

A Research Study of Inventory Practices in Archives in the United States: Scalability and Process

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Abstract

This study investigates how inventory practices apply to both digital and analog materials to help inform policy and procedural decisions with respect to digital curation and preservation. Our findings reveal no systematic approach to inventorying these types of materials. Since the practice of an inventory in archives seems to be inconsistent, we believe the findings will provide an opportunity for archivists (and professionals) to reflect on how a long-term approach and a sustainable solution could benefit their work when taking into consideration prioritizing processes for backlogs, developing policy and making procedural decisions within the context of their organization. By using inventory to promote access, we envision the need for a scalable model that addresses both the physical and digital collections in archives.

Introduction

Inventory is a known currency in archives, and its practice may vary depending on the type of settings. For the purposes of our study, inventory is defined as a means to repository all existing materials of any format, born-digital and analog, including new incoming acquisitions and the like. By surveying professionals (or practitioners) who are involved in archival work, the authors wanted to understand how the fundamental function of an inventory transpires throughout the daily work of archives. When digital information and inventory began to meet, many times the perfection of item level data overwhelmed the practitioners. A possible solution to remove this fundamental barrier could be to gain a greater awareness from other practitioners' work and to develop strategic approaches to document and organize collections by means of technologies and programming.

By examining inventory through the lens of scalability, in particular from an academic model, we hoped to begin an evidential conversation of how critical inventory practices take place in supporting the discoverability, long-term access and stewardship of an organization's intellectual memory. We defined scalability as the ability to plan, monitor capacity, and adapt to change over time, finding a solution that can best fit the situation without affecting access to content to benefit small and large organizations. This would take into consideration the ever-increasing volume of materials, including born-digital objects.^{1,2} Our inquiry is an attempt to inform the conversation of merging theory and practice to better support how inventory practices provide the necessary documentation of heritage resources in order to access and educate present and future generations about archival collections.

Problem Statement

¹ Margot Note Consulting, LLC, "Scalability of Digital Preservation: The Right Fit for All," Accessed October 28, 2019.

² Jennifer Vinopal and Monica McCormick, "Supporting Digital Scholarship in Research Libraries: Scalability and Sustainability," *Journal of Library Administration*, 53, no. 1 (2013): 27-42.

How do professionals in archives across the United States handle their inventory of analog and born-digital materials? And, how is inventory data collection interpreted by archives in the face of ever-increasing volumes of materials received?

The authors began their examination with these questions, the objective being to establish a framework to discuss the importance of the inventory in creating greater access within the expanding archival record landscape.

In the literature, Berner notes the approach to archival work to be practical, largely when looking at archives from a theoretical perspective.³ Inventory remains nonetheless a fundamental element in the work of archives. Inventory can provide a much clearer understanding of “arrangement and description, in inseparable combination”⁴ of materials in light of the increasing volume of content, including born-digital objects acquired by archives. In 2005, a paradigm shift began when Greene and Meissner introduced the More Product, Less Process (MPLP)⁵ method for processing, which uncoupled some of the traditional approaches to archival work, including prioritizing collections for digitization, bringing the backlogs and methods needed for collection access into focus. However, the MPLP method was not really focused on the backlog of born-digital materials. More recently, Pflug conducted an opt-in survey from two Society of American Archivists (SAA) email discussion lists--The Lone Arrangers and the Students and New Archives Professionals (SNAP) Roundtables⁶-- to assess collections holdings “to uncover archives and special collections materials that are backlogged and thus inaccessible to researchers”⁷ which included digital data. Seeing as Pflug’s respondent completion size was 25 participants, we decided to expand the sample size to a larger population eliciting participation from numerous organizations.⁸ A broader national survey was distributed to garner a better idea of how digital and analog collections are being first touched, or inventoried, as a follow up to help address backlog problems.

The authors’ hypothesis was to adapt the MPLP method into a scalable model for inventory, thinking that more inventory would allow for more access--hereby referred to as MIMA--especially as inventory should contain digital rights information for non-analog materials as well as traditional analog formats. This MIMA model would allow archives “to find out what information is needed to conduct an effective inventory survey and to articulate the impact it can have on a repository.”⁹ For as Ericson wrote “literature has been thin gruel for those interested in developing acquisition policies equipped to serve the needs of contemporary archival repositories”¹⁰ correlating to inventory, as part of the acquisition process. In 1991, Ericson goes further, referencing Terry Cook’s 1981 idea of collaborating with community organizations, not possessing the items themselves,¹¹ but how can we partner when we do not know what we have in our archives? Knowing what collections archives possess would allow for prioritization, processing, and partnership.

