A BEST PRACTICES REVIEW

Local E-Government Services

December 2001

LEGISLATIVE AUDIT BUREAU

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December 5, 2001

Senator Gary R. George and
Representative Joseph K. Leibham, Co-chairpersons
Joint Legislative Audit Committee
State Capitol
Madison, Wisconsin 53702

Dear Senator George and Representative Leibham:

We have completed a best practices review of local government operations, as directed by
s. 13.94(8), Wis. Stats. This report describes the development and implementation of electronic
government services by local governments in Wisconsin.

Most local governments have already met a recommendation of the Blue-Ribbon Commission on
State-Local Partnerships for the 21st Century, commonly known as the Kettl Commission, that all
local governments serving populations of more than 25,000 have Web sites by June 30, 2002. Only
2 of 71 local governments with this population do not currently have Web sites. Further, 54 of
77 local governments with populations between 10,000 and 25,000 have Web sites.

E-government holds the potential to improve government services by making them less costly, more
convenient, and more accessible to the public. Of the Web sites we reviewed, two-thirds are used
primarily to publish information such as agendas and minutes of government meetings on line.
Increasingly, however, communities are developing features that allow interaction between residents
and the government by allowing residents to send e-mail to local officials, print forms and
applications, and in some cases pay parking tickets or other fees on line using credit cards.

Our report highlights best practices for communities to use in making their Web sites as widely
accessible as possible, making them easy to use, and addressing security and privacy concerns.

We appreciate the courtesy and cooperation extended to us by the many Wisconsin county and
municipal officials who responded to an electronic survey we conducted, as well as to additional
questions.

Respectfully submitted,

Janice Mueller
State Auditor

JM/DB/ss

Summary

As directed by s. 13.94(8), Wis. Stats., the Legislative Audit Bureau conducts periodic reviews of local government operations to identify practices that may save money or provide more effective delivery of government services. Best practices reviews seek to build upon successful local efforts by identifying and publicizing efficient approaches to providing government services.

The subject of this review is the extent to which local governments in Wisconsin have developed electronic government, or "e-government," services and capabilities, using the Internet to provide government information and services on line. E-government is expected to improve government service delivery; increase public participation in government; and provide society as a whole with easier and greater access to government information and services by providing information to the public, allowing the public to report problems on line, and providing the public with the ability to purchase, request, or otherwise obtain government services on line. E-government allows the public access to government information and services 24 hours a day, 7 days a week, and provides the potential for government to fundamentally restructure its operations.

In our best practices review of e-government in Wisconsin counties and municipalities, we:

- examined local governments' Web sites to determine the types and range of e-government services they make available;

- identified the cost of providing e-government services to the public; and

- determined the types of services and e-government capabilities local governments in Wisconsin envision providing to the public in the future.

In our review, we located and analyzed 225 Web sites of local governments in Wisconsin, including 59 county, 88 city, 49 village, and 29 town Web sites. Our review did not include school districts, libraries, or other local units of government. We assessed whether Web sites were easy to use and navigate, whether they provided contact information for government officials, whether they provided information of interest to residents and others, and whether they allowed interaction. Since Web sites are updated frequently, our analyses incorporated

information we found at the time of our review. We also interviewed local government officials from Wisconsin and nationwide. Finally, we reviewed studies and articles that identify current e-government issues and the best practices of local governments in other states, as well as other local government Web sites that have been identified as models for e-government services.

E-government serves various customers, each with differing service needs. An international information technology consulting firm, Gartner, Inc., presented its concept of e-government at a conference sponsored by the State of Wisconsin for state and local government officials in June 2001. This firm presented the development and use of e-government in four phases: developing an Internet presence; providing interaction between local government and the public by e-mail and information; allowing individuals to conduct business with the local government; and re-engineering of a local government's business practices because of increased use and functions of e-government.

Most large Wisconsin communities have local government Web sites. Only 2 of 71 communities with populations over 25,000 do not, and only 23 of 77 additional communities with populations between 10,000 and 25,000 do not. Among the 25 communities without Web sites, 13 reported plans to have them by the end of 2002.

For local government Web sites to be useful for the public, they must be easy to find and easy to navigate. We identified several best practices in this area. First, it is a best practice to widely disseminate a Web site address so that it can be easily located. This can be done by several means, including having a link on other government Web sites, such as the State's Internet portal or Web sites of local government associations, such as the League of Municipalities; working with other organizations, such as the local chamber of commerce; and printing and posting the Web site address on all government documents, in public buildings, in local newspapers, and on major Internet search engines.

Second, it is a best practice for Web sites to provide a combination of navigation tools. The most typical tools are frames or buttons, a search engine, and a site map. In our review of 225 Web sites, 212, or 94.2 percent, had at least one type of navigation tool. However, only 20.0 percent contained a working search engine and 14.7 percent contained a site map, both of which are considered more effective navigation tools. The easiest navigation tool to use is the site map.

Third, it is a best practice to present information both according to services offered by a local government and by the county or municipal departments that provide services. Such a presentation helps visitors more easily find the information they are looking for. We found that 40.0 percent of the local government Web sites reviewed presented information by both department and service.

In addition to varying in accessibility and presentation, local government Web sites can vary in content. Our review identified a wide range of information about the local government, other governments, education, economic development, and community information. Different users of a local government Web site require different information and, therefore, it is a best practice to include different types of information needed by various users, either on the Web site itself or through links to other sites.

So that Web site users can easily identify and contact local government and locally elected officials, even outside of traditional business hours, it is a best practice to provide e-mail contacts for the general government, the chief elected officer, and all other locally elected officials who have e-mail service. At least one e-mail contact was included on 77.8 percent of the local government Web sites we reviewed. Of the 50 local government Web sites with no government e-mail contact, 27 had e-mail contact information for the Webmaster.

In addition to being able to find information about a local government and to contact the local government and its officials on line, individuals have also come to expect to transact business with their local government on line. An initial step that provides this capability is on-line applications that users can print, complete, and return in person, by mail, or by fax to the local government. Available applications may be for recreation, such as a parade permit; for employment; for general government services, such as a voter registration form; and for various permits, such as building, grading, and erosion control permits. In our review, we found 67 local government Web sites had at least one application available on line.

One of the biggest potential advantages of e-government is on-line purchasing and payments, which can allow users to conduct business with the government 24 hours a day, 7 days a week. Local governments also benefit from on-line transactions in capturing revenue that may have been difficult to capture through traditional means. However, local governments also need to consider the time and cost involved in developing this on-line transaction capability. As with any public service, both costs and benefits need to be evaluated.

We found that 25 local governments in Wisconsin have the capability to allow some payments on the Internet. Two cities, La Crosse and Madison, allow payment of parking tickets on line. Individuals paying tickets on line to La Crosse pay an additional service charge of $2. Individuals pay no additional fee for this service in Madison, but the city pays the bank that operates the parking ticket payment Web site a monthly fee and 25¢ for each ticket paid on line. Madison also collects payments for municipal sewer and water bills on line; individuals pay no additional fee for this service.

Twenty-three other local governments contract with a national firm to allow residents to pay property taxes on line. Individual taxpayers are charged a processing fee equal to 2 to 4 percent of the payment amount. Under the vendor's fee structure, an individual paying the average Wisconsin property tax bill of $2,017 in 1999 would pay a fee of $68 in addition to the property tax bill amount. Local governments that provide this service estimated that fewer than 1 percent of taxpayers use it, likely because of the relatively high processing fee. However, several Wisconsin communities, including five counties and eight cities, indicated they plan to offer or expand their capacity for on-line payments within the next 12 months.

There are three additional concerns that local governments need to address in developing e-government services. First, communities must consider the cost of developing, maintaining, and upgrading their Web sites. A majority of local governments that responded to our survey indicated they spent less than $5,000 to develop and launch their Web sites. In addition, a majority of local governments indicated they spend less than $2,500 annually to maintain their Web sites, and less than $2,500 for upgrades. Of the six communities that reported spending $100,000 or more on either development, maintenance, or upgrade costs or a combination of these activities, five are major urban communities, and the sixth smaller community purchased geographic information system capability. Officials from each of the six local governments indicated their costs were for the purchase of their own hardware and software, Web site redesign, or hiring specialized technical staff.

Web sites have the potential to produce cost savings and other efficiencies; 101 local governments responding to our survey identified at least one efficiency or cost savings they realized from e-government. The most common efficiency cited was offering improved levels of service at no additional staffing cost. Similarly, over 60 percent reported a decrease in staff time for job functions such as responding to in-person inquiries, which allowed staff to perform other tasks. On the other hand, no local governments reported having reduced staffing levels as a result of the existence of their Web sites.

A final cost issue is how to fund e-government. The most common method is with tax dollars. For specialized services, such as financial transactions, some local governments charge user fees. Some communities have worked with local volunteers to develop their Web sites. Outside of Wisconsin, other communities have accepted donations from private companies for technical and other services for development and maintenance. Three Wisconsin communities indicated that they allow private companies to advertise services on their Web sites. One of these communities charges a fee. If local governments choose to use advertising as a revenue source, it is a best practice to estimate this revenue conservatively.

A second concern local governments should consider in developing e-government services regards public access to the Internet. While access to the Internet has increased from approximately 24 percent of households in 1997 to more than 50 percent in 2001, there remains a large segment of the population without Internet access. Some believe government should address this "digital divide" by offering public access to the Internet.

In Wisconsin, both the State and local governments are moving to improve access to the Internet. Since 1997, through Wisconsin's Technology for Educational Achievement in Wisconsin (TEACH) Board, the State has accelerated the use of educational technology by providing grants and technical assistance to encourage the development of data and video links, as well as to ensure that classrooms and teachers are able to take full advantage of the services and information on the Internet. We also found one example of local government cooperation: in spring 2001, a City of Madison community center, the local chapter of the Urban League, a communications company, and others created a partnership to fund a computer laboratory in the community center with computers, a printer, an instructor, and free Internet access.

A third concern local governments should consider in developing e-government services is the security and privacy of both personal information and government documents. Risks with security lapses include service interruption, the potential for data tampering, and viruses on the server hosting the Web site. Risks faced by the user include the potential for a third party to copy the record of sites visited and personal preferences, steal credit card numbers and other personal information, and sell personal information gathered by the local government to others.

Local governments also need to consider ways to provide additional Web site security for the information they collect. For example, to ensure that confidential data are kept confidential, local governments could take steps to maintain the security of data by including protections in the electronic infrastructure through firewalls and by limiting those who have access to the data. In addition, governments may also wish to allow digital signatures that would give qualified personnel access to confidential records and also enable certain financial transactions, such as the purchase of goods, to occur over the Internet.

In addition to developing secure Web sites, it is a best practice for local governments to develop privacy and security statements and policies to be shared with individuals who may use e-government services, and to help local government departments to manage their electronic services. Similarly, it is a best practice to have a comprehensive privacy policy or disclaimer that includes information on the accuracy of Web site contents, how frequently those contents are updated, how data collected from users will be used, which information is administered and

maintained, and the extent to which personal Web site use is tracked. Such statements can also serve to protect the local government from liability for inappropriate or incorrect Web site content. Local governments may wish to follow the recommendation of a national consortium on e-commerce, which believes privacy policies should be clearly stated, easily found, and noted whenever the individual is asked to submit personally identifying information. It is also a best practice to include privacy policies in an obvious part of the Web site.

Some citizens and government officials may also be concerned with the amount of information now available electronically that was previously available only on paper. For example, while some local governments include the names of property owners in their on-line records of property values, other local governments do not include this identifying information on line, requiring requestors to appear at the local government office to have access to this information. Further, one local government will remove names of individuals who can demonstrate a personal security risk, such as police officers and victims of stalkers. While governments must comply with the State's open records law, they have flexibility in what they choose to post on their Web sites. Therefore, local governments will need to develop their own policies to address privacy issues, recognizing sensitivities within their communities.

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Introduction

As directed by s. 13.94(8), Wis. Stats., the Legislative Audit Bureau conducts periodic reviews of local government operations to identify practices that may save money or provide more effective delivery of government services. Best practices reviews seek to build upon successful local efforts by identifying and publicizing efficient approaches to providing government services. An advisory council, established to assist with the selection of review topics, is made up of five members who represent counties, cities, villages, and towns and are listed in Appendix 1.

The subject of this review is the extent to which local governments in Wisconsin have developed electronic government, or "e-government," services and capabilities. As e-business and e-commerce have come to represent the conduct of business and retail activity over the Internet, so e-government has come to represent using the Internet to provide government information and services on line. E-government is expected to improve government service delivery, increase public participation in government, and provide society as a whole with easier and greater access to government information and services.

E-government is expected to increase and expedite access to government services.

While some Web sites only provide information, others provide the public with the ability to electronically report problems such as potholes, broken streetlights, or non-working tornado sirens. Still others provide the public with the ability to purchase, request, or otherwise obtain a service or complete a transaction on line, such as submitting a job application, purchasing a building permit, obtaining a copy of a birth certificate, or paying a parking ticket. E-government can also be used to improve a local government's efficiency in purchasing goods or services from the private sector. Not only does e-government allow the public access to government information and services 24 hours a day, 7 days a week, it provides the potential for government to fundamentally restructure its operations.

In our best practices review of e-government in Wisconsin counties and municipalities, we:

- examined 225 local governments' Web sites to determine the types and range of e-government services they make available;

- identified the cost of providing e-government services to the public; and

- determined the types of services and e-government capabilities local governments in Wisconsin envision providing to the public in the future.

In mid-November 2001, 225 local governments in Wisconsin had Web sites.

We analyzed 225 local government Web sites (59 counties, 88 cities, 49 villages, and 29 towns) that were on line as of mid-November 2001 but did not review Web sites of school districts, libraries, or other local units of government. We assessed whether Web sites were easy to use and navigate, whether they provided contact information for government officials, whether they provided information of interest to residents and others, and whether they allowed interaction. Since Web sites are updated frequently, our analyses incorporate information we found at the time of our review.

We surveyed all local governments in Wisconsin that had Web sites.

We also surveyed all local governments with Web sites to obtain information on proposed future capabilities of their sites, the cost to develop and maintain their sites, the extent to which financial transactions can be completed on line, and the benefits and challenges government officials identified related to establishing e-government services. In addition, we interviewed local government officials from Wisconsin and nationwide. We also reviewed studies and articles that identify current e-government issues and the best practices of local governments in other states, as well as other local government Web sites that have been identified as models for e-government services.

Appendix 2 is a glossary of commonly used technology terms.

Benefits of E-Government

Both the Internet and e-government have changed the way in which citizens conduct business.

The Internet has had a major effect on the way business is conducted in the United States. The public expects instant communication and access to a wide variety of information. In addition, changes continue at a rapid pace. E-government has followed a similar pattern by allowing interested parties, such as local residents and government employees, visitors, businesses, and other governmental units to have access to government information 24 hours a day, 7 days a week. More people are, in fact, visiting government Web sites. A survey conducted by the Pew Charitable Trust in 2000 indicates that 55 percent of Internet users have visited a government Web site, and 3.5 million people visit government Web sites daily.

