SCIENCE AND ENGINEERING-BASED FEDERAL LIBRARY WEB SITES AND PUBLIC ACCESSIBILITY OF INFORMATION AND RESOURCES

by
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A Master’s paper submitted to the faculty of the School of Information and Library Science of the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Master of Science in Library Science.

Chapel Hill, North Carolina
November, 2002

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This study depicts an assessment of public accessibility of information and resources in science and engineering-oriented federal libraries via library Web sites. Federal libraries often play a large role in amassing information and resources and creating some type of access for both federal employees and the general public. This evaluation was performed to assess and compare, among federal libraries, the current state of information resources as they relate to public accessibility. Twenty federal library Web sites were reviewed based on service-related scope statements, actual resource availability, vocabulary, user assistance features, and topical searching/browsing capabilities. The research findings indicate federal library Web sites often do not adequately address issues related to public accessibility and use, including instruction, information, or assistance needs.

Headings:

Government information -- public access

Government libraries

Government publications -- Distribution and acquisition

Information systems -- Special subjects – Governments

Internet -- Scientific and technical libraries

Web sites -- Evaluation
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Introduction

As the largest publisher currently in existence (Fraser and Fisher 33), the United States federal government is also responsible for producing some of the nation’s most important and critical information. The “electronic information” age has now descended in full force upon the federal government and a number of changes in the information publication process have resulted. These changes have been both glorious and painful in nature. More and more government sponsored publications and information resources have become available electronically on the World Wide Web, creating ease of accessibility that did not previously exist. Researchers, students and instructors, as well as the general public can readily peruse a wealth of government information that may have been previously difficult or laborious to obtain.

The government produces various types of information, but federally produced scientific and engineering information can be a critically important area for many. For science and engineering researchers, instructors and students, both current and historical government-funded scientific and engineering research can provide key information that may serve as the cornerstone of new research or guide the development of new technology. For the general public or other audiences, scientific information research may provide critical information for topics that affect them personally.

Federal libraries and information centers are often good starting points for tracking down publications or information produced by the particular agency they support. Federal library Web sites can serve as the first point of contact for those
interested in accessing a particular library’s online resources or obtaining information about the library’s resources/services and public availability. The purpose of this paper is to evaluate and compare publicly accessible library information and resources contained within science library Web sites of federal agencies and, from that information, to develop an assessment of the current state of federal agencies’ science and engineering library Web sites. For the purposes of this paper the term “library” will be used refer to both libraries and information centers in any form.

**Literature Review**

There are three main research areas that must be addressed when considering the topic of publicly accessible library information and resources within science and engineering-based federal government libraries. The first research area to review is that of use studies regarding United States government-produced information. Use studies must be reviewed to demonstrate the need of government-produced information by public users. The second area to be considered is that of public accessibility and content research conducted on federal Web sites. Research such as the topic addressed in this paper must build on previous study findings and conclusions to thoroughly cover the issue. The third and final area to examine is research pertaining to evaluations of Web site content. This will provide a solid background for building the criteria used to perform this study.

Research studies on use of United States federal government publications, especially on science and engineering publications, are not current nor are they numerous. In recent years, research on government information has centered on dissemination and accessibility issues. For those interested in actual research that
addresses use of the information itself, this means that older and outdated research serves as the only source of data. Despite this, the research offers an insight into use of government documents. In 1987, Emily Fraser and William Fisher surveyed science and engineering faculty members at the University of California Los Angeles (UCLA) about their use of federal government documents. This survey was modeled after a 1979 survey performed by Peter Hernon that investigated the use of federal government documents by social scientists. Fraser and Fisher reached the same conclusion in 1987 that Hernon reported eight years earlier: despite the fact that the United States federal government was the largest research agency and publisher in the area of science and technology, information produced by the federal government was vastly underutilized by faculty. Like Hernon, Fraser and Fisher found that after the belief that the government produces little to nothing of value related to their field, science and engineering faculty cited difficulty accessing material (effort versus time expended) and unfamiliarity of arrangement as their reasons for limited use (38). Still, over half the faculty that responded in both Hernon’s and Fraser and Fisher’s study admit using federal documents in some capacity (Fraser and Fisher 38). Although Fraser and Fisher’s low response rate preclude any firm conclusions, their study indicated that government documents were, at least, in use.

In their review of government publication use studies spanning 1977 to 1989, Postema and Weech summarized and compared findings of use studies across a variety of government document types. Their conclusions of the library surveys, user surveys and citation analysis studies as they pertain to federal documents supported Fraser and Fisher’s earlier findings: government document use may account for a small number of
items in use or cited, but they were in use. Postema and Weech also identified the
problems with the different types of use studies that can camouflage accurate reporting of
document usage. Importance and relevance of documents is not measured in citation
studies and low usage does not necessarily signify less importance or relevance to the
topic. Additionally, use studies can be flawed. Library use studies can be based on a
skewed perception by librarians and therefore not accurate, while user surveys can be
faulty due to low response rate and defects in the survey instrument.

In 1997, Caswell built on Postema and Weech’s work by reviewing use studies
conducted between 1990 and 1996. Caswell followed Postema and Weech’s example
and divided research into citation analysis, librarian use studies, and general user studies.
Although six years had passed and tremendous information dissemination strides had
been made in the interim, Caswell reported that most research still found that government
document use was modest when compared with other resource types. For example,
Barbara Haner’s 1990 citation analysis revealed that fewer than seven percent of citations
made in 1985 in geological literature were to federal government documents (1,751 of
25,527 total cites) (Caswell 364). Findings such as Haner’s may lead a researcher to the
erroneous conclusion that modest use correlates with importance or relevance. Yet, in a
1994 user study, Richard Walker surveyed authors who cited at least one United States
federal government document in research articles appearing in one of the four core water
research journals. Just over sixty percent of those surveyed found the documents to be
necessary both to generally understanding their research area as well as serving as a
significant contribution to their research (Caswell 367). This finding supported Postema
and Weech’s assertion that citation occurrence is not indicative of relevance or importance.

