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Description of document:

National Archives and Records Administration (NARA) report: <u>Preservation Survey of Textual Records in the</u> <u>Office of Regional Records Services</u>, July 27, 2007

Requested date: 24-December-2008

Released date: 29-June-2009

Posted date:

Source of document:

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National Archives and Records Administration



8601 Adelphi Road College Park, Maryland 20740-6001

June 29, 2009

Re: Freedom of Information Act Request NGC09-040

This is in response to your Freedom of Information Act (FOIA) request of December 24, 2008, for the draft NR Textual Preservation Survey. Your request was received in this office on January 5, 2009, and assigned tracking number NGC09-040. I apologize in our delay in responding to you.

We located the *Preservation Survey of Textual Records in the Office of Regional Records Services.* It was drafted on July 27, 2007, and consists of 31 pages. Unlike the NW Textual Preservation Survey NARA released to you on December 22, 2008, this survey never became an official document, remaining simply as a "draft" document. As you may be aware, the deliberative process privilege protects documents such as "drafts" and the very process of whether a "draft" may evolve into a finished document or remain as a draft. See *Marzen v. HHS*, 825 F.2d 1148, 1155 (7th Cir. 1987) ("[E]xemption protects not only the opinions, comments and recommendations in the draft, but also the process itself.") Nevertheless, we are exercising our discretion in releasing this draft report to you, but have made redactions on several pages pursuant to 5 U.S.C. 552(b)(5), the deliberative process privilege.

If you are not satisfied with our action on this request, you have the right to file an administrative appeal. Address your appeal to the Deputy Archivist (ND), National Archives and Records Administration, College Park, Maryland 20740. Your appeal should be received within 35 calendar days of the date of this letter and it should explain why you think this response does not meet the requirements of the FOIA. Both the letter and the envelope should be clearly marked "Freedom of Information Act Appeal." All correspondence should reference the tracking number NGC09-040.

Please let us know if we may be of further assistance.

Sincerely,

JAY OLIN Deputy FOIA Officer Office of General Counsel

Enclosure

NATIONAL ARCHIVES and RECORDS ADMINISTRATION

PRESERVATION SURVEY OF TEXTUAL RECORDS IN THE OFFICE OF REGIONAL RECORDS SERVICES

Preservation Programs, NWT

(6)(5)

June 2006 July 27, 2007 draft

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EXECUTIVE SUMMARY

A systematic preservation survey of textual holdings in the Office of Regional Records Services of the National Archives and Records Administration (NR) was carried out at the Mid Atlantic Regional Archives in Philadelphia (NRBA) and the Southeast Regional Archives in Atlanta (NRCAA) in April 2006. NARA Preservation Programs (NWT) staff and NRBA and NRCAA archival staff worked together to conduct the survey in the respective regions. Data analysis was performed in May 2006. This report documents the survey process and results, and provides a context for those results.

The overall goals for the survey were to:

- Characterize the nature and extent of the textual preservation needs in the regional archives
- Provide basic information about the condition of the textual records
- Link condition, use, and value of records as a means of prioritizing preservation needs
- Provide a basis for estimating the budgetary resources required to address textual preservation needs



(6)(5)

NRBA

- Gain data to permit a future evaluation of existing protocols and procedures for initial processing, holdings maintenance, and other preservation functions
- Provide preservation data for the Workload Analysis Study performed by the Office of (NPOL) in spring 2006.

Preservation Programs conservation staff assessed the condition, format, and housing of the records. Archivists knowledgeable about the records surveyed, provided the corresponding data on use, value and preservation-related archival issues.

With the assistance of Booz Allen Hamilton statisticians working on the Workload Analysis Study, the textual preservation survey was designed to be statistically valid and structured to achieve 95% confidence with accuracy within 1-2% for each of the two regions surveyed. The survey instrument design was similar to that used previously to survey textual records held by the Office of Records Services – Washington, DC (NW). (b)(5)

Due to schedule and staff resource constraints, it was decided by the Office of Regional Records Services (NR), the Policy and Planning Staff (NPOL) and Preservation Programs (NWT) to limit the preservation survey (and the workload analysis survey) at this time to two regions, and to then apply the results across all regional archives in order to develop an understanding of NR archival preservation needs. NR worked with NPOL and NWT to determine which regions to survey. Criteria included the preservation level of box control, regional resources to participate, and costs. Several regions were under consideration; Ft. Worth, Kansas City, New York, Waltham, Philadelphia, and Atlanta. Travel to the west coast was deemed expensive. Only three regions had master locator lists however several other regions had box lists, which could be combined and used to predetermine the survey samples. Some regions could not support the survey due records move preparations or impending departure of the archival director. Both Philadelphia and Atlanta were willing participants with a high level of box control and travel to these regions was relatively inexpensive.

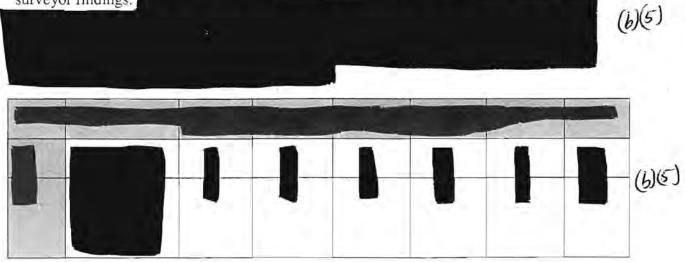
A recommendation that preservation action is needed was applied only when there was imminent threat to the record and the information it contained, and when information could not be accessed due to condition. For the purpose of the survey, preservation need was defined very conservatively and focused on whether records could be safely served to researchers in their existing state and housing. Thus, the emphasis was very much on the



NRCAA

critical "must or need to do." For example, poor quality, chemically unstable Federal Records Center boxes did not trigger a recommendation for holdings maintenance, though they would have if a stricter or more idealized interpretation of preservation was used. On the other hand, a box that does not adequately support the records did trigger a recommendation for holdings maintenance.

To ensure consistency between the NW and the NR surveys performance training for the survey was provided by NARA's Conservation Lab (NWTD.) A blind test was done to test the ability of conservators performing the survey in the regions to remain consistent with the findings of the conservators who performed the survey in the Office of Records Services (NW.) A sample was chosen from the records that were surveyed for the NW Preservation Survey. Linda Blaser (NWT-R) and Anne Witty (NWTD) located the identified samples, performed the survey and then compared their results with the NW surveyor findings.



