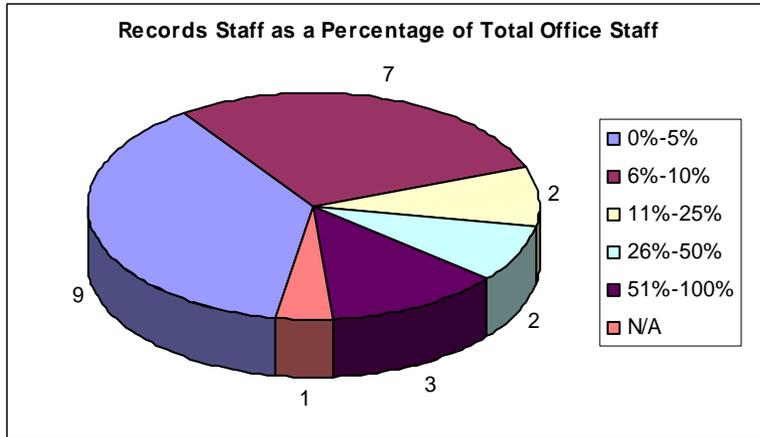


Figure 3: Records Staff to Total Staff

### Nature of Records (12-15)

The following few questions deal with the types of records created and received by the office.

*Question 12. What are the major titles of records series being maintained?*

Survey respondents replied to this question with a great variety in answers. Almost all of the survey participants listed multiple types of records. For ease in evaluation, records series titles were grouped into one of four broad categories: Administrative, Program Operation, Program Management, and, Information Services.

Administrative records are records relating to the administration of the office, i.e. personnel records, office budgets, organizational charts, or general correspondence.

Program Operation records relate to the actual work an office carries out in order to fulfill its mission. These records are the actual work the office produces, i.e. if the office's primary responsibility is to formulate policy, then their policy records would fall under program operation.

Program Management records relate to the administration of the office's program, or the maintenance of a particular project that fulfills their mission, i.e. project plans or project budget.

All records relating to specifically to FOIA requests and Privacy Act records are classified as Information Services as well as office or agency publications managed by the office.

Agencies responded as follows:

11 out of 24 offices maintain Administrative records series.

23 out of 24 offices maintain Program Operation records series.

9 out of 24 offices maintain Program Management records series.  
 6 out of 24 offices maintain Information Service records series.

Note that any office may have a combination of all types of records but the results only include those listed by the respondent.

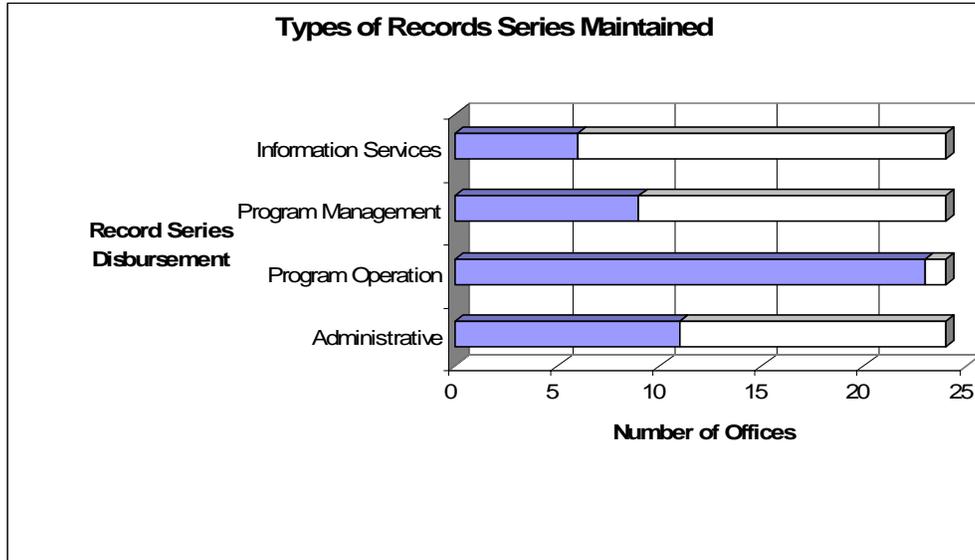


Figure 4: Records Series

Question 13. *Approximately what is the date span of records in the office?  
 (How far do they go back?)*

The date span is defined as the earliest date of official recordkeeping copies which are physically maintained in the office. The average date span maintained in each office is as shown on the chart on the following page:

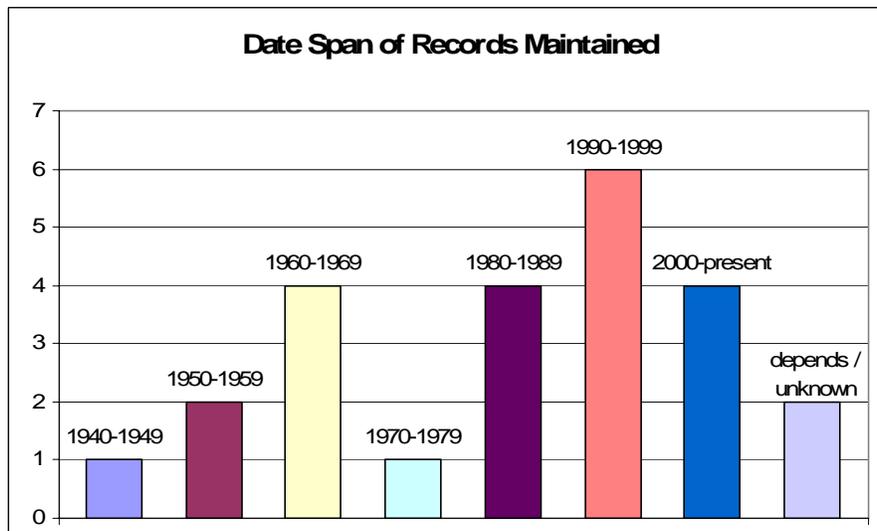
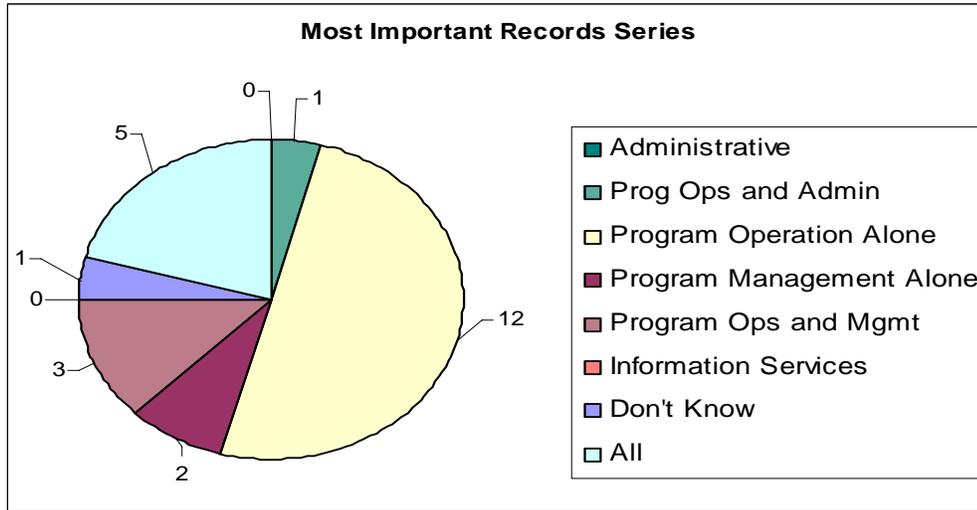


Figure 5: Records Date Span

*Question 14. Which records does the office consider the most important?*

The records deemed most important by an office were classified by the same broad record series categories discussed in Question 12. If an office designated that all records are equally important, this is represented by the category “all.”

Following are the results by survey participants:



**Figure 6: Most Important Series**

*Question 15. Which records does the office send to other offices, either inside or outside of the agency (e.g., the office submits quarterly activity reports to the Office of the Secretary)?*

The wording of this question elicited inconsistent responses from participants. Some respondents answered with a “yes” or “no” reply, while others listed specific reports or documents by name that are sent to other offices. Due to varying and confusing answers from survey contributors, this question has been withdrawn from any further evaluation.

### **Agency/Office Records Management Program (16-21)**

The following questions are concerned with the general components of a typical records management program and aim to determine which policies and procedures are currently in place.

*Question 16. Please describe the records management program in this office:*

Due to multiple segments of this question, the answers provided by survey participants are provided below in tables or charts. Question segments have been combined where possible. Majority answers for each category have been highlighted with **bold** text.

- a. *Is there a written records management policy?*

Defined as an *official* records management policy currently in use by the office. An official policy may be on an agency level, an office level, or a combination of both. A draft or “in process” policy is not considered official for the purpose of this survey. Results are below.

b. *Is there a component of the written records management policy that addresses electronic records?*

Defined as a component of an *official* records management policy which addresses electronic records (see written records management policy above).

A total of 20 offices explained that they have some form of written records management policy (whether agency-wide, office-specific, a combination of agency and office defined, or just designated as a written policy by respondents) with three other offices explaining they were in the process of developing a policy. Of the 20 offices which had a written policy (in whatever form), a total of 17 offices stated their policy addressed electronic records (two of which specified that this electronic reference was specific to just their office). The complete results are below.

**Table 1: Records Management Policy**

|   | Written RM policy | Addresses electronic records |
|---|-------------------|------------------------------|
| Yes, no additional details given        | <b>12</b>         | <b>15</b>                    |
| Agency-wide policy                      | 7                 | 0                            |
| Office-specific policy                  | 0                 | 2                            |
| Combination of agency and office policy | 1                 | 0                            |
| No                                      | 1                 | 5                            |
| In process of developing policy         | 3                 | 2                            |

c. *Does the records management program comply with ISO 15489?*

- Yes: 4 offices
- No: 3 offices
- Don't know: **17 offices**

Although federal and state agencies are not required to comply with ISO 15489, attempted compliance may indicate a dedication to records management. The option “Don't Know” was provided to measure whether or not offices are aware of the international standard in order to discover cognizance of large-scale records management efforts. Most office employees are not aware of ISO 15489 but did inquire about the standard or requested that the research team send them more information.

d. *Do program workers receive scheduled training with respect to their responsibilities for records management?*

This is defined as a formal program which provides regularly scheduled training with respect to employees’ responsibilities for records management or introductory training with refresher courses.

**Yes: 14 agencies**  
 Through agency-wide policy or procedure: 1 agency  
 No: 5 agencies  
 Intermittent training – not regular: 4 agencies

e. *Does the records management staff include an IT expert?*

A yes answer is defined as a member of the records management staff who is an IT expert. IT support staff available for consultation by the records staff are identified as “outside support” but are not considered records management staff.

**Yes: 8 agencies**  
**No: 8 agencies**  
 IT support provided from outside department: **8 agencies**

f. *Is there is a formal system for records hold orders relative to claims or litigation?*

See below, section g.

g. *Are electronic records included in a formal system for records hold order relative to claims or litigation?*

See table below.

**Table 2: Hold Orders**

|  | Formal system for hold orders | Includes electronic records |
|--|-------------------------------|-----------------------------|
| Yes                                      | <b>11</b>                     | <b>8</b>                    |
| Agency-wide policy                       | 1                             | 1                           |
| No                                       | 6                             |                             |
| In process of developing policy          | 2                             | 2                           |
| Not Applicable                           | 3                             | 4                           |
| Don't know                               | 0                             | 1                           |
| Support provided from outside department | 1                             | 0                           |

h. *Is there a disaster recovery plan for vital records?*

This is defined as policies, procedures, and information that direct the appropriate actions to recover from and mitigate the impact of a catastrophe (SAA Glossary) on records.

**Yes: 11 agencies**  
 Agency-wide policy: 2 agencies  
 No: 3 agencies  
 In process of developing policy: 4 agencies  
 Don't know: 1 agency  
 Part of Continuity of Operations (COOP): 3 agencies

i. *Are there disposition and retention schedules?*

All 24 agencies have a written retention schedule providing instructions for the disposition of records throughout their lifecycle. One agency described their schedule as being an agency-wide policy, and one agency explained they have a schedule, but are not currently following it.

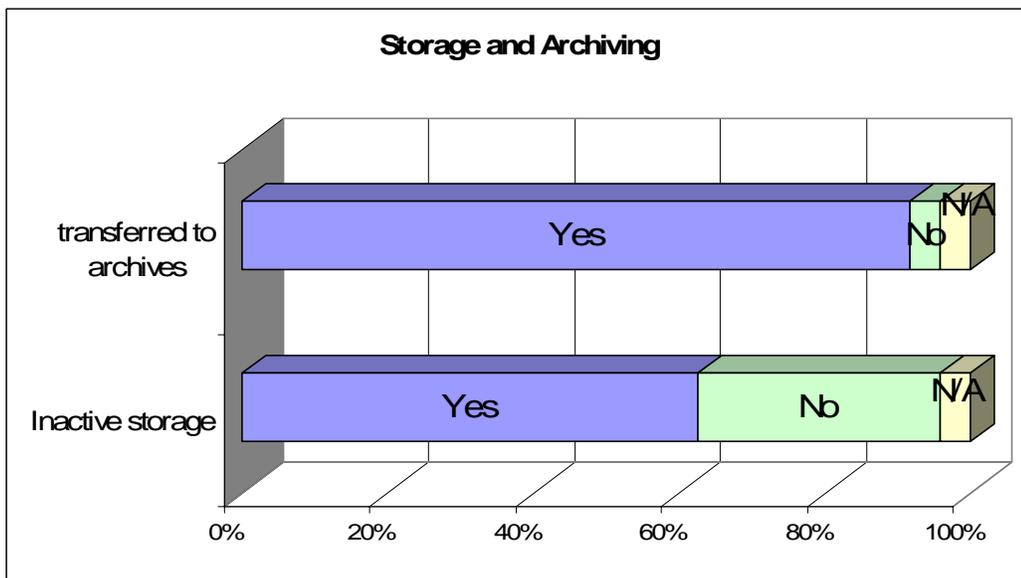
j. *Are records transferred to storage facilities for inactive storage?*

Defined as a transfer before disposition.

See below. Yes: 15, No: 8, N/A: 1

k. *Are permanent records identified and preserved or transferred to an archives?*

Yes: 22, No: 1, N/A: 1

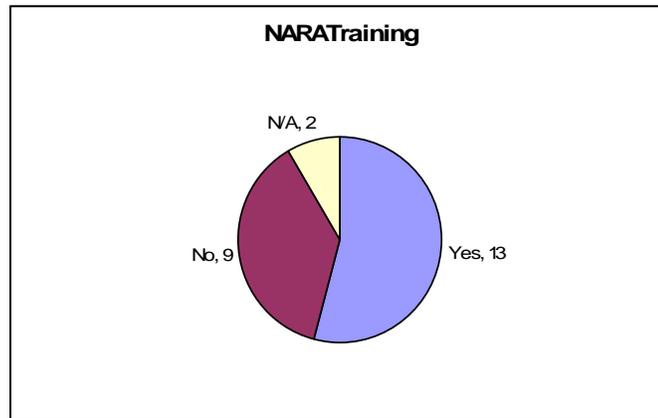


**Figure 7: Storage and Archiving**

*Question 17. Has the records liaison or any program worker received any records management training or services from NARA?*

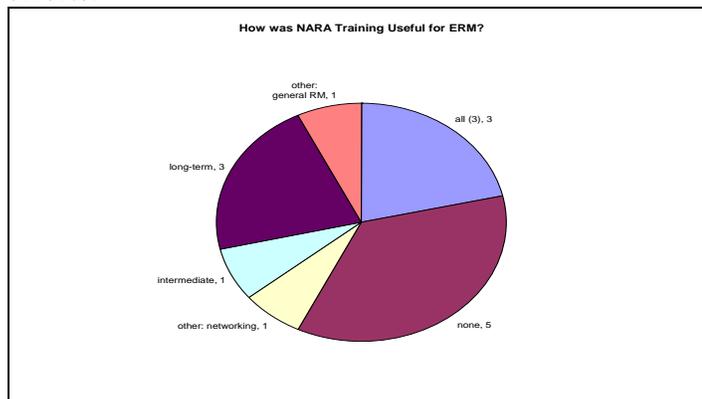
- a. *If yes, how useful was it to you in helping in your electronic records management efforts?*
- 1) *Useful in day-to-day operational records keeping*
  - 2) *Useful in planning intermediate records-keeping planning (1-2 years)*
  - 3) *Useful in long-term planning efforts (3-5 years)*
  - 4) *None of the above, please explain.*

This question defined training from NARA as being specific to records management. 13 out of 24 agencies expressed having received records management training and/or services from NARA.



**Figure 8: NARA Training**

Of these 13 “yes” answers, responses were further broken down to explain how helpful the training was for the electronic records efforts. An “All” answer means the respondent indicated that NARA training and services were useful in day-to-day, intermediate, and long-term planning. A “None” answer means the respondent indicated that NARA training and services were not useful or that they did not address electronic records. An “Other” answer means the respondent indicated that NARA training and services were useful in other ways like Networking and General Records Management rather than for electronic record management efforts.