In all of the studies Caswell reviewed, government document use was explored although not all aspects of use were addressed. Caswell reminded researchers to remain cognizant of study limitations, and pointed out “…little attempt was made in generating data concerning the use of government publications by the general public” (369). This statement reminds researchers that information regarding an entire body of potential users is scarce and their use and need for government information resources remains unexplored.

It might be reasonable to conclude from the paucity of current research on use of government documents that research on public accessibility and content of Web sites as it pertains to information resources is scarce as well. However, this is an area that has seen discussion and investigation. Discussion revolves around general criticism of accessible information from the government and why the Web is not the perfect dissemination machine. For example, Julie Johnson, in her 1996 article, “Government Web Pages: The Lights Are On But Nobody is Home,” criticized government home pages by stating that too many government sites were system driven rather than user driven (151). Instead, Johnson stated that “Pages should be built which reflect the constructs and expectations of the clients, and not the structure of the government agencies providing the information” (154). Her contention was that users were not benefiting from construction and arrangement of information on the sites.

Although discussion and criticism of Web sites are useful, the subjectivity and lack of data to substantiate ideas relegates them to opinion pieces. Research studies
provide important information and clues to determining the actual state of federal
government library Web sites. In 2000, Thomas Downing, of the United States
Government Printing Office (GPO), embarked on a study to determine how selected US
government libraries, information centers, and information services provided public
access to information via the internet. Selecting only nineteen sites out of the many
hundreds of government libraries and information centers provides a very limited
overview of what exactly federal libraries/information centers provide to the public and
his results must be viewed with that in mind. Still, the results were quite interesting.
Downing found that 100% of the libraries or information centers contained resource or
service related scope statements and all but one included scope statements regarding
personnel provided services (4). Additionally, all but one provided some access to online
information (4). Downing also found that an amazing 84% of sites provided online
serials access and almost 80% of sites provided access to both online monographs and
online databases (5). Sites also provided browse applications (68%) and/or a general
search window (58%) for identifying available information (Downing 5). Downing also
discovered that close to 50% of browse applications were either via topic or title (5). In a
study conducted in 1998, Jennifer Souza and Ellen Dodsworth conducted research to
determine if online government collections and resources could replace standard paper
collections. In the course of this study, Souza and Dodsworth evaluated what
information was available and the ease of searching and retrieving information. This
study was also small in scope but nevertheless contained pertinent information regarding
public access. They found, over a two-year period, more information becoming available
via the internet. Souza and Dodsworth also discovered various levels of scholarly
information available (with some sites containing almost none) and noted navigation ease ranged from straightforward to difficult. They also ascertained that many sites contained information that was not available via GPO, including speeches and photographs Souza and Dodsworth 31). In addition, Souza and Dodsworth addressed the concern that archiving and stability of information was a serious issue that could impact future ease of locating more historical material. As they noted, this issue is yet to be resolved.

In another research study concerning federal Web sites, Charles McClure, Steve Wyman and John Beachboard undertook a study to establish evaluative criteria for assessing federal Web sites in 1997. They sought to suggest not only analytical tools for Web site administrators to use when evaluating site structure but also to suggest recommendations that would increase usefulness to libraries and other users. This team selected nine federal Web sites, based on certain pre-established criteria, and ultimately performed an in-depth study on four of those sites. Their techniques for assessment grouped into four areas: system-based, user-based, design-based, and developer-based assessments (McClure, Wyman and Beachboard, n.pag.). The most relevant area as it pertains to the topic addressed in this paper is the user-based assessment. McClure, Wyman and Beachboard collected assessments of the users perceptions of the Web sites and summarized the key points of the user comments for each Web site based on a situated proxies assessment. User findings ranged from complaints about hidden or difficult-to-find information for some sites and lack of clearly written help sections to more positive findings about helpfulness of on-site search engines and stimulation of browsing by site layout/content (McClure, Wyman and Beachboard, n.pag.). The team also followed-up this assessment by performing a focus group interview with the proxies
assessment participants. Participants were asked to rate their skills and also answered general questions about their perceptions of the previous situated proxies assessment, such as “What constitutes good navigability?” and “How legitimate is the information on federal Web sites” (McClure, Wyman and Beachboard, n.pag.)? McClure, Wyman and Beachboard concluded from their findings that the user-based aspect of their study provided a valuable resource for refining evaluative techniques for federal Web sites and can prove to be insightful. They also suggest that federal Web site administrators “…identify target audiences and select user/assessors that best reflect those audiences” (McClure, Wyman and Beachboard, n.pag.) when considering user-focused assessments for evaluation of their Web site.

Like McClure, Wyman and Beachboard’s study, Eschenfelder (et al.) also addressed the topic of assessing federal Web sites in the 1997 article “Assessing U.S. Federal Government Websites.” Eschenfelder (et al.) discussed the increasing value of federal government Web sites as a communication and dissemination of information medium and the resulting importance of federal Web site assessment based on this increase. The focus of this article was to review existing federal policy relating to electronic access of federal government information and, in light of those policies, to create a table of assessment criteria that federal Web administrators can readily employ to assess their Web sites (Eschenfelder 183). Eschenfelder (et al.) built on a 1996 University of Maryland study to develop their two section, twelve part assessment table (183). The table encompasses pertinent issues of Web site assessment such as Web site orientation, currency, accuracy, feedback, design and navigability. Although this article approached Web site assessment from the federal information accessibility and dissemination policy
standpoint, the development of in-depth assessment criteria will be useful for assessment of federal Web sites from a variety of standpoints, including those that are user-based.

