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# Study Methodology

## APPENDIX A

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**T**his appendix explains the process we followed to conduct the best practices review of preventive maintenance for local government buildings. It describes the steps we took, the timeline we followed, and the involvement of local and state government representatives, professional associations, and the private sector.

## BACKGROUND RESEARCH

To explore issues relevant to preventive maintenance, we gathered information from a variety of sources. We began with an extensive literature review of materials from professional associations and other groups with expertise in preventive maintenance, such as the American Public Works Association, Association of School Business Officials International, Building Owners and Managers Association, International Facilities Management Association, and U.S. Army Corps of Engineers. We also researched state and federal laws to learn about legal requirements relevant to building maintenance and funding.

At the beginning of the study in June 1999, we held a roundtable discussion to help define the scope of the review. We invited individuals representing a variety of viewpoints to participate, including administrators and facility managers from school districts, cities, and counties; state legislators and legislative staff; and others interested in preventive maintenance services. At this meeting, 26 participants, in addition to Legislative Auditor's Office staff, presented ideas for topics to include in the review.

We supplemented our literature review and roundtable discussion with personal interviews. Discussions with facility managers and finance directors in several Minnesota school districts, cities, and counties provided additional information about preventive maintenance practices and obstacles to performing preventive maintenance. We met with individuals from private sector building-maintenance firms for additional background on available services and recommended practices.

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**A technical advisory panel offered expertise on preventive maintenance.**

## TECHNICAL ADVISORY PANEL

Early in the project we formed a technical advisory panel to provide expertise and comment on draft materials throughout the review. The 11-member panel consisted of maintenance professionals and others involved with funding or providing preventive maintenance. Members represented school districts, cities,

counties, the private sector, and the Department of Children, Families, and Learning. They came from a variety of sizes of jurisdictions and regions of the state. Table A.1 lists the individuals who served on our technical panel.

We are grateful to the panel members for their advice and help. It is important to note that panel members may or may not agree with the recommendations of our study; the Legislative Auditor's Office remains responsible for the report's contents.

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### **Table A.1: Technical Advisory Panel Members, 1999-2000**

**Phil Allmon**, Management Analyst, Department of Children, Families, and Learning  
**Woody Franklin**, Director of Facilities, Eden Prairie Public Schools  
**Eugene George**, Supervisor of Buildings and Grounds, Minnetonka Public Schools  
**Noel Graczyk**, Administrative Services Director, City of Chaska  
**Fred King**, Director of Business Development, INSPEC, Inc.  
**Tony Mancuso**, Director of Property Management, St. Louis County  
**Len Nachman**, Educational Planner, SGN Architects  
**Dave Nelson**, Real Estate Manager, City of St. Paul  
**Steve Nystedt**, Director of Facilities Management, Dakota County  
**Jim Thorne**, Business Manager, Delano Public Schools  
**Dale Winch**, Director of Property Management, Anoka County

NOTE: Title indicates the person's position as our study began.

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## **PERFORMANCE MEASURES FOR PREVENTIVE MAINTENANCE**

To help identify effective and efficient preventive maintenance practices, we researched guidelines recommended by organizations in the building construction and maintenance industries and standards required by law. Based on this research, we compiled performance measures related to effective planning and use of preventive maintenance. In September 1999, we met with our technical advisory panel to review the measures of performance and later modified some based on the panel's feedback.

These performance measures formed the basis of questions we developed to survey local governments on their preventive maintenance practices (the surveys are discussed below). We used the performance measures to compare local jurisdictions' involvement with preventive maintenance and to identify those reporting effective and efficient practices. The best practices for successful preventive maintenance discussed in Chapter 2 also evolved from the performance measures. In November 1999 we met with our technical panel to discuss these practices, and modified them accordingly.

