

# “Green” Archivism: The Archival Response to Environmental Research

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## Abstract

This article outlines the current relationship between archival materials and environmental research using information provided by a survey of repositories. The survey examined the use of archival sources in archives and manuscript repositories by environmental researchers and the efforts of archival institutions to meet the needs of such users. Results demonstrate trends in record use among environmental users and the lack of efforts by archivists to modify their programs to encourage and satisfy such use.

By the late-nineteenth century many of America's intellectual and political leaders developed a growing awareness of the reckless consumption and exhaustion of the nation's natural resources. A population boom and unprecedented growth in industrialization and technology threatened the survival of resources which previously had been taken for granted. Growing concerns among progressive intellectuals like John Muir, Aldo Leopold, and Gifford Pinchot, who called for preventative measures against natural resource depletion, influenced President Theodore Roosevelt.<sup>1</sup> He quickly established governmental programs and oversight, such as the expansion of the forest reserves and national park service, to “conserve and protect” land, timber, watersheds, and wildlife from unregulated consumption. Roosevelt perceived the enormous economic, political, and social impact on domestic and world

<sup>1</sup> Gifford Pinchot, *The Fight for Conservation* (Seattle: University of Washington Press, 1967), 3–20; also see William Cronon, “Landscapes of Abundance and Scarcity,” in *The Oxford History of the American West*, edited by Clyde A. Milner II, Carol A. O’Conner, and Martha A. Sandweiss (New York: Oxford University Press, 1994): 605–13.

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affairs created by the uncertainty of a sustainable supply of natural resources and took measures to ensure reserves for future use.<sup>2</sup>

Indeed, concern over the state of the environment expanded exponentially during the twentieth century. Today environmental views and policies are diverse and affect local, national, and international affairs. Federal, state, and local governmental agencies appropriate and spend billions of dollars annually for the regulation, arbitration, or prohibition of activities perceived harmful to the environment. Meanwhile, hundreds of special interest and "watchdog" organizations, such as the Audubon Society, Sierra Club, and Greenpeace tirelessly pressure government to create or amend laws and policies favorable to their particular environmental concerns, while corporations invest in their own lobbyists to produce legislation favorable to their business objectives. In addition, governments and special interest groups continuously file litigation to enforce environmental laws and punish those guilty of violating such laws.

With all this diverse activity, the influence of environmental research has reached into the scientific, economic, historical, legal, and legislative communities. Environmental research examines the role and place of nature in human life. The term "nature" refers to the physical environment, or that which is not created by humans. The focal point of most environmental research is the relationship between nature and man. According to historian Donald Worster, environmental researchers study nature in an attempt to determine how humans have affected and influenced the natural environment and, conversely, how the natural environment has affected and influenced humans.<sup>3</sup> Considerable disagreement exists on the ideas, values, and goals of environment thought,<sup>4</sup> but the need and search for relevant environmental information is universal. Therefore, it is crucial that archivists select, preserve, and encourage the use of records containing information related to the interaction between nature and humans.

The range of environmental topics related to natural processes and events, and their consequences is broad. Primary sources documenting resource extraction, management or preservation of forests, water, soil, wildlife, food production, and energy sources (oil, coal, and natural gas) exist in governmental archives, business and association records, personal papers, photographs, and maps. Archival documentation of past and present environmental conditions and their effects on humans and other forms of life, can and is being used to improve human understanding and policy making as it relates to the environment.

<sup>2</sup> An overview of Theodore Roosevelt's conservation policy is described in Harold K. Steen, *The U.S. Forest Service: A History* (Seattle: University of Washington Press, 1976): 69–102.

<sup>3</sup> Donald Worster, "Doing Environmental History," in *Ends of the Earth: Perspectives on Modern Environmental History*, edited by Donald Worster (New York: Cambridge University Press, 1988), 290.

<sup>4</sup> Joseph Petulla, *American Environmentalism: Values, Tactics, and Priorities* (College Station: Texas A & M University Press, 1980), 21–23. Also see Donald Worster, "Introduction," *American Environmentalism: The Formative Period, 1865–1920* (New York: Wiley, 1973), 1–10.

This article examines the use of archival sources for environmental research and the efforts of archival institutions to meet the needs of environmental researchers. A survey of archives and manuscript repositories was conducted in an attempt to document the current relationship between archival records and environmental research. The results demonstrate trends in record use among environmental researchers and the lack of effort by archivists to modify their programs to encourage and satisfy such use. Many archival institutions have failed to alter appraisal and descriptive practices to serve the documentation needs of environmental users or to design education and public relations programs to cultivate such use.

Environmental historical research offers much more to its followers and readers than simply a revision of historical or social perspectives. While the field of environmental history has only appeared as a specialized field in the last twenty-five years,<sup>5</sup> it traces its origins and methods to earlier scholarship. These early developments include the popularization of the frontier thesis formulated by historian Frederick Jackson Turner,<sup>6</sup> the ecological interpretation of past events as used by Aldo Leopold and James Malin,<sup>7</sup> and the research of historical geographers such as Ellen Semple and Carl O. Sauer on past events that have affected the physical environment.<sup>8</sup> These early developments and the growing awareness and involvement of private citizens, government agencies, and legal professionals in the 1960s and 1970s created a demand for environmental research with practical applications for society as a whole. This research goes beyond improving our understanding and management of the environment and requires documentation for the preparation of environmental impact statements and the creation and enforcement of environmental laws.<sup>9</sup>

<sup>5</sup> In 1972 the *Pacific Historical Review* devoted an entire issue to the emerging field of environmental history. See *Pacific Historical Review* 41 (1972): 271–372. The American Society for Environmental History was founded in 1976.

<sup>6</sup> Although Frederick Jackson Turner wrote many essays on the frontier and its influence on American history, his best-known is the classic, "The Significance of the Frontier in American History," in *Annual Report of the American Historical Association for 1893* (Washington, D. C.: American Historical Association, 1894): 197–227. However, scholars analyzing Turner's career have revealed that his view of the influence of physical geography on history grew in his later essays. See Richard Hofstadter, *The Progressive Historians: Turner, Beard, Parrington* (New York: Knopf, 1969), 47–164 and Ray Allen Billington, *Frederick Jackson Turner: Historian, Scholar, Teacher* (New York: Oxford University Press, 1973).