In the preceding paragraphs, use of government information resources and assessments of federal Web sites has been explored. Web site evaluation and assessment methodologies are the final research area that must be addressed. In 1998, Mark Williams wrote an assessment piece that, again while not research-based, provides an excellent basis for beginners to understand Web site evaluation. He suggested four broad areas to consider when approaching Web evaluation: content, source, access, and structure (Williams 16-17). Williams outlined each area and provided numerous criteria to be used for each category. He cautioned evaluators that “One simply cannot judge by the look alone” (Williams 16), an important idea to remember when visual style generally provides the first impression of a Web site.

Research on creating evaluation criteria for Web sites is quite varied. In 2000, Bauer and Scharl introduced a methodology for automated assessments of Web sites based on fuzzy clustering. While designed for rapid automated assessment, the principle behind their methodology also lends itself to manual evaluations. Bauer and Scharl suggested clustering attributes into three areas: static (evaluation of attributes at any given time), dynamic (evaluation of attributes over time) and comparison (between like Web sites) (134-135). They also provide two tables with classification criteria that can be used to assess Web sites. Although their methodology is incomplete, it still provides a good foundation for beginning Web site evaluation.

Mark Spivey evaluated library Web sites with a more specific criteria in mind. In 2000, he investigated the presence of library jargon on the home pages of sixty randomly
chosen higher educational institution libraries. Spivey remarked that professional vocabulary can “impede comprehension by an educated public, who are not professional librarians” (151). Spivey targeted idioms, acronyms, and vendor labels in his study conducted between 1998 and 1999. He found that there was one instance of a library idiom and one instance of an unexplained vendor label per library over the course of three repeated viewings (Spivey 155). The occurrence of acronyms was less common with less than one acronym per home page occurring as the average (Spivey 155).

Although Spivey’s methodology was less formal than would be desirable from a research study, his findings are still of interest and significance to those considering research on Web site content. As Spivey noted, “Library jargon that addresses diverse and novice users of information resources through remote access can be problematic” (155). All three of the above research topics contribute to the knowledge base for this research paper. Current studies relating to the use and need for federal government information, particularly that pertain to science and engineering does not abound. Yet, the research that does exist demonstrates the presence of need and use by individuals outside the federal government system. Research also indicates that there may be a greater need and use of this information than has actually been recognized and evaluated by studies to-date. Web site content research has revealed that of the numerous federal information resources available online, each offers the public varying degrees of completeness and complexity in content. Finally, research on Web site evaluation techniques demonstrates that there are varied methodologies for conducting Web site assessment research, each addressing particular concerns or issues related to Web site content and construction.
Methodology

The purpose of this research paper is to evaluate and compare publicly accessible library information and resources of science and engineering-based federal libraries. The selection of science and engineering-based libraries to be used for this research was based on libraries identified as engineering and science libraries in William Evinger’s 1997 *Directory of Federal Libraries*. Evinger used a self-reporting questionnaire to divide libraries into twelve categories including an Engineering and Science libraries “type.” According to Evinger’s definition, engineering and science libraries were “…those with collections devoted predominantly to engineering and the sciences”(viii). Based on the returned questionnaires, one hundred ninety libraries classified themselves as engineering and science libraries according to Evinger’s criteria.

Libraries then had to meet the following criteria in order to be included in the research:

- Libraries had to have an actual physical location. Virtual libraries, online reading rooms, and publication directories with no corresponding actual physical location were excluded from this study.
- Libraries had to have a publicly accessible Web site.
- Branch, regional, or divisional libraries that were part of a larger department or agency had to have a distinct Web site that was separate from the parent organization. Sites were not considered distinct when:
  * the only information contained on the site was a name, address, phone/fax number, or email address
  * clicking on the library’s Web page Universal Resource Locator (URL) re-routed the user back to the departmental or agency parent Web site
Initial assessment of science and engineering federal libraries based on the above criteria resulted in forty-three eligible library Web sites. The majority of the excluded libraries were the Department of Defense libraries. Preliminary research demonstrated that the vast majority of Department of Defense library Web sites were not publicly accessible due to security restrictions. This researcher determined that the Department of Defense libraries thus were not representative of the typical libraries to be investigated within this study. Therefore, all Department of Defense libraries were excluded from the research.

After initial evaluations were complete, the forty-three eligible library Web sites were arranged alphabetically by library name and assigned a consecutive number from one to forty-three. In the interest of time, a random sample of twenty-two libraries (approximately fifty percent) was then drawn from the forty-three original libraries. This was accomplished by using the Social Psychology Network’s Research Randomizer (http://www.randomizer.org) to generate twenty-two random, non-repeating numbers between one and forty-three. A match was then made between the randomly generated numbers and the consecutive numbers assigned to each library. This technique produced the final selection of the twenty-two libraries to be evaluated for this research paper. The final list of science and engineering-based federal libraries used in this paper can be found in Appendix A.

Web site evaluations were conducted on October 19th and October 26th 2002. As of those dates, two of the twenty-two libraries that originally had functioning Web sites were experiencing major technical difficulties relating to their site. These two library Web sites were eliminated from the study since comprehensive evaluation was not
possible due to those technical problems; this then reduced the final number of library Web sites evaluated to twenty.

After the final selection of library Web sites was complete, evaluation criteria was compiled, reviewed and revised. This criteria was based upon information from several sources including: Spivey’s “The Vocabulary of Library Home Pages,” Downing’s “An Initial Survey and Description of How Selected United States Government Libraries, Information Centers, and Information Services Provide Public Access to Information via the Internet,” Bauer and Scharl’s “Quantitative Evaluation of Web Site Content and Structure” and Eschenfelder’s (et al.) “Assessing U.S. Federal Government Websites.” Initially, twenty evaluation criteria were composed for the research. After conducting a small pilot test, criteria were revised and made more explicit or omitted to eliminate redundancy. This resulted in a final count of fourteen criteria. The list of criteria is below; detailed explanation of each criterion can be found in Appendix B:

- Information about public access to online information explicitly stated?
- Information about public access to library's physical location explicitly stated?
- Access to online catalog provided to public?
- Access to online serials provided to public?
- Access to online databases provided to public?
- Access to agency/department publications available online?
- Search function specific to library pages available?
- Browse function for topics available?
- Site map available?
- Presence of jargon? If yes, definition provided?
• Presence of acronyms? If yes, definition provided?
• Frequently Asked Questions (FAQ) section available?
• Help section available?
• Feedback via email/form available?