³ Richard Berner, *Archival Theory and Practice in the United States: A Historical Analysis* (Seattle: University of Washington Press, 1983).

⁴ Ibid, 5.

⁵ Mark Greene and Dennis Meissner, “More Product, Less Process: Revamping Traditional Archival Processing,” *The American Archivist* 68, no. 2 (2005): 208-63. <https://doi.org/10.17723/aarc.68.2.c741823776k65863>.

⁶ Wendy Pflug, “Assessing Archival Collections Through Surveys,” *The Reading Room* 2, no. 1 (2016): 69-70.

⁷ Ibid, 65.

⁸ See Appendix A for a complete list of organizations.

⁹ Ibid, 81.

¹⁰ Timothy Ericson, “At the “rim of creative dissatisfaction”: Archivists and Acquisition Development,” *Archivaria* 33 (1991): 68.

¹¹ Ibid, 69.

Methodology

In fall 2018, we reached out to state, regional and national archival and museum associations, historical societies, and organizations dedicated to the preservation of digital media in the United States to direct members to a twelve-question survey on inventory practices.¹² Because of a dearth of literature, we developed this survey to specifically investigate how inventory practices are utilized, and criteria that are taken into consideration by archivists and practitioners. This would help inform their work within their archival setting and provide greater information in addition to current analyses that strictly relate to the construction of inventory per se, that is performance, management, assessment, risk identification, and supply chain.

Prior to reaching out to participants via emails and listservs, we selected groups of participants from the Directory of Archival Organizations in the United States and Canada made available by the Society of American Archivists and U.S. historical societies and museums. Listservs taken in consideration were the National Digital Stewardship Alliance, the Digital Library Federation, the American Moving Images Associations, and digipres. A mixed methods survey consisted of quantitative multiple choice and open comment qualitative questions because the authors wanted to hear about people's experiences with inventory beyond the data, in particular how it currently served them. It aimed to investigate the acquisition of both digital and physical materials, from donors to the processing by members at these different entities. The rationale was to gain a better understanding of how inventory is used and how its design and arrangement permeate through the work of archives to ultimately inform and educate.

Findings

Out of the 243 responses, 143 were retained for analysis. Our determination for inclusion in the data set was a minimum response completion rate of 50%. The response completion rate was as follows: 123 responses at 100%; 11 responses at 87%; nine responses at 53%. Most respondents (47.2%) expressed that they first inventoried their materials that they will process later on. By contrast, one-third of them processed their materials at the time of arrival to the archives. The states most represented were New York, Missouri, Pennsylvania, and Maryland.

Associated with the practice of an inventory and its recording mode, we retrieved the highest participation rate (or 90%) inquiring about how much of archival collections are inventoried and whether digital materials were included in the process. It appears that for either analog or digital materials, it is still a work in progress for most organizations represented. Nonetheless, it is reassuring that nearly 40% of respondents expressed having their digital inventory in process. Chart 1 and Chart 2 illustrate the percentage of archival collections inventoried, including digital materials.

¹² See Appendix B for a copy of the survey questions.

