This paper focuses on the preservation of documents that are disintegrating rapidly in national archives. After providing an introduction and background to the situation, the paper outlines a national preservation strategy for administrators and discusses ways to protect collections in archives and libraries throughout the United States. The impact of new technology and the special needs of technology-dependent information (i.e., information that must be stored through electronic and optical-mechanical devices) are also considered, and the future of preservation is discussed. Discussions address four preservation issues: (1) How does one insure that part of a Federal library or archives budget is expended on collection preservation? (2) How does one achieve recommended environmental standards in all Federal archives and libraries? (3) How should mass deacidification and other new technologies for preserving information be obtained by Federal archives and libraries? and (4) How should Federal libraries and archives seek to influence those involved in the development of nontraditional devices and systems for the recording and storage of information? A 21-item selected preservation resource list compiled by Robert E. Schnare is attached to the paper.
White House Conference on Library and Information Services 1991

Preservation: Integrity of Our Nation's
Records at Risk

by

Alan Fusonie
National Agricultural Library

with A Selected Resource List for Preservation
compiled by
Robert E. Schnare
Naval War College Library

Paper presented at the Federal Library and Information Center Committee
Pre-White House Conference
The attached document is the presentation on preservation made at the Federal Library and Information Center Committee pre-White House Conference. Though the focus is toward preservation of information held in federal libraries, the content of the presentation is applicable to the preservation of library and archival materials in general. We feel this document will further your understanding of preservation issues.
ABOUT THE PRESENTER

Alan Fusonie is an Historian and Librarian with the National Agricultural Library and is a part-time Professor of American History at Prince George's Community College. Over the years, Dr. Fusonie has been involved in the development, preservation, access and interpretation of manuscripts, art, rare books, photos, audiovisuals, and a variety of ephemeral research materials. He has administered many commercial restoration contracts - first with Carolyn Horton and Associates and then with the Northeast Document and Conservation Center. Having authored a number of historic bibliographies, articles and books, Dr. Fusonie has also served as a panelist, consultant and lecturer in the areas of agricultural history and library preservation. Currently, Dr. Fusonie is an active spokesman for the application and benefits of laser disc technology in libraries, archives and museums. In local community affairs, Dr. Fusonie is a member of the Calvert County Historic District Commission and the Friends of Calvert County Library, the Chesapeake Bay Foundation, and the American Land Trust.
PRESERVATION: INTEGRITY OF OUR NATION'S
RECORDS AT RISK

1. INTRODUCTION

Thank you for that kind introduction. What a beautiful morning and what a truly outstanding, modern facility. Standing up behind the high-tech podium with two T.V. screens, I feel like Captain Kirk and the auditorium is the Starship Enterprise.

In agriculture, I quite often speak in humble rural settings where our networks reach down many of William Least Heat Moone's Blue Highways. From schoolrooms to barns, to tents at County Fairs to a place like the "Salty Dog Saloon", connectiveness, communication, and service is always a continuing challenge.

But, to be here today is unique - a truly special and important happening with a definite look towards the future.

Ladies and Gentlemen, it is a distinct honor to talk with you this morning about how we might approach the challenge of preserving our archival and library records with major emphasis upon the responsibilities of the Federal government. In developing this presentation, I have had the benefit of receiving the advice and counsel of a very dedicated Preservation Issues Group. For their support, I am deeply grateful.

So let us begin the preservation journey with T. S. Eliot who once reminded us that, "Mankind cannot bear much reality", and yet we, in fact, will face up to today's reality - problems, challenges and opportunity associated with preservation efforts in our Federal Archives and Libraries.

Our nation's archival and library records are at risk and, in many instances, have already been lost forever. During the 1980's, the steady erosion of important collections has accelerated. Ironically, our endangered recorded memory is steeped for the most part in man-made acidic seeds of self-destruction. Library shelves of books and journals have become deterioration areas where highly acidic wood-pulp paper yellows, flakes, and
eventually crumbles into dust. The 1990's is shaping up as a decade of truly extraordinary preservation problems and challenges requiring major responses at the National, state, and local levels.

This picture of preservation despair is not new, only larger in magnitude. By 1979, the Library of Congress, in an alarming self evaluation, estimated that 6 million of its own publications were in need of immediate preservation measures. As late as 1986, the Library of Congress estimated that 70,000 volumes in its collection, unfortunately, were making the adverse transition from the "endangered" to the "brittle" category each year. A study at Yale University reported that more than 37% of their books were embrittled, or, in many instances, one more use would be their last. About 27% of the collection at the National Agricultural Library, or about 500,000 volumes, is in a brittle or near brittle state. About 85% of the collection of the National Library of Medicine is on acid paper. In a sample survey at the Smithsonian Institution Libraries, nearly 30% or about 300,000 volumes were found to be brittle. This alarming preservation crisis continues to be replicated in various degrees at most archives and libraries throughout the United States, and even includes an explosive challenge in the expanding area of non-traditional, technology-dependent recorded information.