The results of the evaluation of the twenty science and engineering-based federal Web sites can be found in the following section.

Results and Analysis

After the initial evaluation of the twenty Web sites was completed, criteria results for each library Web site were compiled in a single table (Appendix C) and simple percentage analysis for each criterion was performed (Appendix D). Web site assessment results for each criteria were divided into five major components: information and resource public policy statements, information and resource public accessibility, information and resource identification, content vocabulary, and help features/online-feedback.

Information and Resource Public Policy Statements

Information and resource policy statements exist to inform the public about the extent of access they can expect from that particular library. Explicit statements occurring within a library’s Web site pertaining to the public’s ability to access information qualified as public policy statements for the purposes of this research. In order to assess the occurrence of public policy statements occurring within a library’s Web site, two policy criteria were utilized: information about public access to online
information was explicitly stated and information about public access to the library’s physical location was explicitly stated.

The first of these two criteria, information about public access to online information was explicitly stated, evaluated the library Web site based on any statements regarding the overall use of the Web site and its contents by the general public. This researcher found only three of the twenty library Web sites evaluated had statements regarding their public access policy to online information. The overwhelming majority (85%) of sites failed to provide any information regarding their public use policy.

The second criterion, information about public access to the library’s physical location was explicitly stated, determined if the library Web site contained information pertaining to the general public’s access of the library’s physical location. Of the twenty library Web sites, exactly half included statements regarding physical location access and the public. Interestingly, of the three libraries that had public use policies regarding online information and resources, only two also had physical location public use policies. The third contained only an online policy statement.

Public policy statements exist to help the user determine what resources and materials they can and cannot actually use or access. The presence of such statements frees the user from the frustration of using trial-and-error strategies to determine what library resources are reserved specifically for federal employee use and what resources are available to the general public. It was surprising and disappointing to see that so few libraries incorporated policy statements into their Web sites despite the widely varying levels of actual access available to users (see the Information and Resource Public Accessibility section). This researcher speculated that the ability to actually use a
library’s Web site or the listing of library location and hours on the Web site served as implied public use policy statements. However, implied policy statements may not be adequate substitutions for clearly written policy declarations from the user’s perspective.

**Information and Resource Public Accessibility**

Information and resource public accessibility referred to the actual accessibility that users from the general public have to a library’s online resources including online catalog(s), serials, databases, and agency/department publications. Any level of public accessibility of these resources qualified a site as accessible. However, it must be stressed that actual levels of accessibility varied widely from site to site. Some sites included more publicly accessible items than other sites. The presence of only one publicly accessible resource for any given category qualified the site for a “Yes” response. It was not within the scope of this research paper to quantify different levels of accessibility beyond a simple “Yes” or “No.”

Four criteria were assembled to determine the accessibility of information and resources within a library’s Web site. The criteria employed were: access to the library’s online catalog was provided to the public, access to any online serials was provided to the public, access to any online databases was provided to the public, and access to agency publications was available via the library’s Web site.

The first criterion, access to online catalogs, evaluated library Web sites based on the presence of an online catalog of library holdings coupled with any searching and/or browsing functions available to the general public user. Of the twenty Web sites reviewed, fifteen (75%) provided the public with access to an online holdings catalog. When this figure was compared with the results for the other three criteria, the difference
in accessibility was quite fascinating. None of the other three criteria evaluations resulted in “Yes” responses for more than fifty percent of the Web sites. The reason behind this disparity cannot be determined from the research conducted for this paper, but raises interesting questions regarding differences among resource accessibility that deserve further investigation.

“Access to online serials was provided to public” served as the second evaluation criterion related to information and resource accessibility. This criterion was used to determine if library Web sites provided public access to the full-text any online serials. In stark contrast to the online catalog accessibility findings, only seven (35%) libraries provided access to at least one online serial that supplied full-text to the general public. The reasons behind the small percentage of libraries providing access to online serials would be speculation, but it may have been likely that licensing agreements and restrictions were factors in such limited public user access. Additionally, this finding did not adequately express the diversity of access (i.e. the actual number of full-text journals publicly accessible) among libraries. A measurement regarding diversity of access may have been a potentially more useful finding than the more generic access issue addressed here.

The third criterion regarding information and resource public access comprised the provision of public access to online databases. Library Web sites were evaluated based on the presence of online databases that were publicly accessible. The findings for online databases were very similar to the serials findings; eight (40%) of the twenty library Web sites provided some sort of access to at least one online database. Also similar to the serials findings, the reasons regarding the low percentage of libraries
providing online database access were outside this paper’s scope and could only be the subject of speculation. However, it was likely that licensing agreements between libraries and vendors once again play a role in restricted access. Finally, again similar to the serials issues, this evaluation did not indicate what library Web sites offered more/fewer online databases for public usage. An in-depth quantitative comparison of publicly accessible databases provided by library Web sites may be a more informative and useful assessment than the general evaluation provided in this research paper.

The final criteria utilized to assess public accessibility to library information and resources consisted of evaluating access to agency or departmental online publications. Accessing government-produced documents online has become a topic of extreme interest to many public users and discussion of accessibility issues pertaining to government publications is not uncommon. Papers such as Souza and Dodsworth’s “Government Information Today: The Dilemma of Digital Collections” and Sprehe’s “Government Information: From Inaccessibility to Your Desktop and Back Again” specifically addressed the issue of government publication availability online. Thus, an evaluation of publication accessibility via library Web sites may be quite useful to those investigating the prevalence of full-text access to online publications. The publication criterion was used to evaluate if libraries provided access in some form (either by direct access or by routing the user to another site that provided access) of the full text of agency/department publications. Ten libraries (50%) of the twenty reviewed provided either direct access or routing to online government publications with full-text availability. This appeared to be an unsurprising figure, considering online serials and databases findings indicated less than half of the library Web sites supplied online access,
but those who advocate the need for public access to online publications are sure to be disappointed. Additionally, this finding was not descriptive in nature and no statements regarding the scope and overall inclusiveness of agency/department publications via library Web sites could be made. This was yet another area that deserves more thorough investigation before any conclusive statements can be made.