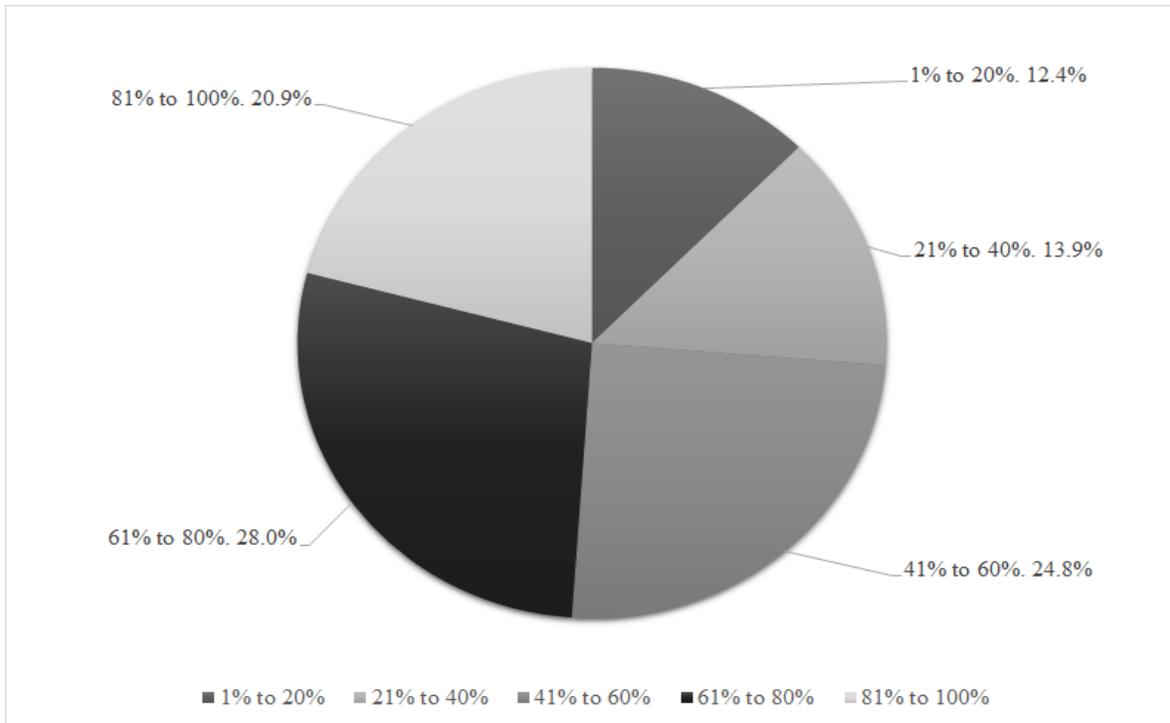


Chart 1. How much of your archival collections are inventoried?