<sup>7</sup> Aldo Leopold, *Sand County Almanac* (New York: Oxford University Press, 1949). Discussion of Leopold's book and influence on developing an ecological interpretation in history can be found in Donald Worster, "Transformation of the Earth: Toward an Agroecological Perspective in History," *Journal of American History* 76 (March 1990): 1087–88. James C. Malin, *The Grassland of North America: Prolegomena to Its History* (Lawrence: University of Kansas Press, 1956).

<sup>8</sup> Ellen Churchill Semple, *American History and its Geographic Conditions* (Boston: Houghton Mifflin, 1904); Carl O. Sauer, "Foreword to Historical Geography," *Annals of the Association of American Geographers* 31 (1941): 1–24. See also Sauer, "Agency of Man on the Earth," in *Man's Role in Changing the Face of the Earth*, edited by W. L. Thomas, Jr. (Chicago: University of Chicago Press, 1956), 49–69.

<sup>9</sup> William Cronon, "The Uses of Environmental History," *Environmental History Review* 17 (Fall 1993): 3–8. Two legal journals specializing in environmental law are the *Environmental Law Review* (1979-present) and the *Journal of Environmental Law* (1980-present).

These developments and changes present new challenges for archivists attempting to select, preserve, and make accessible archival records believed important to environmental users. Archivists such as F. Gerald Ham, Elsie Freeman, Bruce Dearstyne, and Lawrence Dowler have proposed that repositories must begin basing their appraisal, description, reference, and outreach practices on the needs of their users.<sup>10</sup> While archivists have made progress in encouraging the use of their materials in fields such as the New Social History,<sup>11</sup> the African-American experience,<sup>12</sup> and women's studies,<sup>13</sup> the needs of environmental researchers have been largely unexplored by the archival community. Archivists need to encourage the preservation and use of records containing information related to natural processes and events and their consequences. An examination of environmental research topics and methodology, types of records used, and development of an awareness among researchers of the existence and importance of environmental sources is essential to providing user-based service to environmental researchers. A review and modification of institutional practices could include rewriting collection policies or appraisal guidelines, reevaluating the procedures used to describe new and existing materials, and rethinking or expanding the focus of reference and outreach services.<sup>14</sup>

Such a review also gives archivists the opportunity to use research patterns as the basis for measuring the purpose and justifying the existence of their repositories. In an era of limited resources and increased competition with other information specialists, archivists need to work toward discovering more uses for their records, educating users about such documentation, and marketing archival services to new groups of researchers who may benefit from information contained in archives. The activities of discovering new uses, educating potential users, and marketing archival services require that archivists redefine their professional identity from record custodians to record promoters. However,

<sup>10</sup> Elsie Freeman, "In the Eye of the Beholder: Archives Administration from the User's Point of View," *American Archivist* 47 (Spring 1984): 111–23; Bruce Dearstyne, "What Is the Use of Archives?: A Challenge for the Profession," *American Archivist* 50 (Winter 1987): 76–87; Lawrence Dowler, "The Role of Use in Defining Archival Practice and Principles: A Research Agenda for the Availability and Use of Records," *American Archivist* 51 (Winter and Spring 1988): 75–86; Randall C. Jimerson, "Redefining Archival Identity: Meeting User Needs in the Information Society," *American Archivist* 52 (Summer 1989): 332–40.

<sup>11</sup> Fredric Miller, "Use, Appraisal, and Research: A Case Study of Social History," *American Archivist* 49 (Fall 1986): 371–92. Also see Fredric Miller, "Social History and Archival Practice," *American Archivist* 44 (Spring 1981): 113–24; and Dale C. Mayer, "The New Social History: Implications for Archivists," *American Archivist* 48 (Fall 1985): 388–99.

<sup>12</sup> See, for example, Debra L. Newman, comp., *Black History: A Guide to Civilian Records in the National Archives* (Washington, D. C.: General Services Administration, 1984).

<sup>13</sup> Jacqueline Goggin, "The Indirect Approach: A Study of Scholarly Users of Black and Women's Organizational Records in the Library of Congress Manuscript Division," *Midwestern Archivist* 9 (1986): 57–67. Also see Eva Mosley, "Sources for the New Women's History," *American Archivist* 43 (Spring 1980): 180–90.

<sup>14</sup> Freeman, "In the Eye of the Beholder," 111–23; Dearstyne, "What Is the Use of Archives?" 76–87; Dowler, "The Role of Use," 75–86; Jimerson, "Redefining Archival Identity," 332–40.



this is not an easy task. As Freeman points out, archives contain valuable information for many types of researchers, but there are difficulties in "reaching the information hidden in the records we hold." Therefore, archivists should focus archival reference services on the needs of users rather than on the needs of archivists and the nature of the materials.<sup>15</sup>

While activities such as continuous refinements of collection descriptions is desirable to ensure their relevance to current researchers' needs, this process may be too costly for many archival institutions which already are burdened with large backlogs of unprocessed records. Dearstyne argues that a large percentage of archival resources throughout the nation are "poorly maintained, incompletely processed, and inadequately described," but archivists can learn to overcome such obstacles and abandon the passive, reactive approach which has traditionally defined archival reference.<sup>16</sup>

In an attempt to identify the needs of environmental users and to promote greater use of archives and manuscripts as sources for environmental research, some archival associations and institutions have sponsored professional sessions on environmental research. As part of these sessions, historians and other researchers have been invited to speak about the types of environmental documentation needed for their research, and to offer their assessment of existing archival services. One such example is the 1972 National Archives conference of historical geographers, who discussed the use of primary sources in their research.<sup>17</sup> Another example is the 1993 session organized by the Northwest Archivists discussing the activities and difficulties involved in recognizing, preparing, and promoting geographic information systems data for research use.<sup>18</sup> These opportunities allow archivists to listen to environmental users' concerns and ask questions related to their specific needs. Discussions concerning the valuable environmental information contained in different types of archival records, such as travel diaries, land deeds, timber cruises, and aerial photographs demonstrate the ubiquitous nature of environmental information. These activities confirm the importance of repositories recognizing, preparing, and promoting existing records for use by environmental researchers, rather than putting the primary emphasis on acquiring new materials.