Public accessibility of information and resources has been addressed in the above criteria by considering each criterion separately. Table 1 provides a counterpoint to this by establishing an overview of the total number of criteria for which any given library has a “Yes” response. Libraries that had at least one available online resource or more accounted for ninety percent of the total number of libraries reviewed. Conversely, libraries that had no available online resources accounted for only ten percent of the library Web sites. As previously stated for the individual criteria, this overview of the combined criteria did not address the comprehensiveness of access provided by each library and this should be taken into account when considering the results.

Table 1

Combined Criteria Overview:
Information and Resource Public Accessibility

<table>
<thead>
<tr>
<th>Total number of criteria for which the library has a “Yes” response</th>
<th>Number of libraries meeting criteria</th>
<th>Percent libraries meeting criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
<td>35%</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>1</td>
<td>7</td>
<td>35%</td>
</tr>
<tr>
<td>0</td>
<td>2</td>
<td>10%</td>
</tr>
</tbody>
</table>
**Information and Resource Identification**

Information and resource identification were the aspects of a library’s Web site that allowed users to search for and identify materials and information of interest to that particular user. Since locating topics or items of interest can be a source of frustration for many users, evaluation of the frequency of occurrence of finding aids was a worthwhile endeavor. Three criteria were developed to evaluate the occurrence of identification or finding aids within a library’s Web site: availability of a search function specific to library pages, presence of a topic-oriented browse function, and the existence of a site map.

The first of these three criteria, the availability of a search function specific to the library pages, was used to determine if public users were provided with the capability of searching the library’s Web site to locate topics of interest. Any site that provided a search function, no matter how basic, that pertained to the library’s Web pages qualified as meeting this criterion. Only four (20%) library Web sites contained a library-specific search function. This researcher found that result to be both surprising and disappointing, as her experience has generally demonstrated that search functions are frequently the fastest method by which to locate items of interest.

Topical browse functions were the subject of the second evaluative criterion. This criterion was utilized to ascertain if a library had any type of browsing capability that enabled public users to peruse Web page content by topic or subject. In this instance, even fewer libraries supported a topical browse function than a search function. Just two (10%) of the libraries contained a browse function. Since only four of the library Web sites reviewed had search functions and only slightly more than that had site maps, the
speculation that library Web pages utilize other identification/location functions instead of a browse function would not be very likely.

The final information and resource identification criterion assessed was the presence of a site map pertaining to the library. For the purposes of this research, the site map could have been specific to the library itself or could have been part of the overall parent site, providing that the library Web page content was distinctly identifiable within the parent site map. Site maps are valuable as they generally provide a textual representation of the site contents and its overall organization. This could be especially helpful when a site is very large or the home page is visually complex. Therefore, it was surprising to find that only six (30%) of the library Web sites viewed had a site map. It may be that some libraries intend for their “text-only” pages to serve as the site map. However, the structure of a site map, as defined for this paper, implied an ordered overview of site content and organization whereas “text-only” pages were generally just page contents minus graphics, colors, scripts, and other add-in features. In general, this researcher believes text-only pages were not acceptable substitutes for site maps since their customary purpose was not to provide a structured overview but rather to remove visual impediments from a page’s textual content.

The three separate criteria for evaluating information and resource identification were addressed in the preceding paragraphs. As with section regarding public accessibility of information and resources, it may be helpful to consider the criteria as a collective whole. Table 2 presents a combined overview of the criteria. It was overwhelmingly obvious that the absence of any type of information and resource
identification function was half again as common as the presence of the other three occurrences combined.

**Table 2**

*Combined Criteria Overview: Information and Resource Identification*

<table>
<thead>
<tr>
<th>Total number of criteria for which the library has a “Yes” response</th>
<th>Number of libraries meeting criteria</th>
<th>Percent libraries meeting criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>1</td>
<td>5</td>
<td>25%</td>
</tr>
<tr>
<td>0</td>
<td>12</td>
<td>60%</td>
</tr>
</tbody>
</table>

**Content Vocabulary**

Content vocabulary referred to language idioms contained within library Web page contents. Spivey’s 2000 “The Vocabulary of Library Home Pages: An Influence on Diverse and Remote End-Users” expounded on the consequences that idiomatic language can have on users. Spivey asserted that unclear vocabulary could be confusing and troublesome for users. The presence of idioms in the content vocabulary for the twenty library Web sites was determined by using two criteria: jargon was present on the site, and acronyms were present on the site. For “Yes” responses to these criteria, the presence or absence of definitions of the jargon or acronyms was also determined.

For this research paper, jargon was defined as any specialized or technical language/terminology that existed within any Web site pages. Of the twenty Web sites, 12 (60%) contained at least one occurrence of jargon. Of those twelve sites, not a single one provided an explanation or definition of the jargon terminology used.

The presence of acronyms on library Web sites was the second criterion on which Web site content vocabulary was examined. Acronyms were defined as “word(s) formed
from the initial letters of a name or by combining the initial letters of a series of words (Berube 76)” (see also Appendix B). Fourteen (70%) of the reviewed Web sites included at least one occurrence of an acronym. Four (28%) of those fourteen actually provided acronym explanations or definitions for at least one occurring acronym. Given the utter lack of a definition for any jargon, this finding was unexpected.