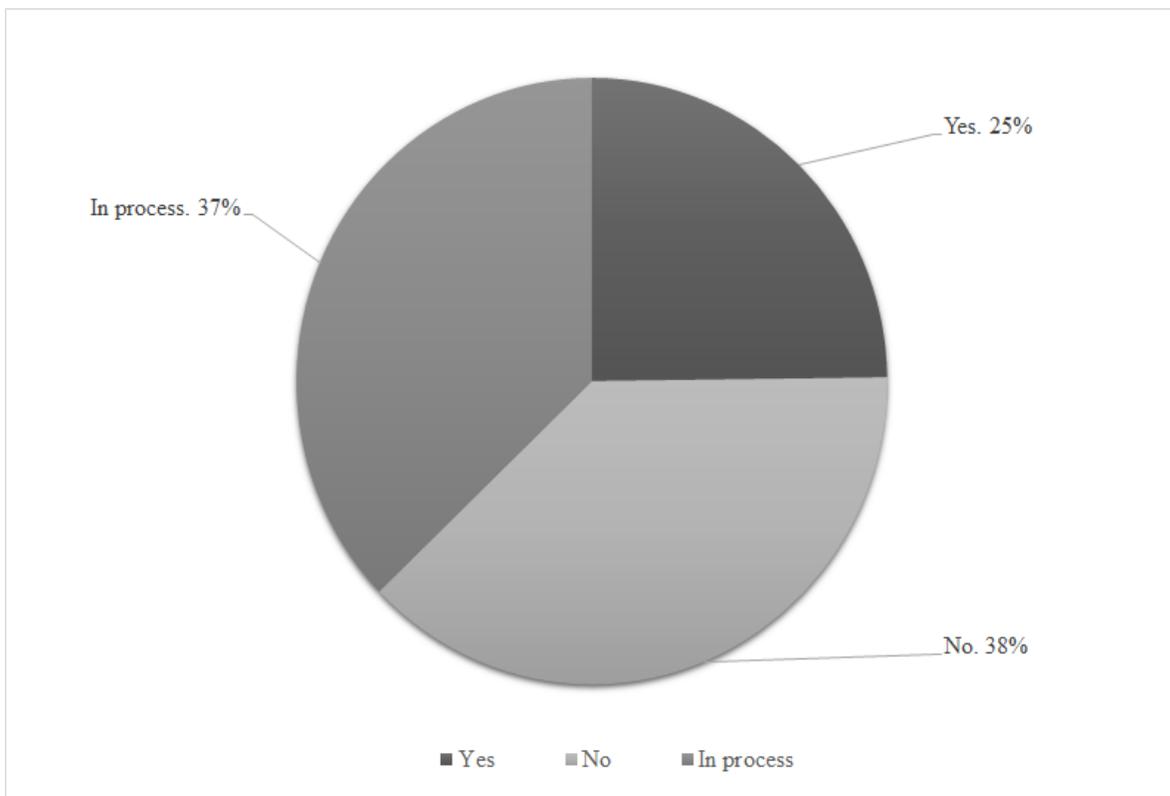


Chart 2. Have you created an inventory of your digital materials?

At the same time, the prioritization of the inventory process tends to be directed towards user demand or projects (48.5%), content type (20%), and/or enduring value (20%) of archival materials. By contrast, criteria like long-term preservation, digital curation, and rights permissions accounted for a mere 1% each. That said, the archivist tends to have the main responsibility (76%) for creating inventory records, of which one-third are routinely recorded in a central database (Chart 3).

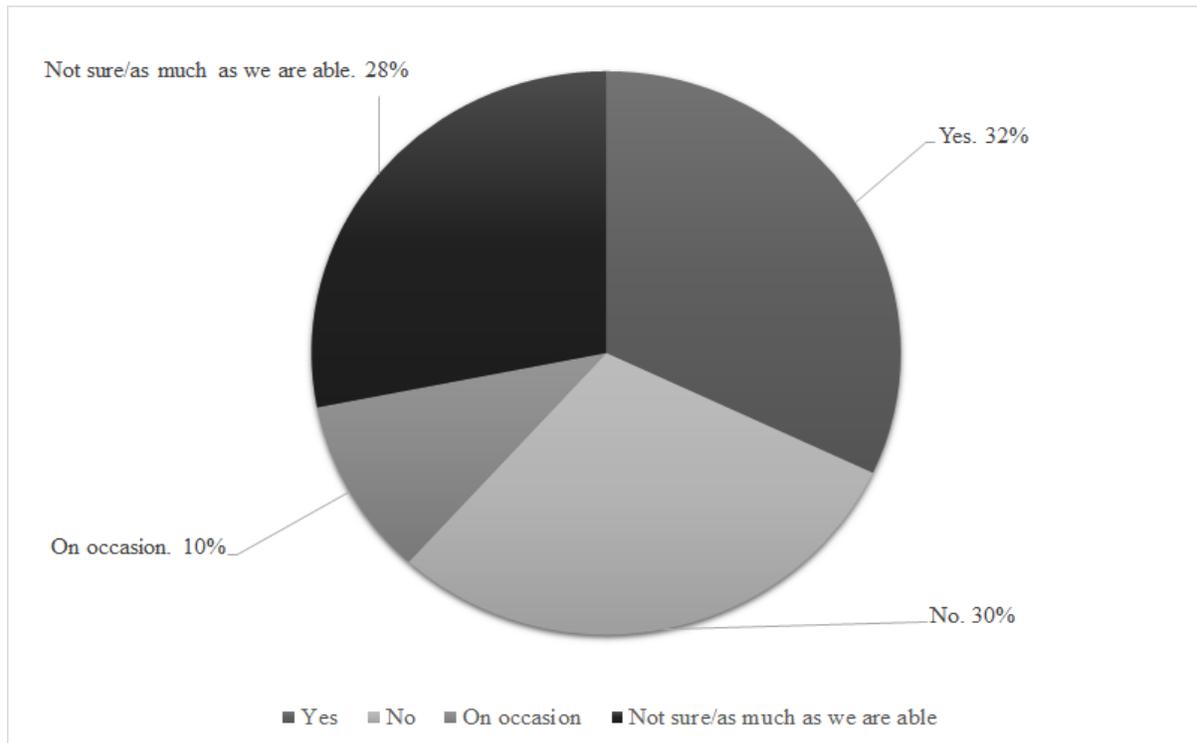


Chart 3. Are inventory records reconciled in a central database on a regular basis?

