

A topographic map of Minnesota, showing contour lines and geographical features, serving as the background for the report cover.

1999 Annual Report

**THE MINNESOTA GOVERNOR'S COUNCIL
ON GEOGRAPHIC INFORMATION**

SEPTEMBER 1999

The **Minnesota Governor's Council on Geographic Information** was created to provide leadership in the development, management and use of geographic information and related technology in Minnesota. With support from Minnesota Planning, the council provides policy advice and makes recommendations regarding efficient investments, management practices, institutional arrangements, and data standards and education.

Minnesota Planning is charged with developing a long-range plan for the state, stimulating public participation in Minnesota's future and coordinating activities with state agencies, the Legislature and other units of government.

Upon request, the *1999 Annual Report* will be made available in alternate formats, such as Braille, large print or audiotape. For TTY, contact Minnesota Relay Service at 800-627-3529 and ask for Minnesota Planning.

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1999 Annual Report

The Minnesota Governor's Council on Geographic Information

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Summary

Organizations and individuals that manage our communities, natural resources and public services are increasingly using new computerized tools to track and visualize geographic information — information about the earth and changes to our surroundings. These tools have dramatically changed the ways in which decisions regarding our environment are made. Often these decisions involve large public expenditures and have great societal impact.

The Minnesota Governor's Council on Geographic Information provides the leadership, coordination, and policy advice needed to support effective and efficient management of this technology. The council is comprised of 18 voting members drawn from all levels of government, educational and research organizations, and the nonprofit and private sectors. Members are appointed on behalf of the governor by the director of Minnesota Planning. Since its creation in 1991, the council has addressed geographic technology issues important to users of geographic information technology and the state.

During the past fiscal year, the council worked on issues related to spatial data needs, standards, and accessibility, outreach, and education and training needs. Work on many of these issues is ongoing, but in fiscal year 1999, the council:

- Reported on the status and statewide availability of 11 key geographic data types.
- Monitored the implementation of a geographic data clearinghouse for Minnesota that was recommended by the council.
- Developed and distributed a handbook and conducted workshops to help organizations understand and use a new national standard for measuring and reporting spatial data accuracy.
- Recommended a data exchange method that has been adopted as a technology standard for state agencies.

- Helped organizations improve documentation of their data through software tools, workshops and a documentation template adopted as a state technology guideline.
- Represented Minnesota's interests in collaborative work with the Federal Geographic Data Committee and other national organizations.

In addition to these accomplishments, the council recommended four exceptional projects for special commendations from the Governor. Each project exemplified the council's commitment to improving the effectiveness of geographic information technology within Minnesota. The following organizations received commendations:

- Washington County for the Quick Access Project
- MetroGIS for the Street Centerline Project
- The Carlton County Soil and Water Conservation District for its GIS outreach programs
- The Minnesota Commission on Legislative Resources, the U.S. Geological Survey and the Land Management Information Center for the "Base Maps in the 1990s" Project

During fiscal year 2000, the council will continue to work toward effective and coordinated geographic information technology development in Minnesota. It will focus on efficient data management practices by promoting useful data standards and enhanced access to geographic information. It will help shape policies and practices that help organizations effectively share and exchange data. It will continue to emphasize and deliver information about the benefits of coordinated development of geographic information technology. The council also will strongly encourage and support statewide data development that meets multiple needs while reducing redundant efforts.

Introduction

Geographic information is fundamental to managing our resources. Until the late 1970s this information was gathered in tabular form and translated by hand onto maps. Maps provide the information in a visual form, making it easier to comprehend. Since maps must be altered or redrawn entirely as change occurs, a hand-drawn map can be out of date by the time it is completed.

Computer technology has dramatically changed the way in which spatial information is used, delivered and managed in Minnesota. Powerful tools, collectively called geographic information systems, can define precise locations and capture, store, and quickly update vast amounts of geographic data. This makes possible timely and informed decision-making for a growing number of public and private organizations statewide. Geographic information systems are used to enhance delivery of public services, manage natural resources, influence public policy, direct community planning, and inform decisions about a host of other social and environmental issues.