The final aspect considered regarding content vocabulary was determining the presence of both jargon and acronyms on a site based on the above findings. The number of library Web sites that had both jargon and acronyms present was twelve (60%). In fact, every site that had an occurrence of jargon also contained an acronym. This result was not unanticipated and clearly demonstrated that the presence of jargon and acronyms together within a Web site was a common occurrence. Unfortunately, this indicated that users will likely not only encounter idiomatic language on a common basis within library Web pages, but also will find, in most cases, definitions or explanations to clarify this language do not exist.

**Help Features/Online-Feedback**

Help features and online feedback were grouped together in this paper as both involve a means of seeking assistance from the library’s Web site. Help features were the Web site elements that furnished the user with any type of assistance regarding site use or contents. Online feedback provided an avenue for users to contact the library electronically, via the Web site, for help with questions that are not addressed within the Web site itself. The three criteria used to assess help features/online feedback were:
a Frequently Asked Questions (FAQ) section available, was a help section present, and was feedback via email or an online form available to users.

Frequently Asked Questions (FAQ) sections consisted of a list of the most commonly asked questions that pertained to Web sites, as well as the library’s answer/response to that question. FAQ sections were designed to answer common questions rapidly, helping to free the user from a detailed help search. The results of examining library Web sites for FAQ sections revealed that this feature was not a commonly included aspect. Only three (15%) of the twenty libraries hosted an FAQ section as part of the Web site. This result was in contrast with results the author had expected to find. She had believed this type of section a popular feature on library Web sites due to their easy-to-use, yet quite helpful, nature.

Similar to an FAQ section, a help section was designed to assist the user by providing general assistance to users with questions or problems regarding the site and its contents. Help sections generally supplied users with a variety of help topics and provided more in-depth assistance than an FAQ section. In order to meet the specified criteria, the Web sites examined for this paper were required to have a general help section that addressed the Web site as a whole. Specific help pages that only addressed one aspect of the site, such as an online catalog, did not count. Based on this criteria, only one (10%) of the library Web sites contained a general help section. This extremely low percentage was unexpected and, unfortunately, determining the reason help sections were absent from all but one Web site was outside the scope of this paper. One possible cause, although purely speculation at this point, might be that some libraries structured
separate help sections around each area of their Web site and did not consider combining these sections into a collective whole.

The third criterion for the help features/online feedback section dealt with the availability of online feedback within the library Web site. Online feedback allowed users to contact the library staff with questions, comments or requests for assistance. Email and online forms were the general format in which feedback was submitted to the library. For the purposes of this research, library sites that provided feedback mechanisms that contacted only the Web master, and not the library staff, did not qualify as meeting the availability criteria. Only those libraries that routed feedback to the library staff themselves were considered to have met this criterion. Unlike the two aspects addressed above, the results for online feedback indicated that the majority of library Web sites sponsored a feedback mechanism of some type. Fifteen (75%) of twenty library Web sites supplied users with an opportunity to submit feedback via email or online form. Although feedback via email and online forms does not provide the kind of “instantaneous” assistance that help or FAQ sections might, it does provide users with an avenue to utilize when problems or questions are encountered.

The preceding sections all address each criterion both singly and as a part of the collective whole of the section. Table 3 presents the findings for the combined criteria results of the “Help Features/Online Feedback” section. Although each criteria, when considered separately, resulted in fewer than expected qualifying Web sites, the combined results revealed that the overwhelming majority (75%) of libraries provided at least some mechanism for assisting users in need of further information.
Table 3
Combined Criteria Overview: Help Features/Online Feedback

<table>
<thead>
<tr>
<th>Total number of criteria for which the library has a “Yes” response</th>
<th>Number of libraries meeting criteria</th>
<th>Percent libraries meeting criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>1</td>
<td>12</td>
<td>60%</td>
</tr>
<tr>
<td>0</td>
<td>5</td>
<td>25%</td>
</tr>
</tbody>
</table>

Conclusions

Arguably the largest publisher in the world today, the United States federal government is also one of the most prolific producers of science and technology information (Fraser and Fisher 33). In the past, one of the difficulties regarding government-produced information has been lower visibility of such information compared with commercially-produced information and the perceived inaccessibility of government information, even once it is recognized as potentially useful. However, the advent of the World Wide Web has both increased visibility and accessibility of government-produced information to the general public. Federal libraries often play a large role in amassing information and resources and creating some type of access for both federal employees and the general public. Therefore, library Web sites may often be the first point of contact for the general public interested in seeking specific kinds of government-produced information or resources. Since Web sites can serve as this first contact point, an evaluation of library Web site contents can provide an idea of how libraries address public use access issues. Comparisons among federal library Web sites provide an overview of the differences among libraries and how they manage public use access topics.
Based on the research conducted for this paper, it is difficult to make anything other than sweeping generalizations about the current state of science and engineering-based federal library Web sites. However, generalizations can sometimes lead to other productive lines of inquiry. The results discussed within this paper demonstrate that too many library Web sites do not appear to provide public users with adequate instruction, information, or assistance. Perhaps some of these limitations are understandable; for example, licensing agreements can play a role in restricting public access to online serials or databases. However, it is not clear why libraries forego basic user support features such as an online help-section or a keyword search function. One would suspect that such features could only aid the library in providing accessibility to the public and so their absence is bewildering. The reasons behind inclusion or exclusion of certain aspects remain unexplored. This researcher believes that perhaps by continuing to further investigate, evaluate and compare library Web sites, these reasons can be uncovered and their effect on user services can be better understood.