Dissocration Survey of Textual Records in the Office of Regional Records Services National Archives and Records Administration Page 4 Approximately 2,160 sample sets, a combined total for NRBA and NRCAA, were evaluated. The sample set at each of the two regional archives was deemed to be statistically valid for its facility. The textual preservation survey results for each facility are in Appendices A and B.

The survey results from the two regional archives were integrated and analyzed. The results of the analysis derived from surveying the two regions were then applied to the total NR textual holdings reported in NARA's Performance Measurement and Reporting System (PMRS) for April 2006: 674,343 cu. ft.

As time and resources are available in the future, the survey may be extended to the other regional archives. When all regional archives have been surveyed, it will be possible to develop a statistically valid assessment of the preservation needs of all NR textual archival records.

The following results provide an indicator of the preservation issues and needs for the NR archival records overall, based on the information gathered in surveying the Mid Atlantic Regional Archives and the Southeast Regional Archives.

The Office of Regional Records Services faces a formidable backlog of textual preservation work. The results of the survey suggest that 85.2% or 574,000 cu. ft. of the NR textual holdings require some type of preservation work.

The greatest preservation need identified by the survey is for holdings maintenance. A total of 70.7% (477,000 cu. ft.) of NR textual records require holdings maintenance. While the percentages of records requiring reformatting, conservation treatment, and custom housing are smaller, the numbers of cubic feet requiring these preservation actions are nonetheless very significant. These results are as follows:

- 0.7% (5,000 cu. ft.) of the textual records require preservation reformatting (e.g., microfilming)
- 10.9% (74,000 cu. ft.) of the textual records require conservation treatment.
- 8.9% (71,000 cu. ft.) of the textual records would benefit from custom housing.

Records continue to deteriorate as time passes, and records made of unstable materials deteriorate more quickly. The preservation needs of records change over time, based on their condition and use. Environment plays a critical role in the effort to stabilize the chemical deterioration of records.

For many records, the physical damage suffered will not change significantly if the records are not used or handled, and if they are stored in good housing and storage environment. However, changing research patterns and the reasons of heavy or intense use that some records receive have a direct impact on the wear on the records. Records in good or stable condition that receive heavy use will always be vulnerable to damage caused by handling. When fragile, damaged, or poorly housed records are used, they are at imminent risk for further damage and loss of information. The task of preserving textual holdings is ongoing and can be met with a variety of strategies that identify and respond to the records at greatest risk.

Over the years NARA has developed a successful preservation strategy that integrates the primary tools that can prolong the useful life of records—environmental controls, holdings maintenance, conservation treatment, duplication, and staff oversight and intervention during records handling. New research and tools will continue to enhance our preservation capabilities. Preventive preservation strategies minimize irreversible loss of information and damage to the records, and save NARA money over time. As damage occurs, costs to stabilize condition increase and often the damage is irreversible. For example, paper that has become embrittled cannot be made flexible again; mitigating strategies for preserving brittle records, such as reformatting or sleeving, are costly.

Despite persistent attention to preservation, it is clear from the survey findings that a substantial body of textual records requires preservation actions. If this backlog is not addressed, it will continue to grow—both as new accessions are received and as records that receive heavy research use show evidence of damage from handling.

TEXTUAL PRESERVATION PLANNING – HISTORICAL BACKGROUND

Prior to this survey, the most notable systematic survey of the preservation needs of textual holdings was undertaken in the early 1980s and issued in January 1985. <u>The National Archives and Records Service (NARS) Twenty Year Preservation Plan (US Department of Commerce, National Bureau of Standards, NBSIR 85-2999) was developed under an interagency agreement with the National Bureau of Standards, which developed the statistically valid survey, analyzed the results, and developed conceptual models of preservation options. The actual survey of records was carried out by National Archives conservation staff. This data was used to characterize the format, condition, and preservation needs of the textual holdings.</u>

The <u>Twenty Year Preservation Plan</u> identified preservation strategies and the resources required to carry them out. The document emphasized several key preservation priorities, including the need for an improved environment, appropriate housing of records, duplication of unstable records, holdings maintenance of incoming records, and conservation treatment of intrinsically valuable records. The Plan provided a conceptual framework for preservation activity and was used effectively to set priorities, establish work procedures, and raise awareness of preservation resource needs. The <u>Twenty Year Preservation Plan</u> articulated a number of key concepts that have since become fully integrated into preservation management at the National Archives and Records Administration (NARA), including

- the importance of providing a suitable storage environment for all records,
- employing the level of use of records as a trigger for preservation attention, and
- focusing on the preservation needs of existing as well as incoming materials in order to avoid expanding the preservation backlog.

The <u>Twenty Year Preservation Plan</u> was one of several tools and initiatives that ultimately resulted in the building of the National Archives at College Park (Archives II) and the renovation of the National Archives Building (Archives I). Both building projects had at their center the enhanced and long-term preservation of the permanently valuable records of the Federal government.

In the early 1990s, NW conducted another preservation survey of textual holdings. The Department of Transportation provided guidance on developing survey methodology that was statistically valid. Reference service slips were utilized to identify the survey universe of records that were used by researchers. The examination of records was carried out by NARA conservation staff.

In addition to updating overall information on the condition and format of NW textual holdings, two key observations emerged. One related to an awareness of the various ways in which custodial units maintained records on research use, which made it difficult to identify a consistent use-based survey universe across NW holdings. The other observation related to the large number of damaged bound records that were identified and the high cost of individual conservation treatment. The latter finding led to implementing the preservation strategy of providing custom boxes for bound volumes as a means of stabilizing them and making them more safely accessible by staff and researchers.

In the late 1990s, the concept of risk assessment emerged as a mechanism for custodial archivists to identify records requiring preservation attention. The emphasis was placed on records that were used by researchers as opposed to the entire holdings. This approach continued the concept of applying use as an important criterion in setting preservation priorities and expending scarce resources. Risk assessment forms and instructions were prepared by conservation staff. These risk assessment forms were used by archivists to document the nature and extent of the problems they identified, as well as to propose the appropriate preservation response, including such actions as holdings maintenance, microfilming or other duplication, and conservation treatment.