Geographic information systems store tabular information and quickly translate it into computer-generated maps, allowing multiple sets of maps and information to be examined simultaneously. The ability to map and analyze several different components of a problem at once is revolutionizing the way in which governments, colleges, businesses and other organizations are able to manage complex projects. Determining where to place a landfill, for example, involves identifying the location of suitable land, proximity to the area to be served, projected community growth and access to the site.

Geographic information technology is rapidly becoming more powerful and more affordable, enabling a growing number of organizations to use geographic information

systems. Yet, collectively, these investments are substantial and developing the data to feed these systems is costly. Some organizations have been developing data and using geographic information systems for many years, while others are just getting started. One result is a mosaic of systems, data and abilities. As the use of geographic information technology matures, the need for policies and organizational structures that encourage a coordinated environment in which this technology can thrive is essential.

Although initial investments in geographic information technology and data can be substantial, savings in both time and money are realized when organizations understand one another's needs and work together toward common solutions. Communication among spatial data developers and users has many benefits: procedures to meet diverse needs are identified, sound practices for greater efficiency and cost-effectiveness are promoted, and knowledge is widely shared.

Originally established in 1991, and reauthorized by Governor Jesse Ventura in 1999, the Minnesota Governor's Council on Geographic Information recommends policies and procedures designed to meet the needs of a broad spectrum of geographic data users and producers. The council brings together experienced professionals from the public and private sectors to provide leadership and promote policies that encourage coordinated growth and effective management of geographic information in Minnesota.

This report highlights the activities and accomplishments of the council during the past fiscal year, as well as potential goals for the future. It also serves to spotlight geographic information system projects recognized by the council and commended by the Governor for their valuable contributions to the geographic information system community and Minnesota.

Activities and accomplishments during 1999

Each year the council considers technical and policy issues affecting geographic information users and producers. Some examples are: identifying standardized data specifications and coding schemes that can be used by all types of systems; recommending organizational solutions for coordinated technology development; and promoting mechanisms that help the growing number of data users find and understand existing data so that duplicative data production is avoided. The council identifies the most pressing issues, or those that would affect the greatest number of users, and creates committees to offer recommendations for council action.

Organized around the council's guiding principles, the following pages chronicle activities and accomplishments from July 1998 to June 1999.

Promote efficient investments in geographic information

It has been estimated that Minnesota spends more than \$150 million each year on geographic information. The council identifies methods to capitalize on expenditures by promoting coordinated investments, supporting projects that serve multiple users and finding ways to build upon existing data and systems.

Building on federal investments: The nation's global positioning system provides precise information about locations on the earth's surface. This information is heavily used by such state agencies as the departments of Agriculture and Transportation and the Pollution Control Agency. Data from the global positioning system improves land and water navigation safety, crop management and many other applications that require exact locational measurements. Learning about the possible elimination of federal funding for a national network that will provide statewide access to this important data, the council petitioned federal lawmakers to continue their support. The project received continued funding.

Coordinated water resource management: With over four million square miles of lakes and more than 100,000 miles of rivers and wetlands, effective management of Minnesota's vast water resources is an enormous task. Accurate and consistent data about the state's surface water is needed and used by numerous organizations, including the departments of Natural Resources and the Pollution Control Agency; county soil and water conservation

districts and watershed management organizations. The council's hydrography committee has brought together state, federal and local interests to establish specifications for a unified statewide hydrographic database that meets the needs of such users. Developing a common database and standardized maintenance procedures saves time and money and provides for clearer communication among agencies.

Promoting funding opportunities: While many organizations realize the benefits of geographic information systems, initial investments in data and software are often prohibitive for smaller organizations. Over the past year a number of grant programs have helped cities, counties and regional organizations develop geographic information capabilities and enhanced data sharing and integration efforts. The council identifies grant opportunities and makes information about them available to its members and other interested parties. Grant applications generally require a multijurisdictional or collaborative component to encourage shared practices and development; the council plays an important role in strengthening these applications.