With archivists having the responsibility for creating inventory records, comments seem to indicate that time and personnel could be limiting factors to handle the volume of materials. With this, it may be helpful to know that second to archivists, those with responsibility for creating inventory records are students (10.7%), closely followed by archival assistants (9.7%).

Lastly, it seems to remain uncertain how inventory work helps inform guidelines and procedures when over half of respondents (or 58.4%) refer to its use as in when it is necessary or needed (Chart 4).

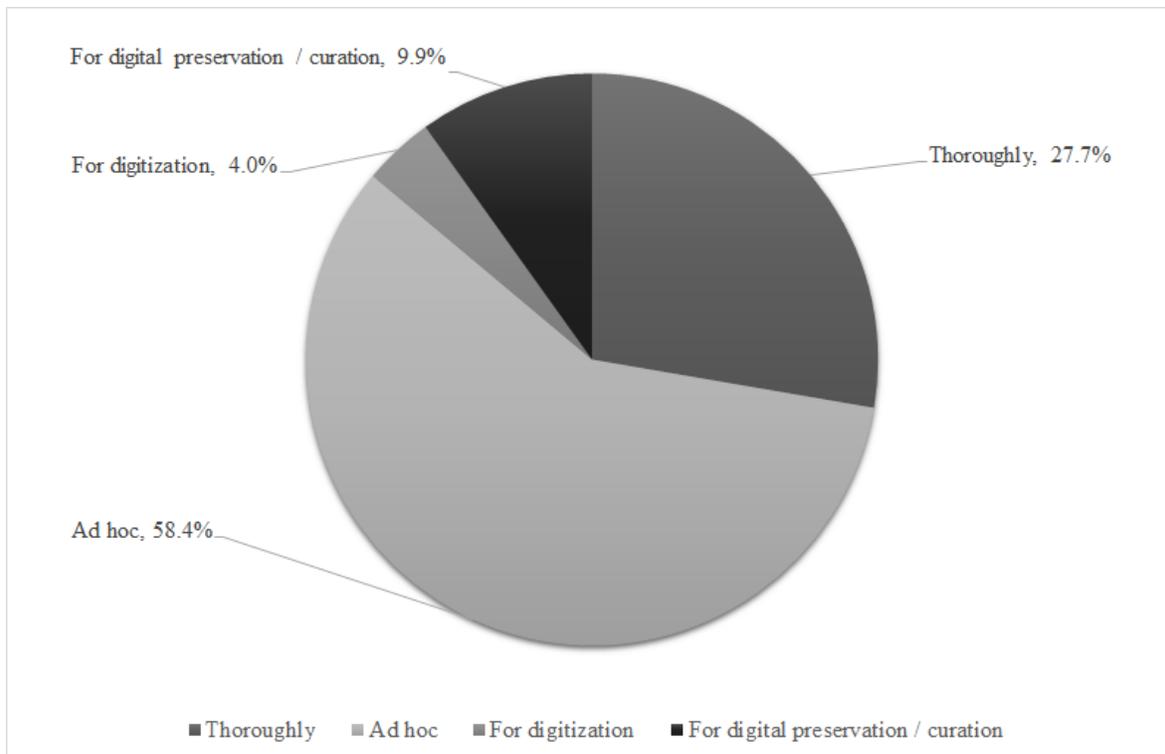


Chart 4. How has the use of an inventory translated into guidelines and procedures?

Conclusion

The survey served as a means to trigger further discussion among peers, and raise awareness of inventory practices. Despite the fact that too little research is available to place the survey findings in perspective, it appears that the inventory of content coming into the archives and other organizations surveyed is, in most cases, taking place at a later time. In regards to practices leading to backlogs, Pflug discusses issues associated with them in archives and special collections, in that “the damaging effects of backlogs, such as the lack of preservation and the potential loss of cultural heritage materials, has grown among repositories.”¹³ Understandingly, conservation could take years, especially at the item level, as a participant noted when referring to a large collection of newsfilm in process. The issue of backlogs was raised in the survey comments as well, and even though “[people] process new donations first and then continue with the backlog[s]”, backlogs do not go away. Pflug states “archivists and special collections librarians often inherit backlogs, making it likely that they are unfamiliar with the contents.”¹⁴ A direct implication to this could be detrimental in that archives are unable to prioritize collections of cultural heritage materials adequately, for users and the community to access. For as Buckland says, “We might say that objects of which nobody is aware cannot be information, while hastening to add that they might well become so when someone does become aware of them.”¹⁵

While the survey did not identify a striking difference among participants in how archival records are reconciled centrally on a regular basis, content prioritization tends to be mostly on user demand and

¹³ Pflug, “Assessing Archival Collections,” 66.