**Figure 9: Usefulness of Training (n=13)**

*Question 18. Has your organization received any “targeted assistance” from NARA on the design and/or implementation electronic record management projects?*

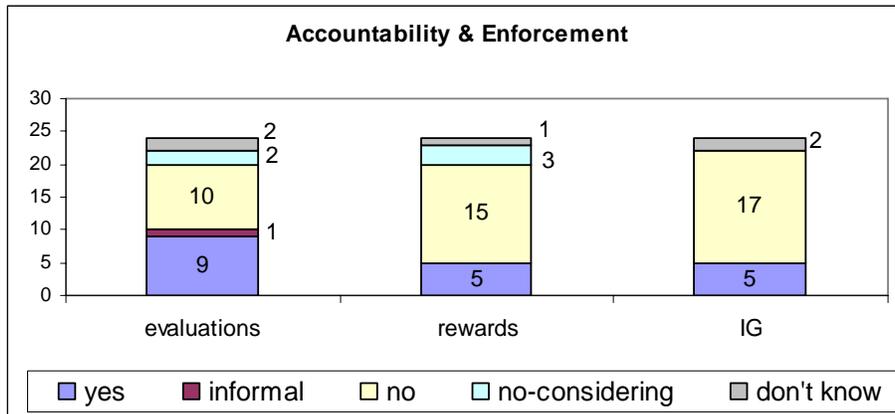
- a. If yes, in what form?*
  - 1) Training*
  - 2) Applications Software recommendation*
  - 3) Compliance to NARA standards*
  - 4) Other (please describe)*
- b. If yes, approximately how many projects?*
  - 1) Please list projects? (Use a separate sheet of paper if necessary)*

Only three offices reported receiving targeted assistance from NARA for ERM projects. This assistance came in the form of system design, specific ERM needs, and scheduling electronic records. 13 agencies stated they had not received targeted assistance, two agencies did not know, two had received assistance from NARA in the form of a project other than electronic records management and for four agencies, this question was not applicable.

*Question 19. What accountability and enforcement mechanisms are in place for records management (Select all that apply):*

- a. The records manager conducts scheduled evaluations of program workers’ compliance with records management policies and procedures*
- b. Program workers are given a certificate or other form of reward when they receive an excellent evaluation*
- c. The Inspector General conducts scheduled audits of records management policies and procedures*
- d. None of the above. Please explain:*

The majority of offices interviewed did not have accountability or enforcement mechanisms in place for records management. A few were considering conducting evaluations and providing rewards for excellent records management, but only five agencies currently offer rewards to employees and have scheduled audits by the Inspector General. Nine agencies currently conduct scheduled evaluations of compliance.



**Figure 10: Accountability & Enforcement**

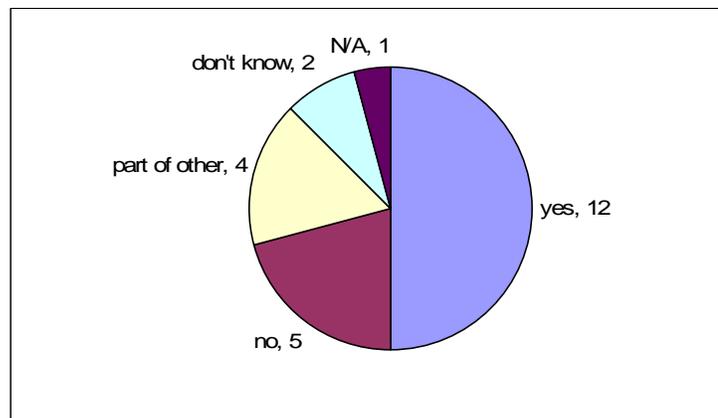
*Question 20. Is there a clear connection between the records management program and the overall mission of the agency?*

The overwhelming majority (20 out of 24) agencies stated there was a clear connection between the records management program and the overall mission of the agency (two agencies said there was not a clear connection, and two agencies did not know), but when asked to describe the specific elements that described the degree to which the program was linked with agency mission the responses were not as clear, which complicates the analysis of the results of this question (see Question 21 “a,” “b,” and “c” results below). It seems evident that though office representatives may *think* there is a clear connection between the records management program and the overall agency mission, when questioned about specifics, the results indicate the link is not as strong as anticipated.

*Question 21. If there is a connection between the records management program and the agency mission, please describe the degree to which the program is linked with the overall goals. (Select all that apply)*

*a. The records management program is included in the annual budget*

This is defined as records management as a line item in the annual agency budget. “Part of other” explains that funding from records management trickles down from another line item or comes from a different department (for example, IT). One small agency explained that there was no money for records management until the agency started implementing an official electronic recordkeeping system.



**Figure 11: Budget**

*b. The records manager is a high-ranking official<sup>5</sup>*

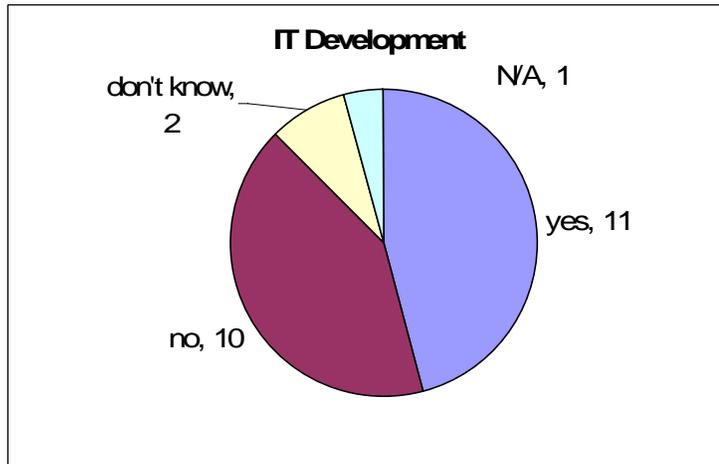
For the purpose of this report, GS 13 and above is considered high-ranking and GS 11/12 is considered mid-ranking.

<sup>5</sup> In general, for the agencies with less than 10,000 employees, this refers to the **agency** records manager, and in the larger agencies it refers to the major component (e.g. “service,” “directorate,” or “administration”) records manager.



**Figure 12: Rank of Records Manager**

c. *The records manager is part of IT development teams*



**Figure 13: IT Development**

- d. *Records management contributes to the annual reporting required by the Federal Managers Financial Integrity Act of 1982 (FMFIA below).*
- e. *Records management contributes to the annual reporting required by the Government Performance Results Act of 1993 (GPRA below).*
- f. *Records management contributes to the annual reporting required by the Information Technology Management Reform Act of 1996 (ITMRA below).*

Agency responses to annual reporting required by various government Acts are listed below. Most agencies were unaware of their contribution to FMFIA and ITMRA, but many were more familiar with GPRA.

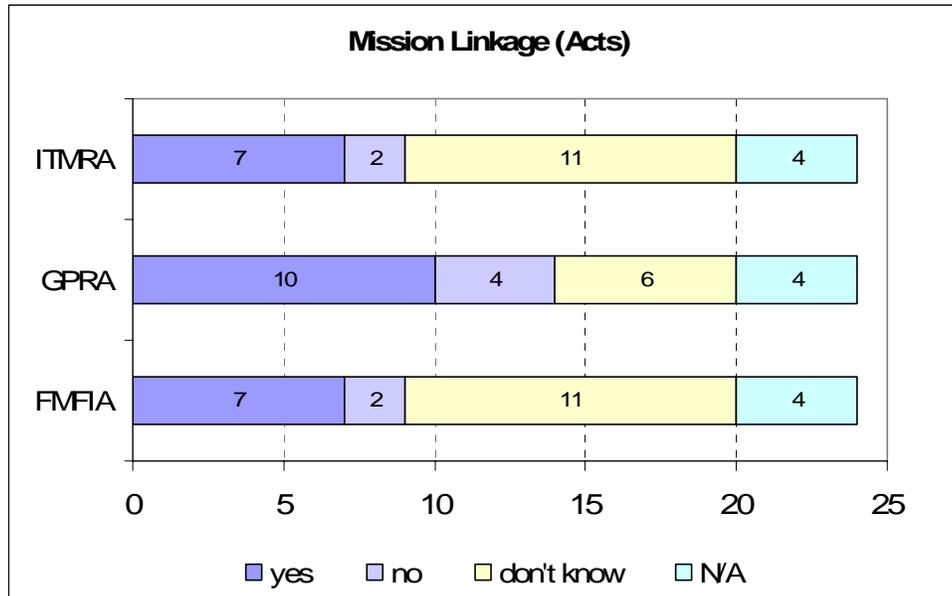


Figure 14: Government Acts

## Records Management (22-24)

These questions address how records are currently managed in the office. File plans and schedules are discussed.

*Question 22. Does the office have a file plan?*

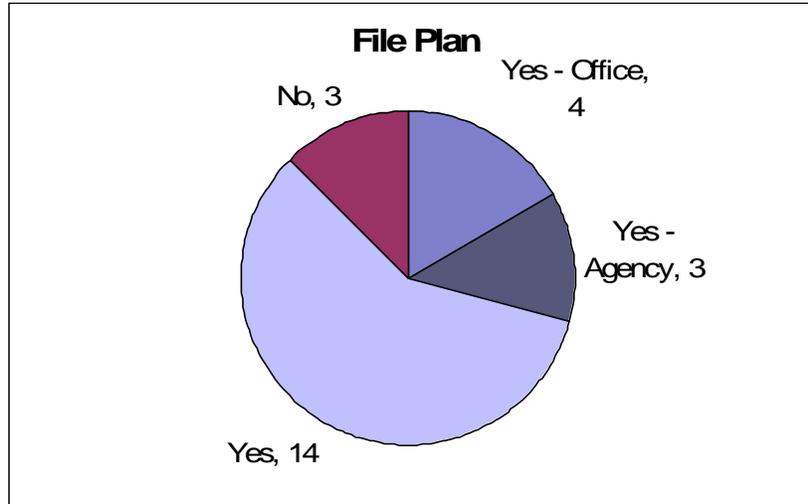
*a. If yes:*

- 1) Is there a copy of the file plan that we could see?*
- 2) For each records series, does the plan reference the relevant item number in the agency records disposition manual?*

*b. If no:*

- 1) Can the office tell us which approved items in the disposition schedule apply to the office's records?*

A file plan is defined as a classification scheme describing different types of files maintained in an office, how they are identified, where they should be stored, and how they should be indexed for retrieval. The researchers did not specify that an office file plan had to include paper and electronic records. However, question 35 b. addressed whether or not paper and electronic records in corporate files are filed according to the file plan. Questions 37 and 40 also asked whether or not individual employees follow a file plan when maintaining recordkeeping copies at their desks and paper copies of e-mails respectively.



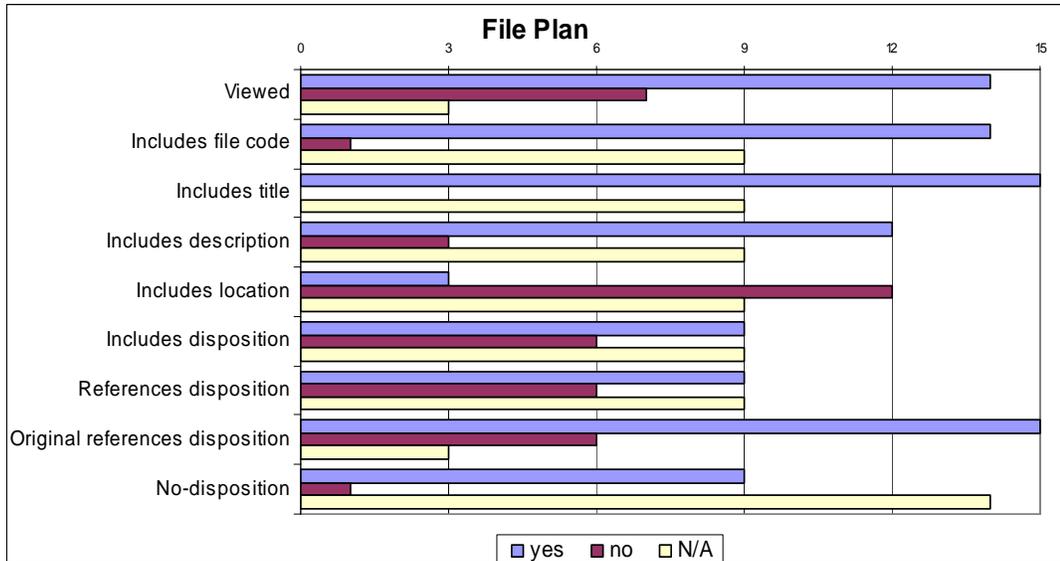
**Figure 15: File Plan**

Only three offices stated they did not have a file plan. Of the 21 remaining offices, seven designated that their file plan was either specific just to their office or an organization-wide file plan. The researchers reviewed 14 of these 21 file plans and made some designations about the different elements the file plans contained and grouped them by similarities and differences.

The file plan elements identified were:

- File plan includes a file code or classification number
- File plan includes the titles of the records
- File plan includes a description of the records
- File plan includes the location of the records
- File plan includes disposition

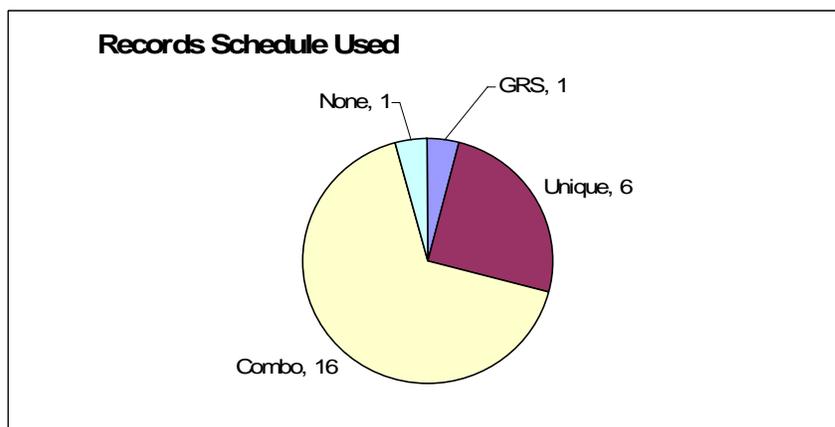
Additionally, if the office answered yes to having a file plan, they were asked whether or not the file plan states the disposition or references the disposition schedule. If the office answered no to having a file plan, they were also asked if they could acknowledge which items in the disposition schedule applied to their records without using a file plan. The results of all of these file plan components are displayed below.



**Figure 16: File Plan Specifics<sup>6</sup>**

- Question 23. Does the office use NARA’s General Records Schedules; has the office developed its own records schedule; or some combination of both?*
- The office uses NARA’s general records schedules for all of its records.*
  - The office develops its own records schedules for all records created in the office.*
  - The office uses a combination of NARA’s general records schedules and individual records schedules developed by the office for unique or high-priority records.*

The majority of agencies interviewed use a combination of NARA’s General Records Schedules and individual records schedules developed by the office. The two state agencies and one private business indicated they use a combination of a State/Corporate records schedule and individual records schedules developed by the office.



**Figure 17: Records Schedule**

<sup>6</sup> “Original references disposition” = agency policy is that the original document includes disposition instructions/coding; “No disposition” = neither the file plan nor the original documents referenced disposition information.

Question 24. Does the office use Flexible Scheduling?

- a. Never heard of it
- b. Heard of it, but not implemented
- c. Considering implementation
- d. Already implemented

Flexible scheduling is defined as a provision for concrete disposition instructions that may be applied to groupings of information and/or categories of temporary records. In other words, it provides instructions for agencies to develop schedules for disposable program records at as high a level of aggregation as would meet their business needs. Flexibility is defining record groupings. Flexible scheduling relates to the “Big Bucket” approach, which refers to the application of appraisal criteria to multiple, similar, or related groupings of information across one or multiple agencies to establish a uniform retention period.

Only three agencies surveyed were currently using flexible scheduling for records management.

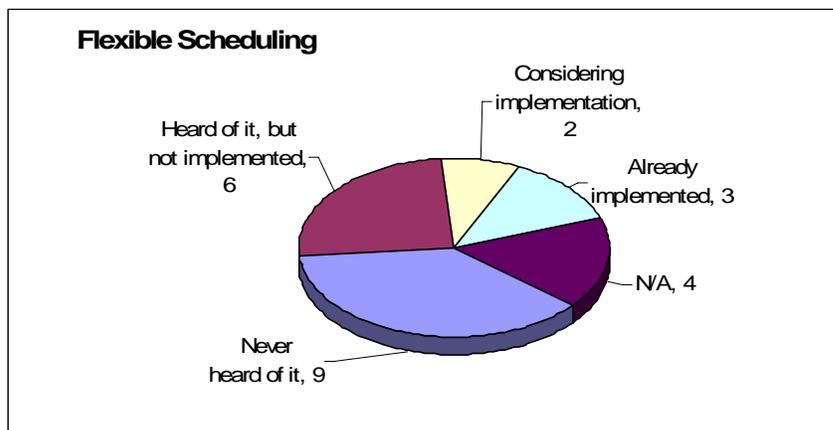


Figure 18: Flexible Scheduling

## **Paper and Electronic Records Maintenance (25-32)**

These questions attempt to discover the physical maintenance of paper and electronic records. Where they are kept and by whom, duplicates, media, and what constitutes an official record copy are discussed here.

*Question 25. How are records maintained?*

- a. Exclusively in paper format*
- b. Exclusively in electronic format*
- c. Some paper and some electronic*

This question posed some problems for the researchers. All 24 respondents actually maintain a combination of paper and electronic records. Three of these 24 though, stated that they only maintain paper records when in actuality, they maintain both. Even offices with paper recordkeeping copies keep electronic duplicates on a shared drive. A mix of paper and electronic formats is common. The paper records mentioned by the three agencies surfaced later in the survey as those considered to be the official recordkeeping copy. If an interviewee answered that they maintain records exclusively in paper format because their official recordkeeping copy is in paper, but stated they kept duplicates on the shared drive, the interviewers changed their answer to “records are maintained in paper and electronic format.”

*Question 26. Are paper records copied to another medium (digital, microform, etc.)?*

- a. If yes:*
  - 1) What medium?*
  - 2) Does your office retain the paper originals?*
  - 3) If yes, are such records integrated with “born-digital” records in an electronic recordkeeping system?*
  - 4) What disposition (or retention) actions are taken for the digitized records?*

Combined with Question 27, see below.