The mission and basic principles that guide the council's activities

The mission of the council is to promote efficient and effective use of resources by providing leadership and direction in the development, management and use of geographic information in Minnesota. The council makes recommendations in areas including, but not limited to, policies, institutional arrangements, standards, education and stewardship.

- Promote efficient investments in geographic information
- Promote geographic information as a public resource that should be widely shared with and available to interested parties
- Support the establishment and use of geographic data standards and guidelines to better exchange and share information resources
- Promote education and training in geographic information systems
- Promote the beneficial uses of geographic information in the development of policy and the management of public resources
- Provide a major forum where ideas and issues of the geographic information community in Minnesota can be brought forward, discussed and acted upon appropriately

Promote geographic information as a public resource that should be widely shared with and available to interested parties

More than 80 percent of all government decisions involve some use of spatial information. Accessing data held by government agencies and other institutions requires reliable and efficient distribution methods. Finding and sharing existing data is a critical goal of the council.

Minnesota state clearinghouse initiative: A geographic data clearinghouse provides information about existing data and its availability through a central source. This type of information exchange has become increasingly important over the past decade. Hundreds, perhaps thousands, of geographic datasets currently exist among the many organizations that use and develop them. Matching existing data sources with organizations in need of particular types of data results in substantial savings and reduces redundant data development efforts.

Laying the Foundation for a Geographic Information Clearinghouse, a report developed by the council in 1997, outlined a conceptual model for the creation of a geographic data clearinghouse for Minnesota. The clearinghouse builds adopted national clearinghouse standards and connects to a worldwide data search and retrieval environment. Based on the council's report, the state's Land Management Information Center at Minnesota Planning is developing an Internet-based data clearinghouse that allows organizations to document and maintain their own data, while centralizing the search and retrieval function for a broader audience. A clearinghouse advisory steering committee was formed to advise the center and make regular progress reports to the council.

Data sharing agreement: The council's data committee is developing sample legal language that can be used by Minnesota governments committed to sharing and exchanging electronic geographic data. To offer guidance about appropriate contract language and procedural steps, the committee is developing a simple decision tree. A draft of the decision tree is complete and much of the language for a model agreement has been researched and is being prepared for legal review. The data-sharing guidelines will be distributed to state agencies and other organizations within the year.

Data status report: In 1994 the council surveyed all known data users and producers in Minnesota with regard to their geographic data needs. Respondents reported that accurate soil data was the most needed, followed by land ownership information and nine other data types.

This year the council's data committee produced *Status Report: Priority Geographic Data*, which documents developments related to 11 key data types. The report provides helpful information for data users on data availability, quality and specifications and includes recommendations for future effort and investments. The report will be continually updated as developments occur. Devising a method to determine current needs among geographic information users is a potential initiative for next year's council.

Recognize and promote exceptional geographic information projects and activities: For the past three years the council has solicited nominations from the geographic information community to recommend exceptional geographic information projects for commendation by Minnesota's Governor. Nominated projects must meet established criteria and exemplify one or more of the council's guiding principles. The council seeks projects that benefit others beyond the originating organization. Also, projects must advance the effective use of geographic information technology in Minnesota.

Support the establishment and use of geographic data standards and guidelines to better exchange and share information resources

If organizations wish to maximize the usefulness and savings from sharing information resources, then standardized data management practices are essential. For example, natural disasters rarely follow jurisdictional or organizational boundaries. To get a complete picture of an issue, data held by two different agencies or entities need to be tied together. If data formats are dissimilar, then combining the data can be extremely costly and time-consuming. The council's standards committee seeks ways to minimize integration difficulties through beneficial standards that can be easily adopted and that do not place unnecessary burdens on those who use them.

Sharing information between state agencies: In 1998 the standards committee recommended a geographic coordinate standard for exchanging spatial data among state agencies. During 1999, the committee successfully worked for endorsement of this standard by the state's Information Policy Council and its adoption by the Minnesota Office of Technology as an official state standard. Now required of state agencies that have no exchange mechanism, this standard provides a consistent method for information exchange. The standard is also useful for private consultants and others doing business with the state.