¹⁴ *Ibid*, 67.

¹⁵ Buckland, Michael K., “Information as Thing,” *Journal of the American Society for Information Science* 42, no. 5 (1991): 356.

project needs. It goes on with comments indicating some sensible concerns about time in being able to process materials, despite the fact that little emphasis seems to be on rights permissions. Rylance states, “The archivist’s tendency to privilege use-value over creation-value has been that within archival memory institutions.”¹⁶ It raises the question as to how this could challenge the digital preservation and curation decisions about the value-added use of cultural heritage materials and the ability to engage in cross-disciplinary scholarship opportunities that could emerge upon contextualizing these works. Along with a greater emphasis on contextualization, it could then be possible to minimize the dependence on institutional knowledge hindered by backlogs.

Pflug stated in her collection assessment survey that most times, conducting a survey was “to gain intellectual and physical control of their repository’s materials”¹⁷ before determining next steps of action. Such actions could have direct implications on establishing guidelines and procedures, which in turn could help inform digital preservation and curatorial work. It is nonetheless puzzling why inventory tends to be so much based on demand. In fact, recommendations from a 2017 study of practices in US repositories seem to indicate that:

The realities of practice and workflow often lead to an uncritical reliance on reviews of past trends, rather than a proactive assessment of future uses. What is more, how archivists identify the materials used by patrons is not consistent across repositories, and we are not systematic in our approach to gathering information about our collections.¹⁸

Even with our survey limitations, this first step could be a *measuring stick*, and could launch a conversation about current inventory practices, assess how such practices could translate into the daily work of the practitioner and provide a long-term approach for being proactive.

As the role of these organizations or institutions continues to focus on retaining the evidential value of records, “born-digital has forced archivists to reexamine and reinvent their principles and practices in light of a digital challenge that emerged before the advent of digital libraries.”¹⁹ How does the archives and museums community respond to these challenges and new demands, when taking into consideration personnel and skills? With archivists being mainly responsible for the creation of inventory content as identified by the survey, the question of adequacy in staffing is apparent. As one respondent commented, we are “just going around the room clockwise.”

With consideration to workforce personnel, skills and roles, a future study could allow researchers to dive deeper in examining the strategic approach to inventory practice, the efficiency in processing materials, the applicability of MPLP, and how these techniques fit within the policy setting, that may eventually transpire into (digital) preservation practices. As Craig Gauld notes “we must, as a profession recognise the role that ideas and theories can play in such a practice-based discipline: there is nothing wrong with being interested in ‘mere ideas’.”²⁰ Next steps would include a follow-up study, reaching out to participants who represent all types of organizations to ascertain the use of inventory at those pre-determined organizations as a theoretical scalability model for both digital and analog materials, which

¹⁶ Rylance, Keli. “Archives and the Intangible.” *Archivaria* 62 (2006): 108.

¹⁷ Pflug, “Assessing Archival Collections,” 70.

¹⁸ Amy Cooper Cary and Pam Hackbart-Dean, “Establishing Processing Priorities: Recommendations from a 2017 Study of Practices in US Repositories,” *Journal of Archival Organization* 15, no 1-2 (2018): 34-57. <https://doi.org/10.1080/15332748.2019.1609309>.

¹⁹ Anne Gilliland-Swetland, “Enduring Paradigm, New Opportunities: The Value of the Archival Perspective in the Digital Environment,” (Washington DC. Council on Library and Information Resources, 2000), 6.

²⁰ Gauld, “The end of archival ideas?” 146-47.

has thus far proven inconclusive. The authors would then reapply the MPLP model used for processing through the inventory lens to determine whether a More Inventory, More Access (MIMA) approach could allow archives to know what they do not know.