*Question 27. Are electronic records copied to another medium?*

- a. If yes:*
  - 1) What medium?*
  - 2) Does your office retain the electronic originals?*

Answers to questions 26 and 27 were combined due to the similarity of issues they covered. Offices were asked if they copy paper or electronic records to another medium and if they retain the original format. Most offices made copies of both paper and electronic records and maintained the original format. This comparison was important to discover the presence of duplicate record copies and redundant systems of recordkeeping. For example, if an office is creating records in electronic format and printing the electronic version to a paper format and keeping both the electronic and paper copies, they have two copies of the same

record. This dual recordkeeping system (regardless of which copy is official) is a burden when only one copy requires retention.

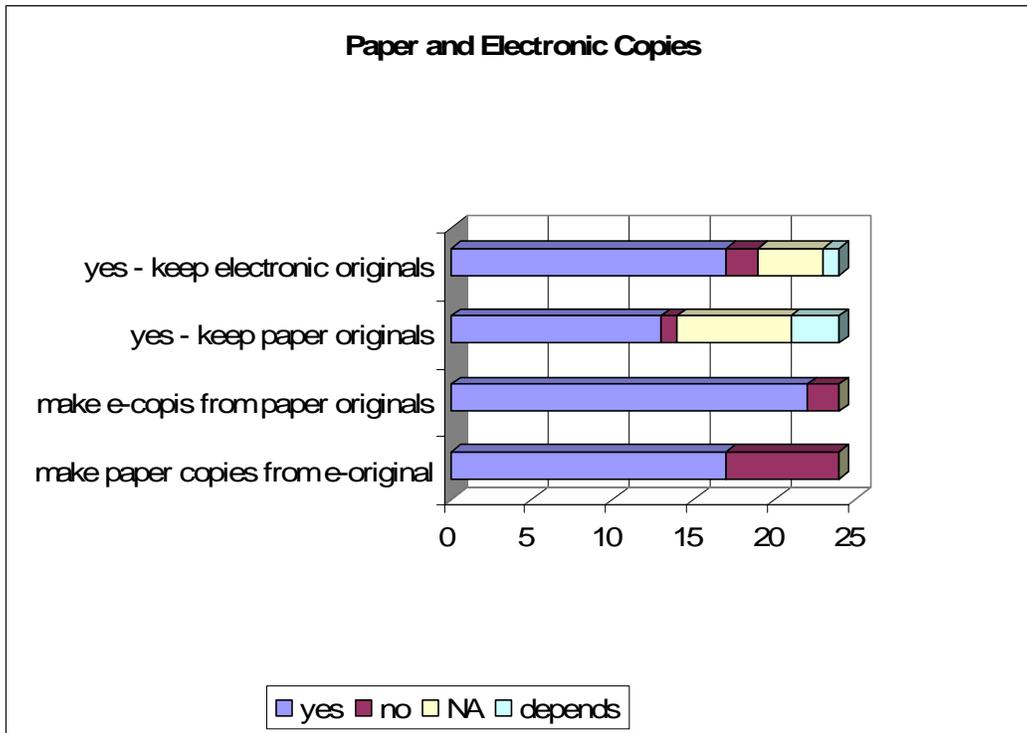


Figure 19: Paper and Electronic Copies

When asked what type of medium the records were copied to, respondents gave multiple answers and explained they used more than just one method for copying records. The answers are displayed in the table below.

For paper records copied to another medium, non-self-explanatory definitions are as follows:

Digital-typed – information from paper is typed into a digital format (i.e. database)

Digital-scanned – scanned into a digital format and may be stored on a server or on removable media

For electronic records copied to another medium, removable media was sometimes defined by the specific type of removable media (i.e. CD, DVD, or backup tape) and was sometimes only identified as removable media without specification.

Again this is significant as it displays the prevalence of dual recordkeeping systems when it is only necessary to retain one record copy.

**Table 3: Media Used**

| Paper records are copied to the following medium: |    | Electronic records are copied to the following medium: |    |
|---|----|--|----|
| Digital typed                                     | 1  | Printed to paper                                       | 21 |
| Digital scanned                                   | 16 | Removable media  | 1  |
| CD  | 1  | Removable media - CD                                   | 8  |
| Microform   | 3  | Removable media – backup tape                          | 5  |
| Not Applicable                                    | 7  | Digital  | 1  |
|   |    | Removable media - DVD                                  | 2  |
|   |    | Zip disk   | 1  |
|   |    | Not Applicable   | 2  |

For paper records copied to another medium, interviewees were asked if these copies were integrated with “born digital” records and what disposition actions were taken with the digitized copies. Integrated with “born digital” means paper records are scanned into a digital format and incorporated into an electronic filing system along with records originally created in a digital format. Nine of the offices surveyed do integrate copies with “born digital” records, six offices do not, and nine offices said this question was not applicable to their office.

Disposition actions for digitized copies are explained in the following list. “Same as paper” means the respondent indicated that the disposition actions for the digital copies are the same as for the paper records because the office/agency schedules records based on content not format. “None” means that records copied from paper are not deleted or saved according to disposition or retention schedules

Same as paper: 5 offices

None: 7 offices

Not Applicable: 7 offices

Disposed according to schedule: 2 offices

Disposed according to schedule for temporary records: 1 office

Disposed according to schedule for permanent records: 1 office

Deleted when no longer needed: 1 office

*Question 28. For paper or electronic records that are copied to another medium, please explain why originals are retained or why they are not retained.*

Answers to this question were varied and extremely descriptive. Because responses were so different, the researchers attempted to categorize answers into similar groups. Several offices gave several explanations which fit into multiple categories. The definitions below are followed by survey results.

“Original saved regardless of format” – all original versions of records are saved.

“Cater to users” – originals are saved for “customer driven repackaging” of information or because users do not have the capability to access information in another format.

“Comfort” – employees are comfortable using records in this format or are used to the medium.

“Recordkeeping copy” – originals are saved because they are in the format designated by the office as the official recordkeeping format.

“Reference” – originals are used for reference purposes but are not the official recordkeeping copy.

“Convenience” – records are more convenient to use in this format because they are easy to access and modify.

“Track versions” – records that are frequently edited are maintained in this format to track the different versions.

“Dual system” – originals are saved because the office maintains a paper and electronic copy of all records.

“Backup” – originals are saved in case something happens to the recordkeeping copy.

“Storage” – it is easier to store records in their original format.

“If not scheduled” – original records are saved because they are not scheduled.

“Post on website” – original records are saved in order to post them on the office/agency website.

**Table 4: Reason Originals Kept**

| Why paper originals are kept:       |    | Why electronic originals are kept:  |    |
|-------------------------------------|----|-------------------------------------|----|
| Original saved regardless of format | 2  | Original saved regardless of format | 2  |
| Cater to users                      | 2  | Cater to users                      | 4  |
| Recordkeeping copy                  | 4  | Recordkeeping copy                  | 1  |
| Comfort                             | 3  | Convenience                         | 10 |
| Track versions                      | 1  | Reference                           | 6  |
| Backup                              | 1  | Backup                              | 1  |
| Dual system                         | 1  | Dual system                         | 1  |
| Not Applicable                      | 14 | Post on website                     | 2  |
|                                     |    | Laziness                            | 1  |
|                                     |    | If not scheduled                    | 1  |
|                                     |    | Storage                             | 3  |
|                                     |    | Not Applicable                      | 8  |

*Question 29. When the office creates duplicates of a given electronic record, how does the office designate which copy is the recordkeeping copy?*

Answers to this question were varied and descriptive. Because responses were so different, the researchers attempted to categorize answers into similar groups. Several offices gave several explanations which fit into multiple categories. The open-ended format of this question explains the wide variety of answers from the offices visited, but what is significant is not the variety (which is to be expected), but the similarity of responses describing paper as the official recordkeeping copy (twelve offices). This high number indicates that many offices are following a traditional recordkeeping strategy even in a modern electronic environment.

**Table 5: Official Recordkeeping Copy**

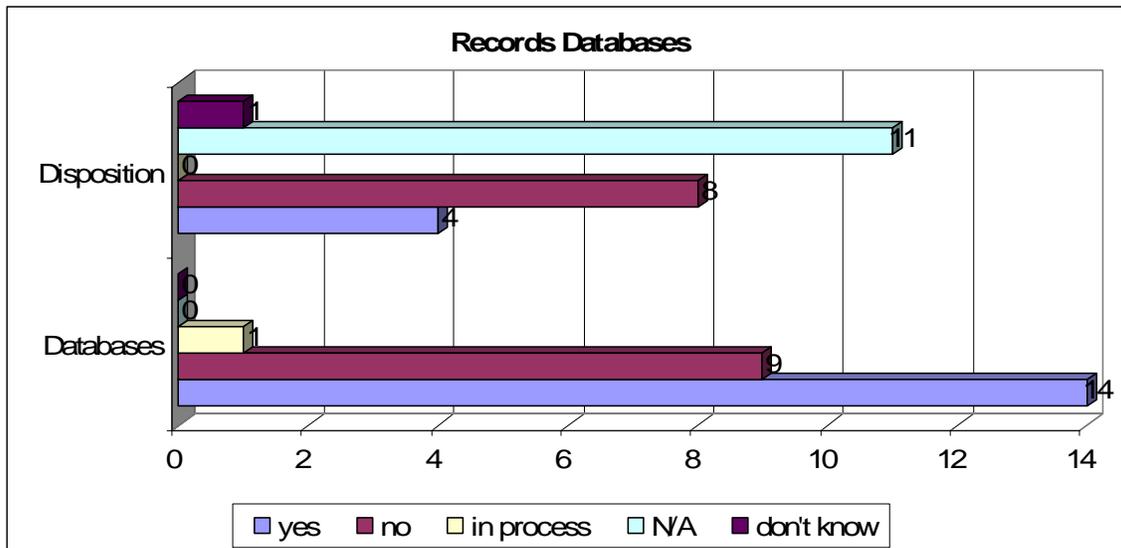
|  |    |
|--|----|
| The original is the official recordkeeping copy                | 2  |
| Paper is the official recordkeeping copy                       | 12 |
| Removable media might be the official copy                     | 1  |
| Paper is the official recordkeeping copy except for databases  | 1  |
| The latest version is the official copy                        | 2  |
| Office has a dual system of official records                   | 1  |
| Electronic records are official except for pay records         | 1  |
| Records with original signature except for submissions on disk | 1  |
| Records' presence in an official folder                        | 3  |
| If in the Electronic Recordkeeping system                      | 1  |
| Records with an original signature                             | 1  |

Additionally, three of the 24 offices mentioned having “media-neutral” scheduling which means the office indicated that they schedule records based on content not format.

*Question 30. Does the office maintain any databases that serve as tracking systems for files?*

*a. If yes, are there disposition instructions for these databases (or are these databases included in your standard disposition schedule)?*

14 of the 24 offices maintain a database or databases which serve as tracking systems for records files. The researcher encountered offices that used databases to track FOIA requests, transfers of files to records centers, or versions of a specific document. Only four of these claimed the database was included in the standard disposition schedule, meaning that the entire database was scheduled as record in and of itself. The complete set of results follows.



**Figure 20: Records Databases**

Question 31. Where are records filed? Please select all that apply:

- a. Corporate filing cabinets
- b. Individual employees' filing cabinets
- c. Electronic Recordkeeping System[ERKS] (e.g.,: IBM Electronic Records Management Solution)
- d. Electronic Document Management System (e.g.,: DOCS Open)
- e. Shared Drive
- f. Task Management System (e.g.,: Microsoft Outlook Task Manager)
- g. Individual employees' hard drive
- h. Other (please explain)

Records of different types were filed in a variety of places. Most of the agencies surveyed kept records in multiple locations in multiple formats. Nearly all offices kept paper records in corporate filing cabinets in a central location and electronic records on a shared drive. None of the agencies interviewed used a Task Management system for maintaining records and a few offices were in the process of implementing an official Electronic Recordkeeping system or a Document Management System (DMS – software that tracks, stores, and retrieves documents and metadata but does not have record retention capabilities). Other systems used for filing records included databases, optical imaging systems, correspondence management systems, and websites. An answer of “Maybe” means the office indicated it was possible records were stored in the location specified, but it was in violation of official policy.

For the purpose of this survey, any software that organizes, tracks, and stores electronic records but does not have records management functionalities is not considered an *official* electronic recordkeeping system, as well as any system that requires an individual to print an electronic record and scan the paper version into electronic format instead of integrating born-digital records in their original format.

This question proved to be particularly significant to the researchers upon analysis of the results. A main goal of this project was to ascertain the extent to which agencies have adopted electronic recordkeeping systems, and how the management of electronic records is incorporated with general records management strategies. The results of this question clearly indicate that many of the offices visited are using some type of system to *facilitate* the management of electronic records (as seen in the number of shared drive responses), but that the systems they are using are not *official* electronic recordkeeping systems. Only one office interviewed out of 24 is using an official electronic recordkeeping system.

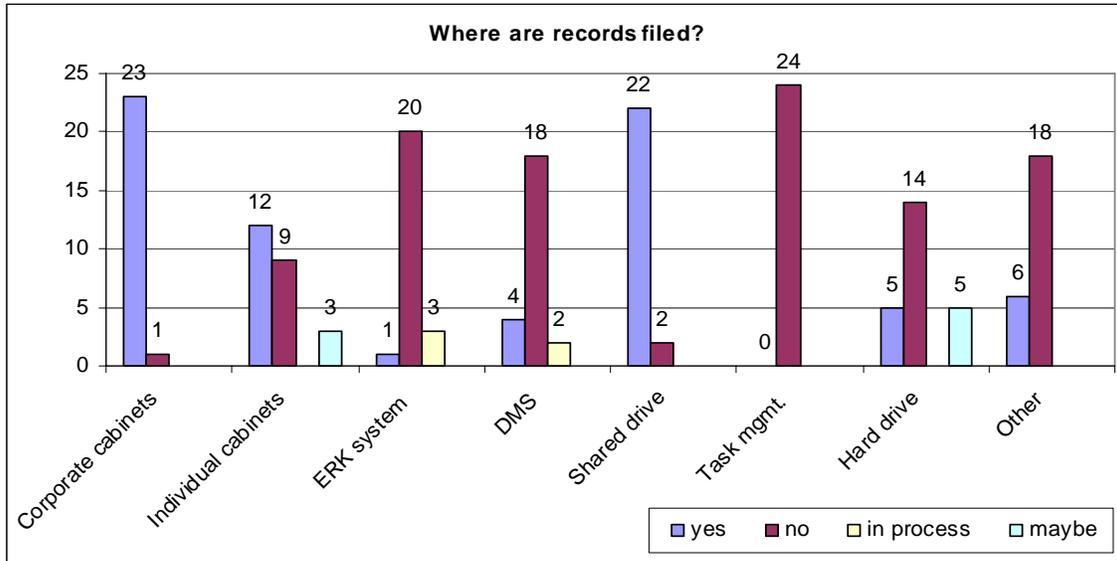


Figure 21: Location of Records

Question 32. Does the office retire any records to off-site storage facilities (select all that apply):

For Paper records or Electronic records:

- The office retires records to the Washington National Records Center
- The office retires records to other Federal Records Centers
- The office retires records to an agency-controlled records storage facility (GOGO, GOCO, or COCO-exclusive agency use)
- The office retires records to a private records storage facility (i.e.: Iron Mountain)
- The office does not retire any records to off-site storage facilities

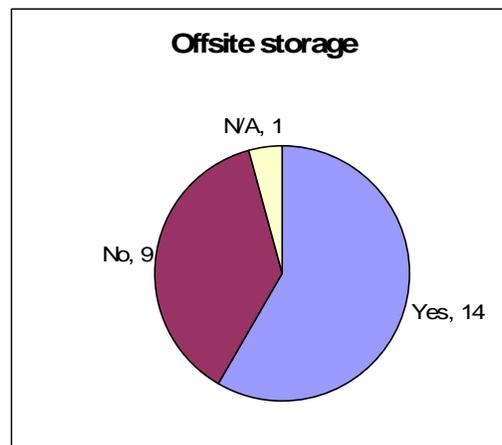


Figure 22: Offsite Storage

14 offices surveyed retire records to off-site storage facilities, but the majority of these are paper records. Eight of these offices send their paper records to the Washington National Records Center in Suitland, MD, two offices send paper

records to another Federal Records Center, one office sends both paper and electronic records to another Federal Records Center, three offices send paper records to an agency-controlled storage facility, and none of the offices interviewed use a private storage facility.

### **Maintenance of Electronic Records (33-37)**

The following questions deal specifically with electronic recordkeeping systems (ERKS), and records or record copies which are maintained in electronic format.

*Question 33. For records that are maintained and filed electronically:*

- a. What is the electronic system (product name) that is being used? (e.g. Hummingbird, Tumbleweed, Documentum, etc.)*
- b. Is the electronic system DoD 5015.2 certified?*
- c. Why did the office choose this system: (please select all that apply)*
  - 1) Cost benefit*
  - 2) Time savings benefit*
  - 3) Required by top management officials*
  - 4) Modernization*
  - 5) The rest of the agency uses it*
  - 6) Easy to use and learn*
  - 7) Other (please describe)*

As most agencies were maintaining records in electronic format on a shared drive, which does not qualify as an official ERKS (see Question 31), the answers to this question were inconsistent with the original intent of the question. It was first necessary for the researchers to determine if the records maintained in electronic format (as addressed in several of the following questions) were official recordkeeping copies, duplicate records kept in electronic format, or a combination of both official and duplicate records in electronic format. Of the 24 agencies surveyed, six maintain official records in electronic format, 14 maintain duplicate records in electronic format, and four maintain a combination of both (Questions 25-27). This is significant because many offices maintain official copies in electronic system that is not an ERKS. This is risky – it means that there is no definite assurance that the records will be maintained and accessible as long as needed according to the schedules.