Risk assessment information provided by custodial units was compiled into a database of atrisk textual records beginning in 1999, and updated annually thereafter. In 2004, the risk assessment forms were simplified. Throughout this period, the data has been used by conservation liaisons, custodial archivists, and others to set preservation priorities and develop annual work plans. Risk assessment forms are also filled out during initial processing, both as a means of alerting custodial archivists to preservation problems associated with new accessions as well as for use as a tool in managing the preservation backlog. Risk assessment information serves as the basis for tracking preservation needs and accomplishments in the Performance Management and Reporting System (PMRS).

In 2004 the Assistant Archivist for Records Services- Washington, DC requested that a new overall updated assessment of preservation be performed. And in 2005 the Assistant Archivist for Regional Records Services requested a similar assessment be performed in the Regional Archives.

SURVEY METHODOLOGY AND CONSERVATION ASSESSMENT

The current survey was designed to answer basic questions about the format, condition, and housing of the textual holdings, which permitted staff to evaluate whether records can be safely served to a researcher in their current condition. Will loss of information result should records be served as observed? Is a preservation action needed to assure the long term preservation of records?

The Policy and Planning Office (NPOL) hired a statistician from Booz Allen Hamilton to provide samples and calculations to achieve an accurate and random sample of the total NR archival textual holdings in two selected regions, Philadelphia (NRBA) and Atlanta (NRCAA). The survey was designed to be statistically valid and structured to achieve 95% confidence with accuracy within 1-2% for each derived estimate. Approximately 2,160 sample sets, a combined total for NRBA and NRCAA, were evaluated to represent the total NR textual holdings of 674,343 cu. ft.¹ NWT and NWTD Conservation staff assessed the condition, format, and housing of the records. Thereafter, archivists most knowledgeable about the records surveyed provided the corresponding data on use and preservation-related archival issues.

Preservation Survey of Textual Records in the Office of Regional Records Services National Archives and Records Administration

¹ NR textual holdings reported in NARA's Performance Measurement and Reporting system (PMRS) for April 2006.

Samples of 1 cubic foot of records (1/3 shelf) were selected based on the total cubic footage for each regional archives. Each region provided a locator list from which the samples were selected using a random generator. Location information on row, compartment, shelf, and box position for the sample site was then recorded in a Microsoft ACCESS database designed for the survey. Record group (RG), accession number (when known), box number, and relevant comments were also entered into the database.



Roger Miller Pulled and Refiled Records in Atlanta

Regional staff pulled records identified by the sample selection and brought those samples to a central location where three teams comprised of one archivist and one conservator each proceeded to survey the records.

One goal of the actual survey was to be as consistent as possible in evaluating the records. Detailed instructions coupled with NWTD-developed training enabled both conservation and archival staff to assess and

communicate information about the records in a uniform manner. See

Appendix C (Instruction Manuals for Archivists and Conservators)

Conservators physically examined records while archivists typed



Conservator Anne Witty surveyed the records while Archives Specialist Arlene Royer entered the data.

in the answers to inquiries about format and condition of the records and their housings. Assessments of preservation needs were made for the sample set.



Archivist Mary Ladner Referring to the Survey Instructions

Once all the survey sets had been examined by conservation staff, information was downloaded to a

NARA networked computer.



ARCHIVAL ASSESSMENT OF RECORDS

Conservator Anne Witty transferring boxes of records during the survey

The separate survey forms used by conservators and archivists in the NW Textual Survey were modified and merged into one form for the NR survey enabling conservators and

> Preservation Survey of Textual Records in the Office of Regional Records Services National Archives and Records Administration

archivists to work side by side examining the sample sets of records simultaneously. Each survey form included archival information (RG, entry and/or accession number as well as specific stack and shelf locations, when available. See Appendix A (Conservation and Archival Data Survey Form)

Archivists evaluated records from the following perspectives:

- use
- special value
- whether microfilming was recommended
- whether the records represented a potential theft risk

To ensure consistency in archivists' responses to questions on use, special value, microfilming recommendation, and theft risk, training was given at the beginning of the survey and written instructions were provided that included definitions and examples. See Appendix C (Instruction Manuals for Archivists and Conservators). At the same time that the textual preservation survey was underway a Workload Analysis Study was being conducted by NPOL which included information on whether finding aids were available and whether archival processing was needed. It was decided that any redundancy between the two surveys would be omitted from the Textual Preservation Survey to avoid duplication of effort and to expedite completion of the survey within the allotted timeframe.

The archival questions included in the survey have a direct bearing on long-term preservation. For example, records that receive high use are most likely to exhibit condition problems as a result of handling. Records of special value often warrant focused preservation attention, while records that pose a potential theft risk are typically candidates for secure storage and/or microfilming.

DATA ANALYSIS AND RESULTS OF ARCHIVAL ASSESSMENTS

All survey data were analyzed by NWCM archives specialist Mark Solomon, who is skilled in database development and use. By weighting the raw results against the survey stack sample size, he computed the percentages of the sample population of NR textual holdings corresponding to each survey query. From these weighted percentages the number of cubic feet of records in the entire NR holdings was calculated for each query. The results yielded the number of records subject to observed threats and candidates for future preservation and archival actions. The information gathered on use and special value was integrated with the data on preservation actions and a number of other data elements to assist in determining the number of records at high, medium, and low risk. Given the large universe of 674,343 cubic feet¹ of records in NR textual holdings, even small percentages reported represent large quantities of records.

High use records requiring preservation action are considered to be at high risk for loss of information. The high risk records with special value could be viewed as the highest priority. Those records having some use may be considered at medium risk for loss of information, and those with no or low use would be the lowest priority for preservation action in order to prevent loss of information.

The archival assessment of the sample sets provided the following data:

- 22.5% (150,000 cu. ft.) of the records receive high use
- 49% (330,428 cu. ft.) of the records receive some use
- 28.4% (191,513 cu. ft.) of the records receive low use
- 0.7% (5,000 cu. ft.) of the records are candidates for reformatting (e.g., microfilming) based on custodial assessment of research use (as opposed to conservator's assessments based on condition)

FIGURE 1: NR ARCHIVAL ISSUES CHART

Tri-fold Sets and	Records in FRC Boxes			
%	Cubic feet	%	Cubic feet	
0.46%	3,100	28.36%	191,000	
0.02%	130	8.28%	56,000	
0.24%	1,600	9.94%	67,000	
0.20%	1,350	10.13%	68,000	
	% 0.46% 0.02% 0.24%	0.46% 3,100 0.02% 130 0.24% 1,600	% Cubic feet % 0.46% 3,100 28.36% 0.02% 130 8.28% 0.24% 1,600 9.94%	

(6)(5)

Figure 1 illustrates archivally assessed use levels as applied to some of the preservation needs.