## SURVEY METHODOLOGY

We surveyed school districts, cities, and counties to gather information on the degree to which local jurisdictions use preventive maintenance practices, to identify jurisdictions using those practices effectively, and to determine obstacles to preventive maintenance. Our surveys asked local jurisdictions about their maintenance operations, personnel, planning, and funding. School districts were asked specifically about the 1998-99 school year. The questions came from preventive maintenance performance standards compiled earlier in our study. Our intent was to collect information on how frequently local jurisdictions met the standards.

We developed separate surveys for school districts, cities, and counties. While the city and county surveys were nearly identical, the school district survey was much longer. Because of particular legislative interest in school district buildings, our school district survey included more questions than our surveys of cities and counties. Before mailing the surveys, we pretested survey questions with our technical advisory panel in September and October 1999.

Tables A.2 through A.4 list the local jurisdictions receiving our surveys and denote which jurisdictions responded. Copies of the survey instruments and their aggregate results are available on our web site at <http://www.auditor.leg.state.mn.us/ped/2000/pe0006.htm> or by contacting project manager Jody Hauer at 651/296-8501 or [jody.hauer@state.mn.us](mailto:jody.hauer@state.mn.us).

### City and County Surveys

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**About 83 percent of cities and counties responded to the survey.**

In early October 1999, we mailed county surveys to either facility managers, county engineers, or county administrators in all 87 counties. We sent city surveys to all 96 cities with a population of 8,000 or more and to a stratified random sample of 200 smaller cities. The city surveys went to the city managers, administrators, or clerk-treasurers in our sample.<sup>1</sup> To ensure our sample of cities represented all geographic regions in the state, we grouped these small cities according to the 13 economic development regions and, for each region, randomly selected a percentage of cities based on that region's proportion of the state population.

The deadline for completing the surveys was October 20, 1999. We mailed follow-up letters and surveys to cities and counties that had not responded by the first due date, and extended the deadline to early November.

We received surveys in time for analysis from 73 of the 87 counties, for a county response rate of 83.9 percent, and from 246 of the 296 cities surveyed, for a city response rate of 83.1 percent.<sup>2</sup> The margin of error for the county survey is plus

<sup>1</sup> Two exceptions were Minneapolis, where we mailed the survey to the property services director, and St. Paul, where the survey went to the real estate manager.

<sup>2</sup> Among cities, 83 of the 96 cities with a population of 8,000 or more responded in time for analysis, for a large-city response rate of 86 percent; 163 of the 200 smaller cities surveyed responded in time for analysis, for a small-city response rate of 82 percent.

