

TECHNOLOGY
STANDARDS
for
South Carolina
Public Libraries
2005



south carolina
STATE LIBRARY

INTRODUCTION

The South Carolina State Library (SCSL) has a long tradition of providing public library standards for use in the state. The current set of standards was last updated in 1998, and while still relevant to many aspects of public librarianship, it does not address the current reality of technology in South Carolina public libraries. In producing "Technology Standards for Public Libraries", the State Library seeks to build upon its tradition of strong public library standards while attempting to provide guidance for libraries as they pursue excellence in the area of technology.

A committee of SCSL Library Development staff, Information Technology staff, and public library staff developed this set of technology standards during the spring and early summer of 2005. A number of other sources were drawn upon for inspiration, information, and guidance, both by Library Development and by the advisory committee members. After a mature draft was written, the State Library asked four other public librarians and technology staff to serve as reviewers. They provided essential feedback to the committee for one final set of changes.

As this set of technology standards is the first of its kind in South Carolina, the committee agreed upon two very important points: that these standards should be reviewed six months after their release, and that they should be reviewed every two years thereafter so that they remain relevant.

The State Library, and in particular the Library Development staff involved in the creation of these standards, wish to express a special and heartfelt thanks to the members of the advisory committee:

- Gene Brunson, System Administrator, Berkeley County Library, Committee Chair
- Penny Harvey, Director, Kershaw County Library
- Bruce Heimburger, Technologies Administrator, Richland County Public Library
- Cynthia Kent, Systems Librarian, Lexington County Public Library
- Tom Lowrimore, Coordinator of Systems, Spartanburg County Public Libraries
- Catherine Buck Morgan, Director of Information Technology Services, South Carolina State Library
- Thomas Reddick, Library Development Consultant, South Carolina State Library
- Felicia Vereen, Library Development Consultant, South Carolina State Library

In addition, tremendous thanks go to the four reviewers:

- David Lyon, Director, York County Library
- Ray McBride, Operations and Technology Manager, Greenville County Library System
- Yolanda McCormick, Director, Dillon County Library System
- Mike Poole, System Administrator, Fairfield County Library

Approved by the South Carolina State Library Board: _____ date _____ (pending approval)

PLANNING, BUDGETING, and POLICIES

Technology has become an integral part of the daily operations of a public library. Even the most basic activities connected with the image of a library are connected to technology, whether it is accessing the library's catalog of items or basic circulation functions. Technology is no longer a special service; it is a backbone service. It is helpful if libraries cooperate with other libraries, organizations, entities, and persons able and willing to assist the library in fulfilling its mission, goals, and objectives. While partnerships can often be beneficial in funding technology-based services, it is critical that libraries assume responsibility for their own services, include technology planning during overall strategic planning and budgeting, and establish appropriate policies for its use.

PLANNING: THE LIBRARY PLANS FOR TECHNOLOGY AND TECHNOLOGY SERVICES

The library has a board-approved technology plan that addresses at least two years and reflects the library's overall strategic plan.

The library's technology plan includes a hardware replacement schedule.

The library reviews and updates its technology plan annually.

The library has a procedure for the appropriate disposal of computers and equipment that is in compliance with local procurement procedures and environmental regulations.

The library maintains documentation for its network, including current administrative passwords, network maps and settings, hardware and software inventories, and emergency support numbers.

The technology manager is responsible for specifying hardware and software for purchase.

The library addresses available technology and related services in its public relations and marketing plan.

BUDGETING: THE LIBRARY CONSIDERS TECHNOLOGY NEEDS WHEN BUDGETING FOR THE LIBRARY.

The library has a line item in its annual budget designed for technology.

The library actively pursues other sources of funding for technology outside of its local budget, e.g. LSTA grants, gifts, etc.

The library seeks E-rate reimbursement for appropriate items.

POLICIES: THE LIBRARY MAINTAINS CURRENT, PUBLICLY AVAILABLE POLICIES ON RELEVANT TECHNOLOGICAL ISSUES.

The library actively promotes and defends users' electronic privacy and intellectual freedom.

The library has a current board-approved Internet use policy.

The library's Internet policy is posted near public Internet computers, available at service points in the library, and posted on the library's web site.

The library's Internet policy contains clear statements regarding filtering, monitoring, CIPA, and South Carolina budget proviso compliance.