HOLDINGS CHARACTERIZED

The survey characterized the various types of record formats that make up the NR textual holdings. See Figure 2: Formats of Textual Records. The textual holdings are comprised predominantly of loose sheets of paper. The survey identified 8.19% of the samples as bound volumes with another 11.75% of the sample sets having both bound and loose records.

Format	% of Surveyed Records	Cubic Feet of Records	
Loose	75.1%	506,400	
Bound	8.19%	55,200	
Loose and Bound	11.75%	79,300	
Cards	2.45%	16,500	
Oversized Documents	2.32%	15,600	
Other	0.19%	1,300	
TOTAL	100%	~674,000	

FIGURE 2: FORMATS OF NR TEXTUAL RECORDS

~The total NR textual holdings were based on 674,343 cu. ft, as reported in April 2006 PMRS.

Many non-textual records and artifacts are interspersed within the textual holdings. The preservation needs of these materials can vary from those of the textual records. Of the nontextual records listed in Figure 3; 4.1% or 2,100 cu. ft. are in need of attention. In most instances, photographs found in the context of textual records need to be housed in polyester sleeves so they can be handled by researchers without damage to the photographic image. Artifacts often require custom housings to provide necessary support and protection.



Film and artifacts filed with textual records

FIGURE 3:

Format	% of Surveyed Records	Cubic Feet of Records
Photographs	5.74%	38,700
Artifacts	0.65%	4,400
Microfilm	0.05%	300
Mixed	0.19%	1,300
Films	0.46%	3,100
AV	0.23%	1,600
Electronic Records	0.09%	600
Total Nontextual Records	7.4%	50,000

FORMATS OF NONTEXTUAL RECORDS FOUND WITH TEXTUAL HOLDINGS

CONDITION OF TEXTUAL RECORDS

The conservators reviewed the condition of the records sampled. Based on the condition, they determined the preservation needs. Appendix A (Conservation and Archival Survey Form) shows the form used for the NR survey. The results are outlined below, based on the format of the records.

Volumes

- 1.61% or 890 cu. ft. of volumes have detached boards
- 2.03% or 1,120 cu. ft. have detached spines
- 7%, or 3,680 cu. ft. have broken sewing or other methods of attachment that are failing.
- All of these conditions represent records at risk for loss of information.



Tied volume

Loose Records

• 75.1% or 506,400 cu. ft. of records are loose records. The most common condition problem found among loose records is tri-folded sets of records. These records make up 6.43% of the survey sample, or 43,400 cu. ft. Breaks commonly occur along fold lines where the paper has weakened. Generally, paper



Preservation Survey of Textual Records in the Office of Region National Archives and Records Administratic Page 13

Trifolded records in FRC box

along the fold lines is darker and more brittle than the rest of the sheet. Trifolded records are frequently in envelopes or packets tied with cotton tape. When in groups, the outer layers are in a more degraded condition than the interior sheets.

- 3.6% or 18,200 cu. ft. of the loose records are considered brittle. Evidence of brittle paper includes edge tears, breaks, chips, and discoloration, which indicate that additional breaking or tearing will likely occur with use. An additional 4% or 27,000 cu. ft. of records represent brittle newspapers.
- 10.2% or 51,600 cu. ft. of loose records are judged to be too dirty to serve. This condition focuses only on the records themselves, not their box or folder. In many cases the dirt obscures information or could readily be transferred to other records that are not dirty. In addition, some of the boxes and folders in Philadelphia, specifically those from notably polluted cities such as Pittsburgh, were coated with so much soot that hands quickly became dirty and had the potential to transfer dirt to the records.
- 1.6% or 8,100 cu. ft. of loose records are significantly torn. This figure does not take into account small edge tears, but does include records in which a tear extends into text or image resulting in structural instability and impeding safe access. Small edge tears (less than 2 inches) that could be stabilized by placing the documents in polyester sleeves as a part of holdings maintenance are not included in this category.
- 2% or 10,100 cu. ft. of loose records are folded or rolled records that cannot be safely unfolded or unrolled to access information. This figure is independent of tri-folded records. While some regions are can perform humidification and flattening procedures, neither NRBA or NRCAA has that ability at this time. Consequently any work of this sort would either need to be sent to conservation or these regions would need appropriate training.
- Unstable copies are recorded at 0.68%, or 3400 cu. ft. Records were deemed unstable when quality of the image or support was in imminent jeopardy. These include documents produced by processes such as ThermofaxTM and VerifaxTM or copied onto inherently unstable papers. ThermofaxTM, VerifaxTM, or other poor quality copies that were clearly legible were not recorded as unstable. There are additional quantities of unstable copies that are still in a condition that the information is legible. Environment plays a critical role in slowing the deterioration of these copies.
- Pressure-sensitive or other variants of applied adhesive tapes were only noted in cases where information is obscured or access restricted because sheets are adhered together. This accounts for 0.45% or 2300 cu. ft. of records. Again,

environmental conditions play a significant role in speeding or slowing the deterioration of the tapes.

Mold or insect damage represents 0.69% or 3500 cu. ft. of records. These conditions were noted if there were mold or insect accretions that could be mechanically reduced or vacuumed. Staining and foxing were not included in this category. No active mold or insects were found in the holdings.

HOUSINGS FOR TEXTUAL RECORDS

Records are housed in folders and boxes to facilitate access and arrangement and to protect the records during transit and use. Housings also physically support records, protect them from dirt, and slow environmental changes. The results of the survey revealed a



Archivist Jefferson Moak with water -damaged box

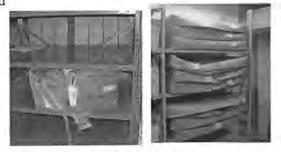
significant need for improvement in how the records are housed.

Boxes

 51.8% of the boxes do not meet current NARA specifications, though most of these boxes still provide adequate physical support. In some cases, marked signs of acid-migration and oxidation stains are visible on records, such as trifolded documents, that are in direct contact with poor quality box materials. Boxes with finger-holes on the front edge can result in damage to records when fingers are inserted to retrieve the box. These boxes are also of poor chemical quality. Boxes designed with "tuck-in lids" can also damage records as lids may inadvertently compress, bend, or tear records as they are closed.