**Table A.2: Independent and Special School Districts Receiving Survey**

* Ada-Borup	* Clearbrook-Gonvick	* Grygla	* Luverne
* Adrian	* Cleveland	* Hancock	* Lyle
* Aitkin	* Climax	* Hastings	* Lynd
* Albany	* Clinton-Graceville-Beardsley	* Hawley	* Mabel-Canton
* Albert Lea	* Cloquet	* Hayfield	* Madelia
* Alden-Conger	* Columbia Heights	* Hendricks	* Mahnomen
* Alexandria	Comfrey <sup>2</sup>	* Henning	* Mahtomedi
* Annandale	* Cook County	Herman-Norcross	* Mankato
* Anoka-Hennepin	* Cromwell	* Hermantown	* Maple Lake
Ashby	* Crookston	* Heron Lake-Okabena	* Maple River <sup>1</sup>
* Atwater-Cosmos-Grove City	Crosby-Ironton <sup>1</sup>	* Hibbing	* Marshall
* Austin	* Cyrus	* Hill City	* Marshall County Central
* Badger	Danube	* Hills-Beaver Creek	* Martin County West
* Bagley	* Dassel-Cokato	* Hinckley-Finlayson	* Maynard-Clara City-Raymond
* Balaton	* Dawson-Boyd	* Holdingford	* McGregor
* Barnesville	* Deer River	* Hopkins	* McLeod West
* Barnum	* Delano	* Houston	* Medford
* Battle Lake	* Detroit Lakes	* Howard Lake-	* Melrose
* Becker	* Dilworth-Glyndon-Felton	Waverly-Winsted	* Menahga
* Belgrade-Brooten-Elrosa	Dover-Eyota	* Hutchinson	Mentor
Belle Plaine	* Duluth	International Falls	* Mesabi East
* Bellingham	* Eagle Valley	* Inver Grove Heights	* Milaca
Belview	* East Central	* Isle	* Milroy
* Bemidji	* East Grand Forks	* Ivanhoe	* Minneapolis
* Benson	* Eden Prairie	* Jackson County Central	* Minneota
* Bertha-Hewitt	* Eden Valley-Watkins		* Minnetonka
Big Lake <sup>1</sup>	* Edgerton	Janesville-Waldorf-Pemberton	* Minnewaska
* Bird Island-Olivia-Lake Lillian	* Edina	* Jordan	* Montevideo
* Blackduck	* Elgin-Millville	* Kasson-Mantorville	* Montgomery-Lonsdale
* Blooming Prairie	* Elk River	Kelliher	* Monticello
* Bloomington	* Ellsworth	Kenyon-Wanamingo	* Moorhead
* Blue Earth Area	* Ely	* Kerkhoven-Murdock-Sunburg	* Moose Lake
* Braham	* Esko	* Kimball	* Mora
* Brainerd	* Evansville	Kingsland	* Morris
Brandon	* Eveleth-Gilbert	* Kittson Central	* Mounds View
* Breckenridge	* Fairmont Area	* Lac Qui Parle Valley	* Mountain Iron-Buhl
* Brewster	* Faribault	* Lacrescent-Hokah	* Mountain Lake
Brooklyn Center	* Farmington	* Lake Benton	* Murray County Central
* Browerville	* Fergus Falls	* Lake City	* Nashwauk-Keewatin
* Browns Valley	* Fertile-Beltrami	* Lake Crystal-Wellcome	* Nett Lake
* Buffalo	* Fillmore Central	Memorial	* Nevis
* Buffalo Lake-Hector	* Fisher	* Lake Of The Woods	* New London-Spicer
* Burnsville	* Floodwood	* Lake Park-Audubon	* New Prague
* Butterfield	* Foley	* Lake Superior	New Richland-Hartland-
Byron <sup>1</sup>	* Forest Lake	* Lakeview	Ellendale-Geneva
* Caledonia	* Fosston	* Lakeville	* New Ulm
* Cambridge-Isanti	* Frazee	* Lancaster	* New York Mills
* Campbell-Tintah	* Fridley	* Lanesboro	* Nicollet
* Canby	Fulda <sup>1</sup>	LaPorte	* Norman County East
* Cannon Falls	Gibbon-Fairfax-Winthrop	* LeCenter	* Norman County West
* Carlton	* Glencoe-Silver Lake	* LeRoy	* North Branch
* Cass Lake	* Glenville-Emmons	* Lester Prairie	* North St. Paul-Maplewood
* Cedar Mountain	* Goodhue	* LeSueur-Henderson	* Northfield
* Centennial	* Goodridge	* Lewiston	* Norwood
* Chaska	Granada Huntley-East Chain <sup>1</sup>	* Litchfield	* Ogilvie
* Chisago Lakes	* Grand Meadow	* Little Falls	* Oklee
* Chisholm	* Grand Rapids	* Littlefork-Big Falls	* Onamia
* Chokio-Alberta	* Greenbush-Middle River	Long Prairie-Grey Eagle	* Orono
* Chosen Valley	* Greenway		* Ortonville