Guiding data documentation: Also endorsed by the Information Policy Council and adopted by the state Office of Technology is a template for documenting geographic datasets. *The Minnesota Geographic Metadata Guideline* helps organizations keep track of their own data and helps users find and understand data kept by other organizations.

Consistent data documentation also is key to the data clearinghouse effort. The metadata guideline is a simplified subset of a nationally developed data documentation standard, which is an important building block of the Minnesota geographic data clearinghouse and clearinghouses being build by hundreds of organizations around the country. To help users follow the guidelines, the Land Management Information Center distributes free software to government entities and provides it at low cost to private developers. The center also conducts metadata training workshops around the state using the guideline.

Developing a keyword thesaurus: During Internet searches, keywords are used to describe the information being sought. Descriptive terms are often used interchangeably and many terms may be used to define a specific item. For example, if one were trying to find information about a particular piece of art, descriptive terms such as the name of the piece, its style or period, or the museum in which it is held may be used. The keywords used can greatly influence the amount and relevance of information found.

Similarly, multiple terms are often used to describe geographic features and events. Rivers, lakes, watersheds, streams and tributaries might all be used when searching for water-related information. The standards committee is developing a thesaurus of geographic terms to guide consistent term usage and enhance geographic data searches. It will provide a structured hierarchy that informs users about the most appropriate terms for their own data. The thesaurus also will help users zero in on the exact information they need when searching the clearinghouse. The committee is continuing to refine the thesaurus and plans to publish the finalized version this year.

Understanding and reporting accuracy: The standards committee tracks emerging national standards and evaluates their usefulness for Minnesotans. A particularly important national geographic standard was developed in 1998. The National Standard for Spatial Data Accuracy supplants a map accuracy standard that has been widely used for the past 40 years. It provides a method to measure and report the accuracy of spatial data.

The standards committee, led by a member at the Minnesota Department of Transportation, reviewed and clarified the standard before it was released. To help organizations

understand the standard and foster its use, the committee developed the handbook *Implementing the National Standard for Spatial Data Accuracy*. The handbook explains the importance of measuring data accuracy and how to implement the standard, using case studies as examples. The handbook was released for public review during 1999. Thousands of copies have been requested, with inquiries coming from as far away as India and the Netherlands. The final version of the handbook is now available from the council at no cost.

Promote education and training in geographic information systems

The council works to educate data users and producers about efficient management practices and about how to use geographic information technology to better inform decision-making. The council also supports efforts to develop a viable spatial data workforce. Introducing geographic information technology into the public and private school systems also is an important council goal.

Cadastral standard workshop: The cadastral standard was developed by the Federal Geographic Data Committee and outlines a method for constructing the databases that store land ownership data. This standard also lends itself to state and local use. The council's standards committee organized a workshop to explain how organizations may use this standard to manage their land ownership information. Over 80 geographic information users from government and the private sector attended the workshop. To make it easier for local government employees to attend, the workshop was held in conjunction with the Minnesota Association of County Officers Conference in February 1999.

K-12 working committee: Realizing that information about geographic information technology is valuable to educators and students, the council's education committee formed a K-12 working group to identify schools that were introducing this technology to students and how others might become involved. Because geographic information is used in studies ranging from urban planning to the natural sciences, elementary and secondary schools are an ideal place to begin to demonstrate the technology's effectiveness.

Stakeholder outreach: In cooperation with the Minnesota GIS/LIS Consortium, the council has stepped up its efforts to inform decision-makers about the value of geographic information technology. This year the council exhibited at the League of Minnesota Cities and Association of Minnesota County Officers conferences. The council plans to make many more presentations to other groups interested in geographic technology and its use.

Governor honors four geographic

Using geographic information, four award winners shaped public policy, promoted cross-organizational involvement, and made a significant contribution to Minnesota. Described next, these projects were recognized with certificates of commendation from Governor Arne Carlson at the October 1998 GIS/LIS Consortium conference.

Quick Access

Washington County received recognition for its Quick Access project, which has changed how information about land ownership within the county is used and shared. The county surveyor's office spearheaded software development that allows county workers and citizens to access the county's digital parcel database through a common system.