As more people gain access to the Internet, expectations of what can be found and done on line increase. As the public increasingly uses the Internet for shopping, entertainment, and information gathering outside of traditional business hours, there are increasing expectations that government information and services should be available over the Internet. Citizens expect government services to be provided more

easily and more quickly, and to be more responsive to their needs. For example, in addition to finding contact information for locally elected officials, citizens may now also expect to find information on specific services a local government provides; up-to-date agendas and minutes of local government meetings; and answers to frequently asked questions, such as when brush and leaves will be picked up, the cost of a dog license, and how to get a pothole repaired. Businesses may expect even more information, such as which permits are needed for expansion, whom to contact regarding tax questions, the type of economic development services the locality provides, or how to bid for government contracts or purchases.

Because an increasing amount and array of information is made available on line, a user-friendly and responsive government Web site increases citizen participation in government. For example, if a Web site clearly indicates the times polling places are open, or the time that a local government committee is meeting, an individual may be more willing to vote or to attend the publicized meeting.

E-government allows citizens to conduct business with the government at their convenience.

More government Web sites are beginning to provide the public with the ability to purchase, request, or obtain services on line. Increasingly, citizens expect to be able to conduct business with their government at their convenience, and not solely during traditional office hours. Doing business on line eliminates a trip to the government office, a wait in line to see a clerk, and the possibility of having to return to provide additional information. If citizens can purchase a government service or product or pay a bill from the comfort of their homes, they will see the government department being responsive to their needs.

Local units of government also benefit from e-government. County and municipal staff spend less of their time answering questions face-to-face or on the telephone if people can find answers on line. Customers are better informed before they discuss issues with local government staff. For example, City of Madison officials indicated that many people research the assessed values of homes in their neighborhoods on line before coming to the Assessor's Office with a concern. Officials noted that having a better-informed customer can also expedite the appeals process and save staff time in explaining the assessment process. Dodge County officials believe there are fewer information requests between departments for information that is now contained on the county's Web site. Appendix 3 provides examples of local government descriptions of Web site user comments and both positive experiences and lessons learned to share with other local governments.

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Web site users have different expectations about the types of information and services provided on line.

While e-government serves to present a single face for all types of visitors, service needs differ among government's many customers. For example, local residents might expect to find information on local, state, and federal government contacts, social services, educational institutions, and voting on their local government's Web site. Businesses might expect to find information on taxes, contracts, procurement, and requests for proposals. Visitors to the area might expect to find information on recreational activities, hotels, restaurants, and other businesses, as well as a calendar of local events. Others may be looking for employment opportunities, local ordinances, and information on other local governments. Making these types of information available 24 hours a day, 7 days a week can provide substantial convenience and service to the public. In our review of 225 local government Web sites, we found a wide range of information and available services. Appendix 4 lists the Web sites we reviewed and provides their addresses.

Studies have focused on the need for e-government, how best to present information and services on line, the effect e-government has on the traditional methods of delivering information and services, and the future of e-government. An international information technology consulting firm, Gartner, Inc., presented its concept of e-government at a conference sponsored by the State of Wisconsin for state and local government officials in June 2001. The firm found that e-government develops in four phases.

- In the first phase, a local government develops a Web site that is readily accessible to the public.

- In the second phase, the local government interacts with its customers by e-mail or through a feedback page. In addition, the Web site makes available a variety of local government information. Most local governments in Wisconsin are in this phase.

- In the third phase, customers are able to conduct transactions with a local government 24 hours a day, 7 days a week. For example, residents of a community are able to pay water bills on line, a potential visitor is able to find and apply for a camping permit on line, and a business is able to find, complete, and submit a request for a building permit on line. Only a few of Wisconsin communities have reached this phase.

- In the fourth and final phase of e-government, local government re-engineers its business processes. For example, a local government may be able to reduce the number of office hours or office staff yet offer customers more services, but only on line. Similarly, in purchasing some types of commodities or services, governments may abandon traditional sealed-bid procedures and adopt procedures in which businesses bid against one another on line. Few local governments have substantially re-engineered their business practices.

Our report analyzes the progress made by local governments in achieving the four phases of e-government presented in this model. As a local government Web site evolves through these phases, the ability for customers to interact with the local government on many levels increases, changing the nature of the relationships between the local government and its employees, the public, and businesses.

Web Sites Reviewed

We identified 225 Web sites created by or for local units of government, including Web sites listed on the [State of Wisconsin's e-government portal](#), as well as those listed in sites maintained by the Wisconsin Counties Association, the Wisconsin League of Municipalities, the Wisconsin Alliance of Cities, the Wisconsin Towns Association, and other local government associations. As noted, we examined only Web sites for counties, cities, villages, and towns, and not those of government entities such as school districts, libraries, and departments of public works. It is possible that new Web sites or additional content have been added since the time of our review, because we noticed updates, improvements, and changes to several Web sites during our review.

As shown in Table 1, the 225 sites we found represent 11.7 percent of local governments in Wisconsin. The total population of the cities, villages, and towns whose Web sites we reviewed is 55.7 percent of the state's population; the population of the 59 counties whose Web sites we reviewed is 95.8 percent of the state's population. Summary data from our Web site review, including the number of county and municipal Web sites found to have each type of information or capability, are included in Appendix 5.

Table 1

Local Government Web Sites Reviewed

Type of Local Government	Number of Local Governments	Number of Web Sites Found	Percentage
County	72	59	81.9%
City	190	88	46.3
Village	395	49	12.4
Town	1,265	29	2.3
Total	1,922	225	11.7

We also found reference to, or information about, an additional 157 local governments, 38 of which are included on the State's Internet portal, on Web sites sponsored by local chambers of commerce, private organizations, and others. However, the local government information on these sites was generally very limited and generally qualitatively different from that on the local government sites. For example, some of these Web sites only listed government officials' names or a local address. These Web sites were not included in our analysis.

To encourage the development of local governments' e-government capabilities, a January 2001 report issued by the Wisconsin Blue-Ribbon Commission on State-Local Partnerships for the 21st Century, commonly known as the Kettl Commission, stated that "all governments in Wisconsin that serve populations of more than 25,000 citizens should produce Web portals by June 30, 2002. These portals should be inter-linked so that citizens from adjoining communities can easily find services and information from neighboring jurisdictions."

We found that only 2 of 71 local governments with populations over 25,000 do not offer Web sites, although 1 plans to have a Web site sometime in 2002. Only 23 of 77 additional communities with populations of between 10,000 and 25,000 do not have local government Web sites. Among these 25 communities,

- 1 is preparing bid documents to contract for the development of a local government Web site;

- 1 is planning to have a local government Web site before 2002; and

- 11 are planning to have a local government Web site sometime in 2002.

The remaining 12 local governments did not have definite timetables for establishing Web sites; some representatives of these governments believed the cost of creating and maintaining a Web site would be prohibitive at this time, and one person indicated that his government would probably launch a site after the development of databases that could be made available over the Internet, such as a database for property assessment information.

Presentation of a Web Site

In order for local government Web sites to be useful for the public, both the sites themselves and the information they contain must be easy to find. In addition, the organizational structure of a local government Web site has a significant effect on ease of use and the ability of customers to obtain the information or services requested quickly and easily.

Web Site Accessibility

Because the existence of a local government Web site is of little use if the public is not aware of the site and its services or must engage in considerable effort to find or use it, a best practice is to widely disseminate a Web site address so that visitors can readily find it. Ways to make a Web site known include:

- adding a link at other government Web sites, including the State's portal, the county's portal, and Web sites of nearby cities, villages, and towns. Of the 225 Web sites we reviewed, 86.7 percent— 137 local communities and 58 counties—had their Web sites linked directly to the State's portal, and

56.0 percent contained links to other local governments. For example, ten local governments located near the City of Appleton had links to their Web sites listed on the city's Web site.

- adding a link at local government associations, such as the League of Municipalities or the Counties Association. For example, 76 communities had their Web sites linked directly to the League of Municipalities' Web site.

- working with organizations such as the local chamber of commerce. For example, a nonprofit corporation, Fox Communities Online, provides information to and about communities in the Fox River Valley area, including an extensive number of links to federal, state, and local government Web sites.

- printing a Web site address on all government documents and business cards, such as on parking tickets, property tax and utility bills, newsletters, and constituent information. For example, the City of Madison includes its Web site address on parking tickets to encourage on-line payment.

- posting the Web site address prominently in public buildings, including the town hall, the city hall, firehouses and police stations, schools, libraries, hospitals, and parks and park shelters;

- listing the Web site in a local newspaper; and

- listing the Web site on major Internet search engines.

It is a best practice to advertise information and services available on line.

Even when on-line services can be convenient, they are not likely to be used if information about them is not widely disseminated. For example, the New Jersey Department of Environmental Protection found that air permits could be obtained in six minutes when they were processed on line, compared to six weeks when they were processed by other means. However, information about the capability was not widely disseminated, and an official from the New Jersey Department of Environmental Protection indicated that he regretted not marketing the capability more aggressively.

Web Site Navigation and Organization

The organization of a local government's Web site has a significant effect on users' ability to navigate and to find information and services. Navigation tools lead users to the specific area of the site with the information or services they seek. Navigation tools include:

- framed sections and buttons that remain on one side of the screen while the user moves from page to page on the remainder of the screen;

- search engines with which a user can find all the pages on the site in which key words or phrases appear; and

- site maps, which are similar to a table of contents and allow users to find the information and services they seek.

94.2 percent of Web sites reviewed contained at least one navigation tool.

As shown in Table 2, 212 local government Web sites, or 94.2 percent of Web sites we reviewed, contained at least one navigation tool—a frame or button, a search engine, or a site map—to assist users in navigation.

Table 2

Web Site Navigation Tools

Type of Local Government	Number of Web Sites with at Least One Navigation Tool	Number of Web Sites Without Navigation Tools	Percentage of Web Sites with at Least One Navigation Tool
County	56	3	94.9%
City	83	5	94.3
Village	45	4	91.8
Town	28	1	96.6
Total	212	13	94.2

Frames and buttons were the most common navigation tools found: 92.4 percent of local government Web sites had this type of navigation tool. In addition, we found that:

- 20.0 percent of Web sites reviewed contained a working search engine; and

- 14.7 percent of Web sites reviewed contained a site map or index of the Web site.

Some communities use frames and navigation buttons that cascade, so that the user does not get lost in the Web site. For example, on the City of Neenah's Web site (Figure 1), the frame remains on the left-hand side of the page during a search for a specific government service, and each time a user proceeds into a different level of the Web site, the choices presented remain on the screen. A user who wanted to find recycling information would click on the "Department/Directory" button, which would reveal a list of seven additional choices while the original list of 14 choices remains on the screen. When the user clicked on the "Administration" button, the seven previous choices would remain on the screen, and the user would see "Public Works." Clicking on the button would cause "Recycling/Refuse" to appear.

Figure 1

Welcome to Neenah, Wisconsin!

Population: 24,507

† Friends of the Neenah Public Library Used Book Sa

A special place to live and a great place to do business

Neenah, Wisconsin. A special place to live and a great place to do business. Come, visit us and see for yourself. And if you're late coming home, we'll leave the lighthouse on for you!

City Hall: 211 Walnut Street, Neenah, WI 54956

City of Neenah website disclaimer

Courtesy of the City of Neenah.

It is a best practice to provide a combination of navigation tools.

Although the presence of at least one navigation tool helps users move through a local government Web site, a best practice is to provide a combination of navigation tools to assist users with differing needs and skills in finding the same information. For example, on Columbia County's Web site (Figure 2), information on recycling can be found by either:

- using the frames section and clicking on "Departments" and then on "Recycling/Solid Wastes";

- using the site map to identify "recycling"; or

- using the search engine and typing the word "recycling."

Figure 2

Courtesy of Columbia County.

The easiest navigation tool to use is a site map.

If only one advanced tool is used, the site map is preferable to a search engine or frames and buttons because it does not require users to be familiar with the terminology used by the local government in order to find the desired information. A site map provides detailed information about a Web site's contents in a way that is similar to the table of contents in a book. In addition, a site map requires less maintenance, is less complex, and is less costly to develop than search engine software. Some of the better-organized site maps we found include those of the cities of Franklin and Algoma, and Rock County. Small communities such as the villages of Oconomowoc Lake and Kimberly, as well as the City of Port Washington, include site maps in their Web sites.

Although it is a powerful tool, a search engine need not be expensive.

Although a search engine is a common Internet navigation tool, some information technology staff we spoke with indicated it can cost between $2,000 and $5,000 to purchase the search engine software package, and an additional $300 to $750 annually for updates and maintenance. Some local governments might find this cost prohibitive. On the other hand, some local governments have found ways to develop or obtain search engine capability at a lower cost. For example, officials of Columbia County and Sheboygan County reported their servers have built-in search engine capability, although staff time is needed to maintain this capability. Officials of the City of Antigo indicated the cost of their Web site's search engine (Figure 3) is included in a $12 monthly hosting fee.

Figure 3

Courtesy of the City of Antigo.

In addition to navigation tools, local governments may wish to consider whether to organize government information by department, by service type, or by both. Information organized by department is helpful to those who are familiar with the local government's structure. However, because many visitors are not familiar with government organization, presenting information only by local government department may result in user frustration or inability to find desired information. For example, a typical user of one Web site we reviewed may not know that the city's Finance and Information Services Department issues dog licenses. This user would have to look in each of the different departments, and perhaps go several layers deep in each, to find information on dog licenses. In contrast, a visitor to the City of Milwaukee's Web site could look for the term "license" in the "City Services Directory" to find a telephone number to call for information on dog licenses, and a visitor to the City of Cedarburg's Web site could find the information by reviewing a list titled "Whom do I call with questions?"

It is a best practice to provide information both by service and by department.

The Village of Plover's Web site (Figure 4) presents a good example of the best practice of presenting information both by service and by the county or municipal departments that provide services. The home page includes:

- a drop-down box listing many different services provided by the village;

- a link to pages that include telephone numbers for various departments and services; and

- links to pages about the various village departments.

Figure 4

Courtesy of the Village of Plover.

As shown in Table 3, 40.0 percent of the local government Web sites we reviewed presented information by both department and service. If a local government wishes to present information in only one manner, it is best to present information by service, which is more user-friendly. We found that 8.4 percent of the Web sites we reviewed presented information primarily in this fashion. In addition, 44.0 percent of the local government Web sites we reviewed organized information primarily by department.

Table 3

Manner of Presenting Information in Local Government Web Sites

Type of Local Government	Presentation by Both Service and Department	Presentation Primarily by Service	Presentation Primarily by Department	Not Applicable*
County	40.7%	6.8%	49.1%	3.4%
City	47.7	4.5	42.1	5.7
Village	28.6	14.3	44.9	12.2
Town	34.5	13.8	37.9	13.8
All Governments	40.0	8.4	44.0	7.6

 * Contained no information on government departments or services.