<sup>15</sup> Freeman, "In the Eye of the Beholder," 112.

<sup>16</sup> Dearstyne, "What Is the *Use* of Archives?" 82-83.

<sup>17</sup> See Ralph E. Ehrenberg, *Pattern and Process: Research in Historical Geography*, (Washington, D. C.: Howard University Press, 1975). Individual presentations at other conferences include Gail Thompson, "Using Archival Records for Research into Environmental History," at the Society of American Archivists annual conference at Seattle in 1990; also historian Susan Stacy spoke about the diversity of environmental history research using archival records at the Northwest Archivists annual meeting in Boise, Idaho, 1993.

<sup>18</sup> For example, Andy Potter's paper, "GIS Records at the Pacific Northwest Branch of the National Archives and Records Administration," described one specific type of record available at the National Archives and suggested that institutions consider new appraisal policies that respond to the growing demand for information related to all aspects of the environment. Presentation at Northwest Archivists annual meeting in Boise, Idaho, 1993.

Besides presentations, some archival journals have published articles discussing the preservation, description, and usefulness of records pertinent to environmental researchers. Over the last thirty years, subjects covered in the professional literature include: the existence and value of meteorological records in historical research, sampling practices for nineteenth-century Michigan lumber company records, records management and appraisal practices for U.S. Forest Service records, the need for appraisal practices for neglected environmental records, use of documentation strategies to identify and preserve relevant records dealing with nineteenth-century quartz mining in Northern California, appraisal guidelines for silver-lead mining records at the University of Idaho, and documentation of environmental racism.<sup>19</sup>

One organization, the Forest History Society (formerly known as the Forest History Foundation, Inc.), had an early and profound impact on the preservation, description, and utilization of environmental archival sources, specifically in documenting aspects of forestry and conservation history. Founded in St. Paul, Minnesota in 1948 by a small group of timber businessmen, academic historians, and professional archivists, the organization's goal was to promote research and writing about the U.S. timber industry. The organization functions primarily as a clearinghouse for archival materials related to forestry and conservation, and has compiled and published two major guides to forest and conservation history sources in North American repositories.<sup>20</sup> It continues to announce recent acquisitions and openings of new archival collections related to forest and conservation history in *Environmental History*, a successor to its quarterly publication, *Journal of Forest and Conservation History*.<sup>21</sup>

These cooperative efforts by historians and archivists have increased the general awareness of archival materials for environmental research. This is most apparent in the growing number of archivists who have solicited records and described them in multi-institutional guides. Philip Hamer, in his *A Guide*

<sup>19</sup> Clyde M. Collier, “The Archivist and Weather Records,” *American Archivist* 26 (October 1963): 477–85; Gordon Manley, “The Use of Archives and Written Records in Meteorological Research,” *Archives* 15 (April 1981): 3–10; Larry Steck and Francis Blouin, “Hannah Lay & Company: Sampling the Records of a Century of Lumbering in Michigan,” *American Archivist* 39 (January 1976): 15–20; Kathy Roe Coker, “A Warehouse of Forestry History: A Success Story in Records Management and Records Appraisal,” *American Archivist* 48 (Fall 1985): 422–24; Candace Loewen, “From Human Neglect to Planetary Survival: New Approaches to the Appraisal of Environmental Records,” *Archivaria* 33 (Winter 1991–1992): 87–103; Hugh A. Taylor, “Recycling the Past: The Archivist in the Age of Ecology,” *Archivaria* 35 (Spring 1993): 203–13; Maureen A. Jung, “Documenting Nineteenth-Century Quartz Mining in Northern California,” *American Archivist* 53 (Summer 1990): 406–18; Richard C. Davis, “Getting the Lead Out: The Appraisal of Silver-Lead Mining Records at the University of Idaho,” *American Archivist* 55 (Summer 1992): 454–63; Stephen Sturgeon, “A Different Shade of Green: Documenting Environmental Racism and Justice,” *Archival Issues* 21, no. 1 (1996): 33–46.

<sup>20</sup> These two guides are Clodaugh M. Neiderheiser, *Forest History Sources of the United States and Canada: A Compilation of the Manuscript Sources of Forestry, Forest Industry, and Conservation History* (St. Paul, Minn.: Forest History Foundation, Inc., 1956), and Richard C. Davis, *North American Forest History: A Guide to Archives and Manuscripts in the United States and Canada* (Santa Barbara, Calif.: ABC-CLIO Press, 1977).

<sup>21</sup> *Environmental History* is the merger of the publications of the Forest History Society and the American Society for Environmental History, which previously published the *Journal of Forest and Conservation History* and *Environmental History Review*, respectively.

to *Archives and Manuscripts in the United States* (1961), used only a few broad subject headings to index collections normally associated with environmental research.<sup>22</sup> Hamer's subject terms included forestry, water pollution, and conservation. However, twenty-five years later, subject headings had become more refined and collections more numerous, as is evident in the National Historical Publications and Records Commission's *Directory of Archives and Manuscript Repositories in the United States* (1986).<sup>23</sup> This directory incorporated subject terms more closely related to the concerns of recent environmental historiography, such as climate, land use, water resources, and wildlife. This expansion of environmental headings and growth in collections contained in the 1986 guide probably reflects the growing consciousness by many in the archival profession of the need to collect, describe, and promote records that meet the documentation needs of environmental users. These same factors probably also influenced change within the Library of Congress's subject headings.

Because of growing interest and increased funding, some academic universities have established subject-oriented repositories that promote environmental research. These include the John Muir Center at the University of the Pacific in Stockton, California; the Water Resources Center at the University of California at Berkeley; the Wilderness Archive at the University of Idaho in Moscow; and the Forestry and Environmental Studies Center at Yale University.<sup>24</sup> But for most archival institutions, the prohibitive costs and required expertise involved in establishing subject-oriented repositories have made this idea unrealistic.