15.1% of the boxes provide records with inadequate physical protection. This

figure includes boxes that are broken and boxes that are the wrong size. Records within boxes held together with pressure sensitive tapes or string, or that are creased, dented, or otherwise physically compromised are at risk when attempts are made to remove or replace records during handling. Boxes designed to house light weight garments or textiles have



Inadequate boxes

been used in the past to house heavy oversized records. In most cases, these boxes do not adequately support their contents and may collapse under the weight of the records as they are retrieved.

• 28.3% of the boxes are Federal Records Center (FRC) cu. ft. storage boxes that were used by the agency that created the records. None of the FRC boxes

Dreservation Survey of Textual Records in the Office of Regional Records Services National Archives and Records Administration surveyed meet NARA specifications for permanent enclosures, but many provide adequate support and protection which allows records to be safely served. Most of the FRC containers close by tucking the top flaps of the box under one another. This method of closure is often results in distortion to the box. When the box flaps are not closed, flaps catch on the shelf above, making the box difficult to remove and/or damages the box. Boxes that are not fully closed make records vulnerable to damage in the event of a water leak. And, FRC boxes are very heavy and difficult to remove and replace on high shelves.

 11.28% of all boxes are under-filled. Under-filled boxes without spacer boards allow records to slump, resulting in document distortion. Because paper retains a memory of this configuration, conservation treatment is required to relax and return the documents to their original state. Under-filled boxes also misrepresent linear feet measurements for reporting purposes and waste shelf space.



Underfilled FRC

- 2.17% of the boxes are legal size document boxes that contain letter size folders. These unmatched sets allow folders to shift during transport, potentially damaging records.
- 17.4% of all boxes are overfilled. Boxes that are overfilled jeopardize safe retrieval and re-filing of records. Tightly packed records also cause boxes to bulge and distort, which results in additional stress on the structural integrity of the boxes.

Folders

- 72.43% of all folders do not meet specifications for permanent quality. Chemical instability of the acidic housing materials can create an unfavorable environment in the box and may contribute to the oxidation stains evident on a number of records. Some new permanent quality boxes contain old, poor quality folders, which are the primary support for the records and in direct contact with them. Not until the boxes are opened is the poor state of folders revealed.
- 62.95% of all folders do not provide adequate physical protection for the records they house. Also included in the folder category are other types of enclosures that do not provide support. Envelopes function as folders in some cases, but because records need to slide in and out, potentially incurring damage, these were considered inadequate. Because of the chemical instability of the card stock or excessive handling, the integrity of many folders has been



Broken folder tabs

Preservation Survey of Textual Records in the Office of Reginnal Records Services Mational Archives and Records Administration compromised. Folder tabs are often broken because of the acidic and brittle nature of the folder material, resulting in loss of folder identification. Records attached to folders via prong type fasteners also present preservation problems since such files are often as thick as three inches, placing severe strain on records being accessed or copied.

- 57.54% of all boxes reviewed do not have enough folders to adequately house the records. Many boxes have few if any folders due to past practices where records were placed in new boxes sans folders. Sometimes a single folder contains more records than can adequately be accommodated; subdividing those records into additional folders is needed to provide adequate support. Folders are also needed to replace existing damaged folders that are no longer capable of supporting the records, and/or those folders that have label information at risk for imminent loss.
- 1.76% of all folders are too small for their contents, which results in edge damage and inadequate support. This category includes letter size folders housing legal and oversize documents and legal size folders containing oversize materials. Records folded once to accommodate the smaller size of the folder were considered acceptable.



Edge tears

PRESERVATION FINDINGS FROM THE SURVEY

Information regarding current preservation needs captured by the conservation staff and information on use and value provided by the archival staff can be viewed in the Preservation Actions Chart (Figure 4).

A recommendation that preservation action is needed was applied only when there was imminent threat to the record and the information it contained, and when information could not be accessed due to condition. For the purpose of the survey, **preservation need was defined very conservatively and focused on whether records could be safely served to researchers in their existing state and housing.** Thus, the emphasis was very much on the critical "must or need to do." For example, poor quality, chemically unstable Federal Records Center boxes did not trigger a recommendation for holdings maintenance, though in a stricter or more idealized interpretation of preservation need they would have. On the other hand, a box that does not adequately support the records did trigger a recommendation for holdings maintenance.

The Office of Regional Records Services faces a formidable backlog of textual preservation work. The results of the survey indicate that 85.19% or 557,000 cu. ft. of the NR textual holdings require some type of preservation work. 14.81% of the textual records do not require preservation action at this time.

The greatest preservation need identified by the survey is for holdings maintenance. A total of 70.71% (477,000 cu. ft.) of NR textual records require holdings maintenance.

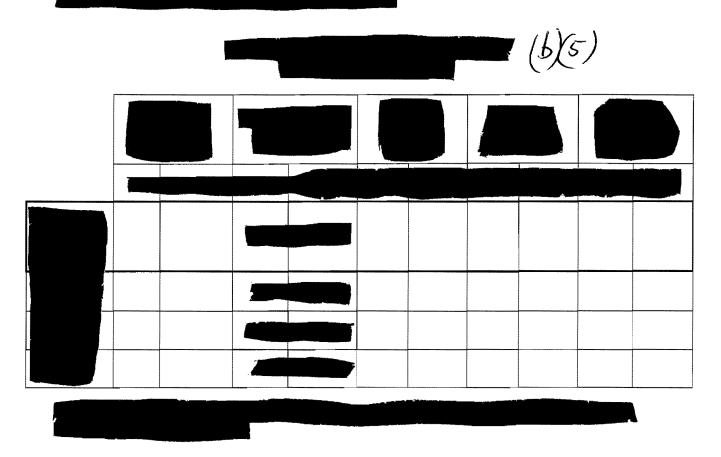
While the percentages of records requiring reformatting, conservation treatment, and custom housing are smaller, the numbers of cubic feet requiring these preservation actions are nonetheless very significant. These results are as follows:

- 0.65% (4,000 cu. ft.) of the textual records require preservation reformatting (e.g., microfilming)
- 10.89% (73,000 cu. ft.) of the textual records require conservation treatment
- 10.60% (71,000 cu. ft.) of the textual records would benefit from custom housing