Local Government Web Site Content

Local governments face many decisions in determining the types of information to place on their Web sites. Our review found wide variation among communities in the types of information included.

Web Site Information

We categorized information included on local government Web sites as information about the local government and other governments, education, economic development, and the community. For each type of local government, the percentage shown in Table 4 represents those Web sites that include links to, or information on, each subject area.

Table 4

Information Included on Wisconsin Local Government Web Sites

Type of Information Included on Web Sites*	Percentage of Counties	Percentage of Cities	Percentage of Villages	Percentage of Towns
Local Government Links				
Local meetings	69.5%	65.9%	59.2%	93.1%
Employment opportunities	62.7	38.6	20.4	13.8
Ordinances/code	22.0	31.8	36.7	48.3
Budget information	15.3	19.3	18.4	10.3
Property assessment	8.5	14.8	4.9	3.5
Citizen participation**	8.5	9.1	6.1	3.5
Procurement	15.3	8.0	0.0	0.0
Other Government Links				
State government	78.0%	52.3%	51.0%	55.2%
Other local government	64.4	53.4	53.1	51.7
Federal government	54.2	30.7	28.6	34.5
Educational System Links				
Local school district	37.3%	77.3%	65.3%	34.5%
University of Wisconsin/ Technical College	39.0	35.2	18.4	17.2
UW-Extension	78.0	6.8	4.1	3.5
Economic Development Links				
Information on local businesses	52.5%	73.9%	46.9%	27.6%
Local economic development	32.2	62.5	38.8	20.7
Community Information Links				
Recreation	64.4%	83.0%	59.2%	37.9%
Calendar of local events	50.9	69.3	65.3	34.5
Historical Society/History	55.9	63.6	49.0	17.2
Library	44.1	71.6	57.1	6.9
Local newspaper(s)	27.1	25.0	32.7	13.8
Utility information	5.1	26.1	30.6	6.9
Neighborhood associations	3.4	4.6	0.0	3.5

  * May be provided through a description or a link.
 ** Includes, for example, requests for participation on local committees and boards.

The information can also be characterized according to the type of user who would most likely seek it:

- Local residents would typically look for recreation and budget information; ordinances and local codes; property assessment information; a schedule of local government meetings and local events; utility information; employment opportunities; school district information; and information on how citizens can participate in government, such as how to serve on committees and boards.

- Businesses would typically look for ordinances and local codes; procurement information; information on tax rates, economic development, and various business licenses; and schedules of local government meetings.

- Other local governments would typically look for ordinances and codes and information on local government meetings and tax rates, in order to compare and contrast their community with the community reviewed.

- Visitors would typically look for recreation, lodging, and dining information and a calendar of local events.

It is a best practice to provide information or links for different types of Web site users.

As noted, it is a best practice for a local government to include different types of information needed by the various users of the Web site either on the local government's own Web site or by providing links to other Web sites. For example, the City of Wausau's Web site provides information for a variety of customer groups, including schedules and minutes of local government meetings; economic development information about industrial parks and employment trends in the area; information on jobs available in various levels of government; recreational opportunities, including the hours of operation of the municipal golf courses; and a searchable calendar for which the visitor can choose the event type and month, such as recreational activities in January.

Similarly, the City of Delavan's Web site provides a search engine for local meetings; maps; and information about the local industrial park, golf courses, and related fees. The Web site also contains a significant amount of information about local businesses such as restaurants and lodgings, which can be used by residents, visitors, and other businesses.

The [City of Eau Claire](#)'s Web site contains a substantial amount of recreation information for both local residents and visitors. For example, it posts the location and hours of operation for the municipal swimming pool, which is useful to both local residents and visitors, as well as information on events that are of most interest to local residents, such as swimming classes and lifeguard training.

A community's Web site can also provide important, up-to-date public information. For example, Ozaukee County's Web site was updated at least daily to provide information during an outbreak of E. coli bacterial infections. Links to other information sources, such as the local public health department's description of symptoms of E. coli infection, were included on the Web site.

Government Contact Information

It is a best practice to provide e-mail contacts for government officials.

One of the advantages of e-government is to allow Web site users to interact with the local government and locally elected officials outside of traditional business hours. When e-mail addresses are provided, users can ask questions or initiate contact with government officials 24 hours a day, 7 days a week. A best practice would be to provide the following e-mail contacts:

- a general government contact through a "contact us" button or link, from which messages are forwarded to the appropriate government official for response;

- an e-mail link for the chief elected officer, such as a mayor or county executive; and

- e-mail links for all other locally elected officials who have e-mail service.

Comprehensive e-mail contact information was included in 27 of 225 local government Web sites.

Only 27 of 225 local government Web sites, or 12.0 percent, had all three types of e-mail contacts. However, as shown in Table 5, 77.8 percent of the local government Web sites we reviewed included at least one e-mail contact. These were for either the chief elected officer, other locally elected officials, or a general government contact. Of the 50 local government Web sites with no government e-mail contact, 27 had e-mail contact information for the Webmaster.

Table 5

E-Government Contact Information

Type of Local Government	Number of Web Sites with at Least One Government E-Mail Contact*	Number of Web Sites with No Government E-Mail Contact*	Percentage of Web Sites with at Least One Government E-mail Contact*
County	42	17	71.2%
City	72	16	81.8
Village	40	9	81.6
Town	21	8	72.4
Total	175	50	77.8

* A government e-mail contact is a general government e-mail contact or an e-mail address for either the chief elected officer or at least some locally elected officials.

It is a best practice for a local government Web site to include a mailing address or a telephone contact.

It is a best practice to include a telephone number and mailing information for the general government, as well as for all locally elected officials including the chief elected officer, for those who would prefer to contact the local government by traditional means. In our review, we found that 43.1 percent of the Web sites contained both telephone and mailing information for the local government and all locally elected officials. On the other hand:

- 15.1 percent had no mailing address for the general government and locally elected officials;

- 10.2 percent had no telephone contact for the general government and locally elected officials; and

- 9.8 percent had neither a mailing address nor a telephone contact for the general government and locally elected officials.

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Some local governments currently offer the public the capability to conduct business on line.

Providing an on-line capability to conduct business by purchasing or requesting a service or completing a transaction on line represents the third phase of e-government. Our review indicates that although many Web sites provide information about government and governmental services, a more limited number are capable of allowing the public to conduct government business on line.

On-Line Applications

An intermediate step in developing complete on-line transaction capability is to make applications for licenses and permits available for printing by users who then complete and return the applications in person, by mail, or by fax. Although an entire transaction usually cannot be completed on line, individuals can initiate the process of purchasing the permit or license they seek without visiting the local government in person or calling during business hours.

67 local government Web sites had at least one application available on line.

Of the 225 Web sites reviewed, 67 (29.8 percent) had at least one type of application available on line. Most of these applications were designed to serve the general public. Table 6 shows a sample of the types of applications we found; the local governments listed do not represent all the governments that make a particular form available.

Table 6

Examples of On-Line Applications for the General Public

Category	Application Description	Local Government
Recreation	Youth sports leagues registration form	City of Antigo
	Public pool safety reporting form	La Crosse County
	Special events in public parks permit	City of Kenosha
	Camping reservation form	Sauk County
	Metal detector use in public parks permit	City of Beloit
	Parade permit	City of Madison*
Employment or Volunteer Application	County employment	Green Lake County
	Police officer employment	City of Green Bay
	Participation on city government advisory committees	City of Beloit
	Crossing guard and volunteer firefighter	Village of Ashwaubenon
General Government Services	Request for property tax assessment review	City of Franklin*
	Absentee ballot	City of Delafield
	City parking ramp permit	City of Appleton
	Complaint form for reporting snow-covered public sidewalks	City of Madison*
	General complaint form regarding city	City of Franklin
	Community Development Block Grant (CDBG) funding	City of Appleton
	Request for parking citation review	City of Janesville
	Birth, death, or marriage record	Brown County
	Voter registration form	Village of Greendale

* This application can be completed and submitted on line.

We also found local government Web sites that offered application forms for persons doing business with the local government. Table 7 provides a sample of the commercial applications we found. Several local governments, like the City of Fitchburg, allow developers to print on-line applications for erosion control permits. Many other governments, such as the cities of Green Bay and Beloit, provide applications for individual professional licenses. More unique examples of commercial applications found on line include a City of Madison form to request subsidized clean-up services for businesses vandalized by graffiti, and a City of Janesville application to approve the removal of underground gasoline storage tanks.

Table 7

Examples of On-Line Commercial Applications

Application Description	Local Government
Subdivision of property lots	St. Croix County
Taxi driver license	City of Green Bay
License to download and use land information data	Columbia County
Removal of underground gasoline storage tank	City of Janesville
Building permit	Village of Oconomowoc Lake
Permit to grade or fill land	Barron County
Graffiti removal service	City of Madison
Landmark building repair	City of Waukesha
Erosion control permit for construction sites	City of Fitchburg
Tree trimmer's professional license	City of Beloit

Some local government Web sites allow users to submit applications or ask questions on line.

Some local governments have developed the additional capability of allowing applications to be submitted and other services to be provided directly on line. This service begins to correspond with the third phase of e-government, and it saves users time and allows more complete access to services. For example, the City of Madison's Web site both gives users access to applications and allows them to complete and file some, such as the complaint form to report snow-covered sidewalks and the application to stage a public parade, on line. Marquette County allows Web site visitors to post questions that are answered by county health department nurses. The City of Milwaukee Web site provides for an on-line auction of surplus city merchandise.

On-Line Purchases

The ability to make purchases and payments on line allows users greater access to government and can be especially beneficial for those transacting government business from outside the community. Local governments can also benefit from on-line transactions that allow them to capture revenue that may have been difficult to capture through traditional means. However, before developing the capability to allow on-line financial transactions, local governments should consider the time and cost involved in providing this convenience.

25 Wisconsin local governments allow on-line payments for government services.

We found that 25 Wisconsin local governments have the capability to allow some payments on the Internet. Two cities, La Crosse and Madison, offer payment of parking tickets on line.

- La Crosse established its on-line service in May 2001. A private contractor that provides parking ticket automation services to the city also administers a separate Web site for paying parking tickets on line. La Crosse pays the contractor no additional fee for this service. Individuals pay the ticket amount and a $2 service charge directly to the contractor, and the face value of the ticket is sent by the contractor to the city. Paying tickets on line is the only way individuals may use credit cards for these payments in La Crosse. City officials believe they have increased collection of many overdue tickets through the Internet because of the credit card payment option. They cited one instance of an individual paying approximately $600 in overdue parking tickets that they believe would have remained outstanding if the credit card payment option were not available.

- Madison established its on-line service in April 2001. The city contracted with a local bank to operate a Web site to collect parking ticket payments. Madison paid a one-time $2,500 start-up fee to the bank and estimates that the cost of city staff time to research and plan Internet transactions before contracting with the bank totaled $20,000. Madison also pays the bank a monthly Web site maintenance fee of $100, as well as 25¢ for each ticket paid on line. Unlike the City of La Crosse, Madison decided that users should not have to pay a fee for making parking ticket payments on line. Instead, Madison pays the approximately 2 percent of the ticket value that is charged by the credit card company. Individuals can also pay Madison parking tickets in person with a credit card, and Madison pays the credit card company charge for these transactions. Despite these costs, city officials believe the on-line collection process is cost-effective, that it has increased annual ticket revenue by an estimated $13,000 to date, and that it encourages payment by nonresidents.

In September 2001, the City of Madison also began collecting on-line credit card payments for municipal sewer and water bills. As with parking tickets, no credit card fees are charged. The bank with which the city contracts for payment of parking tickets also administers this on-line payment and receives 25¢ for each sewer and water bill transaction. The city did not pay any additional costs to the bank to implement this capability.

The remaining 23 local governments in Wisconsin that offer on-line payments all contract with the same national firm. As shown in Table 8, these 23 governments include 10 counties, 3 cities, 3 villages, and 7 towns. These communities allow residents to pay their property taxes with a credit card, either by telephoning the vendor's toll-free number or logging on to its Web site. Village of Kohler residents can also pay their utility bills in the same manner.

Table 8

**Local Governments that Collaborate with
a National Vendor for Property Tax Payments**

Counties	Cities*	Villages*	Towns*
Brown	Park Falls (Price County)	Bayside (Milwaukee County)	Eisenstein (Price County)
Columbia	Stevens Point (Portage County)	Kohler (Sheboygan County)	Emory (Price County)
Door	Wausau (Marathon County)	Sussex (Waukesha County)	Harmony (Price County)
Dunn			Kennan (Price County)
Grant			Knox (Price County)
Manitowoc			Lake (Marinette County)
Price			Rock (Rock County)
Rock			
Taylor			
Waupaca			

An individual paying a property tax bill on line pays a fee equal to 2 to 4 percent of the payment amount.

Local governments that have hired this firm are not charged by the vendor for this service. However, individual taxpayers are charged a processing fee equal to 2 to 4 percent of the payment amount. The actual percentage is based on the amount paid. For example, under the vendor's fee structure, the average homeowner in Wisconsin who paid $2,017 in property taxes in 1999 would pay an additional fee of 3.4 percent, or $68.

We spoke with several local officials, mostly treasurers, whose governments had contracts with this vendor for property tax payment purposes. All were satisfied with the service. Local officials can follow payment activity at the vendor's Web site and also receive daily reports on payments made. The officials indicated they contracted with this vendor to meet taxpayer requests to pay taxes with a credit card. Contracting allows the local governments to increase payment options without additional costs. If the local governments had collected credit card payments directly, they would have had to enter into agreements with individual credit card companies and determine whether credit card processing fees would be subsidized, as the City of Madison did for its on-line payments.

Paying property taxes on line is uncommon because of the high fees.

While satisfied with the service provided by the vendor, local government officials with whom we spoke also reported very low participation by local residents. They estimated that less than 1 percent of taxpayers used this service. Most believe this is because of the high processing fee.

We found that only a few of the communities contracting with the vendor advertised the on-line credit card payment option on their own Web sites: 10 of the 23 governments that contract with this vendor do not have Web sites, and only 5 of the remaining 13 local governments' Web sites—Brown, Columbia, and Waupaca counties and the cities of Stevens Point and Wausau—contain working links to the vendor's Web site. Some communities advertise the on-line property tax payment option in other ways. For example, in addition to including a direct link on its Web site, the City of Stevens Point also advertised this payment option in a city newsletter mailed to residents, and the Village of Bayside printed a notice provided by the vendor that advertises the service in property tax bill mailings.

In addition to reviewing the e-government activities of Wisconsin local governments, we reviewed ten local government Web sites in other states that we had identified or that had been identified in e-government publications and articles as having advanced e-government capabilities. We found that five provided for on-line payment of parking tickets, three allowed on-line payment of property taxes, and two provided individuals the capability to apply and pay for building and other permits on line.

Several of the local government Web sites we reviewed offered other e-government services in addition to on-line payments. For example, in California, both Orange and Nevada counties allow taxpayers to submit on-line forms that provide information from which the County Treasurer can bill a specific amount to the taxpayer's checking account on a one-time basis. Other local governments, such as Minneapolis and Denver, provide on-line options to sign up for automatic utility billing and payment from rate-payers' checking accounts.