**Table A.2: Independent and Special School Districts Receiving Survey (continued)**

* Osakis	Robbinsdale	* Sebek	* Wabasso
* Osseo	Rochester	* Shakopee	* Waconia
* Owatonna	* Rockford	* Sibley East	* Wadena-Deer Creek
* Park Rapids	* Rocori	* Sioux Valley	* Walker-Hackensack-Akeley
* Parkers Prairie	Roseau	* Sleepy Eye	* Walnut Grove
* Paynesville	* Rosemount-Apple	* South Koochiching	* Warren-Alvarado-Oslo
* Pelican Rapids	Valley-Eagan	* South St. Paul	Warroad
* Pequot Lakes	* Roseville	* South Washington County	* Waseca
* Perham	* Rothsay	Southland <sup>1</sup>	* Watertown-Mayer
* Pierz	* Round Lake	* Spring Grove	* Waterville-Elysian-Morristown
* Pillager	Royalton	* Spring Lake Park	* Waubun
* Pine City	* Rush City	* Springfield	* Wayzata
* Pine Island	* Rushford-Peterson	Staples-Motley <sup>1</sup>	* West Central Area
Pine Point	* Russell	* Stephen-Argyle Central	* West St. Paul-Mendota
* Pine River-Backus	* Ruthton	* Stewartville	Heights-Eagan
* Pipestone-Jasper	Sacred Heart	* Stillwater	* Westbrook
* Plainview	* St. Anthony-New Brighton	* Swanville	* Westonka
* Plummer	* St. Charles	* Thief River Falls	* Wheaton Area
* Princeton	* St. Clair	* Tracy	* White Bear Lake
Prior Lake-Savage <sup>3</sup>	* St. Cloud	* Tri-County	* Willmar
* Proctor	* St. Francis	Triton	Willow River
* Randolph	* St. James	* Truman	* Windom
* Red Lake	* St. Louis County	* Tyler	* Win-E-Mac
* Red Lake Falls	* St. Louis Park	* Ulen-Hitterdal	* Winona
* Red Rock Central	* St. Michael-Albertville	* Underwood	* Worthington
* Red Wing	* St. Paul	* United South Central	* Wrenshall
Redwood Falls	* St. Peter	* Upsala	* Yellow Medicine East
* Remer-Longville	* Sartell	* Verndale	* Zumbrota-Mazeppa
Renville	* Sauk Centre	* Virginia	
* Richfield	* Sauk Rapids	* Wabasha-Kellogg	

NOTE: An asterisk (\*) depicts school districts from which we received completed surveys in time for analysis.

<sup>1</sup>Returned survey too late to be included in our analysis.

<sup>2</sup>Responded that a survey of the 1998-99 school year would not apply to the district due to the destruction of the district's building by a tornado in 1998.

<sup>3</sup>Responded that the district was unable to complete the survey due to a vacant facility director position.

or minus 3 percentage points. For the city survey, it is plus or minus 5 percentage points. On either survey, the margin of error may be larger for responses to particular questions where the number of respondents is low.

Survey results may also reflect additional sources of error that cannot be measured. We did not independently verify the accuracy of the information respondents provided. Results can be affected by the extent to which respondents interpreted survey questions consistently, and the degree to which their answers accurately reflected conditions in their jurisdictions.