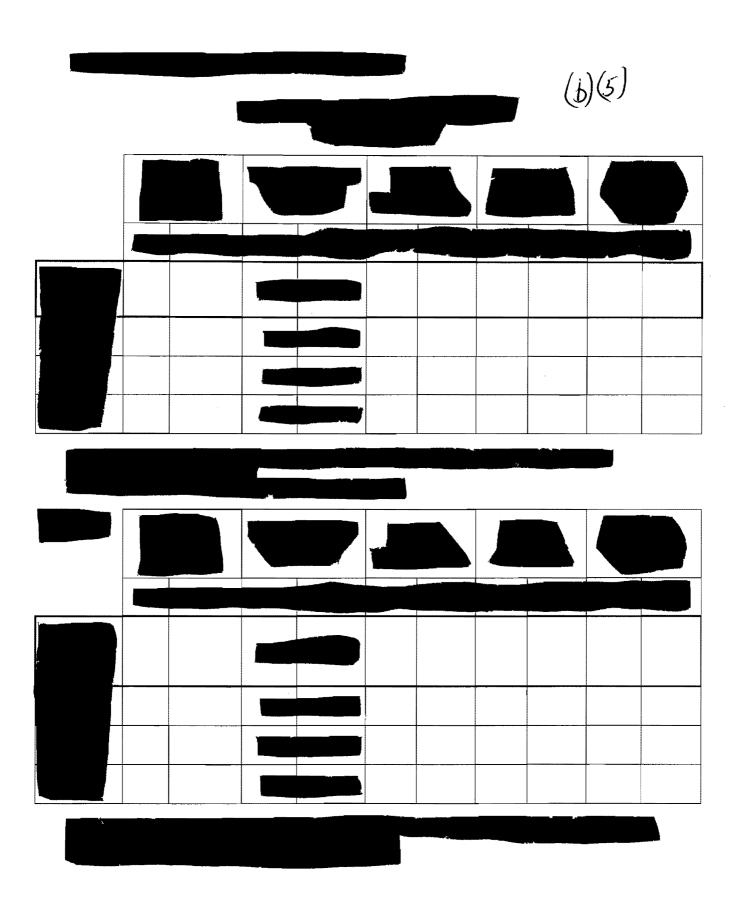
FIGURE 4: PRESERVATION ACTIONS CHART ALL NR

	Records Requiring Holdings Maintenance		Records Requiring Conservation Treatment		Records Requiring Custom Housing		Records Requiring Microfilming		Records Requiring No Preservation Action	
	%	Cubic feet	%	Cubic feet	%	Cubic feet	%	Cubic feet	%	Cubic feet
*All NR Textual Records	70.71	477,000	10.89	73,000	10.60	71,000	0.65	4,000	14.81	100,000
High Use Records	32.81	221,000	1.22	8,200	1.30	9,000	0.32	2,000	7.17	48,000
Some Use Records	20.87	141,000	7.29	49,000	6.57	44,000	0.14	1,000	4.07	27,000
Low Use Records	17.03	115,000	2.38	16,000	2.73	18,000	0.19	1,000	3.56	24,000

*Total NR Textual Holdings were 674,343 cubic feet as reported in the April 2006 Performance Measurement Reporting System.



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PRESERVATION NEEDS

17.04% or 115,000 cubic feet of the textual holdings represent high use records that require holdings maintenance. The Holdings Maintenance Chart (Figure 5) links level of use and special value with the need of records for minimal, moderate, or extensive holdings maintenance.

	All Records Requiring HM		Records Requiring HM Minimal		Records Requiring HM Moderate		Records Requiring HM Extensive	
	%	Cubic feet	%	Cubic feet	%	Cubic feet	%	Cubic feet
*All NR Textual records	70.71%	477,000	16.66%	112,000	18.23%	123,000	35.82%	242,000
High Use Records	17.04%	115,000	3.29%	22,000	2.04%	14,000	11.71%	79,000
Some Use Records	20.87%	140,000	6.43%	43,000	7.64%	51,000	6.80%	46,000
Low Use Records	32.81%	222,000	6.94%	47,000	8.56%	58,000	17.31%	117,000

FIGURE 5: HOLDINGS MAINTENANCE (HM) CHART

*Total NR Textual Holdings were 674,343 cubic feet. (per April 2006 Performance Measurement and Reporting System)

Minimal	Taping torn box lids; properly orienting records; replacing boxes; adding spacer board; scattered preservation photocopying (1:1 box replacement, for example); placing small numbers of photographs in polyester sleeves.
Moderate	Re-boxing in document boxes from FRCs; selectively replacing harmful containers and enclosures where needed; partial replacement of folders. Placing torn documents into polyester sleeves.
Extensive	Complete systematic holdings maintenance; replacement of housings at the series of collection level; may include systematic preservation photocopying; replacing boxes and folders in their entirety; removal and replacement of damaging fasteners; transfer of information from boxes and folders; unfolding flexible tri-folds (at the item level, for example).

The time required to carry out different preservation actions varies greatly. For example, minimal and moderate holdings maintenance activities are essentially carried out at the batch level, and it is primarily during extensive holdings maintenance that records receive selective individual-level preservation attention. This can be compared with conservation treatment, which is typically carried out at the item level. Time required to perform treatment can vary widely, depending on whether records are receiving basic stabilization, for example to permit safe microfilming, or if full conservation is being carried out that can take many hours per item. Microfilming requires individual, item-by-item handling of each record, though the time spent per record is brief. Thus, resource requirements to carry out different preservation actions vary widely depending on the specific action, whether records are handled at the item level vs. batch, and the degree and complexity of the intervention.

DEVELOPING PRESERVATION PRIORITIES

The level of use and special value of the records are critical components in determining priorities for preservation work. In order to maximize effectiveness in preserving the holdings, careful prioritization is key to effective and responsible assignment of limited resources for staff, materials, and storage space.

Level of Use

Archivists directly involved with the specific records surveyed provided data on use. The overall survey results were sorted into the various preservation action categories by level of use, as one means of establishing priorities for action.

Prior to the survey, archival staff defined use as follows:

- **High** use is defined as records pulled for research or reproduction services at least 3 times per year.
- Some use is defined as 1 or 2 uses annually.
- Low use records are not pulled for research or reproduction services during
- (5) the course of a single year.