Planned Expansion of E-Government

Although the literature and studies of e-government indicate the need to increase the number and types of on-line services, most of the 133 local governments that responded to our survey indicated they do not have either the current capacity or any immediate plans to allow the public to conduct government business on line. Many cited concerns over the cost of developing such services. The form used for our on-line survey, with the answers provided by responding counties and municipalities, is Appendix 6.

County Plans

We received 37 responses from counties regarding their current capabilities and future plans to develop on-line financial transactions. Eight of the responding counties—Brown, Columbia, Door, Grant, Manitowoc, Rock, Taylor, and Waupaca—currently make on-line payment of taxes available. Five counties indicated they planned to expand or implement on-line payment capabilities within the next 12 months:

- Taylor County plans to offer on-line payments of fines, permits, licenses, and utility bills;

- Waukesha County plans to offer on-line tax, permit, and license payments;

- Milwaukee County plans to offer on-line permit, fine, and license payments;

- Marquette County plans to offer on-line permit payments; and

- Racine County plans to offer on-line tax payments.

As shown in Table 9, a small number of counties plan to offer these types of services within the next year; however, 35.1 percent or more of the counties responding had no plans to offer any of these services at any time.

Table 9

Current and Future On-Line Financial Transaction Capability for Counties
(37 Respondents)

Capability Time Frame	On-Line Payment of Fines	On-Line Purchase of Licenses	On-Line Purchase of Permits	On-Line Payment of Taxes	On-Line Payment of Utility Bills
Currently Have Capacity	0	0	0	8	0
May Add Within the Year	2	3	4	2	1
Considering Adding at Some Point	6	13	13	10	1
Not Considering	<u>29</u>	<u>21</u>	<u>20</u>	<u>17</u>	<u>35</u>
Total	37	37	37	37	37

City Plans

Because cities provide many public services, they have more opportunities to offer on-line financial transactions. Four of the 57 cities responding to our on-line survey indicated they currently offer an on-line financial transaction capability: Madison for on-line payment of parking tickets and sewer and water bills, La Crosse for on-line payment of parking tickets, and Stevens Point and Wausau for on-line payment of property taxes. As shown in Table 10, 6 cities, or 10.5 percent of those responding, indicated they planned to offer on-line purchasing of permits within one year, and 4 cities, or 7.0 percent, planned to offer on-line payment of taxes within one year. However, 24.6 percent of the cities responding have no long-term plans to offer on-line financial transactions.

Table 10

Current and Future On-Line Financial Transaction Capability for Cities
(57 Respondents)

Capability Time Frame	On-Line Payment of Fines	On-Line Purchase of Licenses	On-Line Purchase of Permits	On-Line Payment of Taxes	On-Line Payment of Utility Bills
Currently Have Capacity	2	0	0	2	1
May Add Within the Year	4	2	6	4	5
Considering Adding at Some Point	29	28	30	27	29
Not Considering	22	27	21	24	22
Total	57	57	57	57	57

Eight cities plan to offer or expand on-line transaction capabilities within the year.

Eight cities responding to our on-line survey indicated they would develop or expand on-line transaction capabilities within the year:

- Milwaukee plans to add on-line purchase of licenses and permits, along with on-line payment of fines, taxes, and utility bills;

- Fitchburg plans to offer on-line fine, permit, tax, and utility bill payment;

- Waukesha plans to offer on-line fine, license, permit, and utility bill payment;

- Watertown plans to offer on-line fine, tax, and utility bill payment;

- Verona plans to offer on-line permit and utility bill payment;

- Marshfield and Oak Creek plan to offer on-line permit payment; and

- Madison plans to add on-line tax payments.

Village and Town Plans

Since towns and villages provide fewer services than counties and cities do, it is not surprising that fewer towns and villages offer or plan to offer on-line financial transaction capabilities. As shown in Table 11, none of the 26 villages or 13 towns that responded to our survey currently provide on-line financial transactions, nor do they plan to offer them within the year. Thirteen of the 26 villages reported some interest in on-line transactions:

- Brown Deer, Grafton, Greendale, and Whitefish Bay are considering all five types of financial transactions;

- Deerfield, Fox Point, Shorewood Hills, and Weston are considering four types of on-line financial transactions;

- Menominee Falls is considering three types of on-line financial transactions;

- East Troy is considering two types of on-line financial transactions; and

- Germantown, Oostburg, and Waunakee are each considering one type of on-line financial transaction.

Table 11

**Current and Future On-Line Financial Transaction Capability
for Villages and Towns**
(39 Respondents)

Capability Time Frame	On-Line Payment of Fines	On-Line Purchase of Licenses	On-Line Purchase of Permits	On-Line Payment of Taxes	On-Line Payment of Utility Bills
Currently Have Capacity	0	0	0	0	0
May Add Within the Year	0	0	0	0	0
Considering Adding at Some Point	11	10	12	12	14
Not Considering	28	29	27	27	25
Total	39	39	39	39	39

Five towns expressed interest in developing on-line transaction capabilities:

- Brookfield officials are considering on-line payment of permits;

- Westport officials are considering on-line payment of utility bills;

- Dunn officials are considering on-line payment of fines, licenses, and taxes; and

- Menasha and Rome officials are considering on-line payment of fines, licenses, permits, taxes, and utility bills.

Cost is the major reason local governments do not plan to offer on-line transactions.

In our on-line survey, we also asked local government officials for the reason they were not interested in offering on-line financial transactions. As shown in Table 12, 65 of the 102 local governments responding to this question indicated they were constrained by costs. Almost half of those responding indicated a lack of interest by elected officials or department managers. Somewhat more than one-quarter of those responding indicated a lack of public demand for these transactions, reflecting local government recognition that residents may not want to pay bills or taxes on line. Eleven local governments indicated they believed it would be difficult to find a partner or vendor with which to contract to help implement on-line financial transactions.

Table 12

Reasons Provided by Local Governments for Not Implementing
On-Line Financial Transactions
(102 respondents)

Reason	Number of Local Governments*
Cost	65
Staff	58
Lack of Local Government Interest	49
Lack of Public Support/Demand	27
Lack of Vendors	11

* More than one response could be provided.

Eighteen local governments also provided individual comments concerning their reasons for not providing or planning to provide on-line financial transactions. For example:

- Kenosha County indicated it preferred to first focus on increasing the informational content of its Web site;

- the Village of Brown Deer, in Milwaukee County, indicated it preferred to first upgrade its computer hardware capabilities;

- the Village of Shorewood Hills, in Dane County, indicated it preferred to first address on-line security concerns; and

- the City of Waupun, in Dodge County, indicated that its municipal Web site had only recently been developed.

On-Line Procurement

Approximately one-third of the local governments responding to our survey indicated that they either currently use the Internet to purchase goods or plan to do so within the next year. Local governments report using Internet resources such as the commercial auction Web site eBay.com and the State of Wisconsin's VendorNet program to obtain discounted office supplies and computers. Currently, 59 of the 225 local governments whose Web sites we reviewed (26.2 percent) subscribe to VendorNet. While local governments can obtain information on line about vendors selling goods and services, only one vendor has the capability to allow local governments to place orders on line.

Some local governments have obtained specialized equipment from on-line vendors. For example, the City of Middleton reported it purchased bulletproof vests for its police officers on line. In addition, a few governments, such as Rock County, use commercial Web sites to request individual vendor bids. As shown in Table 13, counties and cities are more likely to use on-line procurement than are towns and villages with smaller populations. For example, 23 of the city governments responding to our survey (41.3 percent) indicated that they were either already obtaining goods on line or would be doing so within 12 months. However, only 3 village governments (11.5 percent) reported that they were using or planning to use on-line procurement services.

Table 13

Local Government On-Line Procurements Efforts
(132 respondents)

	Currently Procuring On Line or Planning to Next Year	No Immediate Plans to Procure On Line
Counties	14	23
Cities	23	33
Villages	3	23
Towns	3	10
Total	43	89

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Cost, access, security, and privacy are issues to consider.

In addition to determining what information to include on a Web site and the way in which this information will be presented, local governments must address other concerns in developing e-government services:

- the cost of developing and maintaining a Web site;

- public access to the Internet; and

- precautions to protect Web site security and personal privacy.

If local governments do not consider these issues, the extent to which all citizens, as well as the government, will realize the advantages of e-government services will be limited.

Funding E-Government Services

Providing e-government services requires expenditures for both development and ongoing maintenance. Costs to develop and maintain local government Web sites have varied among Wisconsin communities.

Web Site Development and Maintenance Costs

The three different types of costs that a local government will typically incur when developing and maintaining its Web site are:

- development and launch costs, which can include the costs of software, a Web site host, and Webmaster services to create and link the Web pages for access;

- maintenance costs, which can include the costs of updating information, such as posting the minutes of a recent local government meeting; repairing problems, such as non-working links to other Web sites; and updating software to guard against viruses and other on-line risks; and

- upgrade and enhancement costs, which can include the costs of upgrading current computer software and hardware and adding new, additional capabilities, such as the ability to accept on-line applications or process purchases.

In our on-line survey, we asked local government officials to indicate the type of staff used in each phase of their Web site development, maintenance, and upgrade, as well as to estimate the costs they incurred in each area. Most local governments indicated that they used department staff to develop a Web site. As shown in Table 14, 60 of 133 respondents (45.1 percent) reported using department staff, and an additional 44 (33.1 percent) used a combination of department and contracted vendor staff.

Table 14

Type of Staff Used for Web Site Development

Type of Staff	County	City	Village	Town	Total	Percentage of Total
Department Staff	18	25	14	3	60	45.1%
Combination	14	18	7	5	44	33.1
Contracted Vendor	3	13	3	3	22	16.5
Volunteer	0	1	2	2	5	3.8
Did Not Respond	2	0	0	0	2	1.5
Total	37	57	26	13	133	100.0%

Local governments appear to have placed a greater reliance staff to maintain their Web sites than to develop them. As shown in Table 15, 62.4 percent of our on-line survey respondents indicated they use department staff exclusively to maintain their Web sites. This may occur because developing a Web site is more time-intensive than maintenance is.

Table 15

Type of Staff Used for Web Site Maintenance

Type of Staff	County	City	Village	Town	Total	Percentage of Total
Department Staff	26	35	17	5	83	62.4%
Combination	9	11	2	4	26	19.6
Contracted Vendor	1	9	2	2	14	10.5
Volunteer	0	1	3	2	6	4.5
Did Not Respond	1	1	2	0	4	3.0
Total	37	57	26	13	133	100.0%

Costs to develop and launch a Web site vary widely.

Expenditures for developing and launching a Web site are for staff compensation as well as for hardware, software, and other equipment. As shown in Table 16, 57.1 percent of the survey respondents indicated they spent less than $5,000 to develop and launch their Web sites, and 75.9 percent of respondents spent less than $10,000. Among responding counties, 37.8 percent indicated they spent less than $5,000. For cities, the figure was 54.4 percent. Some communities were able to minimize their costs by using volunteers or low-cost software.

Table 16

Costs to Develop and Launch a Local Government Web Site

Reported Cost	County	City	Village	Town	Total	Percentage of Total
Less than $5,000	14	31	20	11	76	57.1%
$5,000 through $9,999	6	14	3	2	25	18.8
$10,000 through $24,999	6	6	3	0	15	11.3
$25,000 through $49,999	4	3	0	0	7	5.2
$50,000 through $99,999	2	1	0	0	3	2.3
$100,000 through $249,999	2	1	0	0	3	2.3
$250,000 and More	1	0	0	0	1	0.7
Did Not Respond	2	1	0	0	3	2.3
Total	37	57	26	13	133	100.0%

Alternative methods exist to reduce the cost of developing and launching a Web site.

A $5,000 expenditure for Web site development may, however, be prohibitive for smaller communities. One low-cost way to obtain assistance in developing a Web site that may be available in the future is through the newly created Wisconsin Department of Electronic Government, which is establishing a program to develop and host local government Web sites. The Department developed Oneida County's Web site as a pilot project and established a series of templates that can be used for other county government Web sites. Other services the Department plans to offer include storage of large data sets, security and virus protection, and disaster recovery. The Department is currently working with one other county. While the Department did not charge Oneida County a fee, it is in the process of establishing costs for its services and estimates the start-up cost for a basic Web site may be between $1,000 and $1,200, and the monthly hosting cost may be $50.

In addition, alliances and partnerships for developing and maintaining low-cost Web sites have been developing nationally between municipalities and other groups, including private companies. For example, in June 2001 a relatively low-cost Web site development tool for local governments became available nationally. This tool was created to assist the League of Minnesota Cities and the International City/County Management Association (ICMA) in offering low-cost Web sites to Minnesota cities. When the company that created this tool chose to make it available nationally, the ICMA agreed to help promote it. The Web site development tool may be best suited for smaller governments, or those serving populations below 60,000, but it is

available to all local governments, including non-ICMA members. Of the approximately 100 cities nationwide that are using the tool, the largest is Minnetonka, Minnesota, which has a population of approximately 52,000.

A sliding fee scale is applied to the local governments that use this tool. As of October 2001, communities that are members of the ICMA will pay licensing fee and a Web site hosting fee that is established based on their size. For example:

- a community with a population of less than 500 will pay a $200 one-time licensing fee and a $20 per month hosting fee;

- a community with a population between 10,000 and 14,999 will pay a $900 one-time licensing fee and a $50 per month hosting fee; and

- a community with a population between 50,000 and 59,999 will pay a $2,700 one-time licensing fee and a $100 per month hosting fee.

Larger communities negotiate the licensing and hosting fee with the company. The company also offers customized Web site design and development services to local governments for an additional fee.

As of October 2001, the Village of Fox Point was the only local government in Wisconsin using this service, although several others are considering it. The village, with a population of approximately 7,000, has paid a $700 licensing fee and will be paying a $40 per month hosting fee to the company. The village indicated it selected this company's services over other less-expensive options because the tool available from the company working with the ICMA presented several advantages: it allowed village staff to create the Web site without having to be familiar with computer programming language, and it allows the Web site to be updated frequently by village.

In addition, the National League of Cities (NLC) and a major technology corporation are working with 12 municipal leagues in approximately 50 cities and towns nationwide to encourage e-government by offering local governments a low-cost Web site development tool, as well as high-speed Internet access. To participate, local governments pay a $295 set-up fee and a monthly fee of approximately $56. The precise monthly fee is established by each state's municipal league. The NLC anticipates making this opportunity available to other interested state municipal leagues by January 2002. The NLC also plans to expand Web site tools to include on-line payment options.

For communities that host their Web sites on their own equipment,
maintenance costs are primarily for staff compensation. As shown in
Table 17, 65.4 percent of our survey respondents indicated they spent
less than $2,500 in the past 12 months to maintain their Web sites, and
an additional 19.6 percent of local government respondents indicated
they spent between $2,500 and $9,999. Web site maintenance costs
were $5,000 or more for 11 of 37 responding counties, while 18 of
57 responding cities indicated expenditures at this level.