Quick Access is an easy-to-learn software program for new and seasoned users. By developing and making available a well-designed tool for non-technical people, Washington County has found a way to offer the benefits of a geographic information system while reducing the learning curve often associated with this technology.

The Washington County Soil and Water Conservation District office uses the software to create hundreds of maps per year depicting soils and wetlands, which are used in the field to educate landowners. Quick Access allows cities to maintain up-to-date zoning and comprehensive planning information. By subscribing to regular data updates, organizations lower their own operational expenses while maintaining consistent access to current data. Quick Access displays information that helps staff plan, deliver public services, maintain tax rolls, reach citizens and manage natural resources. When used by the public, the system fosters rapid response to questions that, when researched manually, may not be answered for days or weeks.

MetroGIS Street Centerline Data Project

MetroGIS, a regional geographic information system collaborative, was awarded for its coordinating role in providing a free addressable dataset of metropolitan region street data to Minnesota public agencies and academic institutions. Developed by the Lawrence Group, a private mapping firm, this dataset is being used extensively by more than 40 organizations for a myriad of applications. The dataset locates roads in a nine-county area. It is designed to align with parcel data maintained by the counties and contains the range of addresses for each road segment and landmarks, including schools, churches, parks, rivers and lakes.

The Minnesota Department of Transportation and the Metropolitan Council financed the licensing of this dataset and a five-year maintenance contract to promote standardization and sharing of geographic information; both are cornerstones of the MetroGIS initiative. Public benefits from the MetroGIS Street Centerline Project include significant savings through reduced duplication of effort and expenses and more reliable information for projects that cross jurisdictional boundaries.

"The ability to access the section maps electronically with the assessor's information is a great benefit to the city in that it spans across all city departments and helps staff in their daily work functions" – Rich McNamara, Oakdale city administrator

"In addition to these products being very cost-effective for our agency, the fact that they are set up as uniform databases for the entire region (not each in separate county coordinate systems) have made them immediately usable for us." – Nancy Read, technical services leader, Metropolitan Mosquito Control District

Information system projects

Carlton County Soil and Water Conservation District Geographic Information Systems Program

The Carlton County Soil and Water Conservation District was recognized for its efforts to organize city geographic meetings to identify common city data and training needs. Participants included officials from cities, townships, counties, soil and water conservation districts and other local government units. The district also created a geographic information network providing over 30 free or low-cost key datasets to cities in a five-county area in northeastern Minnesota. The district also trains city staff members and many others across the state.

These activities have allowed many organizations and local governments to use geographic information technology for improved resource management. Data sharing initiatives have been advanced and numerous staff have gained the knowledge and experience needed to perform geographic information system functions without expensive training.

Base Maps in the 1990s Project

Three organizations successfully completed an eight-year state and federal cooperative project that provides a wealth of digital geographic data for Minnesota. The project was coordinated by the state's Land Management Information Center and was funded through Minnesota's Legislative Commission on Natural Resources and the U.S. Geological Survey. These three cooperators received commendation for their willingness to combine financial and human resources with the Natural Resources Conservation Service and the U.S. Forest Service to make the project a success.

This \$7 million project delivered statewide infrared aerial photography and statewide digital orthophoto quadrangles in several forms, including inexpensive and easy-to-use county-based CD-ROMs. The project also delivered 30 meter resolution digital elevation models for the entire state and several entirely new topographic maps. Digital orthophotos are used extensively as base data and as an important control and verification layer. They add precision, detail and confidence to existing data and help analysts observe physical features on the ground. Using this information as on-screen backdrops makes map-related data entry faster and more accurate. It also makes the process of validation and error checking much simpler. The U.S. Geological Survey has filled over 1,500 orders for county-based CD-ROMs and at least 30 organizations within Minnesota have ordered this data through the Land Management Information Center at Minnesota Planning.