### Survey Methodology

A survey of repositories was constructed to measure the practices and policies of the archival profession in response to the growing interest in the environment and environmental research. (See sample of questionnaire in appendix). How much had this type of research affected activities such as appraisal, description, and outreach? The survey was designed to gauge, at the repository level, the awareness of environmental use, the efforts toward policy development and planning, and the resources spent to facilitate such use. How actively had repositories instituted the ideals of user-oriented policies and practices?<sup>25</sup>

<sup>22</sup> Philip Hamer, ed., *A Guide to Archives and Manuscripts in the United States* (New Haven, Conn.: Yale University Press, 1961).

<sup>23</sup> National Historical Publications and Records Commission, *Directory of Archives and Manuscript Repositories in the United States* (Washington, D. C.: National Historical Publications and Records Commission, 1986).

<sup>24</sup> Judith Endelman, "Looking Background to Plan for the Future: Collection Analysis for Manuscript Repositories," *American Archivist* 50 (Summer 1987): 340–55; Linda J. Henry, "Collecting Policies of Special-Subject Repositories," *American Archivist* 43 (Winter 1980): 57–63.

<sup>25</sup> Freeman, "In the Eye of the Beholder," 111–23; Dearstyne, "What Is the Use of Archives?" 76–87; Dowler, "The Role of Use," 75–86; Jimerson, "Redefining Archival Identity," 332–40.

In the 1980s, the Society of American Archivists developed and promoted a research agenda as a "working blueprint" for the profession. Among the objectives included in the resulting report, *Planning for the Archival Profession* (1986), was the identification and promotion of innovative uses of archival records through the evaluation of past and present research.<sup>26</sup> The report included suggested activities designed to achieve such identification, including a survey of records use in archival repositories. Information from this blueprint and other sources was used to construct a questionnaire that was sent to archival repositories in Alaska, Washington, Oregon, California, Idaho, and Montana.<sup>27</sup> The repositories used in the survey came from Richard C. Davis *North American Forest History: A Guide to Archives and Manuscripts in the United States and Canada* (1977), which provided a list of repositories that previously recognized or "publicized" use of their records for forest history. The repositories of these western states, where natural resources have played an important part in the region's economic and social development,<sup>28</sup> represented a variety of different types of institutions and, therefore, would give a good indication of environmental research across the archival profession.

While many archivists have realized the potential value of their records for environmental research, questions still remain as to precisely what resources and efforts should be expended to understand and encourage such research. What specific collections contain information about the environment and where are they found? Based on the potential value collections have for environmental research, what policies and procedures have been established or should be implemented by archival institutions in the appraisal, accessioning, and description of records, and the promotion of their use? The data obtained from such inquiries can greatly assist archivists in gauging the current role environmental research plays in their programs, as well as providing an outline of steps which may be taken to encourage use and enhance the accessibility of archival materials for environmental research.

The questionnaire had two objectives. The first objective was to gather information from professional archivists about environmental research in their repository's collections, including specific data on professional fields represented among environmental researchers, specific topics of research, and types of archival records most often utilized. The second objective was to measure the efforts made by repositories to encourage environmental research. Questions focused on policies and procedures concerning the appraisal and description

<sup>26</sup> Society of American Archivists, *Planning for the Archival Profession: A Report of the SAA Task Force on Goals and Priorities* (Chicago: Society of American Archivists, 1986), 27–28.

<sup>27</sup> A questionnaire was also sent to the Environmental Protection Agency research library in Atlanta, Georgia.

<sup>28</sup> For a discussion on the importance of natural resources in the economic and social development of the western United States, see Richard White, *It's Your Misfortune and None of My Own: A History of the American West* (Norman: University of Oklahoma Press, 1991), 212–97; also see Donald Worster, *Under Western Skies: Nature and History in the American West* (New York: Oxford University Press, 1992), 13–15.

of environmentally related materials and institutional outreach activities that archivists have established to facilitate and encourage environmental research in their holdings. This second set of questions was constructed in response to the writings of archivists who have proclaimed that the archival profession must base its services and programs on the needs of users.<sup>29</sup>

Working within the framework of these two objectives, a list of proposed questions was constructed and submitted to experienced scholars and archivists for further editing and comment.<sup>30</sup> After their review, a final version of the questionnaire was completed, consisting of twelve multiple-choice questions with space provided at the end for additional comments (see appendix). Questionnaires, with a cover letter explaining the purpose of the survey and a self-addressed, stamped envelope, were mailed to forty-two repositories. A computer database was constructed to input and store survey information as well as to analyze the data after completion of the information gathering. If precise statistical data did not exist for a repository, then archivists provided impressionistic responses to the survey questions. Nonresponses were not used in the final analysis of a particular question, and specific comments provided were reviewed and used to further clarify survey findings.

Of the forty-two surveys mailed, thirty were completed and returned—a response rate of 71.4%. Repositories returning questionnaires included two regional branches of the National Archives and Records Administration, five state archives, five public libraries, twelve academic or university institutions, and seven historical societies. Two of the state historical societies also function as state archives and are coded as both for the study. Overall, the institutional breakdown represented a diverse cross-section of archival repositories and produced reliable data on which to base survey findings.<sup>31</sup>

### **Survey Findings—Characteristics of Environmental Research**

According to archivists, the top two categories of environmental records users were researchers engaging in environmental history (87.5%) and environmental impact assessment (78.1%) (Table 1). The dominance of environmental history is probably due to the number of universities and historical societies/museums participating in the survey, which outnumbered all other repositories nearly two-to-one. As an example of the research in the field of environmental impact assessment, staff at the Pacific Northwest branch of the

<sup>29</sup> Freeman, "In the Eye of the Beholder," 111–23; Dearstyne, "What Is the Use of Archives?" 76–87; Dowler, "The Role of Use," 75–86; Jimerson, "Redefining Archival Identity," 332–40.

<sup>30</sup> Categories for type of researcher, research topic, and types of records used were designed after discussions with scholars from Western Washington University, including historical geographer James W. Scott, environmental historian Mart Stewart, and retired U.S. Archivist James B. Rhoads.