The library's Internet policy clearly describes filter disabling and challenge procedures.

The library's Internet policy clearly defines prohibited behaviors and consequences for policy violations.

The library's Internet policy will state that the library will only install software to which it holds appropriate licenses.

The library has an up-to-date, board-approved acceptable use policy governing staff use of library technology.

STAFFING

The staff of a public library is its most important investment. It is for this reason (and many others) that public libraries expend most of their financial resources on the staff; therefore, it is important that the investment be strategic.

The rapidly changing field of technology presents a unique challenge in terms of staffing. Unlike more established fields, there is no one best way to determine competency in the position of systems librarian, nor is there one best combination of training and education that defines a person's fitness to hold the position. Typically, the position draws from a diverse pool of people whose combination of education and experience gives them the characteristics to do well in the position. Therefore, it is impossible to specify what qualifications are needed in a systems librarian.

COMPETENCIES: THE LIBRARY ACKNOWLEDGES THAT TECHNOLOGY SKILLS ARE IMPORTANT IN A WELL-DEVELOPED STAFF.

The library will establish technology competencies for all staff positions. (See Appendix 2 for resources)

The library will provide all staff with opportunities for training in order to meet technology competencies.

LEVELS OF STAFFING: THE LIBRARY EMPLOYS TRAINED STAFF TO SUPPORT TECHNOLOGY SERVICES.

The library employs an adequate number of technology staff to serve its population:

- Population below 50,000—at least 1 part-time FTE
- Population between 50,000 – 74,999—at least 1 full-time FTE
- Population 75,000 + --1 full-time FTE per 50,000 population

If the library employs a systems professional in a full-time, dedicated position, this person actively participates in technology planning, implements board-approved policies, and acts as the chief advisor to the library director and board in the creation of relevant policies.

If the library employs a part-time technology position or a full-time position with split duties, this person substantially participates in technology planning and policy processes, and performs the tasks related to the library's technology services.

ACCESS AND SERVICES

A mission of every public library is to provide access to information and materials to the citizens it serves. On the surface, this seems an obvious statement, but a great deal of planning and organization is required to ensure that quality services exist for patrons. The following standards relate to the most basic technology services provided by today's public libraries.

ACCESS: THE LIBRARY UTILIZES TECHNOLOGY TO PROMOTE USERS' ACCESS TO INFORMATION.

Patrons have access to the library's integrated library system (ILS) and other electronic information resources outside the library 24 hours a day, 7 days a week.

The library provides a single login for registered users to all licensed electronic information resources.

Library complies with the Americans with Disabilities Act (ADA) in all electronic services.

WEB SITE: THE LIBRARY PROVIDES USEFUL, CURRENT INFORMATION THROUGH A WEB SITE.

The library maintains a web site with current information and resources.

The library's web site will include contact information and locations for all of its outlets.

The library's web site is built to World Wide Web Consortium (W3C) standards for validation and accessibility.

SERVICES: THE LIBRARY FACILITATES USE OF AVAILABLE ELECTRONIC DATABASES, INTERNET INFORMATION SOURCES, AND LOCALLY INSTALLED SOFTWARE PROGRAMS.

The library provides public access to Internet browsers, productivity software (e.g. office suite), and educational software.

Trained library staff are available to assist the public with utilization of technology during all operating hours (e.g. PCs, software, satellite downlink, etc.).

The library provides printing in black and white.

The library provides printing in color.

The library allows the use of removable/portable storage media on public use computers (e.g. floppy disks, CDs, USB/Flash drives.)

INFRASTRUCTURE

Library technology without the appropriate infrastructure will not function efficiently or securely. These standards address the basics of library hardware, software, networking infrastructure, and security.

HARDWARE: THE LIBRARY TECHNOLOGY STAFF SELECTS AND MAINTAINS HARDWARE THAT FACILITATES EFFICIENT ACCESS TO LIBRARY MATERIALS AND SERVICES.

The library maintains warranties and maintenance agreements for hardware that the library cannot afford to replace in a given budget year.

The library provides one (1) public Internet access computer for every 1500 population.

The library has an uninterruptible power supply (UPS) for its critical hardware, including the integrated library system (ILS) server(s).

The library ensures that all hardware can be seamlessly added to the network (compatible with existing hardware, software, etc.)