For the one agency maintaining records in electronic format on an official ERKS, and the eleven agencies that were maintaining records in electronic format using some other type of software or were in the process of implementing an official ERKS or some other electronic system that is not an ERKS, product names were provided during the interviews. The product names of some would specifically identify the agency so that information has been left out of this analysis. Other systems encountered during the study included Document Management systems (DMS), web-based systems, an optical imaging system, a database, and a correspondence management system. The custom built official electronic recordkeeping system used by one office is DoD 5015.2 certified (certified by the

JITC because it meets the mandatory baseline functional requirements set forth by the department of defense and endorsed by NARA). Two of the agencies in the process of implementing an official ERKS are using DoD 5015.2 certified applications and one is not. The office that did not choose a DoD 5015.2 product explained that it meets all the baseline functional requirements but is cheaper because it is not certified.

These results are significant: only one office is currently using an official electronic recordkeeping system and only three offices are in the process of implementing one. This confirms that the use of electronic recordkeeping systems in the Federal government is limited.

Not every office answered why their office’s particular electronic system was chosen and those who did had multiple answers. Many offices were able to select a reason from the provided list of popular reasons an electronic system might have been chosen over another, but many offices had different answers than those provided. These “other” answers included:

- the system captures email
- the system was selected as part of a bid proposal and was selected for many factors including cost and requirements
- the system was selected due to the consistency of the software deployment
- the system was chosen because the office needs are unique and can be addressed properly
- the system makes it easy to track correspondence
- the office had no choice about the selection of the system because it was selected at a higher level
- the system is easy to access and is able to store more files in less space

The results collected are as follows:

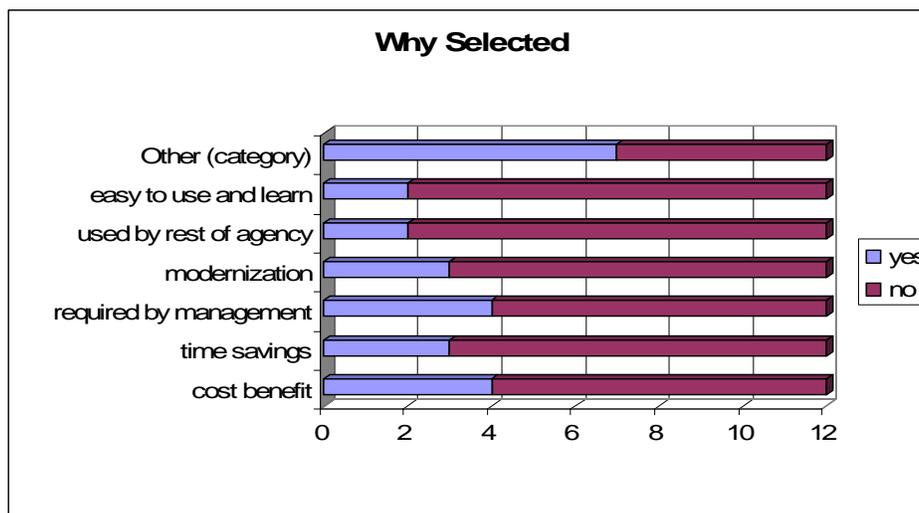


Figure 23: Why Selected

*Question 34. Are any records maintained in corporate files?*

*a. If yes, please list the types of records (paper or electronic).*

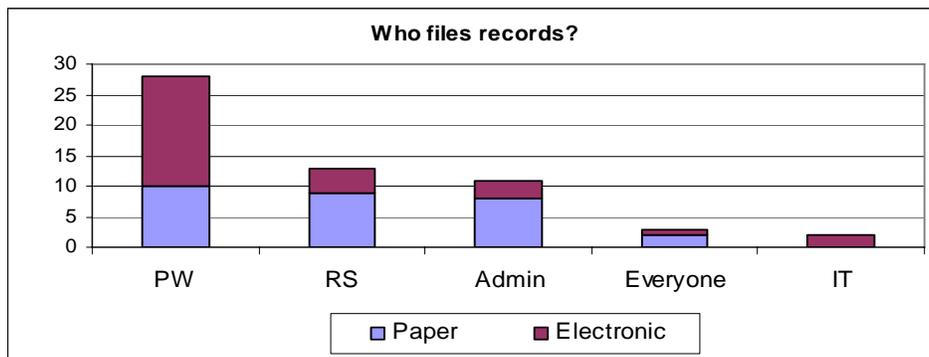
Corporate files are defined as paper records kept in central filing cabinets or electronic records kept in an electronic system accessible by all employees. Three offices stated they maintained only paper records in central corporate files, one office stated they maintained only electronic records in a central corporate file, and 20 offices explained they maintained both paper and electronic records in central corporate files.

*Question 35. For records maintained in a corporate file:*

*a. Who files the records (in paper format and electronic format)?*

- 1) Program workers who create the records (PW)*
- 2) Records liaison (RS)*
- 3) A Secretary (Admin)*

Most centrally located records (whether paper or electronic) are filed by the program workers who create the records, but many offices listed multiple choices. For example, some offices may have answered that electronic records are filed by the program worker who created the record while paper records are filed by an admin, or perhaps electronic and paper records are filed by an Admin and Records Staff, or records are filed by everyone in the office. Program workers are more likely to be responsible for filing electronic records than paper records. The complete results are displayed in the chart below.



**Figure 24: Who Files Records?**

*b. How are records filed (in paper format and electronic format)?*

- 1) Filed in accordance with a file plan linked to the agency's disposition schedule*
- 2) Filed in accordance with the agency's disposition schedule*
- 3) Not filed according to a file plan or disposition schedule*

Filing procedures were similar for paper and electronic records. Records were filed according to an office file plan, multiple plans, or file plans linked to disposition schedules. In other cases, they were filed but not following any particular plan. A few agencies reported “other” plans in effect, including by

media type, subject, agreement or item number, subject and data type, or geography and subject. A few others said they had no plans or “it depends”. No office reported filing only according to the disposition schedule.

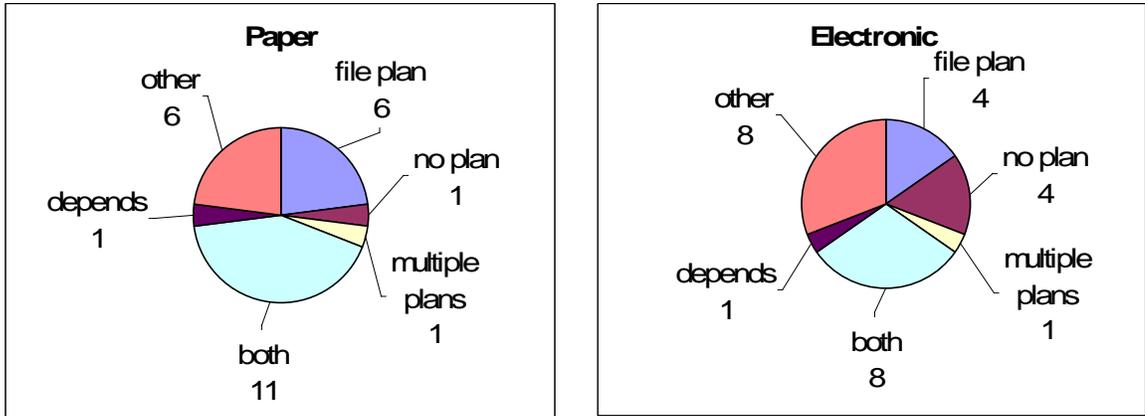


Figure 25: Paper and Electronic Records

Question 36. For records maintained in electronic format in corporate file:

This question consisted of several different parts (a-j). Each question dealing with maintenance of electronic records in a corporate file will be addressed separately and individual results are listed below each question. If multiple answers were given to create a total greater than 24 (agencies), a note will be provided to this effect.

36.a. Who has access to the system? (select all that apply)

- 1) All employees
- 2) Top management officials
- 3) Records liaison
- 4) Other (please describe)

“Depends” means that varying levels of access are provided for different people. Multiple answers were provided for this question.

Table 6: System Access

|                          |    |
|--------------------------|----|
| All employees            | 19 |
| Records staff            | 1  |
| Administrative Assistant | 1  |
| Depends                  | 3  |
| IT representative        | 1  |
| Most employees           | 1  |

36.b. How does staff access the records in the system?

- 1) Via an icon on their desktop
- 2) Via an intranet

- 3) *Via the internet*
- 4) *Other (please describe)*

Multiple answers were provided for this question.

The primary method used by offices for accessing electronic records in a central file is through an icon on the desktop including access to a shared drive (20 offices). Internet system was selected by one office, file browser was selected by one office, and intranet was selected by three offices.

*36.c. How is access to the system regulated?*

- 1) *The system is open to all users who know about it*
- 2) *The system is available through designated workstations*
- 3) *Authorized users are assigned an ID and password*
  - a. *How are access privileges removed from the system?*
- 4) *Other (please describe)*

Multiple answers were provided for this question. Primarily, access to electronic files is regulated through an ID and password (according to 20 offices). Additionally, access is available through designated workstations at three locations, and the system is open to all users who know about it at three locations. In general, all agencies had some type of access restrictions on their electronic files. Many agencies had levels of access on folders in the shared drive, meaning that when an employee logs on to the network they may not be able to view all folders or may have read only access depending on their permissions.

*36.d. In what format are they able to access records in the system?*

- 1) *Read only format*
- 2) *Read and write format*

*Read only* format is defined by the ability of users to view records and not make any changes, read and write format allows users to view records and make changes. Frequently, read access will be provided for some users in an office and read/write access will be given to others. Six offices restrict access to electronic files in a central system to read only format, while nine offices allow read and write access. The remaining nine offices stated that read or read/write access depended on the situation or the user.

*36.e. In general, how does staff find records in the electronic corporate file?*

- 1) *Finding records:*
  - a. *Through search function in the electronic system*
  - b. *By browsing through a list of available files/folders*
  - c. *Through special request via a different department*
  - d. *Other (please describe)*

Finding electronic records in a corporate file can occur through many different means at the agencies interviewed. Multiple answers were provided for this question. Following are the results.

**Table 7: Locating Electronic Files**

|  |    |
|--|----|
| Browse a list of files or folders                              | 18 |
| Review file plan to locate record                              | 5  |
| Special alert in system provides link to record when available | 1  |
| Search (i.e. keyword)  | 9  |
| Particular criteria known (i.e. order number)                  | 7  |
| Finding records is intuitive                                   | 2  |
| Shortcuts on desktop   | 1  |
| Special request  | 2  |
| Not Applicable   | 1  |

2) Please explain how effective this method is for finding records:

- a. Very effective
- b. Effective
- c. Somewhat effective
- d. Not at all effective

Most offices listed their means of finding electronic records as very effective (ten offices) or effective (seven offices), but six offices described their method(s) as only somewhat effective. None of the offices described the method for finding records as not effective and only one office did not know the effectiveness. Because multiple answers were provided, the researchers found it more useful to break down the “effectiveness” answers according to the methods or combined methods in the tables below. This also provides a breakdown of the specific combination of multiple answers provided for question number 36e.

**Table 8: Method Effectiveness**

|  |   |
|--|---|
| Browse a list of files or folders only |   |
| Very Effective                         | 1 |
| Effective                              | 1 |
| Somewhat Effective                     | 1 |
| Total:                                 | 3 |

|  |   |
|--|---|
| Browse a list of files or folders & Search |   |
| Very Effective                             | 1 |
| Effective                                  | 1 |
| Somewhat Effective                         | 0 |
| Total:                                     | 2 |

|  |   |
|--|---|
| Browse a list of files or folders & Review File Plan |   |
| Very Effective                                       | 3 |
| Effective  | 1 |
| Somewhat Effective                                   | 0 |
| Total:   | 4 |

|   |   |
|---|---|
| Browse a list of files or folders & Special Request |   |
| Very Effective                                      | 0 |
| Effective   | 0 |
| Somewhat Effective                                  | 1 |
| Total:  | 1 |

|   |   |
|---|---|
| Browse a list of files or folders & Search & Review File Plan |   |
| Very Effective  | 1 |
| Effective   | 0 |
| Somewhat Effective  | 0 |
| Total:  | 1 |

|  |   |
|--|---|
| Browse a list of files or folders & Search & Special Request |   |
| Very Effective   | 0 |
| Effective  | 0 |
| Somewhat Effective   | 1 |
| Total:   | 1 |

|   |   |
|---|---|
| Browse a list of files or folders & Particular Criteria Known |   |
| Very Effective  | 1 |
| Effective   | 1 |
| Somewhat Effective  | 1 |
| Total:  | 3 |

|  |   |
|--|---|
| Browse a list of files or folders & Particular Criteria Known & Finding Records is Intuitive |   |
| Very Effective   | 0 |
| Effective  | 1 |
| Somewhat Effective   | 1 |
| Total:   | 2 |

|   |   |
|---|---|
| Browse a list of files or folders & Finding Records is Intuitive & Creating Shortcuts |   |
| Very Effective  | 0 |
| Effective   | 0 |
| Somewhat Effective  | 1 |
| Total:  | 1 |

|                                    |   |
|------------------------------------|---|
| Search & Particular Criteria Known |   |
| Very Effective                     | 0 |
| Effective                          | 2 |
| Somewhat Effective                 | 0 |
| Total:                             | 2 |

The most effective search strategy listed by the participants is to browsing a list of available files and folders on the directory, in an official ERKS, or other type of electronic system combined with reviewing the file plan. The least effective strategies were ones involving more than two steps.

36.f. *Is the electronic system migrated to new software and hardware as necessary?*

- 1) *If yes, how often?*
  - a. *Every 6 months*
  - b. *Once per year*
  - c. *Every 2-3 years*
  - d. *Every 4-5 years*
  - e. *More often than once every 5 years*

21 offices claim they migrate their electronic systems to new software and hardware as necessary. This is good news for the preservation of electronic documents. Without regular software and hardware migration, the possibility of permanently losing documents to obsolescence increases. Only one office stated they did not migrate to new software and hardware, but explained that it was a brand new system and the office had not yet had the opportunity to migrate. The office assumed new software and hardware would be upgraded as needed. One office did not know the migration practices of the office and one office was not applicable.

How often these migrations happen varied by office. Results are below.

**Table 9: Software and Hardware Migration**

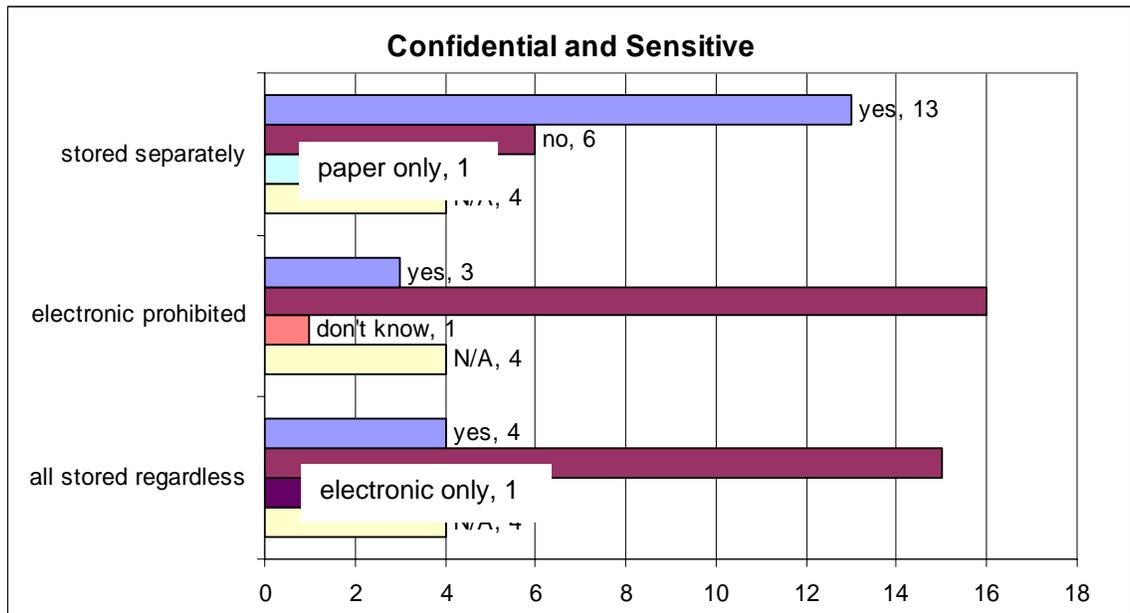
|   |   |
|---|---|
| Once per year                             | 2 |
| Every 2-3 years                           | 3 |
| Every 4-5 years                           | 2 |
| As needed                                 | 6 |
| Continually or daily (on a regular basis) | 3 |
| As affordable                             | 1 |
| Don't know                                | 5 |
| Not Applicable                            | 2 |

36.g. *Please describe procedures used to store confidential, privileged, or other restricted access records. (select only one):*

- 1) *All records are stored regardless of sensitivity in general storage*

- 2) *Some sensitive records are prohibited from being stored electronically*
- 3) *Sensitive records are stored separate from general records*

Confidential and other sensitive records are handled differently for each office. Most offices store their confidential records in a separate area from their general records. “Electronic only” and “Paper only” define the procedures for just that particular type of record format. Electronic records that have access restrictions are stored separately from records without access restrictions. Note that this question did not apply to several offices routinely dealing with confidential and sensitive information because all employees in the office have the appropriate security clearance and their office is treated as a secure environment. Other agencies omitted this question because they do not handle any confidential, privileged, or other restricted access records.



**Figure 26: Confidential and Sensitive Records**

36.h. Describe the disposition practices for temporary electronic records at your agency (select all that apply):

- 1) *HOW*
  - a. *Flagged for deletion before they are destroyed*
  - b. *Deleted according to a disposition schedule*
  - c. *Deleted ad hoc*

The following list presents the results of how temporary electronic records are disposed. Multiple answers were provided for this question.

**Table 10: Disposition Practices**

|   |    |
|---|----|
| Flagged for deletion before destruction   | 2  |
| Deleted according to disposition schedule | 12 |
| Deleted ad hoc                            | 8  |
| Not deleted                               | 2  |
| Don't know                                | 2  |
| Not Applicable                            | 2  |

2) *WHO*

- a. Deleted manually by individual program workers
- b. Deleted manually by the records liaison
- c. Deleted automatically by the electronic system
- d. Other (please describe)

The following list presents the results of who disposes of temporary electronic records. Multiple answers were provided for this question.