Table 17

Annual Web Site Maintenance Costs

Reported Cost	County	City	Village	Town	Total	Percentage of Total
Less than $2,500	22	33	22	10	87	65.4%
$2,500 through $4,999	2	4	4	1	11	8.3
$5,000 through $9,999	4	9	0	2	15	11.3
$10,000 through $24,999	3	7	0	0	10	7.5
$25,000 through $49,999	1	0	0	0	1	0.7
$50,000 through $99,999	1	1	0	0	2	1.5
$100,000 and More	2	1	0	0	3	2.3
Did Not Respond	2	2	0	0	4	3.0
Total	37	57	26	13	133	100.0%

Upgrade and enhancement costs include staff compensation as well as
hardware, software, and other equipment. As shown in Table 18,
62.4 percent of our survey respondents indicated that they spent less
than $2,500 for annual upgrade and enhancement of their Web sites, and
an additional 22.4 percent indicated they spent between $2,500 and
$9,999. A majority of local governments reported spending less than
$2,500 for maintenance and less than $2,500 for upgrades. On the other
hand, a small number of respondents indicated they spent more than
$10,000 for each of these types of costs, and very few respondents
reported spending $100,000 or more.

Table 18

Annual Web Site Upgrade and Enhancement Costs

Reported Cost	County	City	Village	Town	Total	Percentage of Total
Less than $2,500	17	33	23	10	83	62.4%
$2,500 through $4,999	5	4	1	3	13	9.7
$5,000 through $9,999	6	10	1	0	17	12.7
$10,000 through $24,999	4	4	0	0	8	6.0
$25,000 through $49,999	0	3	0	0	3	2.3
$50,000 through $99,999	2	0	1	0	3	2.3
$100,000 and More	1	2	0	0	3	2.3
Did Not Respond	2	1	0	0	3	2.3
Total	37	57	26	13	133	100.0%

A total of 90 local governments, or 83.3 percent of those that reported staffing level information, indicated they had less than one full-time equivalent (FTE) staff person dedicated to Web site maintenance and upgrade activities.

As was shown in Tables 16, 17, and 18, most local governments develop, maintain, and upgrade their Web sites relatively inexpensively. On the other hand, of the six communities that reported spending $100,000 or more on either development and launch, maintenance, upgrade, or a combination of these activities, five are major urban communities, and the sixth smaller community purchased geographic information system capability. In addition, officials from each of the six local governments indicated these costs were for the purchase of their own hardware and software, for redesign of their Web site, or for hiring specialized technical staff.

Efficiencies and Cost Savings

As local governments pass through the different phases of e-government, they should be able to realize increased efficiencies and cost savings. In the fourth and final phase, the transformation of a local government though a re-engineering of its business processes, local governments may be able to make substantive changes to the manner in which they do business, such as making reductions in office hours or staff. The most significant benefits of e-government are expected to be realized in this phase, and the types of changes could yield significant cost savings to local governments.

As private-sector businesses have realized for some time, and governments are beginning to realize, it is easier to process some transactions electronically than by hand. For example, it is easier and less costly for a bank to process a withdrawal from an automated teller machine than through a teller transaction. While it is difficult to estimate actual processing costs, which vary among local governments, one consulting firm estimates cost savings for filing taxes and paying tickets on line could save a government a minimum of $3 per transaction.

Almost all respondents identified efficiencies related to e-government, but fewer than half identified cost savings.

Among 101 local governments that identified benefits related to e-government, 94 identified at least one efficiency, while only 42 identified cost savings. As shown in Table 19, the most common efficiency cited was improved levels of service at no additional staff cost. In addition, as shown in Appendix 6, over 60 percent of the 101 local government respondents reported a decrease in staff time for other job functions, such as responding to in-person inquiries, which allowed staff to perform other tasks. The most common cost savings identified by respondents was savings on printing costs. It should be noted, however, that no local governments indicated they have reduced staffing levels because of efficiencies associated with e-government.

Table 19

Local Government Efficiencies and Cost Savings with E-Government
(101 Respondents)

Type of Efficiency or Savings	Percentage of Counties	Percentage of Cities	Percentage of Villages	Percentage of Towns
Improved Level of Service Provided at No Additional Staff Cost	75.0%	82.9%	81.0%	81.8%
Increased Department Staff Time for Other Functions	50.0	68.3	57.1	72.7
Savings on Printing Costs	42.9	31.8	42.9	54.6
Met Increased Demands for Services Without Increases in Staffing or Other Costs	32.1	43.9	23.8	63.6
Decreased Department Staff Time for Processing Financial Transactions	25.0	19.5	38.1	9.1
Other Cost Savings*	17.9	22.0	14.3	9.1
Savings for Equipment or Space	7.1	2.4	0.0	9.1
Reduced Department Staffing Levels	0.0	0.0	0.0	0.0
Number of Local Governments	28 counties	41 cities	21 villages	11 towns

* Examples include free Web site hosting, working cooperatively with the State, developing the Web site with local rather than contracted staff, and working with community volunteers.

Several local governments provided anecdotes regarding government efficiencies or cost savings they realized through e-government:

- La Crosse County noted that several of its departments realized a savings in staff time by providing information on taxes and other local government information on line.

- The City of Janesville noted its assessor's office has received fewer calls from realtors since it developed an on-line database of assessment information, and as a result, staff time that had been spent answering these inquiries is available for other purposes.

- The Town of Westport reported it provides its local newsletter on its Web site, saving printing and postage costs.

Local government officials were not able to quantify their cost savings from e-government. However, as local governments continue to develop their Web sites and offer more services on line, they may be able to realize additional efficiencies and measurable cost savings.

Funding Methods

Local governments choose to fund e-government in a variety of ways. These range from full-funding directly by the local government to using volunteers to provide needed services, using advertising revenue as the source of partial funding, and user fees for specialized services.

Tax dollars most commonly fund e-government.

The most common method of funding local government Web sites and e-government is with tax dollars. Some local governments, however, may choose alternative funding strategies, especially for individual transactions.

In some cases, local governments may also be able to obtain some services at little or no charge from community volunteers. For example, Rusk County reported in our on-line survey that local college students volunteered to design its Web site. However, the Web site was housed on a college server, which limited county access and control. In addition, these students are no longer available, so while the initial Web site development was economical, the county now must spend funds for maintenance and upgrades.

Outside of Wisconsin, some governments have funded part of their e-government costs by accepting donations from private companies for technical and other development and maintenance services. We did not find any examples of this in Wisconsin.

Only one Wisconsin community reported using advertising as a revenue source.

Another way in which some local governments may choose to partially support their e-government services is by allowing private companies to advertise for a fee. Of the 87 local governments that provided comments on advertising, only the City of Marshfield indicated it receives revenue in return for Web site advertising. Marshfield officials indicated that they received approximately $6,400 in advertising fees in 2000 for advertisements placed in a printed and on-line brochure. The city indicated it increased advertising charges by 10 to 20 percent once it began to place these advertisements on line as well as in the printed brochure.

The Village of Shorewood Hills' Web site carries a link to the local communications company that sponsors the village's Web site. While Shorewood Hills receives no direct revenue, it does receive free Web hosting services in return for displaying the advertisement. A third city also identified itself as allowing advertising on its Web site, although it receives no revenue or in-kind services for the advertisements, which are lists of events sponsored by local businesses that are similar to listings on many other communities' Web sites.

A total of 27 local governments, or 31.0 percent of those that provided comments on advertising, indicated they were not seeking or using advertising as a method to fund their Web sites because of concerns regarding the appropriateness of promoting individual businesses through advertising. Another 12 local governments, or 13.8 percent of those that provided comments on advertising, indicated they had legal concerns or policy limitations that prevented them from using advertising on a public Web site.

It is difficult to estimate the revenues a local government could realize from advertising on its Web site because we found so few examples of communities accepting advertising. City of Madison officials noted one reason Madison does not use advertising as a revenue source is that amounts received could vary significantly from year to year. However, in 2001 the city anticipates it will receive approximately $325,000 in revenues from the advertising it allows on city buses, and a city official noted that the amount is projected to increase to over $500,000 in 2002.

Over a 12-month period, the City of Honolulu, Hawaii, earned approximately $55,000 from advertisements on its Web site. However, city officials expected to earn approximately $150,000 and were selling advertisements to corporations for as much as $5,000 per month. If a local government decided to accept advertising on its Web site, it would be a best practice to estimate advertising revenues conservatively and to assess whether managing advertising sales is within the capability and interests of the local government.

Some local governments charge user or other fees to cover the cost of e-government.

Finally, some local governments charge user or other fees for certain on-line services. As noted, the City of La Crosse charges a $2 fee for each parking ticket individuals pay on line, which is paid to the company that provides the city its on-line payment service, and 23 local governments in Wisconsin use a national vendor that allows citizens to pay property taxes on line for a fee that is equal to between 2 and 4 percent of the amount paid. Madison plans to provide police reports on line and indicates it does not plan to charge a user fee for this service. However,

it requested a one-time payment from each of the insurance companies that made the most requests for printed copies of police reports. The one-time fee was intended to help offset the copy fees the city no longer receives, as well as the costs incurred to make police report information available on line. Officials indicate that one insurance company already made this payment.

The Digital Divide

Governments are attempting to address the digital divide.

While access to the Internet has increased from approximately 24 percent of households in 1997 to more than 50 percent in 2001, with a projected increase to more than 70 percent by 2005, there remains a large segment of the population without Internet access. Some believe government should address this "digital divide" by offering public access to the Internet. We found examples of state and local governments taking steps to address the digital divide, both in Wisconsin and across the nation.

In Wisconsin, both the State and local governments are moving to improve access to the Internet. Since 1997, through Wisconsin's Technology for Educational Achievement in Wisconsin (TEACH) Board, the State has accelerated the use of educational technology by providing grants, loans, and subsidies for telecommunications access and to make high-speed data lines available. The TEACH Board has also provided grants for training to ensure that teachers and students take full advantage of services and information available on the Internet. TEACH Board funds are available to schools, school districts, the Wisconsin School for the Deaf, the Wisconsin Center for the Blind and Visually Impaired, cooperative educational service agencies (CESAs), public libraries, private colleges and universities, and technical colleges. From 1997 through June 30, 2001, the TEACH Board:

- subsidized high-speed data lines that allow Internet connections at 276 public libraries, 161 public schools, 35 private schools, and 14 private colleges;

- subsidized 161 efforts by the Wisconsin School for the Deaf, the Wisconsin Center for the Blind and Visually Impaired; private, public, and tribal schools; CESAs; private colleges and universities; and technical colleges to develop video links that include high-speed Internet connections; and

- provided financial assistance to complete wiring upgrades in 33 percent of Wisconsin's kindergarten through twelfth-grade classrooms.

Some Wisconsin communities have also been addressing the digital divide through partnerships between public and private entities. For example, in spring 2001 a City of Madison community center, the Urban League of Madison, a communications company, and others created a partnership to fund a computer laboratory in the community center that includes computers, a printer, an instructor, and free Internet access. A national technology grant to the Urban League provided the funding for the computers and printer. Because of this partnership, the community center is able to offer additional classes to youth and adults. The laboratory is open during school hours for alternative education of at-risk youth, and after school for both elementary and middle-school children.

Some communities outside of Wisconsin have established public kiosks to provide accessibility. These kiosks are stand-alone devices that resemble automated teller machines and use multi-lingual touch screens to provide government services and information. Fairfax County Virginia has kiosks at 23 locations where residents can browse city Web pages, apply for city jobs, schedule special trash pick-ups, print government forms, and pay taxes with credit cards. San Antonio, Texas, operates eight kiosks as part of a strategy to locate government services in malls and shopping centers. We found no examples of kiosks in Wisconsin.

Security and Privacy Issues

Security issues may present the largest barrier to the development of e-government services. A September 2000 study conducted for the Council for Excellence in Government found that 37 percent of the government officials surveyed believed security was the most significant obstacle to developing e-government capabilities, followed by 26 percent who were concerned with financial constraints. In addition, the President required that by December 2000, all federal agencies include a privacy statement on all principal Web sites and entry points containing personal information.

Risks Involved

Creating a Web site and providing large amounts of data over the Internet create a number of security risks for local governments, and a number of privacy risks for users. Security risks to the local government include:

- the potential for service interruption;

- the potential for both government employees and others to intentionally tamper with data, such as replacing existing data or modifying data so that the browser or the user's own computer fails;

- the potential for hackers to overcome a Web site's security measures and gain access to confidential information; and

- increased potential for viruses to infect the server that is hosting the site.

Privacy risks to the user include:

- the potential for an electronic record of sites visited and personal preferences being created and used by the local government or a third-party;

- personal financial information submitted over the Internet not being secure; and

- information the user provides being sold by the local government to others, including businesses.

Some respondents to our on-line survey indicated that security and privacy issues are a concern they have to address. For example:

- Door County staff indicated that the server used by the private company that hosts the county's Web site was broken into, and the site was unavailable for several days;

- Village of Oostburg staff indicated they developed an on-line message board but received inappropriate comments from people not associated with the village, prompting them to close the message board; and

- Village of Greendale officials expressed concerns about the type and amount of personal and other information that can be made available on line.

Overcoming Security and Privacy Concerns

It is a best practice to make security and privacy statements and policies readily accessible on line.

It is a best practice for local governments to develop security measures and privacy statements and policies that are readily accessible on line for individuals who may use e-government services, and to help the local units of government or departments manage their electronic services. Local governments should include disclaimer notifications that serve to protect them from liability for inappropriate or incorrect Web site content and that notify the public of limitations to on-line information.

Security Measures - Local governments are responsible for collecting, maintaining, and distributing sensitive or confidential information; therefore, they need to consider ways to provide security for their Web sites and the information the government collects. For example, to ensure that confidential data are kept confidential, local governments could take steps to maintain security by including protections in the electronic infrastructure through firewalls and by limiting those who have access to the data.

In addition, governments may wish to allow, subject to state and federal laws, digital signatures that would give qualified personnel access to confidential records and also enable certain financial transactions, such as the purchase of goods, to occur over the Internet. A digital signature is one that can be written on line and that allows individuals to submit on-line applications or make significant purchases or request specific documents without hand-signed paper applications.

Developing Privacy Policies - Once a government has taken steps to provide secure e-government services, it needs to also develop a privacy policy. In addition to increasing citizen comfort with using e-government services, a detailed privacy policy will help the government unit give adequate consideration to security issues and provide guidelines for understanding when true security violations have occurred, as well as help it evaluate the adequacy of future system modifications and security measures.

In December 2000, the National Electronic Commerce Coordinating Council (NECCC), a national group of government leaders concerned with advancing e-government within states, developed a guide for state and local governments to use when developing or evaluating government Web site privacy statements. The guide notes that "posting a privacy policy would be a first step in reassuring citizens that

information they regard as sensitive in nature will not be improperly used, strengthening consumer support for new, innovative e-government applications and on-line services." The NECCC recommends that governments include, at a minimum, the following in their privacy policies:

- the limited ways in which citizens' personal information will be used;

- whether the information will be shared with a third party;

- whether the citizen can limit the distribution of that information; and

- the government's efforts to secure the data it collects, including how the government will both preserve the quality and accuracy of the data and limit access to it.