Important records of our cultural heritage, held by the Federal Government, are in a tragic state of affairs. Yet, these records or holdings, we must remember, are the property of the American people. From the world renowned holdings of the Library of Congress, National Archives and Records Administration, National Library of Medicine, National Agricultural Library, and other Federal Repositories, to non-federal libraries throughout the United States, these records, despite current expertise, knowledge, and progress, are being lost at an alarming rate. We really need a comprehensive preservation survey of the 2,500 Federal Libraries. The results of the recent Preservation Issues Group survey clearly portrays the many small federal libraries as having very limited to zero resources for preserving their collections. And, yet, these Federal Archives and Libraries play such a vital role in providing documents, as well as answers, to many questions posed by society. For instance, a plant breeder used early American seed trade catalogs to identify a specific disease-
resistant plant variety for re-introduction into the current gene pool. In another case, a young lawyer used pre-1900 maps and land office records to resolve an important land claim dispute. In yet another instance, a scientist/environmentalist utilized retrospective time-series reforestation photographs as critical visual data in an acid rain study. Consider, also, the surgeon who needed to review the latest literature relating to a pressing medical procedure. These examples reflect the enormous number of vital inquiries received by these Federal Libraries and Archives which have continued to serve this Nation and the world well. We must realize that the preservation problems now confronting us as a nation have reached crisis proportions. It is a National problem and affects both Federal and non-federal repositories of our cultural heritage.

The question for the 1990's is, "When is enough enough?" When will the Nation's archival and library community develop a real sense of tangible preservation stewardship? Unfortunately, some past preservation studies, plans, and journalistic outcries have become for a variety of reasons, management ends in themselves with little or no discernible impact in the area of implementation. Just to say that a report or study has been conducted is not enough! In spite of substantial progress in the manufacture of alkaline paper, non-permanent paper is still the major medium polluting our Nation's libraries. Can Federal agencies with archival and library responsibilities do more in the 1990's in the area of preservation with existing budgets? With the exception of LC, NARA, SI and NLM, no Federal libraries or archives receive any major line item budget allocation for a preservation program. Senator Clayborn Pell's Bill, S. J. R. 57, requiring the use of acid free paper for permanent governmental records, is now Public Law and is a start. The action advocated in this bill should be emulated by all 50 states. Is it not time for preservation within the Federal Archival/Library system and throughout most other libraries in the United States to be treated as a basic budgetary necessity, rather than as an afterthought?
II. A NATIONAL PRESERVATION STRATEGY FOR ADMINISTRATORS

Since the 1960's, most library staff at the National, state and local levels have been increasingly aware of the serious need for training and education in library preservation. Unfortunately, as we prepare for the 1990's, it is shocking to imagine that Columbia's School of Library Services which, in 1982, offered the first university degree program in the country to train library conservators and preservation administrators, is closing its doors. Unless the preservation program at Columbia can be saved, Columbia University's economic move may have serious long-term implications for efforts to build a nationwide preservation program.

However, we must not let the current problem deter us from our ultimate goal - the development of a nationwide preservation education awareness strategy for administrators (Federal agency heads, administrators of library and archival repositories, rather than preservation administrators) to preserve our cultural heritage. Preservation education is one of the most critical milestones on the road to collection preservation. We must now join forces to clearly articulate and develop this strategy. Administrators must realize that they hold not only the fate of their collections in their hands, but, also, the fate of a whole segment of our cultural heritage. Therefore, administrators must begin to recognize the following goals and objectives:

1. Define Preservation Priorities.
3. Establish a re-education and a continuous education program for all members of the staff.
4. Control the Archive and Library Environments.
5. Establish an organization structure that will place preservation functions on a par with other major activities.
6. Provide staff to accomplish the priorities and functions that have been identified.
The Nation's archival and library administrators must be more informed on preservation matters in the 1990's, and do a better job of defending critical preservation needs. There must be continuous education that includes a seminar/workshop training program on the latest thinking, outlook, practices, R & D research, and funding strategies, as part of a new National preservation education initiative. This program should be focused at the administrative level where budgetary decisions are made. A truly effective preservation education program for administrators in the 1990's should be a mandatory part of their education curriculum and place emphasis on information values, preservation priorities management, outreach and funding strategies, and on-site observations, rather than just take the "sit, look, and listen" approach. The Federal Library and Information Center Committee (FLICC) which is located at the Library of Congress, and which has already successfully provided a one day preservation seminar, is the logical existing organization to coordinate preservation education within the Federal government. FLICC should be strengthened in such a way as to also enable it to effectively serve as a management support facilitator for all federal libraries in such areas as preservation and binding contracts, and fund raising on behalf of federal libraries. The National Endowment for the Humanities and other appropriate organizations should also be encouraged to support FLICC's expanded preservation related responsibilities.