"We have found the digital orthophotos to be a very valuable resource. They have saved us the trouble of having to create orthophotos ourselves in many instances. The digital orthophotos are inexpensive and easy to utilize for any GIS user." – Jay Bell, associate professor, Department of Soils, Water and Climate, University of Minnesota

"I would like it known that GIS maps have greatly helped the city by accurately showing corporate city limits overlaid on a digital orthographic quadrangle." – Gary Brumberg, Silver Bay city administrator

Assessing city and county training needs: During the summer of 1998, the council's education committee conducted an informal survey of 12 city and county offices to ascertain current and projected geographic information technology use and training needs. The survey revealed that geographic information technology was generally used more heavily in urban than in rural areas. Rural offices need basic training while urban offices need advanced levels of instruction. The survey showed that all organizations projected tremendous growth in the use of this technology. Both rural and urban governments reported that an average of 25 employees per year required some level of geographic technology training. Information from this survey will be used by private educators to develop a plan for offering geographic information system classes to local government employees across the state.

Informing the geographic information community: The annual Minnesota GIS/LIS Consortium conference is a major venue for sharing with spatial data users information about council activities and industry developments. In 1998, the council sponsored four sessions and a workshop at the conference. The council addressed the national standard for spatial data accuracy, Minnesota's geographic data clearinghouse, building a statewide hydrography database, and the organizational benefits of database documentation. The council workshop offered hands-on instruction using the *Minnesota Geographic Metadata Guideline*.

Promote the beneficial uses of geographic information in the development of policy and the management of public resources

Accurate and up-to-date information is fundamental to lawmakers, communities and public agencies when addressing community and natural resource issues. These decisions often rely on understanding factors related to geography and spatial distributions. Geographic information systems can help decision-makers address these questions. The council works to help identify opportunities for effective use of geographic information.

Mapping municipal boundaries: To define voting precincts, determine rights to levy taxes, settle property disputes and identify judicial liability, precise information about municipal jurisdictions is necessary. A working group of the council's data committee has investigated how boundaries are recorded and mapped in Minnesota and which agencies are involved in reporting and updating municipal boundary information. Next year the group is expected to forward recommendations that outline a process for a comprehensive and standardized method for maintaining a statewide digital boundary file.

State-federal cooperation and policy direction: The Federal Geographic Data Committee is a group of 14 federal agencies charged with identifying methods to coordinate geographic data and procedures across the country. The council has been an official cooperater with the Federal Geographic Data Committee since 1994, providing Minnesota a voice in federal development efforts.

The Federal Geographic Data Committee hosted a 1999 forum in Washington D.C. attended by council members. The forum, titled "Making Livable Communities a Reality," advanced a Clinton administration initiative to encourage organizations to use geographic information to design better communities. The forum addressed both policy and technical issues and involved a broad range of decision-makers, practitioners, managers and academics. The event culminated in a congressional hearing on geographic information technology and its value to support public policy. MetroGIS, a Minnesota regional data-sharing collaborative, was invited to present testimony on its experience building a multi-jurisdictional project to unify the seven-county metro area's data and procedures and address the region's policy issues.

Educating the new administration: In January a new Governor took office in Minnesota. The council, authorized by previous executive order, provided the new administration educational materials about geographic information, policy issues and the role of the council. Governor Ventura issued a new order in April, renewing the state's commitment to the council and its mission. The Governor will review the order every two years to assess the council's effectiveness.

Reporting research activities: A committee to research land records automation in Minnesota operated under the council from July 1996 to June 1998. During this time, the committee addressed potential financing, organizational and policy issues. In 1999, the land records modernization committee documents were combined into a final report, now available from the council.

Helping other coordinating organizations: When the MetroGIS coordinating committee decided to expand its state agency representation, it asked the council to recommend appropriate agencies. The coordinating committee helps shape MetroGIS policy and identifies methods to leverage individual investments for the greater public good. The council was quickly able to provide an informed recommendation to invite the departments of Natural Resources and Transportation to join the coordinating committee. Both agencies use geographic information systems to support its activities in the metropolitan region.