SOFTWARE: THE LIBRARY TECHNOLOGY STAFF SELECTS AND MAINTAINS SOFTWARE THAT FACILITATES EFFICIENT ACCESS TO LIBRARY MATERIALS AND SERVICES.

The library maintains support agreements on its integrated library system (ILS).

The library's integrated library system (ILS) should be updated so that it is at least within one major release of the current release.

The library should only use operating systems currently supported by their manufacturers.

The library has established procedures for backing up critical data daily and stores at least one current copy of the data in a secure, off-site location.

NETWORKING: THE LIBRARY MAINTAINS A FUNCTIONING NETWORK.

The library should ensure that routers are retained only for their vendor-designated life cycle or are covered by a lifetime warranty.

The library has sufficient bandwidth to effectively support ILS functions and Internet access.

SECURITY: THE LIBRARY MAINTAINS A SECURE NETWORK.

The library has a firewall.

The library has and maintains up-to-date virus protection for all library computers.

The library has a policy addressing use of removable media on its public computers.

The library monitors critical systems for security breeches and/or illegal access.

The library has procedures in place for the removal of “malware” (spyware, adware, etc.).

EQUIPMENT FOR USE BY STAFF: THE LIBRARY PROVIDES STAFF WITH THE TOOLS NECESSARY TO PROVIDE EXCELLENT SERVICE.

The library will provide staff with adequate technology to efficiently perform job duties.

FACILITIES: LIBRARY FACILITIES SUPPORT EXISTING TECHNOLOGY.

The library will maintain facilities that are compliant with current Institute of Electrical and Electronics Engineers (IEEE) standards.

The library has a disaster recovery plan that addresses possible incidents (e.g. roof/plumbing leaks, flooding, fires, hurricanes, etc.) and includes emergency contact information for relevant staff, pre-disaster actions, and instructions for response and recovery. (Please see Appendix 2 for resources.)

Appendix 1: Glossary

Adware A form of spyware that collects information about the user in order to display advertisements in the Web browser based on the information it collects from the user's browsing patterns.

Children's Internet Protection Act (CIPA) CIPA, signed into law in December 2000, is designed to safeguard children against objectionable or harmful material on the Internet. CIPA amends the Elementary and Secondary Education Act of 1965 and the Communications Act of 1934. The amendments direct schools and libraries to have in place a policy of Internet safety and a technology-based method of blocking access to visual depictions on the Internet that are obscene, child pornography or harmful to minors.

E-rate (Schools and Libraries Universal Service Support Mechanism Educational Rate) On May 8, 1997, the Federal Communications Commission (FCC) adopted a Universal Service Order implementing the Telecommunications Act of 1996. The Order ensures that all eligible schools and libraries have affordable access to modern telecommunications and information services.

Federal-State Cooperative System (FSCS) Each state is responsible for funding data collection from its public libraries, and for submitting that data to National Center for Education Statistics (NCES). The federal government, through NCES, is responsible for planning the data collection, collecting and editing the data and disseminating it.

Full-Time Equivalent (FTE) FTE's are calculated by dividing the number of hours of work assigned to an actual position by the hours of work assigned to a full time position. The Federal-State Cooperative System (FSCS) for public libraries defines a full time position as 40 hours per week.

Institute of Electrical and Electronics Engineers (IEEE) Founded in 1884 as the American Institute of Electrical Engineers (AIEE), the IEEE was formed in 1963 when AIEE merged with Institute of Radio Engineers (IRE). IEEE is an organization composed of engineers, scientists, and students. The IEEE is best known for developing standards for the computer and electronics industry. In particular, the IEEE 802 standards for local-area networks are widely followed. From the IEEE web site: "Through its members, the IEEE is a leading authority in technical areas ranging from computer engineering, biomedical technology and telecommunications, to electric power, aerospace and consumer electronics, among others."

Integrated Library System (ILS) Typically refers to a library's automation system, a system that includes modules for circulation, cataloging, acquisitions, interlibrary loan, etc.

Library Services and Technology Act (LSTA) On April 30, 1996, Congress passed and the President signed the Library Services and Technology Act (LSTA). LSTA allocates federal funds to state library agencies for statewide services and for sub grants for technology and for targeting library and information services to persons having difficulty using a library.