The above terms and definitions were used for the purpose of the survey and were applied as accurately as possible by archival staff. However, with such large bodies of records, the concept of use is difficult to assess and apply. Use is normally considered at the series level, and in large series that receive high use this may mean that a particular box is actually seldom handled. On the other hand, in a small series, the same box or boxes may be handled repeatedly over the course of a year. A related problem is the fact that level of use is a very subjective concept since there are currently no automated means of tracking actual research use.

(b)(5)

Preservation Survey of Textual Records in the Office of Regional Records Services National Archives and Records Administration Page 22 Usage of records is an important trigger for preservation intervention, since it is at the point of use and handling by researchers and staff that records are most vulnerable to mechanical damage. Brittle papers can fracture, crack, or tear during handling; weak trifolded documents can break along fold lines if forced open; and volumes with loose or detached boards are unable to safely support text blocks during research use. Inherently poor quality papers (such as acidic mechanical wood pulp paper) and unstable copies (such as ThermofaxTM and VerifaxTM) can also suffer mechanical damage through handling, but also can continue to deteriorate chemically even if not handled. Such records are candidates for microfilming, reformatting or preservation photocopying. Records that are not properly housed are difficult and awkward for researchers and staff to handle, resulting in additional damage to records.

Efforts are underway to develop a Holdings Management System, which will permit the accurate tracking of records use. Toward this end, in the fall of 2005, the Office of Records Services-Washington, DC (NW), the Office of Regional Records Services (NR), and the Office of Presidential Libraries (NL) agreed to the following definition of Levels of Record Use, which will permit consistent comparisons of both use data and preservation assessments across NARA:

Level of use takes into account the various types of record use, including research, reference, correspondence, loan, reproduction, and exhibit use. The level of record use may vary over time, depending on such factors as changing research interests and trends and anniversaries of significant historical events.

- **High** use records are generally used at least 3 times per year by researchers, staff or others
- Moderate use records are generally used 1 or 2 times per year by researchers, staff or others
- Low use –records are generally used less than once per year by researchers, staff or others

SPACE IMPLICATIONS OF PRESERVATION ACTIONS

Preservation actions to improve the storage housings of records vary in their impact on space requirements. Some activities are space neutral, such as one-to-one replacement of document boxes that are damaged or made of unstable materials. Occasionally, poorly filled boxes can be re-housed to require less stack space. Other re-housing actions can increase stack space required to store records by 7% to 200%.

(b)(5⁻)

For large records series, these latter re-housing actions can significantly increase the stack space needed to store records properly. In considering the long-term implications for preservation actions on storage space needs, the largest impacts are from tri-folded records and records currently in Federal Records Center boxes. The quantity of tri-folded records are a static group of records from previous centuries and will not grow with time. On the other hand, the number of accessioned records stored in FRC boxes is large, 28.3% of the holdings at present, and is growing every year. Despite predictions that paper records will disappear, a great deal of paper continues to be accessioned. Projecting future space needs for records received in FRC boxes should take into account the space expansion that results on transferring their contents to document boxes.

Balanced against the space impact of re-housing records is the enhanced preservation benefit of storing records in document boxes as opposed to FRC boxes. Document boxes are smaller and weigh less, thus are much easier for staff and researchers to handle, especially in the research rooms. Document boxes also contain records in manageable units that permit safer access and re-filing of folders. For these reasons alone, records that receive moderate to high use should be housed in document rather than FRC boxes. Most FRC boxes do not have fully closing lids, which put records at greater risk in the event of a water leak and also expose records to airborne dirt and light. In addition, since none of the FRC boxes met NARA specifications for preservation quality containers, replacing them has even greater preservation benefit.

The level of research, use, and value are important factors in determining which records have priority for re-housing projects that expand space requirements.

CONCLUSION

This textual preservation survey provides a snapshot of the condition and preservation needs of NR textual holdings as they existed at the time of the survey data collection. For the purpose of the survey, preservation need was defined very conservatively and focused on whether records could be safely served to researchers in their existing state and housing. Thus, the emphasis was very much on the critical "must or need to do" as opposed to the enhancements that would be desirable if resources (staff, space, and supplies) were limitless.

Based on evaluating a statistically valid sample of 2161 units, the textual preservation survey permits NARA's Office of Regional Records Services to characterize the condition and preservation needs of its 674,342 cubic feet of textual holdings. The survey is extremely important and useful in terms of analyzing patterns, overall needs, priorities and workload. The data has already provided the basis for a Textual Preservation Budget Initiative (FY08). The risk assessment process that NR initiated, and that has been updated annually, will continue to serve as the method of identifying and setting priorities for specific textual records that require preservation attention.

The preservation needs of records change over time. Unstable materials will continue to deteriorate as time passes. NARA holds records that span the last 200 years; they vary in quality and chemical stability. In the 1980s federal legislation mandated that government paper be alkaline, which does much to ensure a minimum level of chemical stability for the paper. However, there are many records created on very poor quality paper that are now very brittle or in the process of becoming brittle. Environment – temperature, relative humidity and air quality- has a significant influence on how quickly or slowly the

records deteriorate as a result of chemical degradation. Cooler temperatures and drier relative humidity slow chemical reactions, and therefore are highly effective at slowing irreversible deterioration of the records.

Changing research patterns and the seasons of heavy or intense use that some records receive have a direct impact on the wear on the records. Even those records that are in good or stable condition that receive heavy use will always be vulnerable to damage caused by handling. Records that are chemically degraded or unstable are even more threatened since they will suffer even more damage as they are used and handled. The task of preserving textual holdings is ongoing and must be met with a variety of creative strategies and resources that identify and respond to the records at greatest risk.

NARA has developed a successful preservation strategy that integrates the primary tools that will prolong the useful life of records—environmental controls, holdings maintenance, conservation treatment, duplication, and staff oversight and intervention during records handling. Utilizing an integrated, prioritized approach to planning and carrying out preservation actions is an efficient and economical model for ensuring the preservation of NR records for use by future generations. Archivists, conservators, and preservation specialists collectively evaluate records from their different perspectives and plan preservation strategies.

Despite persistent attention to preservation, it is clear from the survey findings that a substantial body of textual records requires preservation action. If this backlog is not addressed, it will continue to grow—both as new accessions are received, as chemical deterioration increases and as records that receive research use become damaged from handling.

ACKNOWLEDGEMENTS

The NR Textual Preservation Survey was accomplished through the dedication, creativity, and diligence of many individuals.