ISSUE: How does one insure that part of a Federal library or archives budget is expended on collection preservation?
III. PROTECTING COLLECTIONS IN ARCHIVES AND LIBRARIES THROUGHOUT THE UNITED STATES

Controlling the archival and library environment in the 1990's must be a major response which administrators initiate as a budgetary priority. A stable environment, inclusive of recommended temperature, humidity, and lighting, is one of the most crucial factors within archives or libraries throughout the United States. Administrators should also enforce stack and filter maintenance, and keep window blinds closed, as well as prohibiting smoking, food, and drink from their storage areas. These basic preventive preservation measures should be complemented by an up-to-date disaster plan. Administrators and staff must be able to react quickly when a disaster occurs in order to avoid and/or reduce loss to all or a part of their collection, as well as staff. Preservation education, staff commitment, and administrative leadership will be critical to how well archives and libraries monitor and enhance their storage environments. Cooperation with state and local preservation programs to share expertise and for training purposes is another critical factor.

ISSUE: How do we achieve recommended environmental standards in all Federal archives and libraries?

IV. WHAT ABOUT THE IMPACT OF NEW TECHNOLOGY

The high acid content of major portions of archival and library materials, whether it is stored under either most appropriate or poor environmental conditions, will continue to cause collections to deteriorate. The shelf-life of archival and library materials under good stable environmental conditions can
be extended for several hundred years, if the acidic process can be stopped by deacidification. By 1991, several inexpensive mass deacidification processes will reportedly be available. Mass deacidification, coupled with preventive conservation measures, such as appropriate temperature and humidity controls, will buy time for the most deteriorating material, if its condition is not brittle or near brittle.

The Library of Congress is at the forefront of mass deacidification research and development. Several private sector vendors have also developed deacidification processes. In addition, the infusion of substantial private sector capital into the development of mass deacidification enterprises around the country is critically important in the 1990's. Seed money, healthy competition, and major archival and library markets for inexpensive mass deacidification should translate into a growing major response to our Nation's preservation problems. However, to be successful the deacidification process must be reasonably priced and include a process to strengthen the paper. Brittle paper which has been deacidified without being strengthened will be acid free, but, it is still brittle.

For brittle and near brittle materials, the only option is to transfer their contents to another format. Currently, microforms, photocopy, and optical disc are the major media employed. Microforms are the choice of most institutions for a number of reasons. It is a certifiable archival medium; it employs a basic technology not likely to undergo significant changes in the future, and it is humanly readable. Also, a master negative is available to produce user copies for other libraries, thereby reducing the need to preserve many copies of the same document held by a number of institutions. Microforms, despite the advantages, suffer much from labor intensive production, a lack of user acceptance, patron misuse, and the difficulty of providing adequate maintenance over microform collections, as well as the inherent difficulty of accessing information on microform.

Photocopying brittle material onto acid-free paper is growing in usage especially by those who question whether film is an adequate replacement for the original hard copy of a text. Photocopying for preservation purposes on
acid-free paper provides some advantages in that less training is required for those involved in the process, and the materials can be read without the aid of a mechanical device. However, it is labor intensive and does not offer the advantage microforms do. In addition, much of the material in need of preservation is not in suitable condition for copying.

Optical disc also poses a number of advantages. It is the most compact medium, and one can manipulate information in a much more sophisticated manner, thus providing faster and easier access to specific information. Within the United States, the United Kingdom, and Western Europe, there exist museums, archives, and libraries hoping to increasingly utilize laser disc technology. In the Washington, D.C. metropolitan area, the three National libraries - the Library of Congress (LC), the National Library of Medicine (NLM), and the National Agricultural Library (NAL), as well as the Smithsonian Institution (SI), and the National Archives and Records Administration (NARA), have been extensively involved in research and development in the area of optical laser discs.

The image management revolution during the 1990's will significantly change the way archivists, curators, librarians, and others will store, preserve, retrieve, display, and access non-print images of photos, slides, art, video tapes, motion picture film, and text. This new approach to information management will have a positive effect on library shelf space, and on binding and preservation requirements in all libraries. In the 1990's, the new technology and resulting information products will be more available at an affordable price at the National, state, and local levels. Through the expanded application of cooperative cost-sharing for the operation of selected authoring stations, information leaders hope to more effectively manage and preserve unbelievable quantities and varieties of information for the benefit of society. Some of this truly exciting and increasingly successful technology is on display in the lobby.