Malware Short for *malicious software*, software designed specifically to damage or disrupt a system, such as a virus or a Trojan horse.

Removable/Portable storage media Objects on which data can be stored. These include hard disks, floppy disks, CD-ROMs, and tapes.

Router A device that forwards data along networks. A router is connected to at least two networks, commonly two local area networks (LANs), or wide area networks (WANs) or a LAN and its Internet service provider's (ISP) network. Routers are located at gateways, the places where two or more networks connect.

Spyware Any software that covertly gathers user information through the user's Internet connection without his or her knowledge, usually for advertising purposes. Once installed, the spyware monitors user activity on the Internet and transmits that information in the background to someone else. Spyware can also gather information about e-mail addresses and even passwords and credit card numbers.

Virus A program or piece of code that is loaded onto your computer without your knowledge and runs against your wishes. Viruses can also replicate themselves. All computer viruses are manmade. A simple virus that can make a copy of itself over and over again is relatively easy to produce. Even such a simple virus is dangerous because it will quickly use all available memory and bring the system to a halt. An even more dangerous type of virus is one capable of transmitting itself across networks and bypassing security systems.

World Wide Web Consortium (W3C) An international consortium of companies involved with the Internet and the Web. The organization's purpose is to develop open standards so that the Web evolves in a single direction rather than being splintered among competing factions.

Note: Most definitions taken from Webopedia, <http://www.webopedia.com>
Webopedia is part of the Internet.com network of Web sites owned and managed by Jupitermedia Corporation.

Appendix 2: Resources

Accessibility

US Dept. of Justice--Americans with Disabilities Act Homepage
<http://www.usdoj.gov/crt/ada/adahom1.htm>

South Carolina State Library's Web Accessibility Resources
<http://www.state.sc.us/scsl/access/resourcesx.html>

World Wide Web Consortium (W3C) Accessibility Resources
<http://www.w3.org/WAI/>

WebAIM Section 508 Web Accessibility Checklist for HTML
<http://www.webaim.org/standards/508/508checklist.pdf>

CIPA

Federal Communications Commission—CIPA Information Pages
<http://www.fcc.gov/cgb/consumerfacts/cipa.html>

American Library Association's CIPA Information Page
<http://www.ala.org/ala/washoff/WOissues/civilliberties/cipaweb/cipa.htm>

Competencies

WebJunction's Resources on Evaluating Staff Competencies--
<http://webjunction.org/do/DisplayContent?id=1066>

California Library Association—Technology Core Competencies for California Library Workers
http://www.cla-net.org/included/docs/tech_core_competencies.pdf

Disaster Preparedness and Recovery

Palmetto Archives, Library, and Museums Council on Preservation (PALMCOP)
<http://www.state.sc.us/scdah/palmcop/palmcop.html>

SOLINET—Disaster Mitigation and Recovery Resources
http://www.solinet.net/preservation/preservation_templ.cfm?doc_id=71

E-rate

Schools and Libraries Division, Universal Service Administrative Company
<http://www.sl.universalservice.org/>

South Carolina State Library's E-rate Information
<http://www.state.sc.us/scsl/erate.html>

IEEE

Institute of Electrical and Electronics Engineers (IEEE)

<http://www.ieee.org/portal/site>

Intellectual Freedom

American Library Association--Access to Electronic Information, Services, and Networks—
an Interpretation of the Library Bill of Rights

<http://www.ala.org/Template.cfm?Section=interpretations&Template=/ContentManagement/ContentDisplay.cfm&ContentID=31872>

Print Resources

Npower. *Technology Literacy Benchmarks for Nonprofit Organizations*. Washington, D.C.: Benton Foundation, 2002. <http://www.Benton.org/publibrary/stratcom/techlit.pdf>

Technology and Continuing Education

TechSoup—Plan for Technology Training--

<http://www.techsoup.org/howto/articlepage.cfm?ArticleId=62&topicid=9>

Technology Planning

South Carolina State Library—Technology Planning Template and Resources

<http://www.state.sc.us/scsl/erate/techplan.html>

TechSoup—Technology Planning Resource

<http://www.techsoup.org/howto/articles.cfm?topicid=11&topic=Technology%20Planning>

Appendix 3: Worksheets

The following worksheets duplicate the text of the standards, but are presented in a checklist format to allow each library to evaluate its organization and services in relation to the standards.