**Table A.3: Cities Receiving Survey**

* Adrian <sup>2</sup>	* Cokato <sup>2</sup>	* Hanley Falls <sup>2</sup>	* Marshall
* Akeley <sup>2</sup>	* Coleraine <sup>2</sup>	* Harmony <sup>2</sup>	* Maynard <sup>2</sup>
* Albert Lea	* Cologne <sup>2</sup>	* Hastings	* Medina <sup>2</sup>
* Alberta <sup>2</sup>	* Columbia Heights	* Hazel Run <sup>2</sup>	* Melrose <sup>2</sup>
* Albertville <sup>2</sup>	* Comfrey <sup>2</sup>	* Henning <sup>2</sup>	* Mendota <sup>2</sup>
* Alexandria	* Coon Rapids	* Herman <sup>2</sup>	* Mendota Heights
* Altura <sup>2</sup>	* Corcoran <sup>2</sup>	* Heron Lake <sup>2</sup>	* Miesville <sup>2</sup>
* Andover	* Cottage Grove	* Hibbing	* Milan <sup>2</sup>
* Annandale <sup>2</sup>	* Crookston	* Hill City <sup>2</sup>	* Millville <sup>2</sup>
* Anoka	* Crystal	* Hitterdal <sup>2</sup>	* Minneapolis
* Apple Valley	* Danube <sup>2</sup>	* Hoffman <sup>2</sup>	* Minnetonka Beach <sup>2</sup>
* Appleton <sup>2</sup>	* Dayton <sup>2</sup>	* Hollandale <sup>2</sup>	* Minnetonka
* Arden Hills	* Deephaven <sup>2</sup>	* Hopkins	* Montgomery <sup>2</sup>
* Austin	* Deer Creek <sup>2</sup>	* Hoyt Lakes <sup>2</sup>	* Moorhead
* Avon <sup>2</sup>	* Dilworth <sup>2</sup>	* Hugo <sup>2</sup>	* Moose Lake <sup>2</sup>
* Backus <sup>2</sup>	* Donaldson <sup>2</sup>	* Hutchinson	* Morristown <sup>2</sup>
* Bayport <sup>2</sup>	* Dovray <sup>2</sup>	* Ihlen <sup>2</sup>	* Mound
* Beaver Bay <sup>2</sup>	* Duluth	* International Falls <sup>2</sup>	* Mounds View
* Becker <sup>2</sup>	* Dundas <sup>2</sup>	* Inver Grove Heights	* Mountain Iron <sup>2</sup>
* Belle Plaine <sup>2</sup>	* Dunnell <sup>2</sup>	* Ironton <sup>2</sup>	* Mountain Lake <sup>2</sup>
* Belview <sup>2</sup>	* Eagan	* Isle <sup>2</sup>	* New Brighton
* Bemidji	* East Bethel	* Jeffers <sup>2</sup>	* New Germany <sup>2</sup>
* Bigelow <sup>2</sup>	* East Grand Forks	* Kelliher <sup>2</sup>	* New Hope
* Bigfork <sup>2</sup>	* Eden Prairie	* Kerrick <sup>2</sup>	* New Prague <sup>2</sup>
* Biscay <sup>2</sup>	* Eden Valley <sup>2</sup>	* Kiestler <sup>2</sup>	* New Trier <sup>2</sup>
* Blackduck <sup>2</sup>	* Edina	* Kilkenney <sup>2</sup>	* New Ulm
* Blaine	* Elk River	* Kimball <sup>2</sup>	* Newport <sup>2</sup>
* Bloomington	* Emmons <sup>2</sup>	* Kinbrae <sup>2</sup>	* Nicollet <sup>2</sup>
* Bock <sup>2</sup>	* Erskine <sup>2</sup>	* La Salle <sup>2</sup>	* North Mankato
* Bowlus <sup>2</sup>	* Fairmont	* Lake City <sup>2</sup>	* North St. Paul