Provide a major forum where ideas and issues of the geographic information systems community in Minnesota can be brought, discussed and acted upon, as appropriate

In keeping with state law, all meetings of the council and its committees are open to the public. Notice of council meetings is posted on the Internet and mailed to approximately 200 individuals requesting regular meeting minutes and notices. Members of the community are encouraged to attend and bring relevant issues to the attention of the council.

A resource for policy-makers and geographic data users:

The council provides executive branch direction and advice regarding statewide investments and policy that will support coordinated geographic information technology. The combined experience and expertise of the members provide an excellent resource for decision-makers. Members of the geographic information system community also are urged to inform the council of policy, procedural or organizational issues they would like the council to address. To actively promote itself as a public resource, the council is planning an informational brochure to distribute during the next year. The council has developed a number of informational reports that address management and policy issues surrounding the use of geographic information systems.

Following legislation: During each legislative session the council closely tracks pending legislation that may influence geographic information users. By tracking and deliberating proposed legislation, the council helps identify significant issues that need to be addressed.

During the 1998-1999 legislative session, the council closely followed the activities of the state's Information Policy Task Force and potential changes to Minnesota's Government Data Practices Act. While the Legislature was debating changes that could affect the use and sale of geographic and other data types, the council was tracking recommendations and assessing their impact on users and developers.

Tracking grant projects in Minnesota: In an effort to share information about state and federal coordination, the council sponsored a presentation at its March meeting about federally funded research grants. Three projects funded by the Federal Geographic Data Committee identified benefits and barriers to data sharing and integration. This information helps members understand how state-federal interests are aligned and learn about the possibilities of building on federal interests to advance state priorities.

Keeping the community informed: The council uses the Internet, targeted mailings, issue papers, newsletter submissions and press releases to deliver news of its activity to the user community and the general public. The GIS/LIS Consortium publishes a newsletter, which reaches over 2,000 users of geographic information technology three times each year. The council relies on the newsletter to report on its activities, federal developments and initiatives, and to solicit public comments. Also, the council maintains an Internet site that details its activities, meeting and member information, and resources. It also provides links to other organizations with similar missions and objectives.

Planning ahead: During the past year, both the full council and the standards committee have undertaken strategic planning exercises to ensure that future activities will be responsive to state needs. These exercises involved representatives from other organizations affected by council action and recommendations.

Operational structure: Each year the council forms working committees to research issues that have surfaced as priorities statewide. These working committees recruit participation from all sectors of the geographic information community and reach out to others knowledgeable in policy development, government operations, education, communications and other disciplines. Committee members are subject specialists within their fields. People with private sector, state, federal and local government perspectives all have something to add to the discussion, providing for richer and more in-depth analysis. Collectively, they forward recommendations, which are then brought to the council for approval and action.

How to contact the council

To participate in council activities, obtain more information about the resources and initiatives discussed in this report, or discuss ideas and concerns with a council member, contact the council by:

- Telephone 651-296-1208
- Fax 651-296-1212
- E-mail: gc@mnplan.state.mn.us
- Internet: www.lmic.state.mn.us/gc/gc.htm

Recommended issues for consideration by the new council

The council establishes priorities and initiatives for consideration during the year. Through July 2000, the council will focus on the following areas:

Data management and access

Promote data sharing within Minnesota by completing and promoting a universal data sharing agreement.

Continue to investigate the issues surrounding municipal boundary mapping and provide recommendations for a more consistent and manageable process.

Develop a way to continually update users about the status of efforts to address identified data needs.

Evaluate existing sources of land-use and land-cover data and identify mechanisms for updating and integrating those data to meet multilevel needs.

Continue to monitor state data clearinghouse progress and support promotion and education concerning its role in data discovery and access.

Communication and outreach

Prepare informational materials describing the council, its role in state government and how it can assist public and private geographic information users and producers.

Develop ways to ensure council web site is easily found, navigated and updated in a timely fashion.

Promote communication with geographic information users through the GIS/LIS Consortium conference, and other cooperative outreach projects and events. Actively share council activities through the Internet, newsletters, publications and other means.

Recognize and promote exceptional geographic information projects and activities.

Standards

Survey geographic information users and identify needed attribute coding schemes to help manage and integrate data.