PLANNING, BUDGETING, and POLICIES

PLANNING: THE LIBRARY PLANS FOR TECHNOLOGY AND TECHNOLOGY SERVICES

The library has a board-approved technology plan that addresses at least two years and reflects the library's overall strategic plan.

Yes No Planned Not Planned N/A

The library's technology plan includes a hardware replacement schedule.

Yes No Planned Not Planned N/A

The library has a procedure for the appropriate disposal of computers and equipment that is in compliance with local procurement procedures and environmental regulations.

Yes No Planned Not Planned N/A

The library reviews and updates its technology plan annually.

Yes No Planned Not Planned N/A

The library maintains documentation for its network, including current administrative passwords, network maps and settings, hardware and software inventories, and emergency support numbers.

Yes No Planned Not Planned N/A

The library addresses available technology and related services in its public relations and marketing plan.

Yes No Planned Not Planned N/A

BUDGETING: THE LIBRARY CONSIDERS TECHNOLOGY NEEDS WHEN BUDGETING FOR THE LIBRARY.

The library has a line item in its annual budget designed for technology. Yes No Planned Not Planned N/A

The library actively pursues other sources of funding for technology outside of its local budget, e.g. LSTA grants, gifts, etc. Yes No Planned Not Planned N/A

The library seeks E-rate reimbursement for appropriate items. Yes No Planned Not Planned N/A

POLICIES: THE LIBRARY MAINTAINS CURRENT, PUBLICLY AVAILABLE POLICIES ON RELEVANT TECHNOLOGICAL ISSUES.

The library actively promotes and defends users' electronic privacy and intellectual freedom. Yes No Planned Not Planned N/A

The Library has a current board-approved Internet use policy. Yes No Planned Not Planned N/A

The library's Internet policy contains clear statements regarding filtering, monitoring, CIPA, & SC budget proviso compliance. Yes No Planned Not Planned N/A

The library's Internet policy clearly describes filter disabling and challenge procedures. Yes No Planned Not Planned N/A

The library's Internet policy is posted near public Internet computers, available at service points in the library, and posted on the library's web site. Yes No Planned Not Planned N/A

The library's Internet policy clearly defines prohibited behaviors and consequences for policy violations. Yes No Planned Not Planned N/A

The library's Internet policy will state that the library will only install software to which it holds the appropriate licenses. Yes No Planned Not Planned N/A

The library has an up-to-date, board-approved acceptable use policy governing staff use of library technology.

Yes No Planned Not Planned N/A

STAFFING

COMPETENCIES: THE LIBRARY ACKNOWLEDGES THAT TECHNOLOGY SKILLS ARE IMPORTANT IN A WELL-DEVELOPED STAFF.

The library will establish technology competencies for all staff positions. (See Appendix 2 for resources)

Yes No Planned Not Planned N/A

The library will provide all staff with opportunities for training in order to meet technology competencies.

Yes No Planned Not Planned N/A

LEVELS OF STAFFING: THE LIBRARY EMPLOYS TRAINED STAFF TO SUPPORT TECHNOLOGY SERVICES.

The library employs an adequate number of technology staff to serve its population:

Yes No Planned Not Planned N/A

- Population below 50,000—at least 1 part-time FTE
- Population between 50,000 – 74,999—at least 1 full-time FTE
- Population 75,000 + --1 full-time FTE per 50,000 population

If the library employs a systems professional in a full-time, dedicated position, this person actively participates in technology planning, implements board-approved policies, and acts as the chief advisor to the library director and board in the creation of relevant policies.

Yes No Planned Not Planned N/A

If the library employs a part-time technology position or a full-time position with split duties, this person substantially participates in technology planning and policy processes, and performs the tasks related to the library's technology services.

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ACCESS AND SERVICES

ACCESS: THE LIBRARY UTILIZES TECHNOLOGY TO PROMOTE USERS' ACCESS TO INFORMATION.

Patrons have access to the library's integrated library system (ILS) and other electronic information resources outside the library 24 hours a day, 7 days a week.

Yes No Planned Not Planned N/A

The library provides a single login for registered users to all licensed electronic information resources.

Yes No Planned Not Planned N/A

Library complies with the Americans with Disabilities Act (ADA) in all electronic services.