* Braham <sup>2</sup>	* Falcon Heights <sup>2</sup>	* Lake Crystal <sup>2</sup>	* Northfield
* Brainerd	* Faribault	* Lake Elmo <sup>2</sup>	* Oakdale
* Brandon <sup>2</sup>	* Farmington	* Lake Lillian <sup>2</sup>	* Odessa <sup>2</sup>
* Breckenridge <sup>2</sup>	* Fergus Falls	* Lakeland <sup>2</sup>	* Orono <sup>2</sup>
* Brook Park <sup>2</sup>	* Fisher <sup>2</sup>	* Lakeville	* Osseo <sup>2</sup>
* Brooklyn Center	* Floodwood <sup>2</sup>	* Lastrup <sup>2</sup>	* Owatonna
* Brooklyn Park	* Foley <sup>2</sup>	* Lauderdale <sup>2</sup>	* Paynesville <sup>2</sup>
* Brookston <sup>2</sup>	* Forest Lake <sup>2</sup>	* Lengby <sup>2</sup>	* Pierz <sup>2</sup>
* Brownsdale <sup>2</sup>	* Fort Ripley <sup>2</sup>	* LeRoy <sup>2</sup>	* Pine City <sup>2</sup>
* Buffalo	* Frazee <sup>2</sup>	* Lewisville <sup>2</sup>	* Pine Springs <sup>2</sup>
* Buhl <sup>2</sup>	* Freeport <sup>2</sup>	* Lexington <sup>2</sup>	* Pipestone <sup>2</sup>
* Burnsville	* Fridley	* Lilydale <sup>2</sup>	* Plymouth
* Caledonia <sup>2</sup>	* Genola <sup>2</sup>	* Lino Lakes	* Prinsburg <sup>2</sup>
* Cambridge <sup>2</sup>	* Georgetown <sup>2</sup>	* Litchfield <sup>2</sup>	* Prior Lake
* Cannon Falls <sup>2</sup>	* Ghent <sup>2</sup>	* Little Canada	* Proctor <sup>2</sup>
* Carver <sup>2</sup>	* Gilman <sup>2</sup>	* Long Prairie <sup>2</sup>	* Ramsey
* Cedar Mills <sup>2</sup>	* Glenwood <sup>2</sup>	* Loretto <sup>2</sup>	* Red Wing
* Centerville <sup>2</sup>	* Glyndon <sup>2</sup>	* Lyle <sup>2</sup>	* Regal <sup>2</sup>
* Champlin	* Golden Valley <sup>1</sup>	* Madelia <sup>2</sup>	* Richfield
* Chanhassen	* Goodhue <sup>2</sup>	* Madison <sup>2</sup>	* Richmond <sup>2</sup>
* Chaska	* Granada <sup>2</sup>	* Mahanomen <sup>2</sup>	* Robbinsdale
* Chatfield <sup>2</sup>	* Grand Rapids	* Mahtomedi <sup>2</sup>	* Rochester
* Chickamaw Beach <sup>2</sup>	* Granite Falls <sup>2</sup>	* Mankato	* Rosemount
* Chisholm <sup>2</sup>	* Grant <sup>2</sup>	* Maple Grove	* Roseville
* Circle Pines <sup>2</sup>	* Greenwald <sup>2</sup>	* Maple Lake <sup>2</sup>	* Round Lake <sup>2</sup>
* Clarissa <sup>2</sup>	* Greenwood <sup>2</sup>	* Maple Plain <sup>2</sup>	* Rush City <sup>2</sup>
* Clearwater <sup>2</sup>	* Grey Eagle <sup>2</sup>	* Mapleton <sup>2</sup>	* Rushmore <sup>2</sup>
* Cleveland <sup>2</sup>	* Halma <sup>2</sup>	* Maplevue <sup>2</sup>	* Sacred Heart <sup>2</sup>
* Cloquet	* Ham Lake	* Maplewood	* St. Anthony <sup>2</sup>