The NECCC also recommends that governments prepare privacy policies that are written clearly and without legal terminology and that they make their policies available to users before transactions containing personal information are submitted. The form or Web page that is used to collect the information should also include a privacy statement. In addition, the NECCC suggests that governments use it and other organizations as resources when developing or evaluating existing privacy policies.

According to the most recent studies available, local governments have been slow to develop and include privacy statements on their Web sites. Another NECCC study conducted in December 2000 found that only 2 of 50 county and city government Web sites reviewed nationally included privacy statements. The study noted that local governments may find it particularly difficult to establish privacy statements because there may not be a party clearly responsible for privacy.

We found some Web sites with no disclaimer or privacy statement, and others with brief disclaimers absolving the local government of responsibility for the content of any links found on its Web site. Still others include more comprehensive privacy policies with disclaimers. Such statements often include information on the extent to which personal Web site use is monitored and note that security measures are in place to limit tampering with Web site contents. Columbia County's Web site, for example, includes statements regarding many privacy and security concerns. The range of statements found on Web sites are represented by:

- St. Croix County, which has a disclaimer statement regarding links to external sites. This site simply notes, "Links to external sites are provided for your convenience. St. Croix County has no control over the format, content, or accuracy of any information found at non-St. Croix sites."

- Waukesha County, which has a detailed privacy statement, written in plain language, that includes a discussion of the reasons for which personally identifying information may be considered an open record: "In the State of Wisconsin, laws exist to ensure that government is open and that the public has a right to access appropriate records and information possessed by state government. At the same time, there are exceptions to the public's right to access public records that serve various needs: the privacy of individuals is included among these exceptions. Exceptions are provided by both state and federal laws… We strive to protect personally identifiable information by collecting only information necessary to deliver our services. All information collected at this site becomes a public record that may be subject to inspections and copying by the public, unless an exemption in law exists."

- The City of Neenah, which has a comprehensive statement describing its position on copyright, accuracy, and limits on the use of personally identifying information. For example, it states, "…at certain areas of the City of Neenah's Web site(s) you may be asked to provide personal information, including, but not limited to, your name, your electronic mail address, your postal mailing address, your home and/or work telephone number(s), [and/or] your date of birth. The City of Neenah requests this personal information for purposes of correspondence or for conducting city business. The City of Neenah does not share this personal information with anyone outside the City of Neenah nor disclose personal information to any third party. Users are cautioned that this information may nevertheless be subject to disclosure to any Wisconsin citizen under the Wisconsin Public Records Law."

When reviewing local government Web sites, we noted that privacy statements or the links to them are often found at the bottom of the home page. However, links to policies or statements are more easily noticed when placed at the top of the page, along with the other key contents. As noted, these statements could also appear on any Web page used to collect personal information, such as a permit application form.

Balancing Privacy with On-Line Availability

Local governments must judge the degree to which public records should be available on line.

In addition to considering the types of security measures to be taken and privacy policies to be developed, local governments must also consider how to balance expectations regarding the privacy of personal information with expectations for information to be available on line. Governments may encounter opposition if they choose to offer some open records on line, such as police reports filed after automobile accidents, because some citizens believe that making such records readily accessible by electronic means is an invasion of their privacy even when the records are public documents that can be obtained at a police station.

Communities have flexibility in determining what information to post on line, and several communities have confronted these sensitivities when making decisions about publishing property assessment information on line. Information on property assessments is a matter of public record, but if governments choose to offer this information on line, access to personal information is more readily available than when a requestor must appear at a government office to obtain this information. The City of Cudahy indicated that several people have requested their names be removed from its on-line property tax information list. Calumet County officials indicate they planned to include tax information on their Web site, but they have concerns about the extent of the information that should be included. While the Dane County Web site currently offers on-line property assessment information, the names of property owners are not made available to the general public. In contrast, the City of Madison's Web site includes the names of both current and previous property owners, although property owners such as police officers, victims of stalkers, and others who can demonstrate a personal security risk can request their names be removed. Web sites of the cities of Marshfield and Menasha allow individuals to search for property values by owner's name, parcel number, or address.

In addition to concerns regarding property owners' names, concerns have also been expressed about photographs of residential properties on some local government Web sites. A proposed law that is part of 2001 Assembly Bill 621 would prohibit this practice.

In developing their policies, local governments should determine whether or not to give citizens the opportunity to keep nonconfidential personally identifying information private. At the state level, 1999 Wisconsin Act 88 required that the departments of Natural Resources, Regulation and Licensing, and Transportation provide citizens with an opportunity to request that release of personal information be limited. For example, s. 23.45, Wis. Stats., now requires that when the Wisconsin Department of Natural Resources requires individuals to provide any personally identifying information electronically or by telephone to obtain permits, licenses, and other goods or services from the Department, the individuals be given an opportunity to declare that such personal information shall not be included on any lists of ten or more individuals the Department furnishes to another person. In addition, 2001 Wisconsin Act 16 created s. 19.68, Wis. Stats., which prohibits state agencies and officials from collecting personally identifying information from anyone who uses a state Web site without that person's consent.

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Appendix 1

Best Practices Local Government Advisory Council

Daniel Elsass, Local Government Center
University of Wisconsin-Extension
(Originally appointed as City Administrator, City of Baraboo)

Edward Huck, Executive Director
Wisconsin Alliance of Cities

Craig Knutson, County Administrator
Rock County

Mort McBain, County Administrator
Marathon County

Vacant
Appointee of Wisconsin Towns Association

Appendix 2

Glossary of Terms

Customers and visitors—can be citizens, businesses, and government departments and employees.

Firewall—software and hardware that limit unauthorized access to a computer, including a Web site, to outside parties.

Frames—bordered areas displayed in a browser window that operate independently from browser windows.

Hacker—a person who gains access to others' computers for malicious or other purposes. Hackers can inflict damage on a Web site by destroying or altering its contents, uploading viruses, and stealing sensitive data such as credit card information.

Host—a computer linked to the Internet on which the Web pages are stored and through which Internet users gain access to them.

Link—an electronic connection to a data file, Web page, or Web site.

Menu—a list of services and links on a Web site.

Navigation Tools—a mechanism to lead users to the area of the Web site that contains the information or services they seek.

Portal—a Web site that is a single entry point that provides access to a considerable number of links to other Web sites and organizes them in a way to make navigation simple.

Server—a computer that contains files that make up a Web site.

Virus—malicious computer code with intent to disrupt business.

Webmaster—a person who develops and maintains a Web site. This includes producing individual Web pages; linking the pages together; and developing and maintaining other Web-based services, such as on-line databases, search engines, and other related applications.

Appendix 3

Comments Received and Lessons Learned by Local Governments

Comments from Web Site Users

A total of 117 local governments, or 88.0 percent of our on-line survey respondents, provided comments characterizing information they received from customers about their Web sites. For example:

- Columbia County officials indicated they received many positive responses from customers concerning their Land Records System, which provides tax parcel and assessment information within the county.

- Door County officials indicated several customers suggested the county's home page provide links to the Door County Chamber of Commerce Web site.

- Grant County officials reported they have avoided using a large number of high-resolution photos and graphics on their Web site so that the pages do not use a lot of computer memory and can load quickly.

- City of Janesville officials indicated that Web site users suggested changes to the menus because of difficulties navigating the Web site, and the city redesigned its menus.

- City of Neenah officials used an on-line survey in order to obtain comments from users of their Web site.

- Racine County officials reported that many of the services now provided on their Web site were the result of customer suggestions.

- Officials of the City of Verona found that posting meeting agendas and road construction updates was very popular with the citizens.

- In response to customer suggestions about Web site design and content, the City of Wauwatosa established an Internet task force that will be used in its efforts to redesign its Web site, and the City of Brookfield used focus groups when it upgraded its Web site.

- Village of Whitefish Bay officials indicated they received many requests from users to develop the capacity to submit permit applications and pay taxes and other fees on line.

Positive Experiences

Local government officials provided several examples about positive experiences with their Web sites and information they included. For example:

- Eau Claire County officials indicated their "Most Wanted" page brings in tips regarding open arrest warrants.

- City of Greenfield officials reported the Parks and Recreation Department information on the city's Web site has been recognized at the state and national levels.

- Marathon County officials reported staff participation allows them to update and post new information on their Web site nearly every day.

- City of Milton officials reported they worked cooperatively with the local school district and chamber of commerce to create the city's Web site as a high school class project at no cost to the city.

- Officials from the City of Sheboygan, the Village of Plover, and the Town of Liberty each cited learning new Web site development software packages as opportunities for professional growth.

- City of South Milwaukee officials reported they used their Web site to provide a survey and share the results with interested parties in discussions to combine fire services with a neighboring municipality.

- Waukesha County officials reported using a standard Web site format, resulting in department pages having a common look and allowing easier maintenance of the site.

Web Site Management Challenges

Finally, local governments also provided examples of challenges they faced in the design, launch, maintenance, and enhancement of their Web sites. For example:

- Officials from Barron and La Crosse counties; the cities of Greenfield, Madison, and West Allis; and the towns of Bellevue and Menasha identified the challenge of updating their Web sites in a regular and timely manner.

- City of Beloit officials reported their initial Web site design raised questions about the types of information to be included, such as whether the Web site would consist entirely of government information or would also include news, weather, entertainment, and other nongovernmental information.

- Douglas County officials identified the difficulty in developing Web site features with a contracted vendor.

- City of Muskego officials indicated they allowed staff from all departments to make changes to the Web site, but on a few occasions staff caused unintentional damage.

- Door County officials reported they would like to allow department staff to make changes to the Web site but have decided not to for security reasons; however, this has made it more difficult to update the site on a regular basis.

- Village of Denmark officials pointed to the importance of being listed on major Internet search engines to help customers find their Web site.

- Officials from the counties of La Crosse and Milwaukee, the cities of Marshfield and Shell Lake, and the Village of Howard cited the importance of obtaining the support and participation of department staff in developing and maintaining a Web site.

- Officials from Oconto and Outagamie counties noted the importance of keeping their Web sites relatively simple, so that customers using various web browsers would be able to use them without difficulty.

- Racine County officials noted the need to restructure internal processes in order to take advantage of e-government in the long term.

Appendix 4

Web Sites Reviewed

Counties (59)

Barron	http://www.co.barron.wi.us/
Bayfield	http://www.bayfieldcounty.org/
Brown	http://www.co.brown.wi.us/
Buffalo	http://www.buffalocounty.com/
Burnett	http://www.mwd.com/burnett/
Calumet	http://www.co.calumet.wi.us/
Chippewa	http://www.co.chippewa.wi.us/
Clark	http://www.clark-cty-wi.org/
Columbia	http://www.co.columbia.wi.us/
Dane	http://www.co.dane.wi.us/
Dodge	http://www.dodgecountywi.com/
Door	http://www.co.door.wi.us/
Douglas	http://www.douglascountywi.org/
Dunn	http://www.co.dunn.wi.us/
Eau Claire	http://www.co.eau-claire.wi.us/
Fond du Lac	http://www.co.fond-du-lac.wi.us/
Grant	http://grantcounty.org/
Green Lake	http://www.co.green-lake.wi.us/
Iowa	http://www.iowacounty.org/
Jackson	http://co.jackson.wi.us/
Jefferson	http://www.co.jefferson.wi.us/
Kenosha	http://www.co.kenosha.wi.us/
La Crosse	http://www.co.la-crosse.wi.us/
Lafayette	http://wicip.uwplatt.edu/lafayette/
Lincoln	http://www.co.lincoln.wi.us/
Manitowoc	http://www.co.manitowoc.wi.us/
Marathon	http://www.co.marathon.wi.us/
Marinette	http://www.marinettecounty.com/
Marquette	http://co.marquette.wi.us/
Milwaukee	http://www.co.milwaukee.wi.us/
Monroe	http://www.co.monroe.wi.us/
Oconto	http://www.co.oconto.wi.us/
Oneida	http://www.co.oneida.wi.us/
Outagamie	http://www.co.outagamie.wi.us/
Ozaukee	http://www.co.ozaukee.wi.us/
Pepin	http://www.co.pepin.wi.us/
Pierce	http://www.co.pierce.wi.us/
Polk	http://www.co.polk.wi.us/
Portage	http://www.co.portage.wi.us/
Price	http://www.pricecounty.org/
Racine	http://www.racineco.com/
Rock	http://www.co.rock.wi.us/

Rusk	http://www.ruskcounty.org/
Sauk	http://www.co.sauk.wi.us/
Sawyer	http://www.sawyercountygov.org/
Shawano	http://www.co.shawano.wi.us/
Sheboygan	http://www.co.sheboygan.wi.us/
St. Croix	http://www.co.saint-croix.wi.us/
Taylor	http://www.taylor-county.com/
Trempealeau	http://www.tremplocounty.com/
Vilas	http://co.vilas.wi.us/
Walworth	http://www.co.walworth.wi.us/
Washburn	http://www.co.washburn.wi.us/
Washington	http://www.co.washington.wi.us/
Waukesha	http://www.waukeshacounty.gov
Waupaca	http://www.co.waupaca.wi.us/
Waushara	http://www.1waushara.com/
Winnebago	http://www.co.winnebago.wi.us/
Wood	http://co.wood.wi.us/

Cities* (88)

Algoma (Kewaunee)	http://www.algomacity.org/
Alma (Buffalo)	http://www.almawisconsin.com/
Altoona (Eau Claire)	http://www.ci.altoona.wi.us/
Antigo (Langlade)	http://www.antigo-city.org/
Appleton (Outagamie)	http://www.appleton.org/
Ashland (Ashland)	http://www.ci.ashland.wi.us/
Augusta (Eau Claire)	http://www.augusta-wi.com/
Beloit (Rock)	http://www.ci.beloit.wi.us/
Bloomer (Chippewa)	http://www.ci.bloomer.wi.us/
Boscobel (Grant)	http://www.boscobelwisconsin.com/
Brillion (Calumet)	http://www.ci.brillion.wi.us/
Brookfield (Waukesha)	http://www.brookfield.wi.us/
Cedarburg (Ozaukee)	http://www.ci.cedarburg.wi.us/
Columbus (Columbia)	http://www.ci.columbus.wi.us/
Cudahy (Milwaukee)	http://www.ci.cudahy.wi.us/
Cumberland (Barron)	http://cityofcumberland.net/
De Pere (Brown)	http://ci.de-pere.wi.us/
Delafield (Waukesha)	http://www.cityofdelafield.com/
Delavan (Walworth)	http://www.cityofdelavan.org/
Eau Claire (Eau Claire)	http://www.ci.eau-claire.wi.us/
Elroy (Juneau)	http://www.elroywi.com/
Evansville (Rock)	http://www.evansville-wi.org/
Fitchburg (Dane)	http://www.city.fitchburg.wi.us/
Fond du Lac (Fond du Lac)	http://www.ci.fond-du-lac.wi.us/
Fountain City (Buffalo)	http://www.fountaincitywi.com/
Franklin (Milwaukee)	http://www.ci.franklin.wi.us
Gillett (Oconto)	http://www.ci.gillett.wi.us/
Glendale (Milwaukee)	http://www.glendale-wi.org/

* County indicated in parentheses.