<sup>31</sup> See Table 1 for the names of the repositories that participated in the survey.

**Table 1.** Types of environmental users and research reported in archives and manuscript repositories

	Governmental archives and libraries	Academic special collections and archives	Museum and Historical Society collections	Total survey responses*
Environmental history	11	9	8	28 (87.5%)
Historical geography	7	8	7	22 (68.8%)
Physical geography	6	6	5	17 (53.1%)
Environmental law/policy	8	6	4	18 (56.3%)
Env. impact statements	11	7	7	25 (78.1%)
Forestry	12	9	8	29 (90.6%)
Land use	12	10	7	29 (90.6%)
Water resources	12	10	7	29 (90.6%)
Wildlife	11	9	4	24 (75%)
Climate	6	2	4	12 (37.5%)

\*The totals and percentages are based on a survey pool of 32 repositories, not 30 repositories. The Montana Historical Society and Idaho State Historical Society function as both the state historical society and state archives. Their responses were placed in the appropriate category as accurately as possible.

**Governmental archives and libraries (12):** California State Archives; National Archives—Pacific Southwest Region; Yosemite National Park library and archives; Montana Historical Society\*; Crater Lake National Park library; Oregon Department of Geology and Mineral Industries; Oregon State Archives; Willamette National Forest research library; National Archives—Pacific Northwest Region; Washington State Archives; Idaho State Historical Society\*; and Environmental Protection Agency—Region 4 library.

**Academic special collections and archives (12):** University of Alaska (Fairbanks); Bancroft Library—University of California (Berkeley); Henry E. Huntington Library; University of the Pacific, Department of Special Collections (Stockton, California); Stanford University, Department of Special Collections; Water Resources Center Archives, University of California (Berkeley); William Andrews Clark Memorial Library, UCLA; University of Idaho, Department of Special Collections; Montana State University, Department of Special Collections; Horner Museum, Oregon State University; University of Washington, Manuscripts and University Archives Division.

**Museum and Historical Society collections (8):** Idaho State Historical Society\*; Museum of North Idaho; Montana Historical Society\*; Oregon Historical Society; Southern Oregon Historical Society; Eastern Washington State Historical Society; Washington State Historical Society; Whatcom Museum of History and Art (Bellingham).

National Archives and Records Administration discussed the research being done by federal agencies and private citizens to record alterations in the conditions of land or water and the levels of toxic waste contamination at federal sites (e.g., the Hanford Nuclear Reservation). Research into environmental impact assessment primarily occurred at state archives and other public institutions surveyed. This revealed a high use of public records among “applied” or nonacademic environmental researchers. The repository survey also showed that the twelve academic repositories that responded had a much lower percentage of use in “applied” environmental research, such as environmental impact assessment (58.3%) and environmental law and policy (50%).<sup>32</sup>

<sup>32</sup> Unfortunately an analysis of public records, nonpublic/corporate archives, and personal papers as related to environmental research was not possible because the survey did not make a clear separation between public records and nonpublic institutional archives. Thus, when a distribution chart was constructed, the category “archives” reflected both public records and nonpublic/corporate archives. Although assumptions could have been made to distinguish between public records and private corporate records according to the type of repository responding, the reliability of such analysis would have been questionable; thus no attempt was made to discriminate subcategories of “archives.”



When asked which environmental topics or issues were the focus of their environmental users' research (Table 1), 90.6% of the repositories replied that their users most often focused on forestry, land use, and water resources, while wildlife documentation was slightly less in demand (75%). The increasing efforts by repositories to adopt environmentally related subject headings, such as land use and water resources, in the description and reporting of their collections in published guides and computer bibliographic networks may explain these results. In addition to the main topics of interest, the repository survey also reflected a great diversity of research subjects.

Repositories were questioned about the types of records among their holdings that were used for environmental research (Table 2). The results showed that nontextual records, such as maps (87.5%) and photographs (90.6%) were important sources of information for environmental users. The low use of oral history (43.8%) may indicate that most institutions do not maintain oral history materials or that researchers are unfamiliar with the format. The high use of personal papers represented in the repository survey (59.4%) may indicate the value these records have in environmental research, but this figure may also be inflated by the large number of academic institutions and historical societies/museums which responded to the survey and which routinely collect such materials.

Repositories were then asked if, in the last five years, they have experienced a growth in research requests that were primarily concerned with the environment. The majority of repositories responded that they had experienced such growth (81.3%). Two institutions were unable to determine if such growth occurred, and the remaining two reported that environmental research did not increase during the past five years. While this growth rate is substantial, it must be pointed out that all but two of the repositories provided no specific statistical data and responded based on their impressions that increased usage had occurred.

When repositories were asked to identify specific uses, it was apparent that a significant part of the increase in environmental research requests can probably be attributed to environmental cleanup and protection programs. The Pacific Northwest branch of the National Archives explained that the U.S. Army Corps of Engineers used federal records to assist in cleaning up sites which were contaminated during World War II. In response to recent population growth, the Southern Oregon Historical Society has seen its materials used for land-use research by public officials. The Eastern Washington State Historical Society reported that five in-depth environmental impact assessments were undertaken which used their aerial photographs. Lastly, the Water Resources Center at the University of California at Berkeley mentioned that its records were studied to determine ground water supply levels and possible contamination.