**Table A.3: Cities Receiving Survey (continued)**

* St. Anthony Village	Seaforth <sup>2</sup>	* Taylors Falls <sup>2</sup>	West Concord <sup>2</sup>
* St. Charles <sup>2</sup>	* Shakopee	* Thief River Falls	* West St. Paul
* St. Cloud	Shoreview	Tower <sup>2</sup>	* White Bear Lake
* St. Hilaire <sup>2</sup>	* Shorewood <sup>2</sup>	Trommald <sup>2</sup>	* Willernie <sup>2</sup>
* St. Joseph <sup>2</sup>	* Silver Bay <sup>2</sup>	* Truman <sup>2</sup>	* Willmar
* St. Louis Park	* Skyline <sup>2</sup>	* Two Harbors <sup>2</sup>	Willow River <sup>2</sup>
* St. Martin <sup>2</sup>	* South Haven <sup>2</sup>	* Urbank <sup>2</sup>	Winona
* St. Mary's Point <sup>2</sup>	* South St. Paul	* Vadnais Heights	* Woodbury
* St. Paul	* Spicer <sup>2</sup>	* Victoria <sup>2</sup>	* Woodland <sup>2</sup>
* St. Peter	* Spring Grove <sup>2</sup>	* Virginia	* Worthington
* Sandstone <sup>2</sup>	* Spring Hill <sup>2</sup>	* Wabasha <sup>2</sup>	* Wrenshall <sup>2</sup>
* Sargeant <sup>2</sup>	* Spring Park <sup>2</sup>	* Wahkon <sup>2</sup>	* Zemple <sup>2</sup>
* Sartell	* Springfield <sup>2</sup>	* Waite Park <sup>2</sup>	* Zimmerman <sup>2</sup>
* Sauk Rapids	* Stillwater	* Wanamingo <sup>2</sup>	* Zumbro Falls <sup>2</sup>
* Savage	* Sunfish Lake <sup>2</sup>	* Waseca	* Zumbrota <sup>2</sup>

NOTE: An asterisk (\*) depicts cities from which we received completed surveys in time for analysis.

<sup>1</sup>Returned survey too late to be included in our analysis.

<sup>2</sup>City with less than 8,000 population. We mailed surveys to a stratified random sample of 200 smaller cities, and to all 96 cities with populations of 8,000 or more.

**Table A.4: Counties Receiving Survey**

* Aitkin County	* Fillmore County	* Martin County	* Rock County
* Anoka County	* Freeborn County	* McLeod County	* Roseau County
* Becker County	* Goodhue County	* Meeker County	* St. Louis County
Beltrami County	Grant County	* Mille Lacs County	Scott County
* Benton County	* Hennepin County	* Morrison County	* Sherburne County
* Big Stone County	Houston County	* Mower County	* Sibley County
Blue Earth County	* Hubbard County	* Murray County	Stearns County
* Brown County	Isanti County	* Nicollet County	* Steele County
Carlton County	* Itasca County	* Nobles County	* Stevens County
* Carver County	* Jackson County	* Norman County	* Swift County
* Cass County	* Kanabec County	* Olmsted County	* Todd County
* Chippewa County	* Kandiyohi County	Otter Tail County	Traverse County <sup>1</sup>
* Chisago County	* Kittson County	* Pennington County	* Wabasha County
* Clay County	* Koochiching County	* Pine County	* Wadena County
Clearwater County	* Lac qui Parle County	* Pipestone County	* Waseca County
* Cook County	* Lake County	* Polk County	* Washington County
* Cottonwood County	* Lake of the Woods County	* Pope County	* Watonwan County
Crow Wing County <sup>1</sup>	* Le Sueur County	* Ramsey County	* Wilkin County
* Dakota County	* Lincoln County	* Red Lake County	* Winona County
* Dodge County	* Lyon County	* Redwood County	Wright County
* Douglas County	Mahnomen County	* Renville County	* Yellow Medicine County
* Faribault County	* Marshall County	* Rice County	

NOTE: An asterisk (\*) depicts counties from which we received completed surveys in time for analysis.

<sup>1</sup>Returned survey too late to be included in our analysis.

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**Nearly 89 percent of school districts responded to the survey.**

## School District Surveys

In late October 1999, we mailed surveys to all 347 independent and special school districts. The initial due date was three weeks later. We addressed surveys to facility managers in districts for which we had the facility manager's name. For other districts, we mailed surveys to the business officer, or in cases where we did not have the business officer's name, to the superintendent.<sup>3</sup> Names of facility managers were provided to us by the Minnesota Association of School Maintenance Supervisors, and names of business officers by the Minnesota Association of School Business Officers. To increase our response rate, we extended the deadline to the end of November and mailed follow-up letters and surveys to those who failed to respond by the first due date of November 12.