Green Bay (Brown)	http://www.ci.green-bay.wi.us
Greenfield (Milwaukee)	http://www.ci.greenfield.wi.us/
Hillsboro (Vernon)	http://www.hillsborowi.com/
Hudson (St. Croix)	http://www.hudsonwi.com/
Janesville (Rock)	http://www.ci.janesville.wi.us/
Juneau (Dodge)	http://ci.juneau.wi.us/
Kenosha (Kenosha)	http://www.kenosha.org/
Kewaunee (Kewaunee)	http://www.gokewaunee.net/
La Crosse (La Crosse)	http://www.cityoflacrosse.org/
Lancaster (Grant)	http://www.lancasterwisconsin.com/
Madison (Dane)	http://www.ci.madison.wi.us/
Manitowoc (Manitowoc)	http://www.manitowoc.org/
Marinette (Marinette)	http://www.marinette.wi.us/
Marshfield (Wood)	http://ci.marshfield.wi.us/
Mayville (Dodge)	http://www.mayvillecity.com/
Menasha (Winnebago)	http://www.cityofmenasha.com/
Menomonie (Dunn)	http://www.topdolls.com/
Merrill (Lincoln)	http://www.ci.merrill.wi.us/
Middleton (Dane)	http://www.ci.middleton.wi.us/
Milton (Rock)	http://www.ci.milton.wi.us/
Milwaukee (Milwaukee)	http://www.ci.mil.wi.us/
Mondovi (Buffalo)	http://www.mondovi.com/
Monona (Dane)	http://www.monona.wi.us/
Mosinee (Marathon)	http://www.mosinee.wi.us/
Muskego (Waukesha)	http://www.ci.muskego.wi.us/
Neenah (Winnebago)	http://www.ci.neenah.wi.us/
New Berlin (Waukesha)	http://www.newberlin.org/
New London (Waupaca)	http://www.newlondonwi.org/
New Richmond (St. Croix)	http://ci.new-richmond.wi.us/
Oak Creek (Milwaukee)	http://www.oakcreekwi.org/
Oconomowoc (Waukesha)	http://www.ci.oconomowoc.wi.us/
Oconto Falls (Oconto)	http://www.ci.ocontofalls.wi.us/
Omro (Winnebago)	http://www.1omro.com/
Onalaska (La Crosse)	http://www.ci.onalaska.wi.us/
Oshkosh (Winnebago)	http://www.ci.oshkosh.wi.us/
Plymouth (Sheboygan)	http://www.plymouthgov.org/
Port Washington (Ozaukee)	http://www.ci.port-washington.wi.us/
Prescott (Pierce)	http://www.prescottwi.org/
Racine (Racine)	http://www.cityofracine.org/
River Falls (Pierce)	http://www.rfcity.org/
Sheboygan (Sheboygan)	http://ci.sheboygan.wi.us/
Shell Lake (Washburn)	http://shell-lake.com/
South Milwaukee (Milwaukee)	http://ci.south-milwaukee.wi.us/
Spooner (Washburn)	http://www.cityofspooner.org/
Stevens Point (Portage)	http://ci.stevens-point.wi.us/
Stoughton (Dane)	http://www.ci.stoughton.wi.us/
Sun Prairie (Dane)	http://www.sun-prairie.com/
Superior (Douglas)	http://www.ci.superior.wi.us/

Two Rivers (Manitowoc)	http://www.ci.two-rivers.wi.us/
Verona (Dane)	http://www.ci.verona.wi.us/
Watertown (Jefferson)	http://www.ci.watertown.wi.us/
Waukesha (Waukesha)	http://www.ci.waukesha.wi.us/
Waupaca (Waupaca)	http://www.cityofwaupaca.org/
Waupun (Dodge)	http://www.cityofwaupun.org/
Wausau (Marathon)	http://www.ci.wausau.wi.us/
Wautoma (Waushara)	http://www.1wautoma.com/
Wauwatosa (Milwaukee)	http://www.ci.wauwatosa.wi.us/
West Allis (Milwaukee)	http://www.ci.west-allis.wi.us/
West Bend (Washington)	http://www.ci.west-bend.wi.us/
Whitewater (Walworth)	http://www.ci.whitewater.wi.us/

Villages * (49)

Albany (Green)	http://vil.albany.wi.us/
Ashwaubenon (Brown)	http://www.ashwaubenon.com/
Baldwin (St. Croix)	http://www.ci.baldwin.wi.us/
Bayside (Milwaukee)	http://www.53217.com/Bayside/
Belgium (Ozaukee)	http://www.village.belgium.wi.us/
Brown Deer (Milwaukee)	http://www.vil.brown-deer.wi.us/
Colfax (Dunn)	http://www.pressenter.com/~colfax/
Cottage Grove (Dane)	http://village.cottage-grove.wi.us/
Cross Plains (Dane)	http://www.cross-plains.wi.us/
Deerfield (Dane)	http://www.deerfieldwi.com/
DeForest (Dane)	http://www.vi.deforest.wi.us/
Denmark (Brown)	http://www.denmark-wi.org/
East Troy (Walworth)	http://www.easttroy-wi.com/
Elm Grove (Waukesha)	http://www.elmgrovewi.org/
Fox Point (Milwaukee)	http://www.53217.com/FoxPoint/
Germantown (Washington)	http://www.village.germantown.wi.us/
Grafton (Ozaukee)	http://www.village.grafton.wi.us/
Grantsburg (Burnett)	http://www.grantsburgwi.com/
Greendale (Milwaukee)	http://www.greendale.org
Hewitt (Wood)	http://vi.hewitt.wi.us/
Hortonville (Outagamie)	http://www.hortonville-wi.com/
Howard (Brown)	http://www.village.howard.wi.us/
Jackson (Washington)	http://www.jacksonwi.net/
Kimberly (Outagamie)	http://www.vokimberly.org/
Little Chute (Outagamie)	http://www.vil.little-chute.wi.us/
Maple Bluff (Dane)	http://vil.maple-bluff.wi.us/
Menomonee Falls (Waukesha)	http://www.menomonee-falls.org/
Mount Horeb (Dane)	http://danenet.wicip.org/mthoreb/
Newburg (Washington)	http://www.village.newburg.wi.us/
Oconomowoc Lake (Waukesha)	http://www.oconlake.com/
Oostburg (Sheboygan)	http://www.oostburg.org/
Plover (Portage)	http://www.eplover.com/
Random Lake (Sheboygan)	http://www.execpc.com/%7erandom/

* County indicated in parentheses.

Redgranite (Waushara)	http://www.1redgranite.com/
Roberts (St. Croix)	http://www.robertswisconsin.com/
Saukville (Ozaukee)	http://www.village.saukville.wi.us/
Sharon (Walworth)	http://www.sharonwisconsin.com/
Shorewood (Milwaukee)	http://www.execpc.com/~shorewoo/
Shorewood Hills (Dane)	http://www.shorewood-hills.org/
St. Nazianz (Manitowoc)	http://village.saint-nazianz.wi.us/
Thiensville (Ozaukee)	http://www.village.thiensville.wi.us/
Tigerton (Shawano)	http://www.tigertonwis.com/
Waunakee (Dane)	http://www.waunakee.com/
West Milwaukee (Milwaukee)	http://www.westmilwaukee.org/
West Salem (La Crosse)	http://www.westsalemwi.com/
Weston (Marathon)	http://www.westonwisconsin.org/
Whitefish Bay (Milwaukee)	http://www.village.whitefish-bay.wi.us/
Williams Bay (Walworth)	http://www.williamsbay.org/
Woodville (St. Croix)	http://www.ci.woodville.wi.us

Towns * (29)

Algoma (Winnebago)	http://www.vbe.com/~algtown/
Bellevue (Brown)	http://www.bellevue-wi.com/
Brookfield (Waukesha)	http://www.townofbrookfield.com/
Cedarburg (Ozaukee)	http://www.town.cedarburg.wi.us/
Cottage Grove (Dane)	http://www.town.cottage-grove.wi.us/
Dunn (Dane)	http://userpages.itis.com/towndunn/
Empire (Fond du Lac)	http://www.empire-town.org/
Genesee (Waukesha)	http://www.towngenesee.org/
Gibraltar (Door)	http://www.townofgibraltar.com/
Grafton (Ozaukee)	http://www.grafton-town.org/
Greenville (Outagamie)	http://www.townofgreenville.com/
Harrison (Calumet)	http://www.tponet.com/townofharrison/
Hobart (Brown)	http://www.hobart-wi.org/
Liberty (Outagamie)	http://my.athenet.net/~mubl/
Menasha (Winnebago)	http://www.town-menasha.com/
Newbold (Oneida)	http://www.newboldtown.com/
Oregon (Dane)	http://www.town.oregon.wi.us/
Ottawa (Waukesha)	http://www.townofottawa.com/
Richfield (Washington)	http://www.town-richfield.com/
River Falls (Pierce)	http://riverfallstown.com/
Rome (Adams)	http://www.romewi.com/
Suamico (Brown)	http://www.suamico.org/
Summit (Waukesha)	http://www.summittown.org/
Superior (Douglas)	http://www.pressenter.com/~tosuper/
Vermont (Dane)	http://www.vermonttown.org/
Verona (Dane)	http://www.town.verona.wi.us/
West Bend (Washington)	http://www.town.west-bend.wi.us/
Westport (Dane)	http://www.townofwestport.org/
Wilson (Sheboygan)	http://www.townwilson.com/

* County indicated in parentheses.

Appendix 5

Summary of Web Site Review Data

General Information

225 local government Web sites found and reviewed

Navigation Tools

(for 225 local government Web sites)

Types of Tools Found	Found and Functioning	Percentage	Not Found or Not Functioning	Percentage
General navigation tool (such as frames)	208	92.4%	17	7.6%
Search engine	45	20.0	180	80.0
Site map or index	33	14.7	192	85.3

Electronic Links or Addresses of Other Relevant Web Sites

(for 225 local government Web sites)

Web Site Link or Address	Found and Functioning	Percentage with This Information	Not Found or Not Functioning	Percentage without This Information
Government				
Federal government (any link to or information about a federal agency or portal)	83	36.9%	142	63.1%
State government (any link to or information about a state agency or state portal)	133	59.1	92	40.9
Other local governments	126	56.0	99	44.0
Education				
School district	132	58.7	93	41.3
University of Wisconsin/local technical college	68	30.2	157	69.8
University of Wisconsin-Extension	55	24.4	170	75.6
Local Business				
Local business/chamber of commerce	127	56.4	98	43.6
Local Information				
Local newspaper	58	25.8	167	74.2
Library	119	52.9	106	47.1
Local historical society/ history	118	52.4	107	47.6
Neighborhood associations	7	3.1	218	96.9

Contacts

(for 225 local government Web sites)

	Yes		No	
Telephone/Fax	Number	Percentage	Number	Percentage
General government contact	152	67.6%	73	32.4%
Chief elected officer	168	74.7	57	25.3
Locally elected officials	177	78.7	48	21.3

	Yes		No	
Mailing Address	Number	Percentage	Number	Percentage
General government contact	152	67.6%	73	32.4%
Chief elected officer	141	62.7	84	37.3
Locally elected officials	150	66.7	75	33.3

- **E-mail Contact for the Local Government:**

Yes	112	49.8%
Contact found, unsure if for government	8	3.5%
No	105	46.7%

- **E-mail Contact for the Chief Elected Officer:**

Yes	79	35.1%
No	146	64.9%

- **E-mail for Locally Elected Officials:**

Listed for all locally elected officials	28	12.4%
Listed for some locally elected officials	56	24.9%
No e-mail for any locally elected officials	141	62.7%

- **E-mail Contact for the Webmaster:**

Yes	96	42.7%
No	129	57.3%

- **Feedback Page:**

Yes	37	16.4%
No	188	83.6%

Information Available/Ability to Conduct Business

(for 225 local government Web sites)

	Information Found on Web Site	Percentage of Web Sites with This Information
Local meeting information	155	68.9%
Recreation	151	67.1
Local calendar of events	133	59.1
Economic development	99	44.0
Employment	85	37.8
Ordinances/codes	73	32.4
Utility information	43	19.1
Budget	38	16.9
Property assessment	21	9.3
Citizen participation/action inquiries	17	7.6
Procurement	16	7.1

Presentation

(for 225 local government Web sites)

- **How Government Information Is Presented:**

Primarily by service	19	8.4%
Primarily by department	99	44.0%
Combination of both	90	40.0%
No government information present	17	7.6%

- **Availability of Information on Local Government Departments:**

None	31	13.8%
Limited	85	37.8%
Some	76	33.8%
Considerable	33	14.6%

- **Availability of Information on Government Services:**

None	54	24.0%
Limited	67	29.8%
Some	79	35.1%
Considerable	25	11.1%

- **Availability of Applications for Downloading and Printing:**

Yes	67	29.8%
No	158	70.2%

- **Capacity for On-line Financial Transactions:**

  Yes   7   3.1%
  No   218 96.9%

General Comments

Considerable information available about businesses at this site (for public use):	21	9.3%
Considerable information available for businesses at this site (for business use):	27	12.0%
Integrated recreation information, including references to entities outside the local government (for example, chamber of commerce, visitor's bureau, private sector recreation, and hotels,):	59	26.2%
Information about other local governments:	18	8.0%

Additional Web Sites Reviewed

We also reviewed an additional 157 Web sites that were not included in our analysis because, for example, they were sponsored by private parties or by the chamber of commerce, or they were part of another Web site.

Appendix 6

On-Line Survey Questions and Responses

Part I

Of the 225 local government Web sites we identified, we were able to contact 203. Of these, 133 (65.5 percent) responded to our on-line survey

Questions 1 through 3 requested identifying information from respondents.

4. When was your Web site for your locality launched?

Prior to CY 1998	29	21.8%
CY 1998	25	18.8
CY 1999	33	24.8
First and second quarters 2000	15	11.3
Third and fourth quarters 2000	12	9.0
First and second quarters 2001	8	6.0
Since July 1, 2001	8	6.0
No response	3	2.3
Total	133	100.0%

5. Do you keep track of your site traffic?

Yes	75	56.4%
No	58	43.6
Total	133	100.0%

5a. What is the typical number of hits your locality's main page receives per month?