**Table 11: Disposition Responsibility**

|  |    |
|--|----|
| Program Worker                             | 13 |
| Records staff                              | 6  |
| Network Administrator                      | 1  |
| Database Administrator                     | 1  |
| IT representative                          | 1  |
| Depends on the situation                   | 1  |
| Automatically deleted by electronic system | 1  |
| Not deleted                                | 1  |
| Not Applicable                             | 2  |

36.i. A record is considered “destroyed” when the following has occurred: (select all that apply)

- 1) When the “delete” button has been pushed
- 2) When the media has been overwritten.
- 3) When the media has been physically destroyed
- 4) When backups have been overwritten.
- 5) When an audit log is checked and all copies have been destroyed
- 6) Other (please describe)

Destruction of records is defined by the majority of offices as just hitting the “delete” key, but other answers were provided by the offices surveyed. Multiple answers were provided for this question.

**Table 12: Destruction of Records**

|                                    |    |
|------------------------------------|----|
| When the record can't be recovered | 2  |
| When the delete key is pushed      | 14 |
| When media is physically destroyed | 5  |
| When records have been overwritten | 1  |
| Not Applicable - nothing deleted   | 3  |

|   |   |
|---|---|
| When deleted from tracking system       | 1 |
| When backups have been overwritten      | 4 |
| When the database administrator says so | 1 |

36.j. Describe the practices for permanent electronic records at your agency: (select all that apply):

- 1) Permanent records are flagged for transfer to the National Archives
- 2) Permanent records are maintained with temporary records until they are transferred for archiving
- 3) Permanent records are maintained separate from temporary records prior to archiving

Procedures for permanent electronic records were not as applicable to most offices as were other types of electronic records because most offices did not claim to have any permanent electronic records. Multiple answers were provided for this question. The results to this question follow:

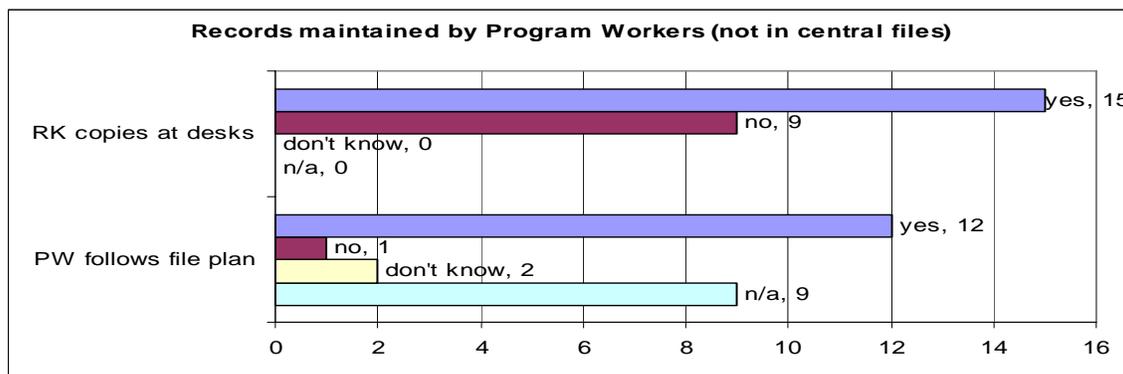
**Table 13: Permanent Electronic Record Procedures**

|  |    |
|--|----|
| Maintained separate from temporary records | 2  |
| Flagged for transfer to NARA               | 4  |
| Maintained with temporary records          | 6  |
| No action is taken                         | 2  |
| Don't know                                 | 1  |
| Not Applicable                             | 11 |

Question 37. Are recordkeeping copies of some records maintained at program workers' desks or personal computers? Multiple answers given to part "C."

- a. If so, may we view these records?
- b. Does the program worker follow the file plan or disposition schedule to manage these records?

Part "A" of question 37 seemed invasive to the researchers and burdensome to the survey participants and not deemed valuable to the ultimate objective of the project. This question was not asked during interviews and thus cannot be evaluated. The results of part "B" though, as well as the main question, are displayed below.



**Figure 27: Program Worker Record Maintenance**

- c. *If a program worker leaves the office what is done with his or her records?*
- 1) *Records are collected from the worker's workspace by copying them from the worker's computer or physically removing the paper files and then incorporated into the agency's records management program.*
  - 2) *Records are boxed up or transferred to backup media and left indefinitely stored until needed.*
  - 3) *Other (please describe)*

Multiple answers were provided for part "C" of this question and the results are displayed below.

**Table 14: Records and Employee Departure**

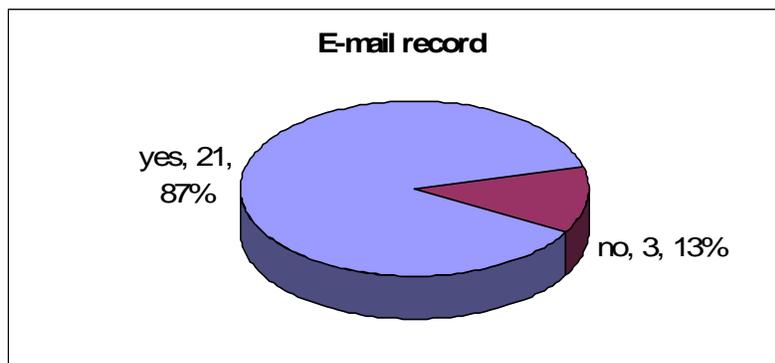
|  |   |
|--|---|
| Records are reviewed for official content  | 6 |
| Records are added to central files         | 8 |
| Records are boxed up and held until needed | 3 |
| Records are transferred to new employee    | 8 |
| Records are destroyed                      | 5 |

### **E-mail Records and Web Content Management (37.5-44)**

This section of the questionnaire deals with e-mail records in particular with a short segment about web content. The previous groups of questions applied to all forms of electronic records, including e-mail and web records.

*Question 37.5: Does your office consider e-mail to be a "record"?*

By chance, the researchers asked the first office interviewed whether or not they considered e-mail to be a record during the course of the conversation. Upon asking this question and before attending the second interview, it was decided that this question (though not originally included in the final questionnaire) was a necessary question and was thereafter included with each of the subsequent interviews. This question was tracked as Question 37.5 for analysis purposes and the results revealed 21 agencies consider e-mail to be a record and three agencies do not.



**Figure 28: E-mail as a Record**

Question 38. Please describe the policy that determines which e-mail are records.

- a. The office policy generally follows NARA's proposed new e-mail regulation that states transitory e-mail dealing with routine matters does not have to be filed in a recordkeeping system (Note: NARA, for the time being, has chosen not to pursue such a regulation.)
- b. Official agency policy delegates what e-mail messages are records (Please explain this policy)
- c. E-mail record status is determined on a case-by-case basis (Please explain the criteria used)
- d. Other (please describe)

The majority of agencies visited by the interviewers had an official policy regarding how to determine which e-mail messages are records. A significant eight offices though, did not have an official policy at all. Many offices incorporate some sort of transitory clause as described by NARA's e-mail regulation. Other results are below.

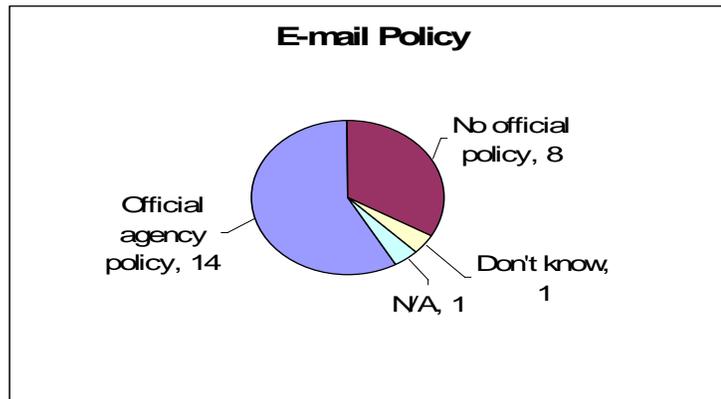


Figure 29: E-mail Policy

After reviewing descriptions of agency policies or procedures for determining e-mail records, the researchers separated and categorized the types of criteria used by agencies. Multiple answers were given to make up the results below.

Table 15: E-mail Policy

|   |    |
|---|----|
| Follows some type of transitory clause for a subset of e-mails designated as records* | 8  |
| Meets the definition of a federal record  | 6  |
| Meets the definition of agency's classes of records                                   | 6  |
| Requires action   | 2  |
| Contains information of value   | 5  |
| Relates to mission of office or agency  | 3  |
| Will be needed again  | 1  |
| Documents an action   | 1  |
| All e-mails kept for a specified time   | 1  |
| Record status is determined on a case-by-case basis                                   | 10 |

*\*For example, NARA's proposed new e-mail regulation that states transitory e-mail dealing with routine matters does not have to be filed in a recordkeeping system, or some type of similar office policy dealing with e-mail messages of a transitory nature.*

*Question 39. Who decides which e-mail is a record and which e-mail is not a record?*

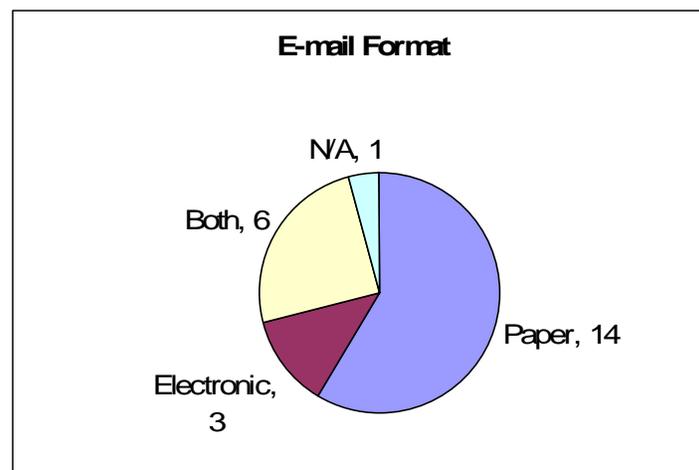
- a. Program workers*
  - 1 Please explain criteria used*
- b. Records liaisons*
  - 1 Please explain criteria used*
- c. Other (please describe)*

Respondents in 22 offices said the Program Worker makes the decision. One office said this was not applicable to them and one office stated the decision was made by the Program Workers, Records Staff, and Administrative Assistants depending on the situation.

Several of the agencies visited offered information regarding how decisions were made about e-mail records. 12 offices stated decisions were a judgment call based on the content of the message and three offices stated decisions were based on a predetermined definition of a record.

*Question 40. In what format are e-mail records maintained?*

This question determined in which format offices maintained their recordkeeping copies of e-mail: exclusively paper, exclusively electronic, or a combination of both paper and electronic. Most offices (14 out of 24) print out their e-mail and retain e-mail records in paper format.



**Figure 30: E-mail Format**

- a. Electronic format*

- 1) *E-mail records are maintained in a native e-mail system (i.e.: Microsoft Outlook)*
- 2) *E-mail records are maintained in an electronic Document Management System*
- 3) *E-mail records are maintained in an Electronic Recordkeeping System (ERKS)*
- 4) *E-mail records are maintained in another electronic format (e.g., Word)*

Of those offices which maintain e-mail records in electronic format, six offices maintain the records in a native e-mail system, one office maintains the records in an Electronic Recordkeeping system, one office maintains the records in an imaging system, and three offices maintain the messages on a shared drive. Some offices provided multiple answers to this question.

*b. Paper format*

- 1) *Paper copies of e-mails are maintained according to the file plan or disposition/retention schedule*
- 2) *Paper copies of e-mails are maintained by the employees who print them to paper and do not follow a plan*

Of those offices that maintain e-mail records in paper format, 15 follow a file plan, four do not, and one office incorporates the e-mail records into paper files according to the disposition schedule.

*Question 41. Where are your e-mail records maintained?*

- a. Program worker's desks*
- b. Personal computers*
- c. File Management Systems on a shared server*
- d. Commercial Document Management System*
- e. Other (please specify)*

Multiple answers were provided for the location of e-mail records. Several agencies maintain both paper and electronic copies of e-mail records and thus store them in different locations. The full set of answers is listed below.

**Table 16: E-mail Record Location**

|  |    |
|--|----|
| Centrally located filing cabinets                  | 15 |
| Individual file cabinets at Program worker's desks | 11 |
| Shared drive                                       | 5  |
| Electronic Recordkeeping System                    | 1  |
| Other: imaging system                              | 1  |
| Individual employees hard drives                   | 2  |
| E-mail system                                      | 2  |
| Other: electronic archives                         | 1  |

*Question 42. In actual practice, how often are e-mails deleted?*

- a. Automatically after sixty days (unless retained by individual employee's action)
- b. Automatically after ninety days (unless retained by individual employee's action)
- c. Automatically after a year (unless retained by individual employee's action)
- d. E-mails are deleted on an individual basis as determined by disposition schedules
- e. All e-mails are saved
- f. I don't know
- g. Other (please specify)

In practice, e-mail messages are deleted in a variety of ways. Multiple answers were given to describe how e-mail is handled. Most offices have space limitations on individual mailboxes and the system would provide a warning to the user who might then delete messages ad hoc. The total number of methods chosen by offices surveyed follows.

**Table 17: E-mail Deletion**

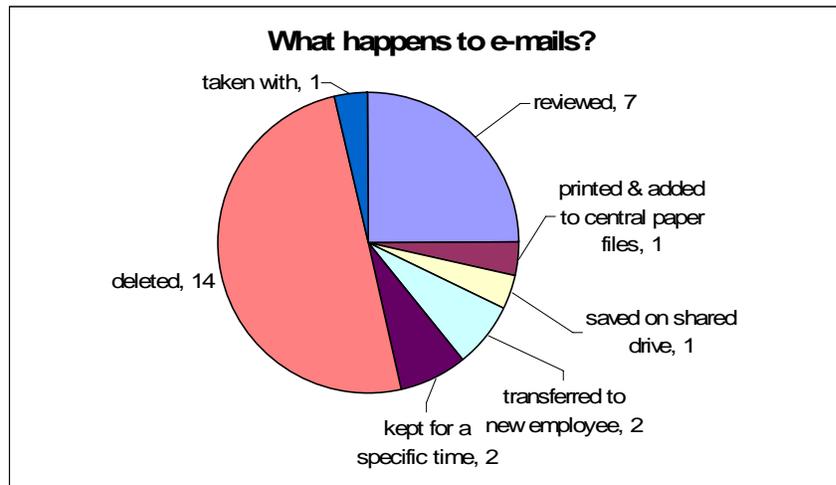
|  |    |
|--|----|
| Messages are saved and backed up on tape regularly | 1  |
| Space limitation on mailbox directs deletion       | 14 |
| Varies depending on situation or user              | 1  |
| Messages are saved to an archive                   | 6  |
| Deleted ad hoc                                     | 12 |
| Deleted automatically after 90 days                | 4  |
| Deleted automatically after 120 days               | 1  |
| Deleted after message has been printed             | 1  |
| Deleted automatically after 180 days               | 3  |

*Question 43. If e-mails are maintained by program workers, what happens to the e-mail records when the program worker leaves the office?*

- a. Transferred to new employee
- b. Transferred to immediate supervisor
- c. Saved on a shared server file
- d. Deleted
- e. Other (Please describe)

When e-mails are maintained individually by program workers (Question 41), the chance that an e-mail record might be lost once an employee leaves the office increases. The researchers inquired about the practices followed by offices to manage messages after an employee departs. Four offices responded by explaining that e-mail messages were reviewed for content and saved as a record if the e-mail meets the policy for recordkeeping. Interestingly though, the most common response (14) was that the office will delete the e-mail messages routinely after an employee leaves and before they are checked for content. The full breakdown of what happens to e-mails is displayed below. Multiple answers were provided for this question by respondents. "Taken with" means an employee takes his or her e-mails with them when they depart their current job and "Reviewed" is defined by e-mail content being reviewed by either the

employee or their supervisor before the employee’s departure. If messages are “saved on a shared drive” or “kept for a specific time,” this means they are held until action can be taken (whether deleted or reviewed). E-mails “transferred to a new employee” are presumed to be reviewed by the new employee for record content and action taken as necessary by the new employee.

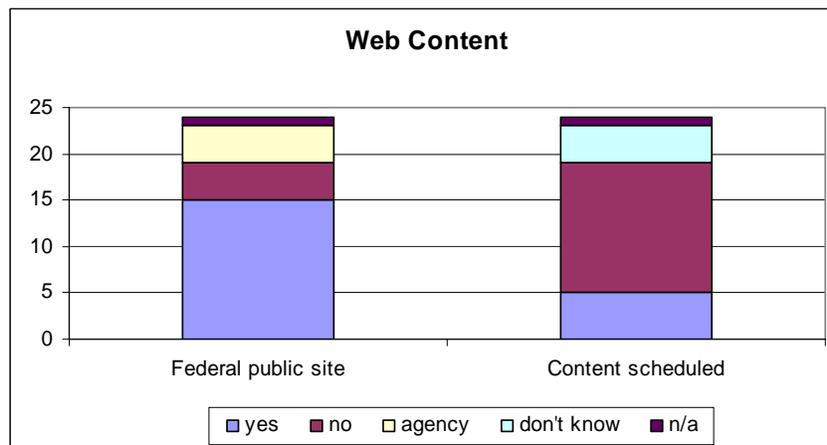


**Figure 31: E-mail and Employee Departure**

*Question 44. How is web content managed?*

- a. The office maintains a Federal public web site?*
- b. The agency schedules its web content records as required by NARA*

The majority of offices visited explained they maintain a Federal public web site (or that a Federal public web site is maintained by the Agency) (Question 5), but most of these offices did not schedule web content records. Results for this question follow.