Yes No Planned Not Planned N/A

WEB SITE: THE LIBRARY PROVIDES USEFUL, CURRENT INFORMATION THROUGH A WEB SITE.

The library maintains a web site with current information and resources.

Yes No Planned Not Planned N/A

The library's web site will include contact information and locations for all of its outlets.

Yes No Planned Not Planned N/A

The library's web site is built to World Wide Web Consortium (W3C) standards for validation and accessibility.

Yes No Planned Not Planned N/A

SERVICES: THE LIBRARY FACILITATES USE OF AVAILABLE ELECTRONIC DATABASES, INTERNET INFORMATION SOURCES, AND LOCALLY INSTALLED SOFTWARE PROGRAMS.

The library provides public access to Internet Browsers, productivity (e.g. office suite), and educational software. Yes No Planned Not Planned N/A

Trained library staff are available to assist the public with utilization of technology during all operating hours (e.g. PC's, software, satellite downlink, etc.). Yes No Planned Not Planned N/A

The library provides printing in black and white. Yes No Planned Not Planned N/A

The library provides printing in color. Yes No Planned Not Planned N/A

The library allows the use of removable/portable storage media on public use computers (e.g. floppy disks, CD's, USB/Flash drives.) Yes No Planned Not Planned N/A

INFRASTRUCTURE

HARDWARE: THE LIBRARY MAINTAINS HARDWARE THAT FACILITATES EFFICIENT ACCESS TO LIBRARY MATERIALS AND SERVICES.

The library maintains warranties and maintenance agreements for hardware that the library cannot afford to replace in a given budget year. Yes No Planned Not Planned N/A

The library provides 1 public Internet access computer for every 1500 population. Yes No Planned Not Planned N/A

The library has an uninterruptible power supply (UPS) for its critical hardware, including the integrated library system (ILS) server(s). Yes No Planned Not Planned N/A

The library ensures that all hardware can be seamlessly added to the network (compatible with existing hardware, software, etc.) Yes No Planned Not Planned N/A

SOFTWARE: THE LIBRARY MAINTAINS SOFTWARE THAT FACILITATES EFFICIENT ACCESS TO LIBRARY MATERIALS AND SERVICES.

The library maintains support agreements on its integrated library system (ILS). Yes No Planned Not Planned N/A

The library's integrated library system (ILS) should be updated so that it is at least within one major release of the current release. Yes No Planned Not Planned N/A

The library should only use operating systems currently supported by their manufacturers. Yes No Planned Not Planned N/A

The library has established procedures for backing up critical data daily and stores at least one copy of the data in a secure, off-site location. Yes No Planned Not Planned N/A

NETWORKING: THE LIBRARY MAINTAINS A FUNCTIONING NETWORK.

The library should ensure that routers are retained only for their vendor-designated life cycle or are covered by a lifetime warranty. Yes No Planned Not Planned N/A

The library has sufficient bandwidth to effectively support ILS functions and Internet access. Yes No Planned Not Planned N/A

SECURITY: THE LIBRARY MAINTAINS A SECURE NETWORK.

The library has a firewall. Yes No Planned Not Planned N/A

The library has and maintains up-to-date virus protection for all library computers. Yes No Planned Not Planned N/A

The library has a policy addressing use of removable media on its public computers. Yes No Planned Not Planned N/A

The library monitors critical systems for security breaches and/or illegal access. Yes No Planned Not Planned N/A

The library has procedures in place for the removal of “malware” (spyware, adware, etc.).

Yes No Planned Not Planned N/A

EQUIPMENT FOR USE BY STAFF: THE LIBRARY PROVIDES STAFF WITH THE TOOLS NECESSARY TO PROVIDE EXCELLENT SERVICE.

The library will provide staff with adequate technology to efficiently perform job duties.

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FACILITIES: LIBRARY FACILITIES SUPPORT EXISTING TECHNOLOGY.

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Yes No Planned Not Planned N/A

The library has a disaster recovery plan that addresses possible incidents (e.g. roof/plumbing leaks, flooding, fires, hurricanes, etc.) and includes emergency contact information for relevant staff, pre-disaster actions, and instructions for response and recovery. (Please see Appendix 2 for resources.)

Yes No Planned Not Planned N/A