The next two survey questions examined which records used in environmental research were created by agencies, organizations, or activities directly related to the environment, and which records were originally accessioned because of their value for other types of research. Most repositories that

**Table 2.** Records Use by Environmental Researchers

	Governmental archives and libraries	Academic special collections and archives	Museum and Historical Society collections	Total survey responses*
Public records	12	0	0	12 (40%)
Personal papers	2	10	7	19 (59.4%)
Institutional archives	0	8	4	12 (40%)
Publications	8	7	7	22 (68.8%)
Maps	10	10	8	28 (87.5%)
Photographs	10	11	8	29 (90.6%)
Oral history	4	5	5	14 (43.8%)
Research growth in last 5 years	11	7	8	26 (81.3%)
Collections directly related to environmental study	11	9	4	24 (75%)
Collections indirectly related to environmental study	7	9	6	22 (68.8%)

\*The totals and percentages are based on a survey pool of 32 repositories, not 30 repositories. The Montana Historical Society and Idaho State Historical Society function as both the state historical society and state archives. Their responses were placed in the appropriate category as accurately as possible.

responded to the questionnaire reported having records of environmental agencies, organizations, or activities (75%). Examples of such collections include: public papers of former Secretary of the Interior Albert Bacon Fall at the Huntington Library; records of the Environmental Protection Agency at the Pacific Northwest regional branch of the National Archives and Records Administration; institutional archives of the Sierra Club, Save the Redwoods League, and Save the Bay at the Bancroft Library; and the Washington State Department of Ecology records at the Washington State Archives.

Many institutions also reported holding materials used in environmental research which were originally accessioned because of nonenvironmental research value (68.8%). Among these were records created by governmental agencies in charge of administering policy on transportation, federal court records, business records of industries based on natural resource extraction (e.g., mining and lumber industries), travel diaries, Sanborn Fire Insurance Company maps, and aerial photographs. Among those that best represent records whose environmental value has grown over time are the records of the U.S. Petroleum Administration (located at the National Archives-Pacific Southwest Region branch), which was responsible for rationing and conserving fuel in the United States during World War II. These files proved important in locating toxic contamination at a closed military site.

#### **Survey Findings—Archival Policies Affected by Environmental Research**

The second part of the repository survey focused on repositories' efforts to appraise and describe records valuable to environmental research and to pro-

**Table 3.** Archival Response to Environmental Research

	Governmental archives and libraries	Academic special collections and archives	Museum and Historical Society collections	Total survey responses*
Appraisal considerations	11	11	8	30 (93.8%)
Collection policy adopted	0	6	0	6 (20%)
Collections publicized for environmental research	5	7	1	13 (40.6%)
Finding aids or subject guides	4	6	2	12 (37.5%)
Press release	1	5	1	7 (23.3%)
Educational conferences	4	3	2	9 (28.1%)
Other public outreach	3	3	1	7 (23.3%)

\*The totals and percentages are based on a survey pool of 32 repositories, not 30 repositories. The Montana Historical Society and Idaho State Historical Society function as both the state historical society and state archives. Their responses were placed in the appropriate category as accurately as possible.

mote environmental use of their collections (Table 3). According to the questionnaire, the overwhelming majority of institutions surveyed (93.8%) had considered environmental research value when appraising and accessioning materials. On the other hand, most of these repositories (80%) lacked within their written collection policy or appraisal guidelines any mention of records solicitation because of potential value to environmental researchers. These findings show that although environmental research does play at least a measurable part in records appraisal, it is not established in written collection policies or in appraisal guidelines. Only six repositories acknowledged having a written appraisal or collection policy pertaining to documenting aspects of the environment. Of these six institutions, only two had established such criteria more than five years ago. The failure to "formalize" a written policy on environmental issues in appraisal practices severely weakens archival institutions' opportunities to select and preserve valuable environmental documentation. Dearstyne urges archival institutions to justify their existence and attempt to secure greater resources by adopting written policy statements which clearly promote their objectives, collection aims, and research interests.<sup>33</sup> Such a written policy statement not only encourages the preservation of environmental information, but also promotes greater awareness of an institution's collection program. Therefore, the lack of written policies to select and preserve environmental documentation lessens the capacity of repositories to promote environmental research conducted in their collections. As a result, archivists also fail to gain environmental users' support for their repositories.

Although most repositories did not formally incorporate environmental concerns in their appraisal considerations, less than half (40.6%) described and publicized in multi-institutional directories the value their holdings have for researching the environment. These findings demonstrated an interest by some

<sup>33</sup> Dearstyne, "What Is the *Use of Archives?*" 80.

archival institutions in encouraging and assisting environmental researchers in using their collections. These descriptive efforts provide archivists an opportunity to build cooperative links between repositories through learning more about other institutions' environmental sources and contributing to the development of collective guidelines and descriptive standards for archival materials in this growing research field.

The last question on the repository survey asked institutions what projects they employed to enhance environmental research in their holdings (Table 3). Description of their materials in finding aids (e.g., scope and content notes) and institutional collection and subject guides (37.5%) were the most popular tool repositories used to promote environmental research. In addition to descriptive finding aids and guides, repositories used educational seminars/conferences (28.1%), press releases (23.3%), and public outreach programs (23.3%). Other activities included presentation of research papers and the publication of an informational journal. Many repositories blamed lack of funding and burdensome workloads for their failure to do more to promote research in their collections. However, the survey results also showed that institutions which took the time to include environmental issues in their written collection policies were much more likely to invest further resources in publicizing their holdings' environmental research value through a number of ventures.

### Analysis of Results

The survey showed environmental history (87.5%) as the field which most often comprised environmental research. However, the strong presence of users preparing environmental impact analyses (78.1%) demonstrated that environmental study does not only consist of academic endeavors, but "nonacademic" ones as well. The survey's findings showed that nonacademic research occurred in nearly all government repositories containing public records, making public records use most popular with users who assessed environmental impacts, policies, and laws.

The survey findings also revealed the diversity of research topics in environmental research (Table 1). Forestry, land use, water resources, and wildlife were selected as being among the subjects most commonly investigated through the use of archival materials. The growth of interest in these topics has shown that the definition of environmental research is broad and open to a great deal of interpretation by both the researcher and the archivist. In future studies, the term "environmental research" needs to be defined more narrowly by topic, such as *wildlife or energy resources*, in order to collect more detailed information and permit more precise analysis.

Archivists' responses concerning the physical types of records used in environmental research (Table 2) showed that nontextual materials such as maps (87.5% of the respondents) and photographs (90.6%) were often utilized by environmental users, while oral history sources (43.8% of the respondents) were

among the least-used record types. While a higher percentage of academic repositories and historical societies was represented in the survey's population than governmental archives, one conclusion that can be drawn from the survey regarding environmental research use in public records is that nonacademic users were more likely to use government records than their academic counterparts, who preferred the use of personal papers and private organizational records. This likely reflects a trend by nonacademic users toward investigating public policy issues involving governmental records.