**Figure 32: Web Content**

## Future of Records Management and Concluding Remarks (45-55)

This part of the questionnaire was intended to wrap up the survey and elicit any additional comments from participants.

*Question 45. Does the office know whom to contact or how to access information regarding any of NARA's guidelines for electronic records management (e.g., imaged files; electronic signatures; transfer of formats of permanent electronic records to National Archives; NARA endorsement of DoD 5015.2-STD)?*

Multiple answers were provided for this question. For example, when asked if the office knows whom to contact at NARA, the response may have been that they contact their agency records staff ("agency RS") or check NARA's website ("website") for information and guidelines regarding electronic records management.

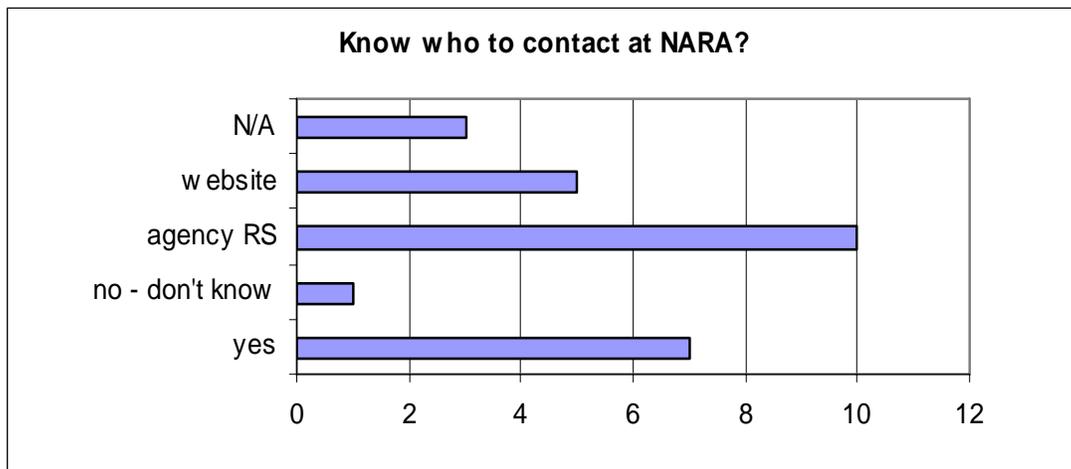


Figure 33: NARA Contact Information

*Question 46. If the office has implemented an electronic recordkeeping system for any or all of their files, what problems did the office encounter when the system was introduced?*

- a. *Problems encountered for custom built and certified systems:*
- b. *Problems encountered for turnkey or COTS (Commercial off the Shelf) products:*

Answers to this question were varied and extremely descriptive. Because responses were so different and lengthy, the researchers attempted to categorize answers into shorter descriptions. Multiple answers were provided by offices surveyed and are listed below. Note that this question includes combined responses from agencies using an official ERKS and other types of electronic systems.

**Table 18: Custom-Built and COTS Problems**

|                                      |   |   |   |
|--------------------------------------|---|---|---|
| <i>Custom-built system problems:</i> |   |   |   |
| Employee resistance                  | 2 | Doesn't meet user needs                   | 1 |
| Searching problems                   | 1 | Restricts workflow                        | 2 |
| Hardware or software migration       | 1 | Not everyone uses it                      | 2 |
| No system documentation              | 1 | User error problems not related to system | 1 |
| System is too slow                   | 1 | Security concerns                         | 1 |
| Media obsolescence                   | 1 | Training issues                           | 1 |
| Hardware obsolescence                | 1 | Inability to merge duplicates             | 1 |
| Metadata                             | 1 | Difficult transition for users            | 1 |
|                                      |   |   |   |
|                                      |   |   |   |
| <i>COTS system problems:</i>         |   |   |   |
| Integration with current system      | 3 |   |   |
| Doesn't meet user needs              | 1 |   |   |
| Employee resistance                  | 1 |   |   |

*Question 47. If the office has not implemented an electronic recordkeeping system for any or all of their files, what is the main reason why they have not?*

- a. Lack of financial resources*
- b. Lack of expertise*
- c. Deemed unnecessary for day to day operations of the agency*
- d. Other (please specify)*

Answers to this question were varied and extremely descriptive. Because responses were so different and lengthy, the researchers attempted to categorize answers into shorter descriptions. Multiple answers were provided by offices surveyed and are listed below, but it is apparent that money is the majority answer for why an office has not implemented an ERKS. As a reference, one office is currently using an official ERKS, three are implementing an official ERKS, nine offices are currently using other types of electronic systems or are in the process of implementing one now and 12 are not using any software application (see also Questions 31 and 50). Note that one agency is using an optical imaging system while they are implementing an official ERKS.

**Table 19: Why Not an ERKS?**

|   |    |
|---|----|
| Lack of financial resources                     | 10 |
| Lack of expertise                               | 1  |
| Deemed unnecessary for day-to-day operations    | 4  |
| Other   | 14 |
| (other categories):                             |    |
| Agency moratorium                               | 2  |
| Lack of quality products                        | 2  |
| Waiting for agency-wide implementation          | 3  |
| Currently investigating products                | 1  |
| Pilot projects not successful                   | 2  |
| Not handed down from corporate office           | 1  |
| Lack of agency standards                        | 2  |
| Currently implementing agency-wide              | 1  |
| Lack of personnel                               | 2  |
| Not considered a priority by senior level staff | 2  |
| System design                                   | 1  |
| Not considered a priority by IT                 | 1  |
| Not handed down by agency                       | 1  |

*Question 48. What types of barriers would you anticipate within your office when implementing an ERKS system? (For example, employee resistance)?*

Answers to this question were fairly well distributed. The organizations all had different views about anticipating barriers for ERKS system implementation and provided multiple reasons.

**Table 20: ERKS Barriers**

|  |   |
|--|---|
| Cost prohibitive                                     | 4 |
| Structure of organization                            | 3 |
| User resistance                                      | 6 |
| Learning new application                             | 6 |
| System design  | 2 |
| None – no barriers anticipated                       | 5 |
| Technical barriers                                   | 4 |
| Comfort with paper                                   | 3 |
| Lack of understanding of records management          | 3 |
| Security   | 1 |
| Easier access, search, and retrieval                 | 1 |
| Requires more work                                   | 1 |
| Facilitate compliance with records management policy | 1 |

*Question 49. What types of advantages would you anticipate within your office when implementing an ERKS system? (For example, better organized)?*

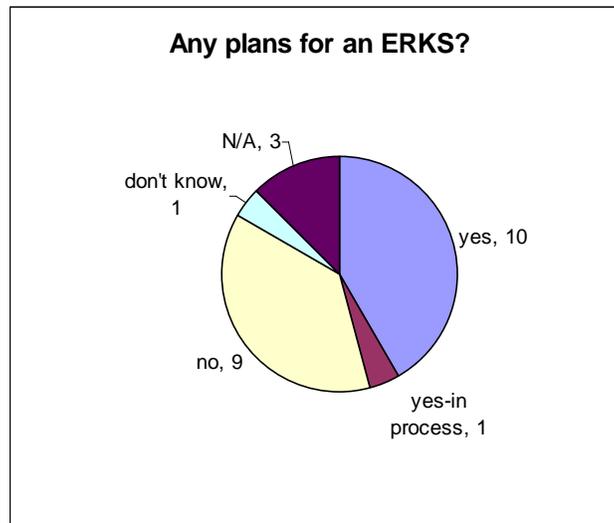
Answers to this question were fairly well distributed. Agencies all had different views about anticipating advantages for ERKS system implementation and provided multiple reasons.

**Table 21: ERKS Advantages**

|  |   |
|--|---|
| Reduce paper   | 5 |
| Increase efficiency in records management operations | 9 |
| Increase efficiency in program operations            | 7 |
| Automated disposition                                | 3 |
| Document management functionalities                  | 3 |
| Easier access, search, and retrieval                 | 7 |
| Foster an appreciation of records management         | 3 |
| Facilitate compliance with records management policy | 7 |
| Technical advantages                                 | 1 |
| E-mail management                                    | 1 |
| No advantages anticipated                            | 3 |
| Professional recognition                             | 1 |
| Security   | 1 |

*Question 50. Is the office planning to implement an electronic recordkeeping system for any or all of their files in the near future?*

Results to this question are displayed below.



**Figure 34: Plans for an ERKS**

*Question 51. If yes, what systems/vendors are you is the office considering and for what files?*

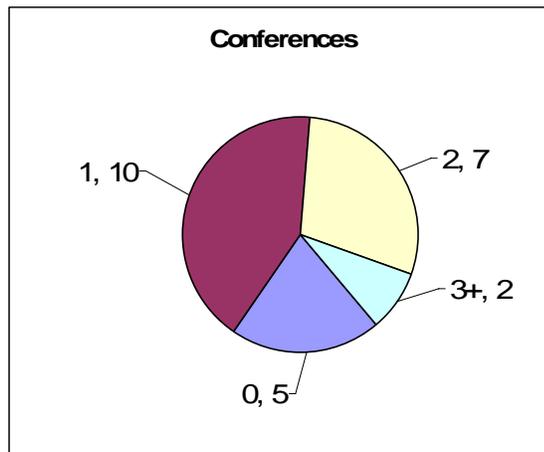
Of the respondents who had researched available products and were considering a specific product, Hummingbird and Documentum products were most popular (selected by two agencies each). Other products mentioned as being considered for implementation include Zasio-Versatile Express, Stellant, ERM Solution, any of the DoD 5015.2 certified products, and custom products built specifically for agency needs that will not be mentioned here in order to protect the anonymity of participants.

*Question 52. How often has the recordkeeping officer (or you) attended conferences focusing on best practices in electronic records management in the last 2 years? (Please list names of conferences attended, if any)*

- a. *Number of conferences:*
  - 1) 0-2 times
  - 2) 3-4 times
  - 3) 5 or more times

b. *Please list conference names:*

Attending multiple conferences per year was not a popular activity by offices surveyed for this project as displayed in the chart below. Five offices indicated they hadn't attended a single conference in the past two years and 10 offices had only attended one conference.



**Figure 35: Conferences**

Conference names provided by participants were inconsistent. Of the respondents who had attended conferences within the past two years, most could not remember the names of the conferences they had attended or could not remember all of the conference names. Due to varying and confusing answers from survey contributors, this question has been withdrawn from any further evaluation.

Question 53. Do you communicate regularly with records management peers in different agencies?

a. If yes, how? (Listserves, meetings, roundtable, etc)

Communication between agencies varied from listservs, to meetings (formal and informal), conferences, phone calls, e-mail messages, and more. For simplicity, the researchers grouped these different means of communication into three main categories: face-to-face, written, and phone. Of the 13 agencies that expressed regular communication with records management peers in different agencies, most preferred all methods of communication (phone, written, and face-to-face).

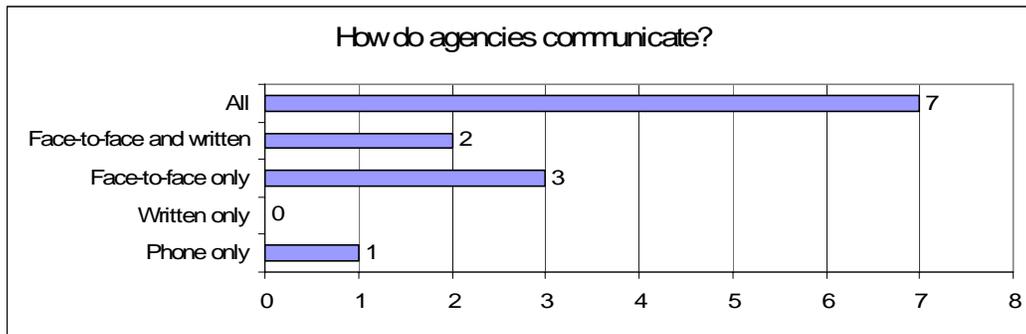


Figure 36: Agency Communication

Question 54. Please explain how communication across agencies may be helpful or why it may be a hindrance to your records management program.

This question created a lengthy explanation from most agencies interviewed. Offices had very different opinions about how communication across agencies would be helpful or a hindrance. The researchers captured all of the comments provided and what follows is a summary of the findings for the two categories.

Most agencies explained that communication across agencies would be very helpful. A very common comment was “why reinvent the wheel?” This means if an office is having a problem with an element of their records management program, it could benefit from finding a solution from an agency experiencing a similar problem, rather than reinvent a solution from scratch. This enables an office to improve by learning different ways of adapting to a situation and experiencing new methods for problem solving. Learning from others’ mistakes or studying methods from more advanced agencies can make an office more efficient and decrease cumbersome duplicative efforts. Most agencies were interested in learning about methods used in other agencies and reviewing their policies and experiences.

Others however, thought communication across agencies would be helpful, but only in certain areas. For only those agencies performing the same types of tasks, work in the same type of environment (for example, military agencies), or for specific records (like administrative records which are managed and maintained by all offices), sharing information was considered beneficial. Some agencies thought sharing

information about generic records management issues and questions in a public venue would be helpful. Some even thought that getting this information out to the general public may help to increase an interest in records management and benefit the program as a whole.

Most of the agencies interviewed could not see how communication across agencies would be a hindrance to their records management program. Most saw information sharing as a benefit. However, there were some valid reasons for not exchanging ideas. For some agencies, the information and records handled within the office or the program missions are unique or confidential, and it is not always possible to share ideas with other agencies. Others mentioned having to set priorities for responsibilities, and networking with others was not necessarily as beneficial as completing day-to-day tasks. Some others even explained being confused about guidelines; they thought talking to others may increase their confusion or they didn't know who to contact in other agencies for records management assistance or advice.

*Question 55. Are there any questions that you feel were not covered in this survey or is there anything else you would like to add?*

10 offices visited had additional comments to make upon completion of the survey and 14 did not. Comments made by the representatives interviewed are interspersed throughout this report as necessary.

## **Data Summary and Trends**

This section summarizes the most significant results from the various parts of the questionnaire, as presented in the Questionnaire results on pp. 6-55 of this report.

### **Introductory Questions (Questions 1 – 5)**

The introductory questions of the survey were primarily used for information gathering prior to site visits. These questions were not as significant to the ultimate goal of the project, but did produce some interesting statistics about the well-distributed mix of agency types, the geographical dispersion of agencies (most in DC and Virginia), and the universal maintenance of federal public websites across locations (interestingly, though most agencies maintain a federal public website, the majority of them do not schedule website content).

### **Office Function/Organization and Nature of Records (Questions 6 – 15)**

The next section of the survey collected information regarding the function and organization of the offices visited and the nature of the records they maintained. A majority of the agencies visited were large agencies with employees numbering in the tens of thousands. The offices interviewed were fairly high in the agency hierarchy with most being two or three levels down from the top office. Nearly all of the offices maintained program *operation* related records, and most offices also considered these to be the most important of all of the records they kept. At such a high level in the hierarchy of such large agencies, the expectation was that program *management* records, rather than program *operation* records would have been more strongly represented and appreciated.

### **Records Management (Questions 16-24)**

When reviewing the agency or office records management program in general and how records are managed in the office, most agencies replied as expected. They usually had the typical components of a records management program (written policy, training, hold orders, disaster plan, disposition/retention, inactive storage, archiving, and file plans). Agencies seemed to be having some trouble moving into the information age though. While the majority had included electronic records in their written records management policies, few offices included them in policies for hold orders for litigation. Very few had fully developed policies for managing electronic records in an effective manner. Most lacked IT expertise; for instance, few reported having an IT expert on the records management staff. Records managers were usually not included on IT project development teams. Records management is not considered a high priority in most agencies and it is not provided with adequate resources or support from higher level officials. If the records manager was a high-ranking official, or if records management was included as a separate line item in the annual budget, or if accountability mechanisms were more strongly enforced, electronic records management might take a front seat.

## **Paper and Electronic Records Management and Maintenance (Questions 25-32)**

All of the agencies visited maintain both paper records and electronic records. This finding was not very revealing, but what was interesting is that most of these records are often copied to another medium and the original is kept. Electronic records are routinely printed to paper, and paper records are often digitally scanned. Keeping both the original and the copy is redundant, but paper is most often seen as the official recordkeeping copy (54.2% of all respondents; see Question 29) even when most records today will be born in digital format. To adhere to the paper as record copy policy, electronic records are printed to paper to be filed as official. Agencies are hesitant to dispose of the electronic copies though and continue to maintain dual recordkeeping systems because the electronic files are convenient for users. Additionally, electronic copies are kept in an informal shared drive system and very few agencies are moving to official electronic recordkeeping systems. This seems to be the case because all offices already have access to shared drives and consider them essential to major office functions but do not have the resources to implement new technology. Also, there are perceived barriers, such as employee resistance to change that lead some to think adopting a new system might inhibit work flow at first whereas employees already use shared drives on a daily basis. The project provides evidence which is consistent with other surveys and studies to the effect that the Federal government is not fully taking advantage of the capacities of information technology to maintain electronic records for as long as needed. NARA's own research/development work, particularly the Electronic Records Archives (ERA) project will help the government move in that direction. But in the meantime, as the project revealed, one of the central issues is whether the government as a whole regards electronic records as "official" and "recordkeeping" records if they are captured in an appropriate Electronic Recordkeeping System. (ERKS).

## **Electronic Recordkeeping Systems (ERKS) (Questions 33-37)**

Half of the agencies interviewed are using (or are in the process of implementing) some type of system to maintain electronic records (whether ERKS, DMS, optical imaging system, web-based, or other), but most are using a shared drive in addition to the system or a shared drive by itself. Interestingly, only four agencies are using (or are in the process of implementing) an official ERKS. We believe that *every* Federal agency should have the goal of implementing ERKS to manage their born-digital records. All other alternatives are likely to result in ineffective records management practices for electronic records. NARA should continue to support the adoption of standards-based ERKS. Specifically, this includes training agency personnel in the benefits of ERKS; working with OMB to include dedicated funding for ERKS in future agency budgets; and continued promotion of ERKS within the Presidential Initiative for E-Records.