100,000 or more	5	6.7%
10,000 to 99,999	10	13.3
1,000 to 9,999	19	25.3
500 to 999	6	8.0
1 to 499	25	33.3
Blank	10	13.4
Total	75	100.0%

6. Please indicate the services you currently offer and the services you plan to offer in 2002:

Current:	Offer		Do Not Offer		Blank	
Provide contact information for departments/agencies	131	(98.5%)	2	(1.5%)	0	(0.0%)
Provide contact information for elected officials	122	(91.7%)	10	(7.5%)	1	(0.8%)
Provide links to other government agencies	111	(83.5%)	21	(15.7%)	1	(0.8%)
Print out application forms for licenses or permits	48	(36.1%)	83	(62.4%)	2	(1.5%)
Public is able to make purchases or payments on line	5	(3.8%)	122	(91.7%)	6	(4.5%)
Other	22	(16.5%)	4	(3.0%)	107	(80.5%)

2002:	Offer		Do Not Offer		Blank	
Provide contact information for departments/agencies	82	(61.6%)	1	(0.8%)	50	(37.6%)
Provide contact information for elected officials	78	(58.7%)	6	(4.5%)	49	(36.8%)
Provide links to other government agencies	84	(63.2%)	6	(4.5%)	43	(32.3%)
Print out application forms for licenses or permits	65	(48.9%)	37	(27.8%)	31	(23.3%)
Public is able to make purchases or payments on line	28	(21.1%)	82	(61.6%)	23	(17.3%)
Other	18	(13.5%)	4	(3.0%)	111	(83.5%)

7. If your Web site allows the public to print application forms, please check which types of forms are available.

Type of Form	Available	Percentage
License applications (such as marriage licenses)	18	13.5%
Permit applications (such as building permits)	30	22.6
Park permits/reservations	15	11.3
Permits/registration applications for businesses	10	7.5
Applications for vendors or for bids	7	5.3
Registration for recreation classes/events	15	11.3
Requests for personal records (such as birth certificates)	10	7.5
Other	21	15.8
Not applicable	31	23.3

8. Does your locality currently engage in, or plan to engage in within the next 12 months, any on-line procurement of goods and services?

Yes	43	32.3%
No	89	66.9
Blank	1	0.8
Total	133	100.0%

8a. Please provide any additional information about your on-line procurement activities, especially any reverse auctions.

30 respondents (22.6%) provided comments.

9. Do you have any commercial advertisements on your Web site?

Yes	3	2.3%
No	130	97.7%

Municipalities identifying themselves as having commercial advertising are:

- City of Fond du Lac
- City of Marshfield
- Village of Shorewood Hills

9a. Do you receive any revenue or anything in lieu of revenue (e.g. reduced fees) for your commercial advertisements?

No local governments responding to the survey reported advertising revenue or a reduction in fees, although some local governments identified minimal earnings during follow-up telephone calls.

10. Are you currently seeking commercial advertisers?

Yes	0	0.0%
No	131	98.5
Blank	2	1.5
Total	133	100.0%

11. What factors did you consider in your decision whether or not to have commercial advertising?

87 respondents (65.4%) provided comments.

12. Does your site include a means for the public to contact Web site support staff in the case of a technical question, a problem, or to obtain information not found at the Web site?

	Yes	Percentage
Name and telephone number provided	52	39.1%
E-mail address provided	117	88.0
Feedback form available	38	28.6
No contact information provided	10	7.5

13. What kind of feedback have you received from the public concerning your locality's Web site, such as ease of use or the types of services that are available on line?

114 respondents (85.7%) provided comments.

14. Have you had any positive experiences concerning the design and/or management of your locality's Web site that would be useful to share with other local units of government?

69 respondents (51.9%) provided comments.

15. Have you encountered any challenges concerning the design and/or management of your locality's Web site that would be useful to share with other local units of government?

72 respondents (54.1%) provided comments.

16. Who developed the Web site for your locality?

Department staff	60	45.1%
Contracted vendor	22	16.5
Combination	44	33.1
Volunteer	5	3.8
Did not respond	2	1.5
Total	133	100.0%

17. Who maintains the Web site for your locality?

Department staff	83	62.4%
Contracted vendor	14	10.5
Combination	26	19.6
Volunteer	6	4.5
Did not respond	4	3.0
Total	133	100.0%

18. Annually, how much full-time equivalent (FTE) staff time, including in-house staff and any contracted staff time, is devoted to:

Maintenance of your Web site:

Less than .25 FTE	61	56.5%
.25 to .49 FTE	21	19.4
.50 to .99 FTE	9	8.3
1.00 to 1.99 FTE	11	10.2
2.00 FTE or more	2	1.9
No response	4	3.7
Total	108	100.0%

Other activities, such as modifications, upgrades, and enhancements:

Less than .25 FTE	63	58.3%
.25 to .49 FTE	14	13.0
.50 to .99 FTE	7	6.5
1.00 to 1.99 FTE	6	5.5
2.00 FTE or more	3	2.8
No response	15	13.9
Total	108	100.0%

Total FTEs:

Less than .25 FTE	53	49.1%
.25 to .49 FTE	16	14.8
.50 to .99 FTE	21	19.4
1.00 to 1.99 FTE	10	9.3
2.00 to 2.99 FTE	6	5.5
3.00 FTE or more	2	1.9
Total	108	100.0%

19. Annually, how much do you spend on the maintenance of your locality's Web site, excluding modifications, upgrades, and enhancements?

Less than $2,500	87	65.4%
$2,500 through $4,999	11	8.3
$5,000 through $9,999	15	11.3
$10,000 through $24,999	10	7.5
$25,000 through $49,999	1	0.7
$50,000 through $99,999	2	1.5
$100,000 and greater	3	2.3
Did not respond	4	3.0
Total	133	100.0%

20. In the last 12 months, how much did you spend on other activities related to your locality's Web site, such as modifications, upgrades, and enhancements?

Less than $2,500	83	62.4%
$2,500 through $4,999	13	9.7
$5,000 through $9,999	17	12.7
$10,000 through $24,999	8	6.0
$25,000 through $49,999	3	2.3
$50,000 through $99,000	3	2.3
$100,000 and greater	3	2.3
Did not respond	3	2.3
Total	133	100.0%

21. Can you estimate the costs to launch your locality's Web site? Please include the costs for development, purchase of hardware, purchase of software, private vendors, and staff time.

Less than $5,000	76	57.1%
$5,000 through $9,999	25	18.8
$10,000 through $24,999	15	11.3
$25,000 through $49,999	7	5.2
$50,000 through $99,999	3	2.3
$100,000 through $249,000	3	2.3
$250,000 and greater	1	0.7
Did not respond	3	2.3
Total	133	100.0%

22. Have you experienced any of the following benefits through establishing your locality's Web site?

Improved level of service provided at no additional staff cost	81	80.2%
Decreased department staff time for other functions	62	61.4
Savings on printing costs	40	39.6
Met increased demands for services without increases in staffing or other costs	39	38.6
Decreased department staff time for processing financial transactions	24	23.8
Other cost savings	18	17.8
Savings for equipment or space	4	4.0
Reduced department staffing levels	0	0.0

A total of 101 respondents listed at least one benefit.

23. Please provide any comments you would like to offer concerning any cost savings your local unit of government has realized through the establishment of the Web site.

41 respondents (30.8%) provided comments.

24. Please indicate the services you are or will be offering on line:

	Do Not Have Capability and Are Not Planning to Add	Are Considering This Service	Anticipate Having On-line Capability Within 12 Months	Have On-line Capability
Pay fines	79 (59.4%)	46 (34.6%)	6 (4.5%)	2 (1.5%)
Purchase licenses	77 (57.9%)	51 (38.3%)	5 (3.8%)	0 (0.0%)
Purchase permits	68 (51.1%)	55 (41.4%)	10 (7.5%)	0 (0.0%)
Purchase park permits/reservations	68 (51.1%)	50 (37.6%)	13 (9.8%)	2 (1.5%)
Register for recreation classes/events	71 (53.4%)	44 (33.1%)	12 (9.0%)	6 (4.5%)
Obtain personal records	95 (71.4%)	25 (18.8%)	10 (7.5%)	3 (2.3%)
Other records	86 (64.6%)	37 (27.8%)	5 (3.8%)	5 (3.8%)
Pay taxes	69 (51.9%)	50 (37.6%)	9 (6.7%)	5 (3.8%)
Make utility payments	82 (61.6%)	43 (32.3%)	7 (5.3%)	1 (0.8%)
Other	119 (89.5%)	4 (3.0%)	9 (6.7%)	1 (0.8%)

25. If you do not currently have the capability to allow the public to complete any financial transactions on line and do not intend to develop this capability within the next 12 months, what reason(s) factored into your decision?

102 respondents (76.7%) listed at least one reason, including:

Cost	65	63.7%
Staffing	58	56.9%
Availability of financial institution or vendor to provide this service	11	10.8%
Level of interest within the local unit of government to provide on-line financial transactions	49	48.0%
Level of public interest in having on-line financial transactions	27	26.5%
Other	18	17.6%

Part II

20 survey respondents completed Part II of the survey.

1. Do you track the number of on-line financial transactions processed at your locality's site?

Yes	4	20.0%
No	10	50.0%
No response	6	30.0%

4 respondents indicated they track the number of on-line financial transactions:

- City of Appleton
- City of Madison
- City of Stevens Point
- City of Wausau

1a. How many on-line financial transactions are processed per month?

3 survey respondents provided monthly transaction information:

- City of Madison: 400 transactions per month
- City of Wausau: 25 transactions per month
- City of Stevens Point: 5 transactions per month

2. Have you compared the volume of on-line financial transactions to the same financial transactions completed by mail or in-person?

Yes	1	5.0%
No	13	65.0%
No response	6	30.0%

The City of Wausau was the only survey respondent that indicated comparing transaction volumes.

2a. What information could you provide to us regarding those comparisons?

The City of Wausau reported more transactions are completed by mail than on line.

3. Have you compared the cost of on-line financial transactions to the same financial transactions completed by mail or in person?

None of the survey respondents indicated they compared on-line transaction costs to those completed by mail or in person.

3a. What information could you provide to us regarding those comparisons?

None of the survey respondents provided cost comparisons.

4. What methods of payment do you accept for on-line financial transactions?

7 survey respondents indicated at least one on-line payment method.

Credit card	6 of 7	85.7%
Electronic funds transfer	2 of 7	28.6%
Other methods	0 of 7	0.0%

5. What methods of payment are accepted by your local unit of government for financial transactions completed by mail or in person?

13 survey respondents indicated at least one payment method for mail or in-person transactions.

Cash	13 of 13	100.0%
Check	13 of 13	100.0%
Credit card	8 of 13	61.5%
Electronic funds transfer	6 of 13	46.2%
Other methods	0 of 13	0.0%

6. **What were the initial in-house start-up costs you incurred to develop the capability to process on-line financial transactions?**

   3 survey respondents reported they had no start-up costs:

   > Outagamie County
   > City of Stevens Point
   > City of Wausau

   4 survey respondents reported start-up costs:

   > City of Madison $20,000
   > City of Appleton $5,000
   > City of Eau Claire $700
   > Dane County $300

   In addition, the City of La Crosse reported in-house start-up costs were part of a software package it purchased.

7. **What kinds of in-house costs were incurred?**

   > Equipment   Cities of La Crosse and Madison
   > Salaries   Cities of Appleton and Madison
   > Security Software   Dane County

8. **Did you contract with a private vendor to develop on-line financial transaction capability?**

   > Yes   4   20.0%
   > No   6   30.0%
   > No response   10   50.0%

8a. **What were your costs?**

   2 respondents provided additional information about their vendor costs. Refer to responses to Question 8b for additional information.

8b. Whom did you pay and what types of services did they provide?

2 respondents provided additional information about their vendor costs:

- The City of Madison spent $2,500 to have a bank provide hardware and software to process transactions and verify credit card information.
- The City of Eau Claire paid $700 for an upgrade to the city's computer system and a computer program to develop an on-line parks and recreation registration system.

9. Do you have any in-house maintenance costs related specifically to on-line financial transactions?

Yes	0	0.0%
No	10	50.0%
No response	10	50.0%

9a. How much are these costs per month?

None of the survey respondents indicated in-house maintenance costs.

9b. What types of costs are there?

None of the survey respondents indicated in-house maintenance costs.

10. Do you pay a private vendor to maintain your on-line service to process on-line financial transactions (e.g. financial institution)?

Yes	3	15.0%
No	7	35.0%
No response	10	50.0%

10a. What are these costs?

2 respondents provided additional information about their vendor maintenance costs. Refer to responses to Question 10b for additional information.

10b. Whom do you pay and what types of services did they provide?

2 respondents provided additional information about their vendor maintenance costs:

- The City of Madison pays a bank $100 per month for a server host fee.
- The City of Eau Claire reported its vendor fees are recovered through a user fee.

11. Are there currently any in-house costs for your local unit government to process on-line financial transactions?

Yes	1	5.0%
No	9	45.0%
No response	10	50.0%

11a. How much are these costs?

None of the respondents provided additional in-house processing cost information.

11b. What are the costs for?

None of the respondents provided additional in-house processing cost information.

12. Does your local unit of government pay a private vendor to process on-line financial transactions?

Yes	2	10.0%
No	8	40.0%
No response	10	50.0%

13. If the answer to the previous question was yes, who receives payment?

- The City of Madison reported a flat fee of $100, and a per-transaction fee of 25¢ is paid to a bank to process on-line financial transactions. In addition, the credit card company receives 2 percent of the transaction.
- The City of La Crosse reported it pays a fee of 35¢ per transaction to a third party.

14. Are there any on-line transaction costs paid directly by the public?

Yes	4	20.0%
No	6	30.0%
No response	10	50.0%

14a. Please list the type of fee(s) paid by the public and the amount(s).

- Columbia County reported the public pays a 2 percent service fee on property tax payments.
- The City of Wausau reported the public pays the vendor a service fee of approximately 3 percent of the transaction.
- The City of Eau Claire reported that the public pays a 50¢ per transaction fee and an additional 5 percent fee for parks and recreation registrations.
- The City of Stevens Point reported the public pays the vendor a service fee.

15. Do you find that you are generating revenue from sources to which you have not previously had access, such as fines paid from out-of-state residents?

Yes	1	5.0%
No	8	40.0%
No response	11	55.0%

15a. How much additional revenue have you generated annually?

The City of Madison reported an additional $13,000 has been generated annually from overdue parking tickets.

15b. What were the sources of this additional revenue?

The City of Madison reported an additional $13,000 has been generated annually from overdue parking tickets.

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Welcome

Washburn County was established in 1883 and named after Cadwallader C. Washburn.

The county seat is located in Shell Lake.

Washburn County is divided into twenty-one districts, with a representative from each district that serves on the Washburn County Board of Supervisors.

The county's municipalities consist of twenty-one towns, two villages, and two cities:

Barronett	Gull Lake
Bashaw	Long Lake
Bass Lake	Madge
Beaverbrook	Minong
Birchwood	Sarona
Brooklyn	Shell Lake
Casey	Spooner
Chicog	Springbrook
Crystal	Stinnette
Evergreen	Stone Lake
Frog Creek	Trego

Washburn County is the 28th largest county in Wisconsin and has a population of 16,036.

Click for larger view

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