Of the 347 school districts, 308 returned completed surveys in time for analysis, for a response rate of 88.8 percent.<sup>4</sup> The results have a margin of error of plus or minus 2 percentage points. Because every respondent did not answer all questions in the survey, the margin of error may be larger for responses where the number of respondents is low.

School district survey results may also reflect additional sources of bias that cannot be measured. For the most part, survey results were taken at face value and were not independently verified.<sup>5</sup> Results may be affected by respondents' interpretations of survey questions and their knowledge of conditions in their district. To address one potential source of bias, we reported variations in responses among superintendents, facility managers, and business officers for some school district findings.

## SITE VISITS OF SELECT LOCAL JURISDICTIONS

Using data from our surveys, we identified cities and counties meeting our performance standards. To identify school districts, we used our survey data and school district expenditure and facility data collected by the Department of Children, Families, and Learning.<sup>6</sup> From among the many local governments that met a majority of our performance measures, we selected 13 to visit for in-depth interviews on their methods and practices. These jurisdictions were nine school

<sup>3</sup> We mailed surveys to facility managers in 127 districts for which we had a facility manager's name, to business officers in 89 districts for which we did not have a facility manager's name, and to superintendents in the remaining 131 districts for which we had neither a facility manager's nor a business officer's name. A breakdown of survey respondents by occupational title indicates that some people receiving surveys transferred their surveys to another staff person to complete: 134 facility managers, 100 superintendents, and 41 business officers responded to our survey (the remaining 33 respondents failed to indicate a specific title).

<sup>4</sup> Two school districts responded in time but did not complete a survey due to unique circumstances.

<sup>5</sup> Staff called some school districts to clarify estimates of person-hours spent on facility maintenance and operations.

<sup>6</sup> *Minn. Stat.* §123B.77 requires school districts to provide financial data each year to the Department of Children, Families, and Learning through the Uniform Financial Accounting and Reporting Standards (UFARS) system.



districts, two cities, and two counties, representing different population sizes and regions of the state. We used information gathered during these visits to describe the examples of best practices presented in Chapter 2.

We visited the 13 sites during January 2000. On these visits, we asked about the advantages and disadvantages of specific practices, costs and savings associated with undertaking a practice, and circumstances under which a practice may be transferable to other local jurisdictions. The people we interviewed also offered suggestions and tips for other jurisdictions considering similar practices. To collect the information systematically, we used a standard questionnaire with 11 open-ended questions. A copy of this questionnaire is available on our website at <http://www.auditor.leg.state.mn.us/ped/2000/pe0006.htm>.

## LOCAL GOVERNMENT ADVISORY COUNCIL

When the Minnesota Legislature established the best practices reviews program in 1994, it created a Local Government Advisory Council and charged it with recommending local government services for review. In June 1999 the Advisory Council recommended the topic of preventive maintenance, and the Legislative Audit Commission approved the council's recommendation. Council members also provided feedback on the report by reviewing and commenting on a draft version. Table A.5 lists the individuals currently serving on the Local Government Advisory Council.

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**Table A.5: Local Government Advisory Council Members, 1999-2000**

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<b>Charles Meyer (chair)</b> , St. Louis Park City Manager
<b>Dave Childs</b> , Minnetonka City Manager
<b>Don Helmstetter</b> , Spring Lake Park Schools Superintendent
<b>Tim Houle</b> , Morrison County Coordinator
<b>Lynn Lander</b> , Hermantown City Administrator
<b>Scott Neal</b> , Northfield City Administrator
<b>Brandt Richardson</b> , Dakota County Administrator
<b>Steve Sarkozy</b> , Roseville City Manager
<b>James Schug</b> , Washington County Administrator
<b>Lothar Wolter, Jr.</b> , Norwood Young America Township Clerk

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