Corporate filing systems (whether paper or electronic) seemed to be the main location for maintaining records in the agencies surveyed, but the methods for handling each are very different. Centrally located paper files are maintained by program workers, records staff,

and administrative assistants almost equally, but electronic files are almost exclusively maintained by the program worker who creates the record (see Question 35a). Paper files are typically maintained according to a file plan or a file plan linked to a disposition schedule. Many electronic files are maintained similarly, but a much higher number of these follow no plan at all. Most of the electronic files are stored on a shared drive which in most cases is open to all employees. Many users will be granted a particular level of access according to their unique login ID and password, but most files allow read and write access, and security could potentially become an issue in some locations. This is particularly true with regard to confidential records. Sensitive paper records can be locked in a safe location and kept separate from general records, but for a lot of agencies, some sensitive records are not prohibited from being stored electronically and may be exposed to threatening situations if not protected properly. Since most agencies consider a record is destroyed only when the delete key is pushed, electronic files are particularly vulnerable.

### **E-mail Records (Questions 37.5 – 44)**

E-mail messages as record material proved to be an interesting segment of the questionnaire. E-mail was considered by most agencies to be record material, and while many agencies have specific e-mail record policy, an alarming number have no policy. Most determinations of what constitutes a record are made on a case-by-case basis or a judgment call by the program worker who receives the e-mail message. Of the e-mail messages considered records, most are printed to a paper format and filed in corporate filing cabinets or maintained at program workers desks (against the policy in some agencies where personal filing cabinets are not approved for record retention). Many e-mail messages are kept in electronic format as well and are typically maintained in a native e-mail system. While most e-mail is reviewed by the program worker for record status, if the program worker leaves the office, in most cases, their e-mail messages are just deleted. This could mean a high number of e-mail records are destroyed prematurely.

The ERM research team was surprised to find during the course of the survey that not every organization considers e-mail to be a record. Three agencies, two of which are military, indicated they do not consider e-mail messages records because e-mail is used as informational means of communication, much like the telephone. However, all three of these agencies occasionally save e-mails containing information of value but in general do not file their e-mail into an official recordkeeping system. However, it is not surprising that the type of organization or nature of work performed by an office will determine the reliance on e-mail to complete business functions, thus creating record material in the form of electronic communication.

E-mail remains a serious concern. Both the Cohasset surveys and our study show that e-mail is out of control in many Federal agencies, and this project offers some additional insights. E-mail is over-used as a communication, record-creating, and documentation device; most offices lack procedures and training for handling it; record and non-record are commonly commingled; systems for filing and keeping track of it are the exception, not the rule; and retention/disposition is haphazard and uneven.

### **Future of Records Management and Concluding Remarks (Questions 45-55)**

As the interviews were ending, the researchers inquired a bit about participants' views regarding the future of records management and obtained some concluding remarks. Agencies who have implemented an official electronic recordkeeping system or other type of electronic system encountered a variety of different problems with both Commercial off the Shelf (COTS) products and custom built systems, but the main reason agencies have not implemented an ERKS is associated with cost. Additionally, agencies anticipate user resistance and problems learning a new application if they move forward with implementation of an electronic system. The good news is that most agencies also anticipate an increased efficiency of records management operations if they install a new system.

Most agencies know how to get additional information or assistance regarding electronic records management, but they do not necessarily know whom to contact at NARA. Most respondents will contact their own agency records staff representative or visit NARA's website. For most offices, another interaction method used was a communication across agencies. Discussing ideas, problems, and solutions beyond agency boundaries was seen more helpful than it was a hindrance.

### **Web Survey**

Phase two of this project involved a collection and analysis of information from records and information management professionals via a web-based survey. This web-based survey was shorter in length than the on-site questionnaire used to interview federal government agencies and was more universal in nature. The survey was conducted via SurveyMonkey.com, a web-based survey tool and was directed to individuals associated with records and information management organizations such as AIIM and ARMA as well as records management and archive professionals in the public and private sectors through their organizational listservs. This phase allowed a broader reach for data collection and a more varied sampling of agencies, though it did not provide as much in-depth explanation of electronic records management policies and procedures as did the personal on-site interviews at federal agencies. This web-survey was conducted as a means to reach more people and collect more information, but the analysis must also be taken in context with the data collected from the on-site interviews to provide a more complete picture.

This phase of the project was completed by a team of graduate students in Master of Information Management Program at the University of Maryland with a final report provided to the Center for Information Policy. The web-based survey consisted of 31 questions (25 of which were multiple choice) and was made up of four sections: records management programs; paper records; e-mail records; and electronic records. The survey was available online for 30 days and results were collected and analyzed from 119 participants. While the specific identities of the responding organizations was not

requested in the online survey, the size and type of agency was collected. The public sector agencies made up the highest response group with 21 federal government agencies, 39 state government agencies, and 5 local government agencies answering the online survey. Whether there was an overlap with the federal agencies participating in the on-site interviews is unknown. Among private sector groups participating online, 31 stated they were for-profit companies and 23 were non-profit. The agency size was solicited for these groups as well. There were 67 responses from agencies with 1000 employees or fewer and 52 agencies had over 1000 employees. In each of the four sections of the survey, highlights were noted and a discussion of pertinent information was included in the final report.

The major findings of the final report written by the team who conducted the web-based survey (and included as an appendix to this report) included a discovery of the importance of records management responsibilities as viewed by agency officials, and an awareness of records management policies by employees. The report identified e-mail records as important to records management professionals, though policies and procedures for e-mail maintenance were shown to be underdeveloped. Additionally, the report described a lack of appreciation of records management as significant to the implementation of official electronic recordkeeping systems and electronic records management in general. This lack of appreciation creates a cycle where records management is delegated to administrative and secretarial staff because it is seen as insignificant.

Along with a written report describing findings, the team also created a cross-variable analysis of the data. The analysis included a comparison of answers by size of organization as well as type of organization. Interestingly, the comparison by type of organization (whether public or private sector) did not produce any significant differences between organizations. The respondents had similar answers to questions throughout the survey. Similarly, the comparison by agency size was mostly the same throughout each question with a few minor exceptions. Very small agencies (1-50 employees) were less likely to include some of the typical components of a records management program (like disposition and retention schedules, transfer of records to inactive storage, and permanent archiving). Additionally, a slightly larger percentage of these very small companies maintained records exclusively in paper format. These findings are not unexpected as small agencies have fewer records to handle and may not need the structure of programs used by larger agencies.

## Key Problems and Proposed Solutions

This section of the report identifies and proposes solutions to the three most important problems revealed by the project: (1) difficulty in developing and implementing ERKS, particularly in large agencies; (2) uncertainty about retention and disposition of electronic records; and (3) maintenance of parallel paper and electronic records systems.

### **Problem 1**

*Most offices, particularly in large agencies, have not developed or deployed Electronic Recordkeeping Systems (Questions 33 – 37)*

The survey's findings suggest smaller agencies are further along in achieving implementation of electronic recordkeeping systems but that there are fewer small agencies looking to do so in the immediate future. Smaller agencies appear to have more flexibility to design and purchase systems simply because of their size, but still face financial constraints similar to larger agencies. ERKS are a rarity in federal offices and the project did not find any evidence that this is likely to change for the better in the near future. The need is obviously not being met in a timely fashion, and in fact it is growing with the growing volume of e-mail and other electronic records. The explanations are: lack of understanding of the nature and characteristics of official "electronic records;" lack of appreciation of what an ERKS is and how it is better and more functional than informal approaches like storing on one's hard drive; underestimating the negative consequences of haphazard management of electronic records; reassurance that comes from maintaining dual paper-and-electronic systems; and, as many respondents mentioned repeatedly, lack of support and resources.

The situation is critical across the federal government, judging from the results of the survey. The researchers only visited one agency that was already using a certified electronic recordkeeping system and three agencies that were in the process of implementing a system at the agency level. The agency already using a system and two agencies in the process of implementing an ERKS have less than 10,000 employees (two agencies in this range are planning for an ERKS in the near future). The problem is more intense in large agencies than in smaller ones. Only one agency in the range of 10,001-50,000 employees is in the process of implementing an ERKS. However, five agencies in the 10,001-50,000 range are planning or would like to implement a system in the near future in addition to two agencies in the 50,000+ range.<sup>7</sup>

Stated in another way, of the ten Federal agencies that have less than 10,000 employees, one has implemented an official electronic recordkeeping system, two are in the process of implementing a system, and two are planning or would like to implement in the near future. Thus, 30% of the agencies with less than 10,000 employees have taken steps to

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<sup>7</sup> N=20 for this discussion, as we excluded the three non-federal organizations, and also excluded one federal agency whose employment is classified.

implement an electronic recordkeeping system and 20% are hoping to automate electronic records management soon. Of the ten Federal agencies with more than 10,000 employees, one is in the process of implementing an ERKS and seven are planning for a system in the future. Thus, 10% of agencies with more than 10,000 employees have taken steps to implement an electronic recordkeeping system, and 70% are hoping to automate electronic records management soon.

Interestingly, 20% of agencies with more than 10,000 employees (two agencies total) are not planning to implement an ERKS in the near future compared to 50% of agencies with less than 10,000 employees (five agencies total). Two interviewees from an agency with between 10,000 and 50,000 employees cited the lack of financial resources as a primary reason they have not implemented an ERKS. One respondent indicated his office was waiting for agency-wide implementation, which he did not see possible with current resources. Another respondent from an agency with 50,000+ employees explained that a system was deemed unnecessary for day-to-day operations and was not seen as the best solution at the time it was explored. The agency did not consider an ERKS efficient or an appropriate use of funding. The responses from representatives from agencies with less than 10,000 employees were similar to reasons given by larger agencies but varied slightly. Three of the five agencies with fewer than 10,000 employees stated a lack of financial resources as the main reason why the office had not actively pursued an ERKS. Two of these three agencies also indicated that obtaining a system was not a priority set by either senior level management or the IT department. Two smaller agencies also cited lack of personnel as a major factor, which was not an issue for any large agencies.

It is important to note that the researchers asked individuals why they had not implemented an ERKS up to this point even if they answered that they were planning to implement one in the future. Therefore, people who answered that their agency is not planning to implement an ERKS *and* people who answered that their agency is planning to implement in the near future had similar reasons why they had not done so up to this point. Two agencies, one that did not have plans and one that did, indicated the agency placed a moratorium on the purchase of electronic recordkeeping systems until it could develop an agency wide policy or plan.

The responses to questions relating to the implementation of an ERKS indicate agencies already implementing or looking to implement systems are doing so *on the agency level*. While individual offices may have imaging systems or correspondence management systems that facilitate work unique to their office, agencies are attempting to design records management systems that will be used by all offices. This means smaller agencies have less trouble implementing an ERKS because they do not have to coordinate among as many offices and go through as many layers of bureaucracy. It is also easier for smaller agencies to purchase inexpensive commercial off the shelf [COTS] products which will meet their recordkeeping needs whereas it is more likely that a larger agency will have to design and build a system in order to meet the recordkeeping needs of multiple, diverse offices.

In addition to the data available on the implementation of ERKS in the federal government, the surveyed offices in neither the two state agencies nor the one private sector business are using an ERKS. James Frazier from the Government Services branch of the Delaware Public Archives stated that he is only aware of one office in the Delaware State Government currently using an official ERKS. William Henry from the South Carolina Department of Archives and History, Archives and Records Management Division had a similar statement. As far as he knows, no agency in the state government has an official electronic recordkeeping system, but one is using a document management system.

The lack of ERKS in place within federal agencies, state agencies, and private corporations means the majority of offices still designate their official recordkeeping copies in paper format (54.2% of survey participants; see Question 29).

## **Proposed Solution**

Funding is clearly a major impediment to implementation of ERKS in many agencies. Although effective management of electronic records is a classic “pay me now or pay me much more later” problem, records management in general, and ERM in particular, is not seen as a high budget priority in internal agency budget battles. As long as agencies must make choices between funding what they consider core mission programs and records management, RM will consistently be short-changed. Electronic records management will only receive the required resources if it does not have to compete with other priorities. This can only occur if a government-wide source of funding, dedicated solely to implementation of ERKS, is established. We propose that NARA work with OMB to encourage all agencies to include a dedicated no-year appropriation, similar to the NARA 117X fund for facility construction and repairs, for the exclusive purpose of supporting ERM, in future budget requests.

## **Problem 2**

*Disposition of Electronic Records is too Cumbersome and Uncertain (Questions 36-42)*

The organizations surveyed in this study that are managing records in paper format and organizations maintaining official electronic recordkeeping copies in the absence of an ERKS typically resort to manual disposition of temporary electronic records, meaning that employees select individual word-processing documents or e-mail records and delete them one at a time. This is troubling because the processes described by interviewees for manually deleting electronic records were sporadic, cumbersome, and are resulting in too many records being saved for longer than necessary as well as other records being disposed of prematurely.

Currently deletion of temporary electronic records, typically word-processing documents, is done by the record’s creator. While 12 offices do so according to a disposition schedule (meaning they will only delete an electronic record at the end of its lifecycle), there are very few agencies that have a systematic process for reviewing and deleting records filed on the shared drive or document management systems and 12 offices do so

ad hoc (2 offices indicated that their official policy was to delete documents according to the disposition schedule, in practice they also used ad hoc deletion). Other offices are not even deleting temporary records. One office has not deleted any records from the shared drive because they have not run into any storage problems. The same is true for one office that is currently using a document management system to store scanned images. In the twelve offices doing the deleting, the employees who are deleting their temporary electronic records are generally not following any standard procedures, such as reviewing files at the end of the year, which results in records being saved too long. This practice has caused problems for several federal agencies that had to produce documents for FOIA requests that should have been destroyed. Retrieving documents that should have been deleted, whether for FOIA requests or litigation, creates more work for employees, diverts time away from completing functions central to the office's mission, and creates legal risks.

Some organizations have more organized processes in place to dispose of temporary electronic records on the shared drive. One office in a federal agency has a records manager who regularly reviews documents filed on the shared drive according to a detailed file plan. They will send out a notice of intent to destroy records, and employees may respond if they wish to save the record past its disposition. Three organizations have instituted periodic reviews of files for disposition. These reviews may be in the form of a special "clean-out" day, where all employees are given time to clean out their electronic files, or a notice that goes out every month or year as a reminder to delete non-records and records past their retention.

The lack of standard practices for disposition is especially evident in the management of e-mail messages because the determination of e-mail record status and deletion or retention is entirely up to the individual who receives or sends a message. No organizations interviewed have any systematic procedures to review e-mail other than notifications when individual accounts are reaching their storage quota, and unlike with a shared drive or document management system, the individual employee is the only person who accesses their inbox and may choose how to manage their messages. This results in different levels of attention paid to records management policies with regard to e-mail. Some employees may be particularly organized with their e-mail and will print their e-mail records, save them in the appropriate filing cabinet, and delete them from their inbox in order to comply with their agency's policy on retaining e-mail records. Other employees may save everything until their account reaches its space limitations and then delete based on how much space they need to free-up. This problem is complicated by the fact that many offices do not have policies regarding record status or else have vague policies that leave record status determination up to employees' judgment. As a result, the types of e-mails saved vary from one individual to the next.

Regardless of the system in place for the deletion of temporary electronic records, most processes are entirely manual and unwieldy. The deletion of records from the shared drive is done by reviewing individual documents and hitting the delete button (with the exception of two agencies that have a folder for transitory files which is deleted regularly). This is more difficult in offices that do not follow file plans to file electronic

records or have not established naming conventions that help decipher one type of record from another. E-mails must also be reviewed and deleted by individuals. For those organizations with e-mail systems that have automatic deletion, employees must review e-mails before the retention period is up and take an extra step to print or archive essential or non-temporary records. Reviewing and deleting e-mail also becomes a problem when employees leave an office. Most organizations either assume the employee has printed or archived their e-mail records and terminate their account when they leave, or they instruct the departing employee, his or her replacement, or supervisor to review all e-mail content before it is deleted.

## **Proposed Solution**

Frankly, we did not find any acceptable interim solution. In the long term, ERKS facilitates resolving many of these problems because a records management system will automate disposition (3 respondents noted automated disposition as an advantage to implementing an ERKS) and provide employees with guidelines to determine record status. Of course records creators and custodians will still have to be trained and motivated to determine what is a record and to assign the correct file codes to the records. Such a system will also allow agencies to maintain official recordkeeping copies in electronic format and reduce the burden of maintaining a dual recordkeeping system.

## **Problem 3**

*Organizations are Maintaining Unsynchronized Parallel Paper and Electronic Systems (Questions 25-36)*

Many offices indicated that they maintain two parallel systems – electronic and paper. Some refer to these as “dual” systems that duplicate or mirror each other. Participants in our survey offered various explanations:

- Paper is the official recordkeeping copy – Many federal agencies keep a paper copy as their official recordkeeping copy in order to comply with NARA’s regulation that word-processing documents and electronic mail messages must be maintained in an electronic recordkeeping system or printed to paper, but retain the electronic copy on the shared drive for reference or convenience.
- Original is saved regardless of format – Two federal agencies keep the original paper or electronic version of a record even if it is not designated as the official recordkeeping copy simply because it is the original record.
- Cater to users – Some agencies keep different formats of records in order to meet the needs of customers and employees or accommodate their preferences. For example, federal employees performing fieldwork may or may not have access to computers. In one federal agency and one state agency, the only way for employees to access records from outside the office is via the agency network. In another agency, records may only be sent to field agents in hard copy because they do not have the technology to receive electronic communications.