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APPENDICES

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APPENDIX A: CONSERVATION AND ARCHIVAL DATA SURVEY FORM

	Conservation	Building:	N	Surveyor_Initials:	JMM/AW	
Record Identifier:	Γ		Entry_No: 42-E-1-2.2	Accession_No	2:	-
Computer	NR	Un_Matched_Set	Г	Brittle:	0-	
NWT_CILNo	5	Tri_Folded_Set	Г	Brittle_NewsPaper	Г	
RG_No	21	Format:	loose -	Torn	0-	
Stack_Area	В	Boards_Detached	0.	Taped	0-	
Row	1	Spine Detached	0.1	Folded Rolled	0-	
Compartment	17	Bindings_Failed	0-	Unstable_Copy		
Shelf Shird	6			Non_Text:	N/A I	
	621	Folders_WrongSiz	and the set of the set	-		
		Folders_Needed:	0.	Non_Text_Need_Atten	and the second second	
FRC_Box Declassified	Г	Folders_Meet_Speca	a second and a second se	Dirty	E.	
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Boxes_Meet_Specs:	0-	Ser	nd_to_Con:	0-	Usage:	
Boxes_Adequate:	100 -		nd_for_CH:	0.	Some 🔹	
loxes_Broken	0-		nd_to_HM:	Moderate -	Theft_Risk	
loxes_Wrong_Size	0.		commend_Microfilming	E	Г	
loxes_Over_Filled:	0.		Preservation_Work_Needed			
Boxes_Under_Filled:	0.	NO_	FIESEIVAUUT_WUK_NEEUEU			
Comments		and the second			The second second	
Lomments						

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APPENDIX B: SPACE IMPLICATIONS OF REHOUSING RECORDS

The figures below provide information on the space implications for re-housing records. This information was provided by NW Holdings Maintenance staff who have extensive experience with these projects.

- Re-box a properly filled document box: Re-boxing textual records directly from an old box to new results in no change in volume.
- Re-box a document box and replace folders: Re-boxing and replacing folders may result in some expansion, so three document boxes may expand to 3 ¹/₄ boxes. On average, re-boxing and re-foldering a shelf of seven boxes results in an expansion to 7 ¹/₂ boxes or a 7% increase in shelf space.
- Transfer a Federal Records Center (FRC) box into document boxes: The contents of a FRC box, when transferred to document boxes, may fit into 3 to 3 1/2 document boxes. A standard shelf holds 3 FRC or 7 document boxes. Re-boxing a shelf of FRC boxes results in 9 to 10 document boxes. A shelf of 3 FRC cartons re-boxed expands to approximately 9 or 10 document boxes, which require 1.3 or 1.4 shelves, a 30% to 40% increase in shelving occupied.
- Re-boxing tri-folded records: When tri-folded records are unfolded dry and placed in folders, one box of records can expand to three boxes, an increase of 200%. Conservators doing dry flattening of records found one box expands to two boxes, an increase of 100%. Unfolding and humidification will yield a significantly lower space increase.
- Custom boxing of bound records: When bound records are custom boxed, three shelves of volumes generally expand to four shelves, a shelf space increase up to approximately 33%, depending on the thickness of the volumes and if all volumes on the shelf are custom boxed.

APPENDIX C: INSTRUCTION MANUALS FOR ARCHIVISTS & CONSERVATORS

NR Textual Preservation Survey – Archival Input Instructions for filling out the survey form

Records to be Surveyed

Based on the total cubic feet of NR textual holdings and working with a statistician from Booz Allen Hamilton, a geographic sampling formula utilizing random numbers has been devised that is based on stack locations in NRBA and NRCAA. Each survey unit is one cubic foot or one third of a shelf. **The box or volume number listed in the location field indicates the starting point for the cubic foot survey unit**. To achieve 95% confidence in the survey results, approximately 1800 survey units will be evaluated.

Conservation Input

Conservation staff will fill out the portion of the survey form that covers the format and condition of the records and the suitability of boxes and other housings. Based on the assessment of each cubic foot sample, summary preservation recommendations will be made in the following categories: conservation treatment, custom housing, holdings maintenance, microfilming, or no preservation attention required.

Archival Input

Survey forms will show the RG, entry number, and MLR number as well as the stack location of the survey unit and the completed conservation assessment. Archivists familiar with the record group will be asked to provide responses to the questions below. Depending on their familiarity with the specific entry, this may involve going to the stack location to examine the survey unit. Some survey units may consist of multiple entries, in which case the responses should cover all of them. The presence of multiple entries or series will be noted in the comments field filled in by conservation staff.

Survey Questions

Usage Circle n, s, or h. Usage is evaluated at the series level on the basis of one year. The word "none" may appear as a default response on the form. Please ignore this and choose the appropriate response.

- <u>None</u> records are not pulled for research or reproduction services during the course of a single year.
- Some use is defined as 1 or 2 uses annually.
- <u>High</u> use is defined as records pulled for research or reproduction services at least 3 times per year.

Special Value Check this box if answers to the following questions are yes. Answer yes even if only one or two items in the sample set have special value.

- Are the records vault items, or are they candidates for vault storage or limited access?
- Do the records have exhibit potential?
- Are the records significant due to content, age, format, or association value?

Archival Microfilm Check this box if the entry or series is a candidate for preservation microfilming, from the perspectives of use and research interest.

Please note: Directly below the box containing questions for archival staff, is a check box for "microfilmed". Conservation staff will check this if boxes or volumes in the sample set have a microfilm label. However, if the box is <u>not</u> checked but archival staff knows that the records have been filmed, please check this box. If the records have already been filmed but the film is of poor quality and/or the entire entry was not filmed, please check the archival microfilm box. In sorting the data, boxes checked that both indicate that the records have been filmed and need to be filmed will be a trigger for re-filming.

Theft Risk Does the series contain materials at risk of theft? Check this box if the answers to the following questions are yes. Answer yes even if only one or two items in the sample set are vulnerable to theft.

- Do records contain presidential or other significant signatures?
- Are stamps, coins, and/or currency present?
- Does the series contain artifacts?
- Are there graphic materials present (such as small manuscript maps or drawings, comic books, baseball cards) and similar materials of potential monetary and/or collector interest?
- Are there manuscripts or other documents present of potential interest to collectors?

Items at risk of theft may be candidates for vault storage and/or the marking program.

Please include your initials on each survey form. If you have any questions about the survey, contact Linda Blaser 301-837-0938