Most archivists already understand and recognize environmental information within their collections, although many repositories do not mention it in their collection policies. A great variety of public records, personal papers, and corporate records contain useful data about the physical environment. These archival sources may have been accessioned because of information documenting specific issues concerning the environment, or they may have been acquired originally because they contained information of value to other fields. Many archivists report that their collections include environmental information. In fact, most records probably contain some degree of information describing aspects of the environment from which they arose. Examples of such records include overland trail diaries and donation land claims, Sanborn fire insurance maps, U.S. Army Corps of Engineers civil engineering files, and transportation commission meeting minutes.

During the last five years, most repositories (81.3%) reported that they had experienced a rise in environmental research. This may indicate a general increase in the study of environmental subjects, but it may also show an increased awareness by researchers of the existence and importance of archival materials as environmental sources. The increase in environmental research in archival materials most likely caused many repositories (93.8%) to react accordingly and to consider the needs of environmental users when appraising records.

While most repositories reported that environmental researchers used their holdings and nearly all considered the needs of these users when appraising and selecting records, only a fifth of the repositories had formally established written appraisal or collection guidelines which included the preservation of environmental documentation. Continued growth may influence more repositories to expand their appraisal policies in the future, but many archival repositories may view documenting environmental issues as too large a task for their scarce resources.<sup>34</sup> Still another reason may be that modifying the acquisition policy is a major undertaking. The latter notion is supported by F. Gerald Ham, who believes that archivists should only develop or change acquisition policies after careful analysis. He also states that an institution's documentation goals should

<sup>34</sup> According to Bruce Dearstyne, every archival program should produce a planning document or written statement providing an explanation on "why it exists, what records it aims to collect, what it aims to document, and what types of research it is most interested in encouraging." See Dearstyne, "What Is the *Use of Archives?*" 80.

be adopted with specific limits that match the repository's resources and which build collections in a systematic way.<sup>35</sup> While these factors probably hinder the establishment of appraisal guidelines that might meet the needs of environmental users, they also raise concerns about the future use of archival materials by environmental researchers. Few archival institutions have been established with the primary intent of collecting, preserving, and encouraging the use of materials related to environmental research. To remedy this situation, most archival repositories will need to at least acknowledge the value and importance of environmental documentation and try to meet the needs of these users through modifying their collection policies.

The appraisal and selection of records only begins the process of ensuring the use of archival materials. The survey also showed that less than half of the repositories (40.6%) used multi-institutional guides to list and promote their holdings for environmental research. The use of environmental documentation largely depends on archivists' ability to attract potential researchers to their holdings. While a majority of repositories reported undertaking this descriptive enterprise, a significant proportion of the repositories surveyed did not. One explanation for the low percentage may be that repositories believed that their limited resources would be better spent on other descriptive endeavors, such as on-line computer cataloging. Another rationale may be that some institutions probably have not fully considered or do not understand the environmental documentation contained in their holdings, or believe that it is a minor area compared to other subjects. Perhaps some archivists may simply lack a knowledge or background in environmental studies. Fredric Miller suggested that archival description is both labor-intensive and requires continuous refinement as records grow, records creators change, and users find new meanings in records. Effective description requires archivists to develop a detailed understanding of the records and the probable uses for those records.<sup>36</sup> Therefore, if archivists are going to attract and encourage environmental users, they must not only study the needs of potential user groups, but they must also inspect archival records for the desired information and adequately communicate the existence of that information.

Not surprisingly, the survey findings demonstrate that archival repositories that spent the time to prepare and implement the appraisal of documentation relating to environmental issues were also much more likely to invest further resources in the promotion of environmental research. The study also provided evidence that most archival institutions were conscious of the environmental research value of their materials, but few actively pursued or publicized such use. Of the many repositories in the survey which did not allocate time and resources

<sup>35</sup> F. Gerald Ham, *Selecting and Appraising Archives and Manuscripts* (Chicago: Society of American Archivists, 1993), 15.

<sup>36</sup> Fredric Miller, *Arranging and Describing Archives and Manuscripts* (Chicago: Society of American Archivists, 1990), 79, 86.



toward enhancing environmental research, many may have believed the benefits of promoting such research did not warrant the cost in time and money; other repositories may not have had the resources to engage in such activities. Some archivists, however, did promote and publicize environmental research value in their materials through educational seminars, workshops, and press releases.

The benefits of establishing a public outreach program are numerous. Ann Pederson outlines many rewards that a well-defined education and public relations program may have for an archival institution, including: educating user groups about the nature of archival work (i.e., selection, description, and reference); building interactive communication between archivists and specific user groups that influence and improve archival work to meet specific users' needs; promoting the existence of pertinent materials uncovered in archival collections; and gaining community and financial support for their programs.<sup>37</sup> While this study revealed few well-designed education and public relations programs to attract environmental users, the missed opportunities to increase communication and understanding cannot be tolerated by archival institutions looking to find new justifications and advocacy for their programs.

## Conclusion

This study focuses on the use of records by environmental researchers and measures archivists' efforts at meeting the needs of these users. Why environmental research? Of the many issues facing society today, concern about the environment affects everyone and promises to remain a crucial issue into the foreseeable future. In addition, environmental issues are diverse and offer archivists many opportunities and challenges to preserve and provide documentation for users. As Freeman proposes, archivists should adopt reference services which focus on the needs of their users (such as environmental users) and encourage them to use archival materials on a continuing basis.<sup>38</sup>

An increase in environmental research during the last five years encourages careful planning and preparation to facilitate even more use of archival materials documenting the environment. Some archivists have already gained important information about the needs of environmental researchers, and some repositories have instituted changes in their policies and procedures to accommodate these users. However, unless more archival institutions are willing to promote their holdings to environmental users, the archival profession may never fully realize the potential for patronage and support from researchers in this growing field.