- Comfort – Paper copies of all records are kept because employees and/or customers are more comfortable with the medium or view them as more reliable because they contain wet signatures.
- Convenience – Electronic copies are kept because they are easier to access, search, and retrieve. As living documents, electronic records are easier to proof and edit and employees may reuse information by cutting and pasting or copying into a new document.
- Not scheduled – One federal agency stated that some electronic records are retained because they are not scheduled. Another agency retains all of their electronic records because they are currently not covered by the agency's schedules. Therefore neither agency can dispose of them according to NARA's regulations. It should be noted that, for Federal agencies, word processing and e-mail electronic copies are scheduled by GRS 20, items 13 and 14.
- Back up – Electronic copies of paper records are considered back up in case something happens to the paper records or they cannot be found.
- Laziness – One federal agency records manager acknowledged that duplicate electronic records might be saved on the shared drive because people are too lazy to remove them.
- Post on website - Electronic version of paper records are needed to code in HTML post on an organization's website.
- Storage – One organization indicated that they have plenty of storage on the shared drive and thus have the capability to retain original electronic records in addition to paper records.

It is also noteworthy that one federal agency simply maintains a dual system, where every record must be in paper and electronic format. In addition to the on-site interviews, 78.1% of the online survey respondents indicated that records are filed in shared drives.

Regardless of the reasons why organizations retain electronic and paper versions of the same record, keeping duplicates in multiple formats results in the maintenance of a parallel system and is a redundant practice. This creates extra work for program employees and records management staff because records must be copied to another medium (e.g., a word-processing document has to be printed and filed) and two copies must be disposed of. It introduces confusion as to which copy is the "original," "official," or "recordkeeping" copy. It poses problems about version control. Considering that it is difficult enough to effectively manage one filing system, organizations increase the likelihood that copies of records will be retained for longer than their disposition. Maintaining the electronic copies too long subjects agencies to the risk of having them subject to FOIA, litigation, and Privacy Act restrictions. Agencies need to be clear about what constitutes the recordkeeping copy of their records. This will increase efficiency in program management and solve records management problems relating to retention and disposition. It will also help the Federal government meet its legal mandate to create and maintain records, document its work, support continuity of service, and overall improve operational efficiency.

## Proposed Solution

### *A Synchronized File Plan and Shared Drive is Currently the Best Tool to Efficiently Manage Electronic Records for Organizations that Cannot Implement an ERKS*

It is unrealistic at this point in time for organizations to completely discontinue their paper recordkeeping systems. As the responses indicated, people still want access to paper records and many offices do not have plans or the resources to implement an electronic recordkeeping system. The *shared drive is not a substitute for an ERKS*; however, the reality of today's workplace is that the majority of records are "born digital" or originally created in an electronic format. Records are also retained in their digital format because of convenience. Bringing electronic records under systematic control upon their creation will improve the management of records in all formats.

It may also ease the transition from a paper-based filing system with paper designated as the recordkeeping copy to an electronic recordkeeping system where original electronic records serve as the official record. We believe this needs to be a goal for the Federal government to achieve as soon as possible. It will require leadership from the highest levels of the government, including the Office of Management and Budget, not just from NARA. It can be done with existing standards and technology and with the gradual adoption of ERKS, as defined and discussed in this report. NARA needs to play an important educational, facilitative, and advocacy role both with Federal agencies and with the information policy-making offices of the Federal government.

Maintaining parallel official paper and unofficial "convenience" electronic records-keeping systems is simply a fact of life, but presents numerous potential problems, the most significant being that the two systems may become out of synchronization. If the official record copy is the paper copy, disposition of the electronic copy before the approved disposition date may cause inconvenience, but not legal problems. However, maintaining the electronic copy after the official paper copy has been appropriately destroyed may provide litigation, FOIA, and Privacy Act problems. Ideally each agency or appropriate agency component should assess the advantages and disadvantages of adopting parallel paper and electronic systems. We suggest that NARA may want to provide specific guidance on this issue.

To address the real world problem of dual systems, the ERM Research Team recommends that individual offices create a file plan if they do not already have one, or utilize file plans and disposition schedules already in place at the agency level. The file plan should identify records created by the office, provide a description of each category of record, include a file code or indexing term for the category of record, and reference its disposition. This file plan should be used for paper files and electronic files stored on the shared drive. All folders on the shared drive should mirror the file plan and files be named according to office or agency standard conventions. Currently the most effective search strategy for finding electronic records in a corporate file according to the survey participants is to browse a list of available files and folders on the directory combined with reviewing the file plan. A file structure synchronized with a file plan will increase the effectiveness of accessing records on the shared drive.

Six federal and state agencies representatives who spoke with the ERM Research team indicated that their shared drive mirrored an office or agency file plan. Three of those agencies are from the Defense and International Relations sector. The Research team viewed three of the electronic file structures to verify that the naming of folders and records matched the file plan. In addition to these agencies, one federal agency showed the research team an electronic file structure on the shared drive that did not follow a file plan but did adhere to official office file naming conventions.

Depending on the agency, different people are responsible for filing electronic documents in the appropriate folders. In some agencies the creator of the record is responsible for filing according to the file plan. Other agencies designate specific employees as records custodians, which are responsible for filing certain type of records in appropriate folders, following naming conventions, and carrying out disposition of the assigned records.

It may be difficult to monitor and ensure a directory structure remains intact, and that people follow naming conventions, but setting up folders that mirror the file plan makes it easier for all employees to access records. Also, filing documents on the shared drive using standard naming conventions increases the likelihood that records related to each other or in the same record series will be grouped together and easier to find.

The replica file plan and folder structure included on the next two pages mimics the file plans and folder structures the researchers viewed while on-site at agencies. The file plan is a simplified, generic outline at the record series level that uses information from NARA's GRS 14 – Information Services Records. Organizations are encouraged to develop file plans at a level of detail necessary to effectively manage their records. This may involve listing records titles and descriptions at the item level if an office deals routinely with unique records.

In addition to following a detailed file plan and setting up an identical folder structure on the shared drive, offices need to develop standard naming conventions that all employees adhere to when saving certain types of records on the shared drive. This will vary depending on the nature of the work performed, but there are general conventions an office might follow. An office might choose to name files using a combination of the following: name of record creator, name of record recipient, date of record creation, title of record item, document number.

As with most real-world problems, the proposed solution is not ideal, but presents a realistic approach to mitigate problems. The primary advantages are that replicating the approved file plan on the shared drive requires minimal investment or training, and facilitates coordinated disposition of temporary records. It must be noted that maintaining the recordkeeping copies of long-term temporary (more than 10-year retention) or permanent records on a shared drive faces the additional problem of becoming technologically obsolete before the end of their retention period.

From another perspective, as a practical matter, the solution we are proposing seems like the best of the alternatives available at least for now. Pushing for a reversion to an all-paper system would be a step backwards, given the state of information technology and the widespread use and convenience of electronic records. On the other hand, pushing hard for people to abandon paper and rely solely on electronic records seems risky until more reliable ERKS are in place. The solution is intended to work as a tide-over approach until the government advances to the point where the original electronic record can serve as the official record.

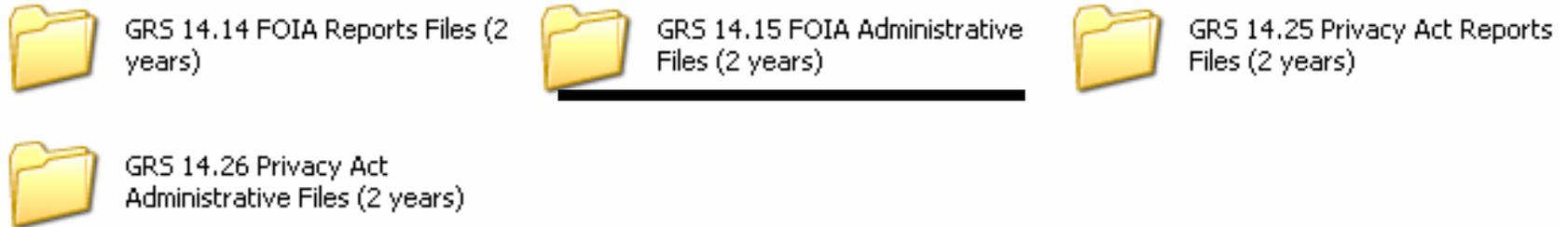
An example of correspondence filed by date and last name of recipient follows the sample file plan and folder structure.

**Sample 1: Sample File Plan**

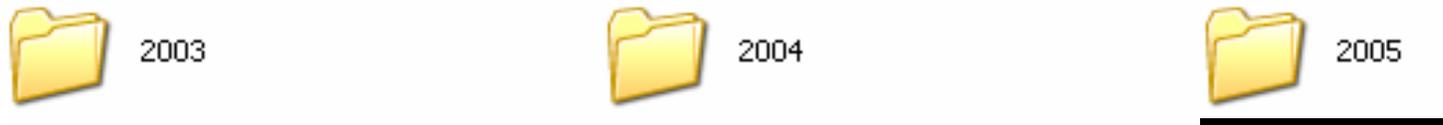
| ERM Study Sample File Plan<br>(Modeled after NARA's General Records Schedule) |                                  |   |                           |  |
|---|----------------------------------|---|---------------------------|--|
| Records Schedule Number   | Record Series Title              | Description   | Disposition Instructions  | Location   |
| GRS 14.14   | FOIA Reports Files               | Recurring reports and one-time information requirements relating to the agency implementation of the Freedom of Information Act, EXCLUDING annual reports to the Congress at the departmental or agency level.  | Destroy when 2 years old. | Paper: Central Files<br><br>Electronic: Shared Drive |
| GRS 14.15   | FOIA Administrative Files        | Records relating to the general agency implementation of the FOIA, including notices, memoranda, routine correspondence, and related records.   | Destroy when 2 years old. | Paper: Central Files<br><br>Electronic: Shared Drive |
| GRS 14.25   | Privacy Act Reports Files        | Recurring reports and one-time information requirement relating to agency implementation, including biennial reports to the Office of Management and Budget (OMB), and the Report on New Systems at all levels. | Destroy when 2 years old. | Paper: Central Files<br><br>Electronic: Shared Drive |
| GRS 14.26   | Privacy Act Administrative Files | Records relating to the general agency implementation of the Privacy Act, including notices, memoranda, routine correspondence, and related records.  | Destroy when 2 years old. | Paper: Central Files<br><br>Electronic: Shared Drive |

**Sample 2: Sample Shared Drive File Structures**

**ERM Study Sample Shared Drive File Structure**



**GRS 14.15 FOIA Administrative Files (2 years)**

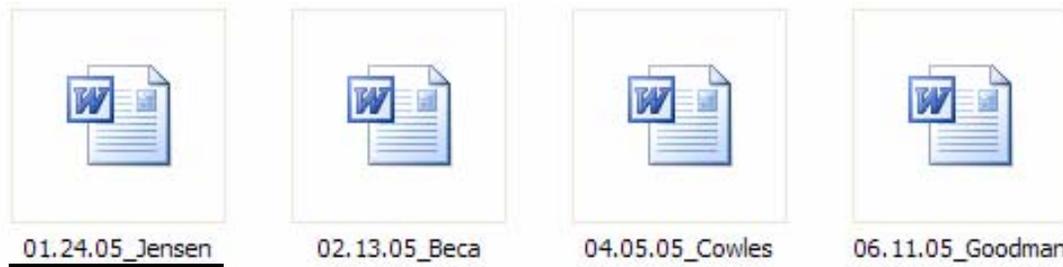


**GRS 14.15 FOIA Administrative Files (2 years)/2005**



### Sample 3: Sample Shared Drive File Structure Details

#### GRS 14.15 FOIA Administrative Files (2 years)/2005/Correspondence



The benefit of organizing files in this type of folder structure is that disposition can be done at the folder level instead of manually deleting individual records. Individuals may easily review the folders and remove any documents which need to be saved past their disposition, but the process is less time consuming than deleting individual records. Based on the folder structure above, an employee may delete the GRS 14.15 FOIA Administrative files in the 2003 folder at the end of 2005 because it has a disposition of two years. Although electronic copies of records which fall under GRS 14 may be deleted 180 days after an official paper recordkeeping copy is printed, the findings of this study prove many organizations retain electronic copies past their disposition for reference and convenience even after the record is printed. It is best to have these electronic copies under systematic control in a filing system similar to the one presented above in order to prevent electronic versions of disposed paper records from lingering unbeknownst to records managers.

The technique of using a filing plan to synchronize paper filing systems with central electronic filing systems on the shared drive does not address many problems organizations are facing with e-mail management, especially manual disposition of e-mail messages. However, all the information needed to make sound recommendations for this area was not gathered in the study. More specialized research needs to be done to discover best practices in e-mail management.

## Future Research Opportunities

Through the process of researching best practices in electronic records management, it became apparent that some areas of the research project were not comprehensive enough and needed further evaluation. This research project was designed to address a specifically targeted audience and the policies and practices followed for managing desktop electronic records by this audience. Given the limited resources and time available to complete the project, the research team successfully completed the scope of the project and managed to collect extra information regarding additional avenues related to electronic records management. These extra bits of data collected provided interesting and informative material for the researchers and added to the richness of the report, but did not cover these areas extensively. Future research opportunities are available as a result of the extra data collected by this project.

Future research is needed particularly regarding e-mail as an electronic record. Most agencies visited viewed e-mail differently from their other electronic desktop application originated records. E-mail typically came under a different policy or different procedures than other electronic records, and additional research might determine the underlying reasons, as well as how this issue can be addressed. Such research should start by examining current e-mail policies to identify their strengths and weaknesses, then look at techniques employees can use to determine records status, and finally determine the best method for filing and storing e-mails in the absence of an official electronic record-keeping system. A key component of future research on e-mail should include gaining a better understanding of the proportion of e-mail in offices that is record vs. non-record, transitory vs. substantive, and short-term vs. long term. The current study did not provide any data on these issues.

With the limited number of state and local government agencies and private sector industries visited in person, the research team recommends future research in these areas. An in-depth comparative study of public and private sectors might provide significant findings in progress for electronic records management.

Additionally, future research in other areas of electronic records management could examine newer technologies such as instant messaging. The research team did not include any questions regarding this application in their interview survey, but the topic arose in discussions with agencies as to how to handle IM as well as electronic images, maps, electronic recordings, and more.

In addition to the suggestions above for future research possibilities, many things came to mind while reviewing the project as a whole. The research collected by the research team was comprehensive, but upon completing the final analysis of the data, several questions were left unanswered. These questions were not part of the original scope of the project, but seemed interesting enough to the team to present as future research opportunities. Some of these questions include:

- What goals should the federal government aim for in five years for the state of affairs in electronic records management? In ten years?
- Should any new laws be considered for future progress in electronic records management? How about a reconfiguration of the role of records management officers, education for federal employees, or recognition for model programs?
- What work already has been done in regard to partnering of government agencies with private sector companies to advance electronic records management goals? What additional work is needed in this area? Should private sector companies seek guidance from government agencies in this area? Who should take the lead in significant research and development initiatives?
- Would it be advisable for federal agencies to be required to follow an International Standard (like that of ISO 15489) for improving electronic records management? Should this be endorsed by NARA?
- Why are the smaller agencies taking the lead, why are the larger ones lagging, and what can the larger agencies learn from the smaller agencies? What if anything should NARA do about the differences among federal agencies? What should others (e.g., department heads, professional associations, others) do about it?
- What action is needed by NARA and/or others to address the haphazard disposition of electronic records? Are NARA's existing policies realistic and helpful to agencies or should they be adapted to deal with current electronic records management needs?
- What role should agency heads play in implementing proposed solutions from this research? What role should NARA play? Should NARA take a different approach toward solving problems with electronic records management?
- What are the consequences of not taking action?

These questions could provide a significant foundation for a future report. Further research in these areas and more should provide even more solutions for electronic records management.

## Conclusion

Realizing a paperless office in this age of technology begins with effective and efficient management and organization of records within an agency. As representative of the worth and value of the business, sensible management of electronic records is becoming crucial to the success of an organization. In an attempt to discover current and best practices in electronic records management, the ERM Research Team reviewed current literature in the field and surveyed 21 federal government agencies, two state government agencies, and one private agency to determine policies and procedures presently in use. Additionally, a separate, but associated study of records management professionals was achieved through a web-based survey to assess similar issues through a different approach.

The research team discovered links among the 24 agencies interviewed regarding current progress in attaining successful electronic records management. Similarities among organizations surfaced related to the size of an agency and its available resources in terms of its capacity to implement any software program for managing electronic records. The smaller the agency, the more flexibility it has for purchasing a practical product and the fewer bureaucratic barriers it encounters. Another link among agencies revealed the haphazard disposition of electronic copies of records. Disposition of electronic files proved to be irregular in most agencies which created an accumulation of records retained past their approved timeframe.

The last major connection between agencies was the use of redundant recordkeeping systems. With the hesitancy to relinquish physical paper files, and the prevalence of “born digital” documents, organizations are maintaining duplicate sets of records while at the same time failing to coordinate their maintenance structures. Interestingly, the researchers discovered that perhaps one of the most basic and elemental components of traditional records management programs can eliminate these shared problems among agencies for effective *electronic* records management. Using a well-crafted, organized, and purposeful file plan can help to alleviate some problems agencies are experiencing transitioning to a digital system. This approach is recommended for offices designating electronic records as the recordkeeping copies and for those offices which, based on a risk assessment, wish to avoid the problems associated with FOIA litigation and the Privacy Act that result from keeping electronic copies too long. A meaningful media neutral file plan that mirrors both electronic and paper files and follows the same maintenance schedule will help to consolidate any dual systems, assist with disposition regularity, and will prepare larger agencies for the switch to an appropriate software solution once past bureaucratic or financial obstacles. Efficiently managing electronic records can save an organization a great deal of time and money which will allow them to redirect resources toward other efforts.

## **Acknowledgements**

The ERM research team would like to sincerely thank all those who participated in our survey. On-site interviews took a considerable amount of time and required individuals to expose their work spaces and files. All participants were generous with their time and supplied valuable information to the researchers. We hope we have presented your ideas in a way that will benefit you as well as other organizations that have similar concerns.

Finally, thank you to the Master of Information Management research team for completing the web-based survey portion of the project and contributing to the overall findings of the report.

The ERM research team could not have completed the project without the help of all those mentioned above.