Resources

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Appendix A: List of Organizations

Academy of Certified Archivists (ACA)
American Association for State and Local History (AASLH)
Archivists of the Houston Area (AHA!)
Association for Recorded Sound Collections (ARSC)
Association of Moving Image Archivists (AMIA)
Association of St. Louis Area Archivists (ASLAA)
Conference of Inter-Mountain Archivists (CIMA)
Clark County Historical Society (CCHS)
Colorado-Wyoming Association of Museums (CWAM)
Council of State Archivists (CoSA)
Delaware Valley Archivist Group (DVAG)
International Association for Social Science Information Services & Technology (IASSIST)
Kansas City Area Archivists (KCAA)
Kansas Historical Society (KSHS)
Maryland State Archives (MSA)
Miami Valley Archives Roundtable (MVAR)
Michigan Archival Association (MAA)
Mid-Atlantic Regional Archives Conference (MARAC)
Midwest Archives Conference (MAC)
Minnetrista
Missouri Association of Museums and Archives (MAMA)
Museums, Libraries and Archives Council (MLA)
National Association of Government Archives and Records Administrators (NAGARA)
National Digital Stewardship Alliance (NDSA)
National Episcopal Historians and Archivists (NEHA)
New England Archivists (NEA)
Oklahoma Archivists Association (OAA)
Research Data Access & Preservation Association (RDAP)
Society of Alabama Archivists (SALA)
Society of American Archivists (SAA)
Society of Florida Archivists (SFA)
Society of Georgia Archivists (SGA)
Society of Indiana Archivists (SIA)
Society of Ohio Archivists (SOA)
Society of Rocky Mountain Archivists (SRMA)
Society of Southwest Archivists (SSA)
South Carolina Archival Association (SCAA)
Springfield Area Archivists
St. Louis Area Religious Archivists (SLARA)
Texas Archival Resources Online (TARO)
Twin Cities Archivists Roundtable (TCART)

Appendix B: List of Survey Questions

- Q1. Once you are approached by potential donors, how is any content inventoried?
- Prior to coming to the Archives (by the donor)
 - Prior to coming to the Archives (by the archivist or other archival personnel)
 - At time of arrival to the Archives
 - Scheduled to be processed within a certain timeframe and placed in storage
 - Accounted for, but to process at a later time
 - For any other answer, please explain
- Q2. How is any content inventoried?
- A digital file is created (whether by the archive or donor)
 - A paper file is created (whether by the archive or donor)
 - Both a digital file and a paper file are created
- Q3. How much of your archival collections are inventoried?
- None
 - 1% to 20%
 - 21% to 40%
 - 41% to 60%
 - 61% to 80%
 - 81% to 100%
- Q4. Have you created an inventory of your digital materials?
- Yes
 - No
 - In process

If you answered "In Process" to the previous question, could you please describe your process used or the process currently in place?

- Q5. Due to time, personnel, or volume constraint(s), how do you prioritize the inventory process?
- By content type
 - By enduring value
 - By vulnerability
 - By demand from users or for projects
 - By long-term (digital) preservation
 - By (digital) curation
 - By rights permissions and/or other legal constraints
 - For any other answer, please explain
- Q6. Are inventory records reconciled in a central database on a regular basis?
- Yes
 - No
 - On occasion
 - Not sure/as much as we are able

The identification of unique materials could be important for a variety of reasons, institutional memory, cultural heritage, scholarship, etc.

Q7. When is preliminary preservation done (placing things in acid free boxes; may or may not include refolding)?

- Prior to coming to the Archives
- At time of arrival to the Archives
- Scheduled to be processed within a certain timeframe and placed in storage
- Not considered, presently
- For any other answer, including digital-born materials, please explain

Q8. How has the use of an inventory translated into guidelines and procedures?

- Thoroughly
- Ad-hoc
- For digitization
- For digital preservation / curation
- For any other answer, please explain

Q9. Whom has the main responsibility for the creation of inventory content?

- Archivist
- Digital / data curator
- Archival assistant
- Administrator
- Student(s)
- Other archival staff
- For any other answer, please explain

Q10. If inventory processes are different for digital materials, how are they handled?
Please explain.

Q11. For analysis purposes, please provide the name of the archival association(s) you are affiliated with, city and state.

Q12. You may also provide the name of your institution or organization.