<sup>37</sup> Ann Pederson, "User Education and Public Relations," in *Keeping Archives*, edited by Ann Pederson (Sydney: Australian Society of Archivists Incorporated, 1987), 311–54. Efforts at improving public relations and marketing archival research are also mentioned by Dearstyne, "What Is the Use of Archives?" 83–84.

<sup>38</sup> Freeman, "In the Eye of the Beholder," 112.

Archivists must compete in this information age for the "business" of environmental researchers through educating them about archival research, selecting and describing collections which contain environmental documentation, establishing outreach programs, and reducing barriers to use, such as the length of time taken to process a collection. If archivists don't act to encourage environmental research, these users will look elsewhere for information, which may deprive society of critical information on which to base new environmental policies and procedures.

An archival repository may decide to pool a percentage of its resources with other institutions to adequately document a particular aspect or topic within a region (e.g., the timber industry or endangered species). In an era of dwindling resources, archival institutions should investigate opportunities to work cooperatively with one another. This kind of collaborative effort could help develop interinstitutional collection guidelines, prepare comprehensive descriptions of existing materials, share expertise and user information, and solicit funding and support to encourage environmental research. Documentation strategies may cultivate a new level of communication among records creators, environmental researchers, and archivists to provide opportunities for archival repositories to develop collections and services which will better meet the information needs of environmental users.

Many archival institutions need to redefine their professional identity and procedures in order to promote archival use and achieve a level of recognition by environmental researchers. Archivists must also realize that most environmental users do not possess formal training in archival research and some might be unwilling to learn. Refined and specialized finding aids which adequately describe the contents and location of needed information are a first step. Playing the role of student and becoming informed about environmental users' documentation needs and methods are necessary steps as well. Lastly, archivists must actively promote and market their services to environmental researchers using a variety of methods, including sponsoring educational workshops, participating in environmental conferences, and sending newsletters to potential users in order to encourage better communication.

These activities require substantial investments in time and resources, measures that most archival repositories cannot easily afford. The activist approach necessitates innovative thinking and management of resources, and it requires a two-step process. First, archivists must gather data on the needs and expectations of environmental user groups. And second, they need to use the findings from these studies to construct archival services and marketing techniques that attract and maintain the patronage of environmental researchers. Archivists need to realize the competition and challenges that new technologies and information specialists thrust on them. In a world of electronic mail, computerized information databases, and the World Wide Web, a traditional finding aid leading to boxes and boxes of archival records appears both primitive and intimi-

dating, regardless of the information's relevance. The professional development of tools, such as Encoded Archival Description (EAD) and a multi-institutional finding aid database, will create greater intellectual control over environmental collections and remove some of the traditional obstacles to archival research.<sup>39</sup> The prospects of environmental research growing and expanding in the future appear to be excellent. However, this study concludes that most repositories have neither designed nor implemented needed customer services and marketing techniques based on their appraisal, description, and public program activities to attract these potential patrons.

<sup>39</sup> Theory and case studies of Encoded Archival Description (EAD) were featured in the summer and fall 1997 issues of the *American Archivist*.

**Appendix: Archives and Repository Questionnaire  
Environmental Research**

Name of Institution: \_\_\_\_\_

1. Are your institution's holdings used for environmental research in one or more of the following fields? (Please mark appropriate fields).

\_\_\_\_\_ Environmental history  
\_\_\_\_\_ Historical geography  
\_\_\_\_\_ Physical geography  
\_\_\_\_\_ Environmental law or policy making  
\_\_\_\_\_ Environmental impact analysis / assessment

Other(s): \_\_\_\_\_

2. What environmental topics or issues are of concern to your environmental researchers? (Please mark all that apply).

\_\_\_\_\_ Forestry (i.e. timber industry, reforestation, depletion)  
\_\_\_\_\_ Land use (i.e. settlement planning for agriculture, industrial, commercial)  
\_\_\_\_\_ Water resources (i.e. use and rights of water ways, farm irrigation, pollution)  
\_\_\_\_\_ Wildlife (i.e. conservation, regulation)  
\_\_\_\_\_ Climate (i.e. temperature, precipitation, humidity)

Other(s): \_\_\_\_\_

3. What types of records in your holdings are used for research related to the environment?

\_\_\_\_\_ Private papers  
\_\_\_\_\_ Institutional or business archives  
\_\_\_\_\_ Government publications  
\_\_\_\_\_ Maps  
\_\_\_\_\_ Photographs  
\_\_\_\_\_ Oral history tapes and/or transcripts

Other(s): \_\_\_\_\_

4. During the last 5 years has your institution recorded a growth in research requests that are primarily concerned with the environment? (Please use specific statistics if available).

Yes \_\_\_\_\_ No \_\_\_\_\_

Statistics (if available) \_\_\_\_\_

5. Are there any collections or accessions in your institution that are directly related to environmental agencies, organizations, or activities?

Yes \_\_\_\_\_

No \_\_\_\_\_

Names or descriptions of such records \_\_\_\_\_

6. Are there any collections or accessions in your institution that were not originally related to an environmental agency, organization or activity, but that are now used for environmental research?

Yes \_\_\_\_\_

No \_\_\_\_\_

Names or descriptions of such records \_\_\_\_\_

7. Does your institution consider environmental research when appraising materials?

Yes \_\_\_\_\_

No \_\_\_\_\_

Explain: \_\_\_\_\_

8. Does your institution have a written policy on accessioning or soliciting materials related to environmental issues or topics specifically for their research value?

Yes \_\_\_\_\_

No \_\_\_\_\_

Explain: \_\_\_\_\_

9. If the response is "Yes" to the preceding question, approximately how long has this collection policy been adopted?

\_\_\_\_\_ Years.

10. Are your holdings listed in multi-institutional directories or manuals publicizing their potential value to environmental research?

Yes \_\_\_\_\_

No \_\_\_\_\_

11. Does your institution allocate any resources to the following projects primarily to enhance environmental research at your institution? (Please mark all that apply).

\_\_\_\_\_ Finding aids or collection guides

\_\_\_\_\_ Press releases and public announcements

\_\_\_\_\_ Educational seminars, conferences, or symposiums

\_\_\_\_\_ Other public outreach

**Thank you for your participation!**