**Suggestions for Further Research**

Federal government information plays different roles for various groups of the general public. Since the information revolution and movement towards electronic availability and dissemination of information has arrived, it is imperative that outlets for federal government information, including library Web sites, are examined and studied. Ascertaining the true state of federal library Web sites, especially those that are science and engineering-based, as they relate to public accessibility issues, is an area that warrants more research and scrutiny. Broad overviews, such as this paper, can only graze the surface of the actual state of library Web sites and public accessibility. More in-depth
content analysis that would determine exactly what types of information are included in individual Web sites could help reveal this. Also, library surveys and interviews with library staff regarding the criteria or policies that determine library Web site content and features would benefit those interested in examining content accessibility issues. Potentially, this could also identify some causes of disparity among federal library Web sites. The final suggested area for further research pertains to user studies. User studies of any type that relate to information and resource accessibility could help pinpoint aspects of accessibility that are important to the user themselves.
## Appendix A

### Selected Science and Engineering-Based Federal Libraries

<table>
<thead>
<tr>
<th>Library Name</th>
<th>Current Name (from library Web site)</th>
<th>Universal Resource Locator (URL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forest Products Laboratory Library</td>
<td>Forest Products Laboratory Library</td>
<td><a href="http://www.fpl.fs.fed.us/IS/library.htm">http://www.fpl.fs.fed.us/IS/library.htm</a></td>
</tr>
<tr>
<td>Tiburon Laboratory Library</td>
<td>Santa Cruz Laboratory Library</td>
<td><a href="http://www.pfeg.noaa.gov/tib/lab_library/index.html">http://www.pfeg.noaa.gov/tib/lab_library/index.html</a></td>
</tr>
<tr>
<td>Leetown Science Center, Technical Information Services</td>
<td>Leetown Science Center, Technical Information Services</td>
<td><a href="http://lsc-tis.library.net/catalog.htm">http://lsc-tis.library.net/catalog.htm</a></td>
</tr>
</tbody>
</table>
### Appendix A  
*Continued*

<table>
<thead>
<tr>
<th>Library Name</th>
<th>Current Name (from library Web site)</th>
<th>Universal Resource Locator (URL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department of Transportation Library</td>
<td>Department of Transportation Library</td>
<td><a href="http://dotlibrary.dot.gov/">http://dotlibrary.dot.gov/</a></td>
</tr>
<tr>
<td>EPA, Region 3</td>
<td>Mid-Atlantic Regional Center for Environmental Information</td>
<td><a href="http://www.epa.gov/reg3rci/index.htm">http://www.epa.gov/reg3rci/index.htm</a></td>
</tr>
<tr>
<td>National Health and Environmental Effects Research Laboratory, Gulf Ecology Division Library</td>
<td>National Health and Environmental Effects Research Laboratory, Gulf Ecology Division Library</td>
<td><a href="http://www.epa.gov/ged/bld42.htm">http://www.epa.gov/ged/bld42.htm</a></td>
</tr>
<tr>
<td>NASA-AMES Research Center, Research Information Resources Branch Library</td>
<td>NASA-Ames Library</td>
<td><a href="http://ameslib.arc.nasa.gov/">http://ameslib.arc.nasa.gov/</a></td>
</tr>
<tr>
<td>Delaware River Basin Commission Library</td>
<td>Delaware River Basin Commission Library</td>
<td><a href="http://www.state.nj.us/drbc/library.htm">http://www.state.nj.us/drbc/library.htm</a></td>
</tr>
<tr>
<td>Smithsonian Institution Libraries, Smithsonian Environmental Research Center Branch</td>
<td>Smithsonian Environmental Research Center Library</td>
<td><a href="http://www.sil.si.edu/libraries/serc-hp.htm">http://www.sil.si.edu/libraries/serc-hp.htm</a></td>
</tr>
</tbody>
</table>
Appendix B

Web Site Evaluation Criteria

Information about public access to online information explicitly stated?
A statement does or does not exist on the site that provides an explicit explanation about the public’s ability to access online information and resources.

Information about public access to library's physical location explicitly stated?
A explicit statement regarding the public’s ability to access the physical library in person does or does not exist on the Web site. A sole listing of library hours with no corresponding statement regarding the public does not qualify as an explicit statement.

Access to online catalog provided to public?
The library Web site does or does not provide access to an online holdings catalog. If a online catalog exists, it can pertain to either that specific library or it can be a department/agency-wide holdings catalog.

Access to online serials provided to public?
This library Web site does or does not provide access to online serials, including any otherwise freely publicly accessible serials that the library has chosen to add to their serials holdings page. Access must include full-text availability and not be limited only to abstracts or table of contents information. A “Yes” response does not indicate that ALL serials are publicly available, only that the library supplies links to at least one serial that is publicly accessible from the serials listing page.

Access to online databases provided to public?
The library Web site does or does not provide access to online databases, including any freely publicly accessible databases that the library has chosen to add to their database listing. A “Yes” response does not indicate ALL databases listed are publicly available only that the Web site provides links to at least one publicly accessible database.

Access to agency/department publications available online?
The library Web site does or does not provide either a separate section pertaining to agency/department publications or a link that routes the user to agency or department-produced publications. Access indicates that freely accessible full-text publications are available online to the public. Any links routing the user solely to fee-based publication providers, such as NTIS, do not qualify for a “Yes” response.

Search function specific to library pages available?
The library Web site does or does not provide a search function specifically pertaining to the library’s Web site. In this context, a search function means a text box that allows the user to search the library pages for content by keyword is present. A “Yes” response to this question does not indicate anything other than the presence of a basic search function.
Appendix B
Continued

Browse function for topics available?
A topical browse feature does or does not exist on the Web site. A “Yes” response to this question indicates a means to browse topics besides the site map exists on the Web pages.

Site map available?
The library Web site does or does not contain a textual representation of the structure and topics of the library’s Web site. A site map can be included as part of the overall agency site map but must have library structure and content included. This is NOT the “text only” version of the Web site.

Presence of jargon? If yes, definition provided?
The library Web site does or does not contain jargon (specialized or technical language). If jargon is present on the site, does a definition or explanation of the jargon exist on the site?

Presence of acronyms? If yes, definition provided?
The library Web site does or does not contain acronyms (word(s) formed from the initial letters of a name or by combining the initial letters of a series of words) (Berube 76). If acronyms are present on the site, does a definition or explanation of the acronym exist on the site?