Shepherd new standards through the Minnesota Information Policy Council.

Continue development of the keyword term hierarchy to support consistent term development .

Investigate the feasibility of a statewide geographic technology infrastructure and identify the role of standards in support of this development.

Continue to monitor the development of federal standards and their applicability to Minnesota.

Work toward the development of a common statewide hydrographic database.

Investments

Develop a method to identify the highest priority data needs in the state and investigate policies and investments necessary to address those needs.

Develop and propose policies, procedures and investments necessary to automate management of land records in Minnesota.

Promote cooperative relationships among geographic technology users that can result in shared resources and cost savings.

Promote awareness of funding and grant opportunities for geographic data and technology development.

Informational resources available from the council

The following documents are available by calling 651-296-1208, sending an e-mail to gc@mnplan.state.mn.us and visiting the council's home page at : www.state.mn.us/gc/gc.htm.

New publications

1999 Annual report: The Minnesota Governor's Council on Geographic Information, September 1999

Implementing the National Standard for Spatial Data Accuracy Handbook, September 1999

Land records modernization committee report to the Minnesota Governor's Council on Geographic Information, June 1999

Previous publications

Executive Order 99-6, providing for the re-establishment of a Governor's Council on Geographic Information, 1999

Cardinal Points: Fiscal Year 1998 Annual Report of the Governor's Council on Geographic Information, August 1998

Laying the Foundation for a Geographic Information Clearinghouse, August 1997

Charting Progress: Fiscal Year 1997 Annual Report of the Governor's Council on Geographic Information, August 1997

Identifying Land Parcels: Is a Statewide Standard Needed?, July 1997

Numeric codes for the identification of counties in Minnesota, July 1997

County Soil Surveys: Guidelines for Digitizing, June 1997
Minnesota Geographic Metadata Guidelines, September 1996

Starting Points: Conventions for Geographic Information, September 1996

Resource list for parcel data development, August 1996

Seeking Common Coordinates: Fiscal Year 1996 Annual Report of the Governor's Council on Geographic Information, June 1996

Guidelines for recognizing exceptional GIS projects and programs, May 1996

By-laws of the Governor's Council on Geographic Information, March 1996

Standards for GIS, September 1995

Progressing on Course: Fiscal Year 1995 Annual Report of the Governor's Council on Geographic Information, June 1995

Analysis of the 1994 survey of Minnesota GIS users: Adequacy of the current data and needs for new or improved data, May 1995

Survey of Current GIS Data and Needs: Technical Report, May 1995

Mapping a Course of Action: Fiscal Year 1994 Annual Report of the Governor's Council on Geographic Information, June 1994

Executive Order 93-17 providing for the establishment of a Governor's Council on Geographic Information, August 1993

1999 committee members

Numerous organizations and individuals support the council's mission by contributing to working committees and other initiatives each year. The council recognizes those listed below for their part in the past year's accomplishments.

Communications committee

David Arbeit, Land Management Information Center,
Minnesota Planning
Will Craig, University of Minnesota, Center for Urban and
Regional Affairs (Chair)
Tom Glancy, Minnesota Department of Transportation
Catherine Hansen, GIS/LIS Consortium
Fred Logman, Minnesota Counties Computer Cooperative
Ken Saffert, City of Mankato
Heidi Welsch, Hennepin County

Data committee

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Minnesota Planning
Bob Bixby, St. Cloud State University
Bob Block, Otter Tail County
John Carpenter, The Lawrence Group
Larry Charboneau, The Lawrence Group
Jeff Grosso, City of St. Paul
Jim Hibbs, State Demographers Office, Minnesota Planning
Roger Hirschman, Natural Resource Conservation Service
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John Lunde, Sufficient Systems (past Co-Chair)
Les Maki, Minnesota Department of Natural Resources (Co-
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Lee Meilleur, Legislative Coordination Committee-GIS
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Ron Wencil, U.S. Geological Survey
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Pat Conrad, Ramsey-Washington-Metro Watershed District
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Steven Ring, Minnesota Department of Health
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1999 council members

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