**ISSUE:** How should mass deacidification and other new technologies for preserving information be obtained by Federal archives and libraries?
V. TECHNOLOGY-DEPENDENT INFORMATION

Our Nation's libraries, archives, and research institutions today face an explosive challenge in the form of non-traditional, technologically dependent record formats. Paper and microfilm have been the traditional mainstays of recorded information. The 1980's witnessed the beginning stages of a dramatic revolution in information recording means and media. The 1990's will be a decade in which this revolution becomes pervasive.

Information will be recorded, stored, and accessed in a host of new forms—and all of it will be dependent upon still evolving technologies. Already we know that these technologies are distinguished by two basic elements: they are capable of recording, storing, and accessing massive quantities of information and they require electronic and optical-mechanical devices to store and subsequently display information in a manner that human beings can understand. The bottom line—technologically dependent information, be it verbal or graphic, will reside in an environment that is not human readable.

To the Federal agency heads and administrators of library and archival repositories, the challenge of this revolutionary information environment is to avoid intimidation, grasp the reigns and not turn away, leaving decision-making on technologically dependent information to someone else. The formidable nature of this challenge carries with it a formidable opportunity. If today's top agency administrators are involved actively with those who are shaping the information environment of the 1990's, they will have the unique opportunity to influence and mold this environment. This opportunity to affect the physical nature and thus the life span of recorded information at the time it is initially recorded is without precedent. It is critically important that we encourage cooperation within the public and private sectors in developing plans and standards to ensure the longevity of electronically produced information. This opportunity must not exceed our grasp.
ISSUE: How should Federal Libraries and Archives seek to influence those involved in the development of non-traditional devices and systems in affecting the recording and storage of information?

VI. LOOKING TOWARD THE FUTURE

The 21st century is about 3,100 days away and counting down rapidly. The effective actions of administrators, preventive conservation, and new technologies may reduce the Nation's records at risk. Yet, as we move through the 1990's, we who oversee miles and feet of boxes, volumes, and files, fear for the fate of our Nation's recorded memory, for it is seriously threatened by aging, deterioration, and lack of adequate financial support. The concern for preservation needs of library and archival collections has been primarily the daily responsibility of librarians, archivists, conservators, and curators who, through their professional associations, communicate with elected government representatives at the local, state, National, and international levels. We need to do much more in this area, for with each passing day, the challenge of guaranteeing the survival of these records becomes more crucial.

We cannot afford to wait! Agency administrators and library directors must be prepared to take a more informed and pro-active role in articulating their respective library and archival preservation needs and in collectively developing a national preservation program which includes funding for Federal collections. The publishers, users, and organizations who benefit from information stored in archives and libraries must develop a more responsible
sense of financial stewardship towards preserving knowledge for future generations. The existing concern for preservation must be expanded to include the active support and involvement of educators, editors, researchers, their respective professional associations, and the top executives from corporate America! John Ruskin (1819-1900), English essayist, critic and reformer, once said, "What we think, or what we know, or what we believe is, in the end, of little consequence. The only consequence is what we do."

Improved preservation in the 1990's is what we must do to invest in the knowledge base of tomorrow.

Like Washington and Jefferson, we must cherish and speak on behalf of archives and libraries. We must successfully defend their missions and preserve their unique and valuable holdings for future generations.

Just think about the dignity and importance which has been shown over the years to the protection and preservation of the Constitution of the United States. Remember with me the year 1952 when the Constitution was carefully transferred to the National Archives complete with Military honor guard. The feeling and sense of purpose and respect of that day is what we need for the 1990's. Just think about the important library materials which can be preserved in the 1990's through real cooperation, real sharing and real commitment. Just think of how what we preserve today will benefit future generations.

Ladies and Gentlemen, the decisions and extent of commitment are ours. It has been an honor to talk to you this morning. Thank you for listening and the best to you in your serious deliberations.
ISSUES

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A SELECTED RESOURCE LIST FOR PRESERVATION

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Naval War College Library


Updated version presented at NLM.


Updated version presented at NLM.


**PERIODICALS AND SERIAL PUBLICATIONS:**

*Abbey Newsletter.* Ellen McCrady, ed., East Center, Provo, UT 84601.

*Conservation Administration News.* Toby Murray, ed., McFarlan Library, University of Tulsa, 600 S. College Avenue, Tulsa, OK 74104.