Frequently Asked Questions (FAQ) section available?
The library does or does not contain a section entitled Frequently Asked Questions (FAQ) that addresses common questions about either the library’s resources or the library’s Web pages.

Help section available?
A help section that encompasses the entire library Web site does or does not exist. To qualify for a “Yes” response, the help section must provide assistance for a variety of library for a variety of library functions or resources and not just for one specific resource or function.

Feedback via email/form available?
Is a way to contact the library via email or an online form to ask questions or give feedback/suggestions. This must be to the library/librarian, NOT the webmaster.
Appendix C

Evaluation Criteria Results by Library Web Site

<table>
<thead>
<tr>
<th>Current library name</th>
<th>Information about public access to online information explicitly stated?</th>
<th>Information about public access to library physical location explicitly stated?</th>
<th>Access to online catalog provided to public?</th>
<th>Access to online serials provided to public?</th>
<th>Access to online databases provided to public?</th>
<th>Search function specific to library pages available?</th>
<th>Browse function for topics available?</th>
<th>Site map available?</th>
<th>Presence of Jargon? If yes, definition provided?</th>
<th>Presence of Acronyms? If yes, definition provided?</th>
<th>Frequently Asked Questions (FAQ) section available?</th>
<th>Help section available?</th>
<th>Feedback via email/form available?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 National Wildlife Research Center Information Services</td>
<td>Y(^1)</td>
<td>N(^2)</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>2 Forest Products Laboratory Library</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>N</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>3 NOAA Beaufort Laboratory, Rice Library</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>4 NOAA Central Library</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y/N</td>
<td>Y/N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>5 Boulder Laboratories Library</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y/Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>6 Santa Cruz Laboratory Library</td>
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<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N/Y</td>
<td>N/Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>7 Patent and Trademark Office, Scientific and Technical Information Center</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N/Y</td>
<td>N/Y</td>
<td>N</td>
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<td>N</td>
</tr>
<tr>
<td>8 ARC Library</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N/Y</td>
<td>Y/Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>9 Argonne Information Management System</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N/Y</td>
<td>N/Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>10 Los Alamos National Laboratory Research Library</td>
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<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N/Y</td>
<td>Y/Y</td>
<td>Y</td>
<td>Y/Y</td>
<td>Y/Y</td>
<td>Y/Y</td>
</tr>
<tr>
<td>11 Department of the Interior Library</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N/Y</td>
<td>Y/N</td>
<td>Y/N</td>
<td>N</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
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<td>--------------------------------------------</td>
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<td>-----------------------------------------------</td>
<td>------------------------------------------------</td>
<td>------------------------------------------------</td>
<td>---------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Leetown Science Center, Technical Information Services</td>
<td>Y¹</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>N/Y/N</td>
<td>Y/N</td>
<td>N/Y/N</td>
<td>N/Y/N</td>
<td>Y/Y</td>
</tr>
<tr>
<td>Department of Transportation Library</td>
<td>Y²</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N/N</td>
<td>N/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/Y</td>
</tr>
<tr>
<td>FAA WJH Technical Center Library</td>
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<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N/N</td>
<td>N/N</td>
<td>N/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>N/Y/N</td>
<td>N/Y/N</td>
<td>Y/Y</td>
</tr>
<tr>
<td>Environmental Forensics Library</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N/N</td>
<td>N/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>N/Y/N</td>
<td>N/Y/N</td>
<td>Y/Y</td>
</tr>
<tr>
<td>Mid-Atlantic Regional Center for Environmental Information</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N/Y</td>
<td>Y/Y</td>
<td>Y</td>
<td>Y/Y</td>
<td>Y/Y</td>
<td>Y/Y</td>
</tr>
<tr>
<td>National Health and Environmental Effects Research Laboratory, Gulf Ecology Division Library</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N/N</td>
<td>N/N</td>
<td>N/N</td>
<td>N/N</td>
<td>N/N</td>
<td>N/N</td>
</tr>
<tr>
<td>NASA-Ames Library</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N/N</td>
<td>N/N</td>
<td>N/Y</td>
<td>N/Y</td>
<td>N/Y</td>
<td>N/Y/Y</td>
<td>N/Y/Y</td>
<td>N/Y/Y</td>
</tr>
<tr>
<td>Delaware River Basin Commission Library</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N/Y</td>
<td>Y/Y</td>
<td>Y/Y</td>
<td>N/Y/Y</td>
<td>N/Y/Y</td>
<td>N/Y/Y</td>
</tr>
<tr>
<td>Smithsonian Environmental Research Center Library</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N/Y</td>
<td>N/Y</td>
<td>Y/N</td>
<td>Y/Y</td>
<td>N</td>
<td>N/Y/Y</td>
<td>Y/Y</td>
</tr>
</tbody>
</table>

¹ Y=Yes  
² N=No
Appendix D

Results by Individual Evaluation Criteria

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Number of Libraries with a &quot;Y&quot; for the question</th>
<th>Percent of libraries with “Y” for the question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information about public access to online information explicitly stated?</td>
<td>3</td>
<td>15%</td>
</tr>
<tr>
<td>Information about public access to library's physical location explicitly stated?</td>
<td>10</td>
<td>50%</td>
</tr>
<tr>
<td>Access to online catalog provided to public?</td>
<td>15</td>
<td>75%</td>
</tr>
<tr>
<td>Access to online serials provided to public?</td>
<td>7</td>
<td>35%</td>
</tr>
<tr>
<td>Access to online databases provided to public?</td>
<td>8</td>
<td>40%</td>
</tr>
<tr>
<td>Access to agency/department publications available online?</td>
<td>10</td>
<td>50%</td>
</tr>
<tr>
<td>Search function specific to library pages available?</td>
<td>4</td>
<td>20%</td>
</tr>
<tr>
<td>Browse function for topics available?</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>Site map available?</td>
<td>6</td>
<td>30%</td>
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Works Cited


